

The Impact of Financial Risk Awareness on Digital Bank Usage

**THE IMPACT OF FINANCIAL RISK
AWARENESS ON DIGITAL BANK USAGE**

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DEPARTMENT OF BANKING AND RISK MANAGEMENT**

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BY

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**A final year project submitted in partial fulfillment of the requirement
for the degree of**

BACHELOR OF BUSINESS

ADMINISTRATION (HONOURS) BANKING AND FINANCE

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APRIL 2026

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DECLARATION

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- (2) No portion of this FYP 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.
- (3) Equal contribution has been made by each group member in completing the FYP.
- (4) The word count of this research report is 15553.

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PREFACE

This dissertation was prepared by a group of four students in partial fulfilment of the requirements for the degree of Bachelor of Business Administration (Honours) Banking and Finance at Universiti Tunku Abdul Rahman (UTAR). This research project represents the final year project for the course UBFZ3026 Research Project. The title of this study is The Impact of Financial Risk Awareness on Digital Bank Usage. The successful completion of this report reflects the collective effort, dedication, and commitment of all group members throughout the research process.

This study aims to examine the relationship between digital bank usage and financial risk awareness among consumers in Malaysia. In particular, the research focuses on four key independent variables, namely financial risk awareness, digital financial literacy, perceived security and privacy, and peer or social influence, in influencing digital bank usage. The findings of this study reveal that these factors play an important role in shaping individuals' adoption and usage of digital bank services, as well as their awareness to potential financial risks in a digital environment.

Overall, this research contributes to a better understanding of the growing digital bank landscape in Malaysia and highlights the importance of consumer awareness, technological security, and social influence in managing financial risks associated with digital bank usage.

ABSTRACT

The rapid development of financial technology has accelerated the growth of digital banks in Malaysia, offering consumers greater convenience, accessibility, and cost-efficient banking services. As digital banks operate fully through online platforms without physical branches, users are increasingly exposed to various financial risks such as online fraud, phishing scams, identity theft, unauthorized transactions, and data privacy issues. Therefore, this study examines the impact of financial risk awareness on digital bank usage among Malaysian consumers. In addition, the study also investigates the influence of digital financial literacy, perceived security and privacy, and peer or social influence on digital bank usage.

This study adopted a quantitative research design using a structured questionnaire distributed through Google Forms and face-to-face QR code survey methods. A total of 401 valid responses were collected from Malaysian residents aged 18 years old and above through purposive sampling. The collected data were analysed using Statistical Package for the Social Sciences (SPSS). The statistical techniques employed included descriptive analysis, reliability test, normality test, multicollinearity test, and multiple linear regression analysis.

The findings reveal that digital financial literacy, perceived security and privacy, and peer or social influence have significant positive relationships with digital bank usage. Financial risk awareness was also found to significantly influence digital bank usage, indicating that users with greater awareness of potential risks are more likely to engage in safer and more informed usage of digital banking services. These results suggest that consumers' knowledge, confidence in platform security, and social environment play important roles in shaping digital bank adoption behaviour.

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Overall, this study provides valuable insights for policymakers, regulators, and financial institutions in promoting safer digital bank practices, improving financial literacy, and strengthening consumer protection measures. The findings also contribute to the sustainable growth of the digital bank sector in Malaysia.

Keywords: Financial Risk Awareness; Digital Bank Usage; Digital Financial Literacy; Perceived Security and Privacy; Peer or Social Influence

Subject Area: HG1501-3550 Banking

CHAPTER 1: INTRODUCTION

1.0 Introduction

In the first section of chapter 1, the discussion of the research background was presented. Then, the problem statement was stated in the second section of the chapter, which explained the problems associated with the research. Under the third section of the chapter, the research objectives and questions were presented. Furthermore, the importance of this study is explained in the fourth section which is the significant of this study. The study presented a summary which covered all information from each chapter. Lastly, the conclusion of chapter 1 was provided.

1.1 Research Background

Malaysia's dedication to the establishment of a safe digital economy and an innovative digital economy has been demonstrated through significant policy measures introduced between 2020 and 2024. The Malaysia Digital Economy Blueprint introduced in 2021 focused on the importance of digitalization in promoting national development and competition (Economic Planning Unit, Prime Minister's Department, 2021). On this basis, the Financial Sector Blueprint 2022-2026 identified opportunities to enhance financial inclusion and resilience, coupled with the promotion of innovation within the financial services industry (Md. Mahmudul Alam, 2023). A key milestone in this agenda was the issuance of five digital bank licenses by Bank Negara Malaysia (BNM) in April 2022, aiming to create a new financial landscape to cater to various communities (Dr & Mahomed, 2022).

The five regulated digital banks are a major step in the direction of inclusive digital finance (Mail, 2022). Among those are Boost Bank Berhad, under establishment through collaboration between RHB Bank and Axiata Boost Holdings (Haziq Alfian & Haziq Alfian, 2024); GXBank Berhad, owned by Grab Holdings with support by Kuok Brothers Sdn Bhd; Ryt Bank Malaysia, joint venture between YTL Digital Capital Sdn Bhd and Sea Ltd. These institutions are licensed under the Financial Services Act 2013 (FSA) and do not specifically target Islamic digital banking services. In contrast, AEON Bank (Malaysia) Berhad, which is supported by AEON Financial Service and AEON Credit Service, along with the consortium led by KAF Investment Bank, are targeting Islamic digital banking services (Mail, 2022). Besides that, GXBank was the initial one to officially launch in late 2023, then AEON Bank in May 2024 and Boost Bank in July 2024, while Ryt Bank and KAF's Islamic digital bank have only recently opened up recently in Dec 2024 (The Star Online, 2025). In Malaysia, familiarity with digital banks increased more gradually from 24% to 60% during the same period, while awareness of them increased from 45% in Q4'23 to 93% in Q4'24 (Cheong, 2025).

These new institutions are said to provide low-cost and low-priced services to the underserved and unserved, as well as micro, small, and medium enterprises (Well-Implemented Digital Bank System Will Propel Economy, 2025). With low-cost financial products, simplicity of access, and digital-first products, digital banks can facilitate the integrity and stability of the financial system (Digital Banking Is Key to Financial Inclusion in Malaysia, 2021). This is consistent with Malaysia's national agenda of broadening financial inclusion to poor families, and small enterprises that often face obstruction in transacting with traditional banks (Digital Banking Malaysia: The Inclusive Agenda, 2020). Their presence has therefore been perceived as a driving force for the move of Malaysia towards an inclusive and digital economy (Well-Implemented Digital Banking System Will Propel Economy, 2025).

From a structural perspective, the reliance of digital banks on remote onboarding and automated decision-making significantly reshapes the traditional safeguards

embedded within conventional banking systems. Unlike traditional banks, where face-to-face verification and hard copy documents are further security checks, digital banks are mostly reliant on electronic Know-Your-Customer verification (e-KYC) along with other biometric verifications and risk analysis. Even though these technologies increase efficiency and convenience, they offer possibilities for identity manipulation, synthetic identities, and mule account creation if the process of verification fails or is taken advantage of. As indicated, the emergence of digital banks in Malaysia will present challenges regarding consumer protection and financial risks. Specifically, Bank Negara Malaysia (BNM), with its Risk Management in Technology (RMiT) guidelines, has focused on the need for financial institutions, especially digital banks, to enhance their technological risk management to mitigate against vulnerabilities in systems and fraud (Risk Management in Technology (RMiT) Exposure Draft, n.d.).

At the same time, the National Risk Assessment 2023 identifies that the vast majority of fraud being perpetrated in Malaysia could best be described as cyber-enabled, but with money mule accounts remaining a decision factor in scamming opportunities (Malaysia National Risk Assessment 2023, 2025). With concerns related to scams, the National Scam Response Centre (NSRC) was established in 2022 to allow for greater coordination between regulators, banks, and law enforcement agencies to ensure rapid detection and response to scam activity (Adminbtm, 2024). The Securities Commission Malaysia (SC) is also reportedly issuing continued warnings about an assortment of investment scams that involve fake documents, deepfake impersonation, offers that are not licensed, while encouraging tools people can promote to clarify fraudulent organisations (SC Warns Public on Deepfake Investment Scams Impersonating Prominent Personalities and Using Names of Reputable Companies - Media Releases, n.d.). Ultimately, the intent of the above will reveal that while digital banks increase access to bank and nurture innovation, as a digital only financial service, customers and consumers are likely to face increased financial risks, should they lack the requisite digital literacy and cyber-safety awareness.

Consequently, it becomes evident that the growth and development of digital bank in Malaysia reveal a worthy case in pointing out the critical need to study and comprehend the interface of digital identity systems, consumer behavior, and regulatory mechanisms in digital financial systems, lest the threats to financial inclusion are compounded by increasing fraud risks and eroding consumer trust. It reveals the high significance of empirical study carried out to assess the vulnerabilities emerging in connection to financial risks due to digital bank.

1.2 Problem Statement

Digital banks are intended to transform Malaysia's financial sector by enhancing inclusion, affordability, and efficiency (Ozili, 2018). Unlike traditional banks, they operate without physical branches and rely entirely on digital platforms (Windasari et al., 2022). While the benefits of accessibility and convenience are evident, the risks associated with digital bank usage remain poorly understood, particularly in Malaysia because these institutions began to grow in 2022 and 2023 (Adnan et al., 2024). Most existing research on financial technology has primarily focused on user adoption, perceived ease of use, and satisfaction with services. Although these studies provide important insights about the drivers of adoption, they have often ignored the vulnerabilities consumers may experience of exclusive use of digital financial services.

Between 2020 and 2023, Malaysia experienced a sharp increase in online financial service scams and fraud. The Royal Malaysia Police and CyberSecurity Malaysia reports counted phishing, impersonation and spoofing, fake website and job scam as the most common incidents and reported a loss of 5.2billions of ringgit (CyberSecurity Malaysia, 2025). These statistics show rising risk within Malaysia's world of electronic finance but do not indicate whether digital banks, in contrast to other financial technologies, raise exposure to these risks. However, the rapid digitalization of financial services has shifted the responsibility to secure financial

services from financial institutions to the consumer in some way. Although digital banks use state-of-the-art cybersecurity systems, encryption technologies, and authentication procedures, users are still called upon to be vigilant when performing online transactions (Indah Dwi Novianti & Anis Chariri, 2025).

Aside from that, particular consumer groups may be particularly vulnerable. Older generations may be less familiar with electronic security practices (Ali et al., 2025), while poorer families and people lacking good financial understanding may be unable to protect themselves against fraud (Munisamy et al., 2022). In addition, utilizing peer influence and social trust on the internet can create underestimation of security threats by certain users, which increases vulnerability in turn (Sarkar et al., 2019). A case in Malaysia, most of the financial decisions were being made based on recommendations of families and friends and through online social networks (Mohd Rashid et al., 2023). While positive experiences shared via social media may promote rapid adoption of digital banking services, misinformation or fraudulent schemes spread within trusted social networks could tarnish the reputation of organizations offering such services and lead to distrust among customers (Ahmad et al., 2025). Furthermore, the sophistication of cybercriminals indicates that advanced technology would not necessarily reduce the risk of fraud in the near future (Kurshan et al., 2024). As the usage of digital banks in Malaysia continues to raise in ranks, it would be imperative to determine if the level of awareness to financial risk among consumers rises with that of digital bank usage.

Furthermore, the Malaysian Government's initiative in promoting a cashless and digital economy has led to the increased adoption of online financial services, especially with the COVID-19 pandemic. Consumers in Malaysia have become accustomed to the use of mobile banking services and online payment systems (Nurul Wajhi Ahmad et al., 2022). Nevertheless, the progression from conventional banking services towards fully digitalized banking services may not be seamless across society. There may be challenges, especially in rural areas, for senior citizens or people in low-income societies. Some people may be unable to compete in relation to digital access or knowledge, which may be a cause for concern in terms

of financial risk awareness, thereby prompting the need for an exploration into demographic factors (Vani & Dr. Sathyanarayana, 2025).

The other emerging issue is the psychological component of digital financial behaviors. The convenience and speed of digital bank transactions may encourage impulsive financial decisions, frequent transfers, or reduced scrutiny before authorizing payments (Faraz & Anjum, 2025). Unlike conventional banking, where face-to-face interaction is deeper, thus promoting slowing down of some financial activities, digital bank promotes instantaneous transfer from one account to another. However, while this improves efficiency, there is also increase vulnerability to scam tactics that rely on urgency and emotional manipulation. As such, assessing how behavioral patterns interact with digital bank usage is essential to assessing overall financial risk awareness.

Additionally, trust plays a central role in digital bank ecosystems. As newly established institutions, digital banks must build credibility among consumers who may still associate bank security with physical branches and established institutions. Even though digital banks are regulated under existing financial laws of Financial Services Act 2013(FSA) or Islamic Financial Services Act 2013(IFSA) that comply with similar laws and regulations that apply to traditional banks, public confidence may vary depending on perceived reputation, transparency, and media coverage of cyber incidents. A lack of trust may limit adoption, while excessive trust without adequate awareness may increase awareness to potential financial risks.

This research intends to bridge the gap between an absence of empirical research and literature on digital bank usage and financial risk awareness, while also detecting the moderating roles that digital financial literacy, perceived security and privacy, and peer or social influence play.

1.3 Objectives of Research

1.3.1 General Objective

The goal of this research is to investigate the relationship between digital bank usage and financial risk awareness among Malaysian consumers, and to identify the key factors influencing financial risk awareness in the digital bank environment.

1.3.2 Specific Objectives

For the fulfillment of this major objective, the following specific objectives have been set up.

1. To examine the relationship between financial risk awareness and digital bank usage.
2. To examine the relationship between digital financial literacy and digital bank usage.
3. To examine the relationship between perceived security and privacy and digital bank usage.
4. To examine the relationship between peer or social influence and digital bank usage.

1.4 Research Questions

To provide different recommendations in our research, the following sub-questions will be articulated:

1. Is there a significant relationship between financial risk awareness with digital bank usage?
2. Is there a significant relationship between digital financial literacy with digital bank usage?

3. Is there a significant relationship between perceived security and privacy with digital bank usage?
4. Is there a significant relationship between peer or social influence with digital bank usage?

1.5 Significance of Study

This research study has significant academic, practical, regulatory, and social value, particularly in relation to Malaysia's ever-changing digital bank ecosystem.

From an academic standpoint, the present study makes a contribution to the development of the still limited body of conceptual and empirical research concerning digital banks in Malaysia. To be more specific, taking into account the relatively recent character of the concept of digital banks in the Malaysian financial market, the available body of facts concerning this issue is limited and insufficient. Most prior studies related to banking and financial technology have predominantly focused on consumer adoption, usability, service quality, or user satisfaction when engaging with digital financial services. In contrast, with this study, there is a shift in focus to financial risk awareness of digital bank consumers. By doing so, this present research fills a significant lacuna which has been observed so far in the literature. By focusing on financial risk awareness, this research offers a more comprehensive insight of the potential vulnerabilities faced by consumers in a digital-only bank environment.

Furthermore, the study adds to the body of literature by considering multiple aspects of risk awareness through the inclusion of factors such as digital financial literacy, perceived security, and peer influences. This inclusion of the variables provides for a more nuanced analysis of the various effects of consumer characteristics and perceptions on awareness to financial risks in digital bank. In doing so, they also add a contribution to theoretical debates surrounding consumer

behavior, financial vulnerability, and risk perception with regard to digital financial services in emerging economies, such as Malaysia.

From a practical and regulatory standpoint, the findings of this study are particularly relevant for key financial authorities such as Bank Negara Malaysia (BNM) and the Securities Commission Malaysia (SC). Relevant to Bank Negara Malaysia, the findings may provide valuable insights into areas where consumers are most vulnerable to financial risks when using digital banks. These can inform enhancements in supervisory approaches to digital bank, including the strengthening of risk management practices, consumer protection mechanisms, and cybersecurity requirements under existing frameworks such as the Risk Management in Technology (RMiT) guidelines. The knowledge of how the consumer characteristics and perceptions are factors for risk awareness will thus be of importance to BNM in terms of providing further fine-tuning of regulatory policy and supervisory expectations for digital banks.

Similarly, the Securities Commission Malaysia (SC) may benefit from the study's findings in terms of addressing the issue of digital investment scams, fraudulent schemes, and abuse of digital bank facilities for carrying out illegal financial transactions. In the same way, the study's insights can assist the SC in developing clearer and more targeted regulatory strategies, particularly in combating online investment fraud and scam-related activities that exploit digital financial channels. In addition, the results may also be used to guide public educational and awareness initiatives that seek to enhance financial literacy and cyber-safety awareness levels across consumers, thereby building upon existing regulatory enforcement initiatives (SC and MCMC to Combat Scams via Enhanced Regulatory Oversight - Media Releases, 2022).

From the perspective of the industry, this research is equally important for the digital banks or the financial service providers. The findings can help digital banks better understand the risk profiles and behavioural patterns of their customers, particularly those from underserved or vulnerable segments. Such knowledge could

be useful in developing safer digital bank platforms, better fraud detection tools, clearer user interfaces, and even more successful customer communication with regard to risks. By aiming to address risks in consumer risk awareness, digital banks can actually promote the sustainability of digital banking services, building trust between digital banks and consumers.

Lastly, from a social perspective, this study will aim to contribute to the general attempt to raise the level of financial inclusion and consumer protection in Malaysia. While digital banks aim to improve access to financial services for underserved populations, increased access without adequate safeguards may inadvertently expose consumers to higher financial risks. The findings can thus offer a rationale for why policymakers, educators, and consumer advocacy groups may develop interventions to mitigate financial vulnerabilities and ensure equitable sharing of benefits from digital bank in society.

In this regard, this study makes meaningful contributions, be it in terms of advancing knowledge, supporting regulatory and industry practices, or contributing to a safer and more inclusive digital financial ecosystem in Malaysia.

1.6 Chapter Layout

In Chapter 1, the introduction of the study is presented which entails research background, problem statement, research objectives, research questions, and also importance of study. It gives a general background of the research.

Chapter 2 reviews the existing literature relevant to the study. It examines major concepts such as digital bank usage, awareness to financial risk, digital financial literacy, perceived security and privacy, as well as social influence. This chapter also establishes the theoretical and conceptual framework and outlines the proposed research hypotheses.

Chapter 3 is concerned with the research methodology. This chapter has the discussion centered around the research design, data collection, sampling design, research instrument, and data analysis techniques.

The discussion of the results and findings of the research takes place in chapter 4. As shown in this chapter, the outcomes and findings of the descriptive analysis, reliability tests, and the inferential analysis to establish relationships are discussed.

Chapter 5 brings together the overall findings of the study and explains their practical significance. It offers recommendations for policymakers, financial institutions, and consumers on improving digital bank security and reducing financial risks. In addition, it acknowledges the limitations of the research and suggests possible directions for future studies.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

The first section is the theoretical framework. After that, the second section is the literature review on the dependent variable which is Digital Bank Usage and independent variables which included Financial Risk Awareness, Digital Financial Literacy, Perceived Security and Privacy, Peer or Social Influence. The third section is the conceptual frameworks. The hypotheses are explained and developed in the final section.

2.1 Theoretical Framework

The relationship between digital bank usage and financial risk awareness can be interpreted by two main theories that have been discussed in previous studies. The theories that will be used to explain the connection between the use of digital banking services and financial risk awareness are the Risk Perception Theory and the Technology Acceptance Model (TAM).

2.1.1 Risk Perception Theory

The theory of risk perception explains that people do not base their perception of risk on objective statistical probability, but rather on subjective judgment, which is affected by personal experience, emotional responses, and social factors (Hoorens, 2020). According to the psychometric paradigm of risk perception developed by Slovic et al. (1985), individuals perceive risk on dimensions like dread, unknown, controllability, and familiarity (Ianis Chassang et al., 2024). This implies that two people may react differently in spite of being exposed to the same level of financial risk (Ianis Chassang et al., 2024). Perceived risk is generally seen to have a stronger impact on people's behaviour in financial situations compared to actual risk measurements (Saif et al., 2022).

In the Malaysian digital bank environment, this theory is very relevant. Although digital banks are licensed and regulated by Bank Negara Malaysia (BNM), users may still perceive digital banks to be riskier than traditional banks because digital banks do not have physical branches and face-to-face interactions (Saif et al., 2022). The media reports of scams, phishing, identity theft, and cyber attacks may add to the risk perception, although the probability of being affected is low. As a result, some consumers may decide not to use digital banks or use them less because of the fear of losing money or being victimized by identity theft (Lim et al., 2025).

On the other hand, some users, especially the younger or more digitally experienced individuals, may view the risks of digital bank as manageable or controllable. They may be confident in the ability of technology to protect them from risks through measures such as encryption, biometric authentication, and two-factor authentication. As a result, their risk perception is lower, and therefore adoption and usage are higher. This illustrates the differences in risk perception among various demographic groups, particularly with respect to age, income, and digital financial literacy (Kim et al., 2026).

Risk Perception Theory is particularly relevant to this research since financial risk awareness in digital bank is not only dependent on technical system weaknesses but also on how users interpret, understand, and react to potential threats (Lim et al., 2025). People with low digital financial literacy may underestimate risks due to a lack of awareness, while others may overestimate risks due to a lack of trust in digital platforms (Zhou, 2025). Therefore, this theory offers a conceptual explanation for why digital bank usage and financial risk awareness can be vastly different among Malaysian consumers.

2.1.2 Technology Acceptance Model (TAM)

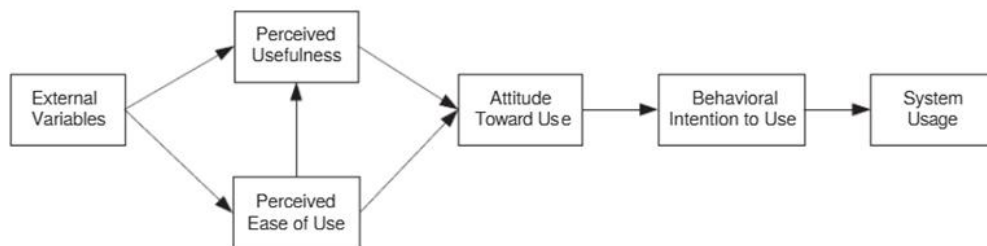


Figure 2.1.2 Technology Acceptance Model. Adapted from (Ma & Liu, 2005).

Technology Acceptance Model (TAM), a model advanced by Davis (1989), is mostly applied in analyzing the behavior of persons in terms of accepting and using

new technologies. According to this model, the willingness of a user to use a technology is largely based on subjective judgement of value and ease of use of the technology with the two most important aspects being perceived usefulness and perceived ease of use (Ma and Liu, 2005). TAM gives a significant theoretical basis in consideration of the behavior of Malaysian users of digital banks in this research and assists in determining why consumers are willing to use digital banking services despite the possibility of incurring financial losses (Ly and Ly, 2022). Perceived usefulness may be construed to mean actual assistance a technology can contribute to better efficiency or performance as perceived by the user. Digital bank usually considers this value through increased transaction processing speed, unlimited service, comparatively low charges, and easily managing funds using mobile gadgets. Digital bank enables Malaysian users to check their account status and execute other financial transactions at any time and at any place without the need to visit the physical branches. Thus, the willingness to use technology is likely to grow as soon as users learn the real value of the technology (Ly and Ly, 2022). Perceived ease of use on the other hand focuses on the ease or the difficulty with which the user operates the system. When a system is well-designed and easy to use through a clear interface, simple processes, and convenient authentication (like biometrics or 1-time verification codes), the general tendency of the users is to learn and keep using it. On the other hand, when the operation process is complicated or the design is not user-friendly, particularly when using it by less technical people, it can decrease their intent to utilize it (Musyaffi et al., 2024). Generally, the TAM theory implies that the more users find a technology to be practical and simple to utilize, the more willing to use it they will be. These two factors are relevant in the study to explain the behavior of Malaysian users when using digital banking service. Moreover, the positive attitudes towards technology can further drive the attitude towards financial risk in users, thereby partially complementing the risk perception theory and explaining the decision of users to behave in a particular way (Musyaffi et al., 2024).

2.2 Literature Review

2.2.1 Digital Bank Usage

Digital bank usage is a concept of measures how much people are adopting and using these new types of banking system for their daily bank needs via electronic means (especially over the internet and mobile devices) without physical branch interaction (Mohd Rashid et al., 2023). Examples of transaction types that digital banks can process for users include: opening a new account and/or managing an existing one, transferring money between bank accounts, paying bills, saving and/or investing in a fixed investment product, applying for a loan, and instant transactions anytime and anywhere (Saif et al., 2022). Unlike traditional banks, digital banks provide financial services entirely on a digital platform, meaning that customers have to rely completely on their mobile devices, the internet, and automated transaction routing in order to manage their financial activities (Traditional Banking vs. Digital Banking: Key Differences, 2025).

In this study, digital bank usage is taken as the dependent variable, as it represents the observable outcome of user decisions and behaviours influenced by multiple individual, technological, and social factors. Digital bank is not just about simple adoption or ownership of an account, it also includes the diversity of services used and the level of reliance on digital banking services compared to traditional banks. Most of the users may only use digital bank for basic transactions, such as transfers or bill payments, while others may rely heavily on them for saving, investing, and managing their daily finances (Rucha K, 2025).

Previous literature indicates that digital bank usage is highly, positively correlated with perceived convenience, cost efficiency, ease of access, and flexibility (Saif et al., 2022). They can avoid the extra fees associated with traditional banking transactions (Traditional Banking vs. Digital Banking: Key Differences, 2025).

From a theoretical perspective, the Technology Acceptance Model (TAM) provides a theoretical perspective on digital bank usage as an outcome of consumer

perceptions related to usefulness and ease of use(Jamshaid et al., 2025). When consumers find digital banking services easy to use, efficient, and practical, they will be motivated to use them. On the other hand, the Risk Perception Theory provides another perspective on consumer engagement with digital banking services. According to this theory, consumers' subjective judgments about related risks can either encourage or hinder their use of digital bank. For example, consumers' perception of the security of digital banks can motivate them to use digital banking services(Jamshaid et al., 2025). Overall, digital bank usage is an important variable in measuring the extent of consumer engagement in digital financial services and can be viewed as a reflection of the way consumers are engaged with the digital bank system in Malaysia.

2.2.2 Financial Risk Awareness

Financial risk awareness refers to the extent of knowledge individuals possess about potential financial risks which exist during digital bank platform usage. The study examines user recognition of existing risks together with their capability to predict and manage those dangers within digital financial systems (Vafaei-Zadeh et al., 2024).

Digital bank requires users to understand multiple risk categories which include cybersecurity threats, fraud, identity theft and data privacy concerns (Ogunola et al., 2024). Individuals with higher financial risk awareness are more likely to identify how these risks occur, such as phishing attacks, fake applications and unauthorized access to bank accounts (Waliullah et al., 2025). People gain risk awareness through their exposure to danger while protecting their ability to recognize danger signals which help them stay away from dangerous situations.

Furthermore, financial risk awareness is closely related to individuals' behavioural responses when using digital banking services (Vafaei-Zadeh et al., 2024). Users who possess greater knowledge about security threats will protect their online accounts through different methods, such as checking transaction records, avoiding suspicious links, creating strong passwords and using multi-factor authentication (Ogunola et al., 2024). Bakar Yahaya and Ramli (2025) state that people who lack security awareness will engage in dangerous practices, such as disclosing their private information, using unsafe public Wi-Fi networks, neglecting to monitor their bank accounts which will result in financial losses.

In addition, financial risk awareness depends on various factors which include digital financial literacy, previous experience and media or social network information exposure (Ameliawati & Setiyani, 2018). People who understand digital financial systems better can identify potential dangers and create effective protection strategies (Ogunola et al., 2024). Besides that, people who have encountered fraud or scam incidents in the past will develop higher financial awareness which leads them to practice more cautious financial behaviour.

Moreover, the rapid speed of digital bank transactions demonstrates the need for people to understand financial risks. Users need to assess risks before making financial decisions because instant transactions require immediate risk evaluation. In contrast, people who lack knowledge about something will take immediate action without verifying facts, which will increase their chances of financial loss. Thus, users need awareness because it serves as a vital security measure that protects them from dangers that occur in online digital spaces.

In summary, financial risk awareness requires people to develop both knowledge and skills for managing financial risks which they will face in digital bank environments. This awareness influences their decision-making and enhances the security of their digital bank activities.

2.2.3 Digital Financial Literacy

Digital financial literacy describes the knowledge, capabilities, cognizance, and competencies held by individuals that allow them to access digital financial services safely and effectively (Abidemi et al., 2024). According to Choung et al. (2023), digital financial literacy goes beyond financial literacy because it involves both technological competence and financial literacy, while also catering to cyber security and internet financial platforms (Choung et al., 2023). Thus, digital financial literacy, where digital bank is involved, means more than just having sufficient understanding about one's financial products, such as saving accounts, transfer services, digital loans, managing digital authentication, detecting fraudulent activities, and guarding personal financial information (Choung et al., 2023).

As society begins to shift into environments dominated by digital bank system, people need to acquire more multi-dimensional skills. Specifically, users need to understand how mobile banking applications work, be aware of and understand digital transaction risk control, and be knowledgeable about consumer rights and complaints (Rasyidah et al., 2023).

Another important aspect of digital financial literacy is cybersecurity, which requires customers to be aware of password creation, multiple factors required for authentication, internet safety, and phishing scams (Maina et al., 2026). In comparison, users lacking financial literacy may not be aware of the potential risks they face from engaging in harmful digital activities (ADMIN FOMCA 2, 2021). ADMIN FOMCA 2 (2021) shows that it is particularly emphasized that there is an urgent need to improve the country's digital financial literacy, especially among vulnerable user groups who are easily victimized by online fraud (ADMIN FOMCA 2, 2021).

Another essential factor is the ability for critical evaluation of the financial information in the digital environment. Digital financial platforms often present users with financial promotions, investment advertisements, and product offers.

People with financial literacy can better evaluate the risk-return ratio, verify regulatory qualifications, and distinguish between qualified financial regulatory bodies and fraudulent financial institutions. The ability for critical evaluation can help the users avoid fraudulent financial advertisements and investment schemes (Md Waliullah et al., 2025).

The Financial Education Network (FEN), with the support of the Ban Negara Malaysia and the Securities Commission Malaysia, introduced financial literacy initiatives such as Financial Literacy Month to enhance financial awareness and financial capability of consumers at all ages (2025 Financial Literacy Month, 2025). The program was initiated because of the need for financial capability to adapt and change with the evolution of digital financial industries (Initiatives - Financial Education Network, 2025).

In summary, digital financial literacy aims to cultivate individuals' multidimensional capabilities, enabling them to make informed financial decisions and reduce their risk of becoming victims of fraud by using digital financial platforms correctly (Saputra et al., 2025).

2.2.4 Perceived Security and Privacy

Perceived security and privacy involve subjective consumers' assessment of the extent to which digital banks can protect their financial assets and personal information against unauthorized access, misuse, or cyber threats (Mohammed Amin Almaiah et al., 2023). Unlike objective financial risk awareness, which is concerned with one's actual vulnerability, perceived security and privacy deal with how safe and well-protected consumers feel when using digital bank platforms. (Handayani Mukhra et al., 2023).

In the digital bank environment, security perception is generally related to the extent to which security systems, such as the security of the technology adopted by the banks, including the use of encryption technologies, biometric technologies, or

secure payment technologies, are perceived by the individual as being effective (Lim et al., 2025). By believing in the security technologies adopted by the banks, the individual is likely to develop trust and engage in online financial transactions (Mohammed Amin Almaiah et al., 2023). However, the individuals are less likely to use digital bank if they have doubts about the security systems adopted by banks or believe that the systems may be compromised by security vulnerabilities, as Md Waliullah et al. (2025) pointed out (Md Waliullah et al., 2025).

On the other hand, the concept of privacy perception is linked to the beliefs held by the consumer concerning the collection, storage, and sharing of their personal and financial-related information. Most digital bank customers are unaware of how their information or data will be protected and used. The user may start to suspect whether their account details are being accessed by unauthorized individuals and whether they can be misused by other service providers for business purposes (Martínez-Navalón et al., 2023).

Furthermore, perceived security and privacy may be influenced by individual experiences and social communication. Individuals who may have in the past been victims of online fraud may be more suspicious about such security. In addition, social media sites, word of mouth, and news outlets may influence public views of internet banking systems.

Another factor is transparency in the management of data practices. For common customers, transparency is key in the perception that digital banks are secure enough (Muhamad, 2025). This is particularly because, in most instances, the banks have been transparent in letting the public know about their approach to privacy, levels of protection, and cybersecurity measures. In contrast, unclear data policies or overdependence on integration with third-party services may result in a state of uncertainty in the processing of personal information (Prihandini, 2026).

One thing that needs to be highlighted here is that the perceived level of security and privacy may not be in line with the actual level of security. A digital bank may have advanced cybersecurity infrastructure, but due to external influences such as

media coverage or misinformation consumers would still feel unsafe using it. In contrast, some users may perceive digital banks as safe even if they know almost nothing about the platform's security. Therefore, perceived security, as a psychological variable, influences users' actual behaviour, regardless of actual risk factors (Apaua & Singh, 2022).

In summary, all of the above factors are subject to various factors like technology, trust, media, experience, transparency, and demographic factors.

2.2.5 Peer or Social Influence

The concept of peer or social influence describes the extent to which an individual's financial decisions are influenced by others, including the opinions, behaviours, and specific expectations of their social circle (Gunawan et al., 2023). In the financial sector, this influence stems from connections with family, friends, colleagues, classmates, and even the online world. Social impact is crucial in technology adoption, especially given the uncertainty surrounding new digital financial technologies. In such situations, the evaluation of technology is not based on personal judgment but on the opinions of others.

In collectivistic societies such as Malaysia, social relationships and group harmony are highly valued. If family or friends who have adopted digital banking system initiate positive feedback regarding such an experience, many people connected with them may also have the confidence to follow suit. This is because trust towards relationships is usually higher than trust for promotional campaigns.

There are various ways by which social influence takes place. First, there is the market situation that takes place through informational influence, where people try to seek information from others in order to eliminate uncertainty. People may see that others are able to use digital banks, leading to positive interactions through word-of-mouth communication (Ali et al., 2025).

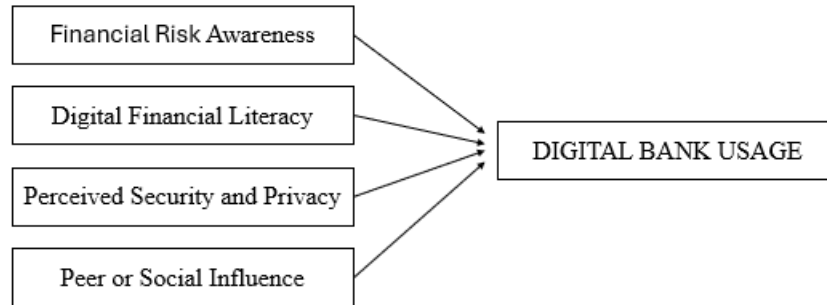
Another mechanism is normative influence, which occurs when the individuals adopt behaviours because of the need for conformance to the expectations of the group or maintaining social belonging. Younger adults will feel encouraged to use digital banks when most of their contacts conduct transactions either via mobile applications or e-wallet integrations. Colleagues in such environments may refer certain digital banks due to payroll integrations or promotional benefits. Ideally, positive experiences shared through the media would add to the overall adoption rate. The advantage of social media communication is the easy spread of messages across a wider communication network. Conversely, if a negative communication trend emerges, public confidence in the operation of such banks may be damaged (Ali et al., 2025).

Besides that, trust transfer model provides insight into how social influences impact digital bank usage. People can transfer trust from a reliable source that they are familiar with to an unfamiliar digital bank (Stewart, 2003). However, not all social influences have positive effects. In this context, negative word-of-mouth effects might negatively impact intentions to use digital banking services. For instance, rumours surrounding account freezing and other banking malpractices might affect intentions to use digital banking services. According to Yaseen et al. (2025), negative word-of-mouth effects might substantially reduce intentions to use new financial technologies.

Additionally, peer influence may sometimes prompts individuals to engage in higher-risk financial activities (Arora et al., 2026). For example, an individual may decide to open a digital bank account or invest online because their friends are doing so without sufficiently understanding the risks involved. In such situations, peer pressure and the tendency to align with social norms can override rational financial assessment.

The importance of understanding the impact of social or peer influence is especially significant in the digital bank environment in Malaysia, where the rapid evolution of technology is also related to the collectivist culture of a society.

2.3 Conceptual Framework



This research publishes a comprehensive framework informed by Risk Perception Theory and the Technology Acceptance Model (TAM) to assess the role of digital bank usage towards an individual's financial risk awareness in Malaysia. Risk Perception Theory posits that individuals make decisions based on subjective assessments of risk, rather than exclusively on objective facts, while TAM explains adoption behavior through two primary factors: perceived usefulness and perceived ease of use, alongside extensions such as trust and social influence. In this framework, digital bank usage serves as a dependent variable influenced by financial risk awareness, digital financial literacy, perceived security and privacy, and peer or social influence. Financial risk awareness acts as an independent contributor that influences adoption but also represents the way users experience risks associated with digital bank usage. While the framework helps delineate how Malaysians' risk perceptions, technology adoption factors, demographic characteristics, and social environments interact to shape both digital bank adoption and financial risk behaviors, it is not intended to be prescriptive, nor limit this important dimension of consumer behavior.

2.4 Hypotheses Development

2.4.1 Financial Risk Awareness and Digital Bank Usage

H1: Higher financial risk awareness is positively associated with digital bank usage

Financial risk awareness is the level to which people are aware of and recognize the risks of financial risks in the context of digital banking services, such as online fraud, phishing, identity theft, unauthorized transactions, and data privacy risks. Such awareness is crucial in the digital bank space as it contributes to the confidence of users and their capacity to interact safely with the financial technologies (Waliullah et al., 2025).

People who have more financial risk knowledge tend to have a better understanding of the specifics of digital threat in finances and the correct actions necessary to curb them (Bakar et al., 2025). Such awareness can allow users to employ preventative measures, including strong passwords, multi-factor authentication, checking the transaction details, and suspicious links or platforms (Bakar et al., 2025). Consequently, these people are in a better position to deal with any form of risks that may arise in the process of undertaking financial transactions over the internet.

Moreover, the awareness of financial risk helps to develop the feeling of control and security in utilizing digital banking services (Salma Faundria Nagari & Surya Raharja, 2025). When users are informed about possible risks and know how to manage them, they will not feel unconfident or exposed (Salma Faundria Nagari & Surya Raharja, 2025). This new found confidence makes them use digital bank more often to conduct operations like fund transfers, payment of bills and management of their accounts.

Empirical evidence suggests that awareness of financial risks can promote safer and more informed usage of digital financial services rather than discouraging adoption (Hossain, 2024). Users who are well-informed are more likely to continue using

digital banking services while exercising caution and applying appropriate security practices (Hossain, 2024).

Therefore, it is expected that individuals with higher financial risk awareness will demonstrate greater usage of digital banking services.

2.4.2 Digital Financial Literacy and Digital Bank Usage

H2: Higher digital financial literacy is positively associated with greater digital bank usage.

Digital financial literacy refers to the ability of users to understand how to use digital banking services while maintaining safe and secure operations (Chhillar et al., 2025). The concept includes understanding how online bank systems work, recognizing existing cybersecurity risks, and using security measures to perform online financial transactions. Users who possess advanced digital financial literacy skills demonstrate increased confidence when using digital bank systems because they know how to identify and handle dangerous situations while protecting their private information and following recommended security methods for their accounts (Chhillar et al., 2025).

The relationship between digital financial literacy and digital bank usage can be explained through the technology acceptance and self-efficacy perspectives. According to these theories, people who possess advanced skills for using digital financial services will use those services more frequently and accept new service features or online financial tools (Alalwan et al. 2022). Users with low digital financial literacy will not use digital bank because they will avoid specific online transactions and depend more on traditional banking methods which will restrict their awareness to financial risks.

The interdependence between these two variables is supported by empirical studies. Research shows that people who possess higher financial literacy skills use digital

banking services more often and across a wider range of services, such as online transfers, bill payments and digital investments. Users who possess better financial literacy skills will also use two-factor authentication, account activity monitoring and phishing attempt recognition as their primary methods of risk management which helps to improve their digital bank platform use (Sumartini et al., 2024).

Hence, it is expected that higher levels of digital financial literacy will correspond with increased usage of digital banking services. This sets up H2 in this study.

2.4.3 Perceived Security and Privacy and Digital Bank Usage

H3: There is a significant relationship between perceived security and privacy and digital bank usage

Perceived security and privacy refer to users' confidence that digital bank platforms can protect their personal and financial information from unauthorized access, misuse, or cyber threats. Consumer trust in digital banks largely depends on these perceptions (Kantika et al., 2022). Users who perceive digital bank platforms as secure systems that protect their personal information will establish their bank accounts with digital banking service and use the service for all their financial operations including account activities and digital payments (Mohamad et al., 2023).

Trust and risk perception theories explain how people use digital banking services based on their perceived security and privacy protection. According to these frameworks, people's intention to use technology depends on their trust in a technology system to protect sensitive information from unauthorized parties and their assessment of potential risks. When people who perceive higher risks, such as fraud, identity theft, or use of personal information, people will not use digital bank platforms even if they realize the benefits offered by technology (Khan & Abideen, 2023).

Furthermore, people who feel more secure and protected their privacy will use digital banking services more than those who worry about online fraud and data breaches. Users who trust their financial information remains protected will increase their engagement with digital bank systems by using advanced features which include online investments and bill payments (Almaiah et al., 2023).

In short, perceived security and privacy play a pivotal role in shaping customers' trust in digital banking services. Hence, this will be formed as H4.

2.4.4 Peer or Social Influence and Digital Bank Usage

H4: Peer or social influence is positively associated with digital bank usage.

Peer or social influence refers to the extent to which individuals' decisions to adopt digital bank platforms which are shaped by recommendations, advice, or social media network behavior of their family members, friends and colleagues (Mohamad et al., 2023). Social influence can encourage users to use digital banks by providing information about the convenience, reliability, and trustworthiness of online financial services. Individuals who believe their peers or social circles support digital bank adoption will follow this social trend which will boost their personal usage and participation.

The relationship between social influence and digital bank usage can be explained through the social learning and theory of planned behavior frameworks. According to these theories, people make their behavioral decisions by observing their surrounding social environment and following their recommendations when they face situations with uncertain risks and limited knowledge (Nasri & Charfeddine, 2012). The combination of peer experience and social recommendations in digital bank results in decreased uncertainty and increased trust, which drives users to use digital platforms with higher confidence.

Empirical studies have also supported this relationship. Research has revealed that positive peer influence in the form of advice provided by friends or family members and peer feedback shared in social media has a significant impact on users' intention to use digital banking services and actual usage of digital banking services (Alenizi, 2022). Conversely, negative experiences shared by peers or online communities can discourage adoption, highlighting the importance of social influence in shaping digital bank behavior.

In summary, the research demonstrates that increased digital bank usage occurs when people experience stronger peer or social influence. This forms the basis for H5 in the present study.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

The main purpose of this chapter is to describe the relations among different research variables by describing the methods used in research. It addresses all major areas of the research design; such as the data collection processes, the sample design, research tools and methods and techniques used in the analysis of data and measurement. A brief explanation of the whole research process is also given in the chapter to allow the readers to get a clearer picture of the way the research is conducted. In general, research techniques described in this chapter encompass the primary aspects of the data analysis process.

3.1 Research Design

Research design is defined as a general plan to organize and logically plan the different components of research study. The primary idea behind it is to make sure

that the research question can be pursued successfully and that the data gathered can be analyzed, so as to aid the development of research outcomes.

There are generally several different types of research design, which include descriptive research, experimental research, correlational research, diagnostic research and interpretative research. We can also divide research into broad categories as quantitative and qualitative (Ansari et al., 2022).

The research takes the quantitative research design. Quantitative research is based on gathering numerical data and processing the data using statistical techniques. It is common in the social science research due to the ability to objectively and systematically study associations between or among various variables (Ghanad, 2023).

This research will use the quantitative approach since the study is designed to test the correlation among various variables such as digital financial literacy, perceived security and privacy, peer or social influence, digital bank use and awareness to financial risk. Data of the study shall be gathered by way of questionnaires and analyzed using statistical methods like descriptive analysis, reliability analysis and multiple linear regression analysis.

3.2 Data Collection

The research process needs data collection as a vital first step because accurate and dependable results depend on the quality of the collected data. There are two main sources of data collection which are primary data and secondary data. For this study, primary data is used as the main source of data collection.

3.2.1 Primary Data

Primary data refers to original data that is collected directly from respondents for the specific purpose of the study (Ajayi, 2025). It allows researchers to access first-hand information which supports their research objectives. Primary data relates directly to their research topic and delivers precise insights about respondents' perceptions and behaviours.

This research collects primary data through a structured questionnaire which researchers distribute to participants via online survey platforms such as Google Forms. Online questionnaires are widely used in academic research because these tools provide easy access to participants while minimizing costs and enabling researchers to complete their work within shorter timeframes (Coşkun & Dirlik, 2021). Furthermore, the online survey method also allows researchers easily to collect participant feedback from people who are situated in various geographical locations (Shiyab et al., 2023). The questionnaire contains several sections which aim to collect information of respondents about their demographic data and their understanding of digital bank usage and financial risk awareness. The structured format of the questionnaire helps establish consistency in responses and allows the collected data to be easily analysed using statistical methods.

3.3 Sampling Design

Sampling design refers to the process of selecting a subset of individuals from a larger population to obtain information which represents the characteristics of that population (Hossan et al., 2023). This research uses non-probability sampling method through purposive sampling to collect data from participants who currently use or plan to use digital banking services in Malaysia. Purposive sampling enables researchers focus on participants who possess essential knowledge and experience about digital bank and online financial platforms. Since digital bank in Malaysia is still developing, the study needs to target people who are already understand online financial services so they will provide meaningful answers about their digital bank usage and their financial risk management.

3.3.1 Target Population

The target population is the group that is closely associated with the goals of the research and acts as the major source of information (Hossan et al., 2023). This study will focus on the residents of Malaysia that are 18 years and above. This segment is of the legal age and has the fundamental qualifications to use financial services (including digital bank and online financial transactions).

Moreover, to illustrate a more comprehensive picture, the respondents in this study are of various social backgrounds, including the representatives of university students, working professionals, business owners, and households with varying income levels. Through the use of a diversified sample, the study will further seek to understand the varying points of view and perception that people have of various financial risks in the process of using digital bank.

3.3.2 Sampling Location

Sampling location identifies the specific geographical region which use to select their participants. For this study, participants are selected from different place across whole Malaysia, especially who live in urban and semi-urban areas because those areas have higher adoption rates of digital banking services. The study targets respondents from locations such as universities, workplaces where individuals are more likely to use mobile applications and conduct online financial transactions. The use of online surveys enables researchers to reach respondents from different parts of Malaysia which helps them to increase the diversity and representativeness of data collection results through broader geographical coverage.

3.3.3 Sampling Elements

Sampling elements refer to the individual units that researchers select for their study. In this study, the sampling elements consist of digital bank users or potential users who possess basic internet capabilities and knowledge of mobile or web financial applications. Each respondent represents a distinct unit of analysis, as they provide relevant information regarding digital bank adoption and usage behaviour. Data collected from each sampling element include demographic data that contains their age, gender, education level, and income level, and behavioural factors such as frequency of digital bank usage, perception of financial risks, and trust in digital platforms.

3.3.4 Sampling Size

Sample size is defined as the amount of participants who will participate in the research. The study will gather a certain amount of respondent feedback that will allow them to perform legitimate statistical analyses of their research. The sample size is generally taken to be 400 or more when performing regression analysis in most quantitative research studies to yield valid results (Ahmed, 2024). How much more credible and applicable to various circumstances the research results are when bigger sample size is used.

$$n = \frac{N}{1 + N(e^2)}$$

Where:

N = Population Size

e = Acceptable sampling error

n = Sample size

The confidence level of the study is 95% and the level of significance is 0.05 (p-value). As the work of the Malaysian Department of Statistics (2025) states, the total population of Malaysia is about 34.3 million. The formula used in calculating sample size will use the relevant data.

$$\begin{aligned} n &= \frac{34,300,000}{1 + 34,300,000(0.05^2)} \\ n &= 399.99 \\ n &= 400 \end{aligned}$$

The sample size is calculated to be 399.999 which is about 400 people as per the above calculation. Thus, to make the research results reliable and representative,

the valid questionnaires will be collected in this study as a foundation of the research and the number of valid questionnaires totals at least 400.

3.4 Research Instrument

3.4.1 Questionnaire

In this work, the authors used a questionnaire as the instrument of gathering information, including biographic information of respondents, perception of using digital bank, and risk level exposure. The questionnaire link was sent through social media platforms like WhatsApp, where they were able to complete the questionnaire easily. The response was voluntary and no data on the respondents was disclosed to any third party other than the purpose of the academic research. Moreover, the main electronic mode of questionnaire delivery was Google Forms to enhance data collection efficiency and convenience.

In addition to the distribution of the questionnaire online through Google Forms, this study also involved the use of a face-to-face technique in order to reach the target participants. Researchers went out looking for the participants in an areas and gave them QR code which is linked to the online questionnaire. Participants could use the QR code in their mobile phone to access the questionnaire immediately.

This method was selected because it helps to verify that respondents meet target criteria and improves the accuracy of their responses. In contrast to the traditional paper-and-pencil questionnaires, the method allowed real-time data collection, reduced responses with a decrease in data entry error and ensured the uniformity of responses. The response rate improved because researchers interacted with participants to answer their questions and clarify information.

The questionnaire had seven sections with 48 questions (Parts A to G). Part A mainly sought some general demographic data including age, gender, level of education, level of income and experience of having dealt with digital bank to gain an insight into the respondents background traits. Part B to G had different research variables, such as financial risk awareness, digital financial literacy, income level, perceived security and privacy, peer or social influence and digital bank use (dependent variable).

In Parts B to G, the level of agreement was measured on a five-point Likert scale to measure all items. The scale is between 1 to strongly disagree, 2 to disagree, 3 to neutral, and 4 to agree, in that order, and it can be used to measure the opinion of respondents to several statements.

3.4.2 Pilot Test

A pilot test referred to as a feasibility study or pilot study, is a type of preliminary investigation conducted prior to the main research. The main goal of the research is to assess the research methodologies, research instruments and research procedures for the larger study to determine their feasibility, validity, reliability and efficacy (Bujang et al., 2024). For example, pilot test measures confusing or ambiguous survey items through a small-scale survey that includes only a limited number of participants. Thus, it improves the research quality and efficiency while minimizing errors and generating a final survey that can effectively collect useful data.

In our research, pilot test was implemented started from 14 February 2026 until 20 February 2026, which lasted for one week. A total of 50 sets of questionnaires were distributed to 50 respondents who came from various states across Malaysia. The main study used the questionnaire without changes because we found no major problems after receiving 50 completed pilot test questionnaires. All collected data will be entered into SPSS to check for any discrepancies, confirming data accuracy and reliability for further statistical testing.

3.5 Constructs Measurement

It is an essential part of the research process that involves defining and quantifying variables to ensure accurate and reliable data analysis (Fadele & Rocha, 2025). It allows researchers transform abstract variables, such as digital financial literacy or perceived security and privacy into measurable form. In this research, each variable was carefully operationalized with specific measurement scales. The correct measurement process establishes a foundation which ensures that the collected authentic data reflects actual phenomena under study for upcoming analysis work.

3.5.1 Measurement Scale

Different types of measurement scales were used in this study to measure the variables in the questionnaire. The choice of scale depends on the nature of the variable being measured and the type of analysis intended. Using proper scales guarantees that data will be understood correctly which enables researchers to perform both comparison and statistical evaluation of their findings (Sarun, 2026). In this study, there were three measurement scales, including nominal, ordinal, and interval scales were employed to collect data regarding demographic characteristic, attitudes, behaviours and perceptions of the respondents.

3.5.1.1 Nominal Scale

The nominal scale is used to categorize respondents into distinct groups without implying any ranking or order among the categories (Sarun, 2026). The system works best for demographic variables which exist as qualitative data. In this study, nominal scales were applied to variables such as gender, as seen below.

Example:

Gender
() Male
() Female

3.5.1.2 Ordinal Scale

The ordinal scale is used to rank responses in a meaningful order, showing the relative position of each response without assuming equal intervals between ranks (Sarun, 2026). This research used ordinal scales to measure variables such as age group, education level and income level. These variables were essential for dividing participants into distinct groups to study digital bank usage patterns or trends. For instance, educational level was classified into secondary school, diploma, undergraduate and postgraduate which allowed researchers to examine how educational background affects financial literacy and digital bank usage. The

use of ordinal scales in these situations helps explain the hierarchical relationships exist between different categories. This scale was employed in Section A, as shown below.

Illustration:

Education Level
() Secondary School
() Diploma/ STPM/ Certificate
() Undergraduate
() Postgraduate
() Others

3.5.1.3 Interval Scale

It is a type of measurement scale which maintains equal distance between all points on the scale (Sarun, 2026). The research used interval scales to measure digital bank usage, financial risk awareness, digital financial literacy, perceived security and privacy together with peer or social influence through Likert-scale questions. According Koo and Yang (2025), each item has a rating scale of 5 points in Likert-scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The use of interval scales enables researchers to quantify respondents' attitudes and perceptions so as to compute mean scores and standard deviations while performing advanced statistical tests such as correlation and regression analysis.

Sample of an interval scale in the Digital Financial Literacy:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I know how to verify whether a digital bank app is legitimate.	1	2	3	4	5

3.6 Data Processing

It refers to the systematic procedures applied to prepare the collected data for analysis, ensuring accuracy, consistency, and usability. Data processing has four major steps, namely verification, editing, coding, and transcription. Once the data has been collected in the form of responses from the respondents, data processing takes place. Data processing is crucial for ensuring that the results obtained in the final stage are reliable (Olukunmi 'Lanre Olaitan, 2024).

3.6.1 Data Checking

Data checking is the process of carefully checking the entire data collected in order to ensure completeness and usability of the data collected. The data collected was thoroughly checked, and any data that was not complete, consistent, or valid was identified and eliminated from the analysis. For example, questionnaires that were partially filled or contained contradictory answers were removed to maintain data quality. This process is important in order to ensure that the data collected does not give biased results in the study (Barchard & Verenikina, 2013).

3.6.2 Data Editing

After data checking, the next step in the process is data editing. Data editing is defined as the process of reviewing the data that has been obtained in order to identify any potential errors that may be present in the data and make the necessary corrections. It includes standardization, identification of outliers, as well as the addressing ambiguous and unclear responses. The process of data editing is to

ensure that the data obtained is a true reflection of the responses made by the respondents and minimizes possible errors that may arise before analysis (Pannekoek et al., 2013).

3.6.3 Data Coding

It entails changing qualitative or categorical data into numerical form, which allows for various operations using statistical software. For example, the values of the items measured by a Likert Scale can be coded from 1 (strongly disagree) to 5 (strongly agree). Proper coding makes it more convenient to effectively input the data and understand the data (Koo & Yang, 2025).

3.6.4 Data Transcribing

This study also did data transcription in the last phase of data processing, and this entailed orderliness and restructuring of the raw data into an analyzable format. All the data processing and data analysis was done using SPSS software to give the data processing its systematic nature and accuracy.

3.7 Data Analysis

The analysis of data can be defined as the systematic procedure of testing the data obtained using statistical means in order to prove the hypotheses of the research and draw meaningful conclusions. The SPSS was also employed in this research to analyze the data exhaustively with its main aim being to establish the validity of the proposed hypotheses and to further elucidate the research question. Precisely, the methods of statistical analysis used in this study were multicollinearity tests, descriptive statistical analysis, normality tests, and inferential analysis (Rahman and Muktadir, 2021). These analytical procedures can be used to examine the correlations among the research variables and enhance the credibility and explanatory strength of the research findings.

3.7.1 Descriptive Analysis

It is a statistical analysis approach used to identify the primary characteristics of a data set. It includes the calculation of the mean, standard deviation, frequencies, and percentages (Kaur et al., 2018). In addition to the tables, Google Forms can also present the data obtained in the form of a pie chart or histograms. Such analysis provides a comprehensive view of the data set, which forms the basis of any statistical test.

3.7.2 Scale Measurement

3.7.2.1 Reliability Test

In this research, the reliability of the questionnaire items was tested with the help of Cronbach alpha coefficient. The quantitative analysis tool, this coefficient is widely applied to determine the internal consistency of items in a scale. Typically, when the Cronbachs alpha coefficient is greater than or equal to 0.70, it is viewed to be a good measure of reliability and the consistency of the research results hence making sure that the results of the research are reliable and accurate. Moreover, the value of the coefficient is between 0 and 1(Bujang et al., 2018).

Table 3.7.2.1: Cronbach's Alpha Rule of Thumb

Cronbach's Alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Source: (Izah et al., 2023).

To determine additional internal consistency of questionnaire, the research presented in this study used Cronbachs alpha coefficient as the main indicator of reliability. This measure indicates how the items in the measure are consistent; the higher the value, the higher the reliability. Table 3.7.2.1 indicates that alpha less

than 0.6 is poor, 0.6 to 0.7 is questionable, 0.7 to 0.8 is acceptable, 0.8 to 0.9 is good and 0.5 is regarded as unacceptable. In this study, the alpha values will be computed the major constructs, which will be digital bank usage, financial risk awareness, digital financial literacy, perceived security and privacy, and peer or social influence. A scale that has an alpha ranging between 0.6 and 0.95 can be regarded as reliable and further analysis can be conducted (Izah et al., 2023).

3.7.3 Preliminary Data Screening

3.7.3.1 Multicollinearity

Multicollinearity is a high correlation between two or more independent variables (regression analysis) (Frost, 2017). Oghenekevwe Etaga et al. (2021) state that multicollinearity may be caused by missing data, the application of dummy variables, correlation between variables, and so forth. This research paper will look to determine whether there is any multicollinearity between the independent variables that include financial risk awareness, digital financial literacy, perceived security and privacy, and peer or social influence. In this respect, SPSS software will be used to carry out tolerance and variance inflation factor (VIF) tests. A value of VIF exceeding 10 and a tolerance value lower than 0.1 represent the existence of multicollinearity (Daoud, 2017).

3.7.3.2 Normality

In order to determine whether the data was normally distributed, this study performed a normality test since normality is an important requirement in most statistical analysis techniques. Statistical tests, including regression analysis and t-tests, are applicable when the data has a normal distribution, and hence the validity of research findings is enhanced (Mishra et al., 2019).

3.7.4 Inferential Analysis

In this work, the sample data obtained will be applied to generalize on the general state of affairs. That is, the analysis of the sample statistics with the help of statistical tests, in turn, allows making plausible assumptions about unknown

parameters of the population (Kuhar, 2019). In this research, inferential analysis is used to investigate the correlation between the independent variables and the dependent variable which are digital bank usage. In particular, the study employs multiple linear regression analysis to determine the extent to which any of the independent variables impacts the use of digital bank.

3.7.4.1 Multiple Linear Regression Analysis

Studying the relationship between a dependent variable and more than two independent variables is appropriate using multiple linear regression analysis (A. Kayode Coker, 1995). And because this research will include multiple independent variables, this can be used to examine the overall effect of all the factors on the dependent one in a more comprehensive way.

Several-linear regression is represented by the equation:

$$DBU_i = \beta_0 + \beta_1 FRA_i + \beta_2 DFL_i + \beta_3 PSP_i + \beta_4 PSI_i + \mu_i$$

Where:

DBU_i = Digital Bank Usage

FRA_i = Financial Risk Awareness

DFL_i = Digital Financial Literacy

PSP_i = Perceived Security and Privacy

PSI_i = Peer and Social Influence

μ_i = error term

This paper interprets the corresponding equations with a multiple linear regression model to demonstrate the effect of independent variables on the right-hand side on the dependent one on the left-hand side. The research hypotheses proposed in Chapter 2 are also consistent with the model specification.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

This chapter is to conduct analysis, summarize, and interpret the data collected from the survey through Google Form. After that, the analysis was conducted using the SPSS system. Results of the responses were analyzed using several statistical methods, including descriptive analysis, reliability test by using Cronbach's Alpha, multicollinearity test, normality test, and inferential analysis using multiple regression analysis, to support the interpretation of the research data collected.

4.1 Descriptive Analysis

It is a change of data which describes the properties of variables (Bhandari, 2020). It entails delivering information in an understandable and equal-tempered way. Descriptive coefficient provides the overview of a given set of data, which can be a representation of the whole population or a sample of it (Bhandari, 2020). Our study includes five questions in the demographic section. The collected data will undergo analysis and be presented using pie charts and tables for clearer understanding.

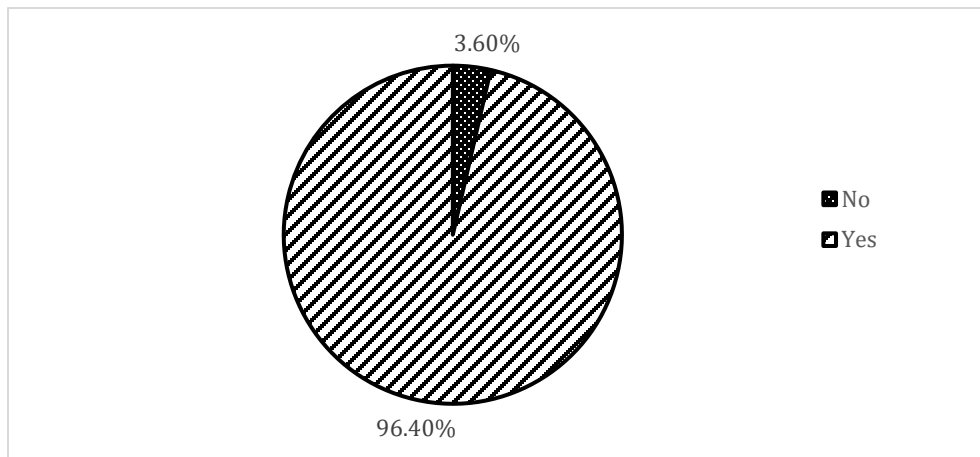
4.1.1 Demographic Profile of Respondents

This analysis examines five key demographic characteristics of the participants: (1) whether they currently use digital bank, (2) gender, (3) age, (4) monthly income level, and (5) education level. The data used for this analysis were collected from

Section A of the survey, and the findings from the descriptive analysis are presented in the following subsections.

4.1.1.1 Do you currently use digital bank?

Figure 4.1: Do you currently use digital bank

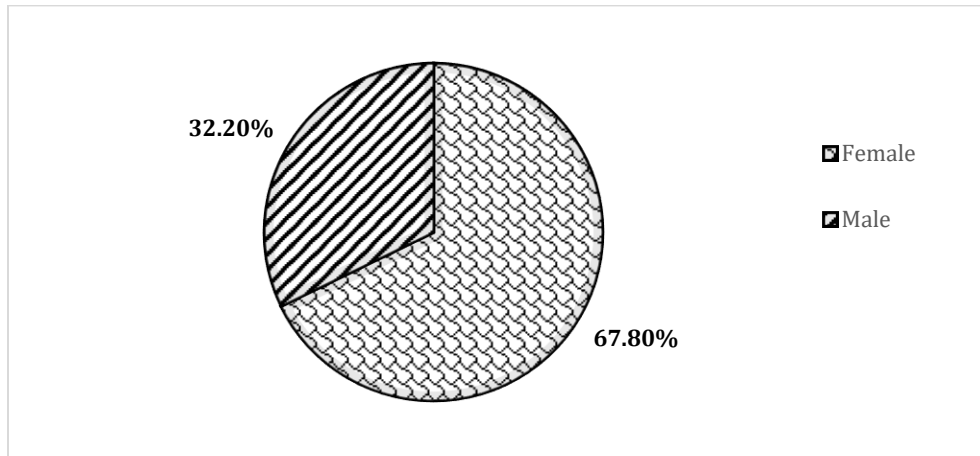


Source: Developed from SPSS system

Figure 4.1 shows that 401 respondents (96.4%) have used digital bank, while only 15 respondents (3.6%) have never used it before. This suggests that the vast majority of participants are already using digital banking services.

4.1.1.2 Gender

Figure 4.2: Gender

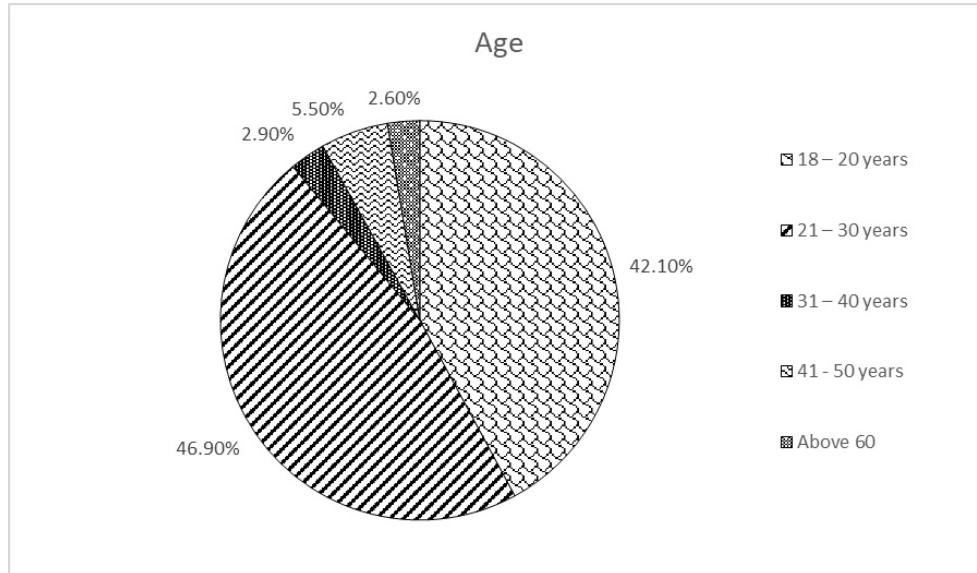


Source: Developed from SPSS system

According to Figure 4.2, the number of female respondents (67.8) and male respondents (134) totaled to 416 questionnaires received out of the respondents. The table of data presented above indicates that the female respondents are more than the male respondents.

4.1.1.3 Age

Figure 4.3: Age

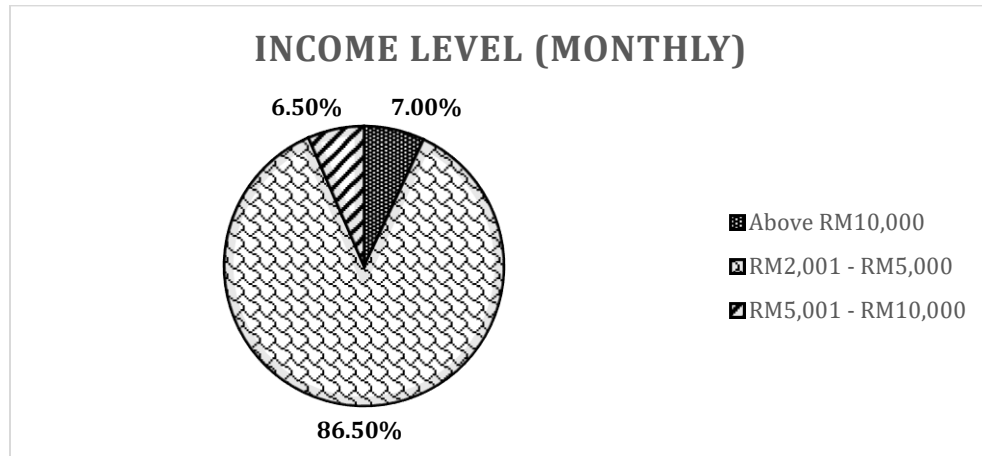


Source: Developed from SPSS system

According to Figure 4.3, it show the percentage of the respondents who responded to this research by completing the questionnaire based on their respective age groups. In reference to the above finding, this research contained respondents within five age groups. The 416 respondents include 195 were aged from 21 to 30 which makes up the highest population of respondents in the study study, with 175 respondents who are between the ages of 18 and 20 years of age making up the rest of the population (42.1%). The respondents between 41 to 50 years old were 23 in number (5.5%). Finally, ages between 31 to 40 years old had only a total of 12 respondents (2.9%) and the oldest of respondents at 60 and above years, only 11 respondents (2.6) of the total population.

4.1.1.4 Income Level (Monthly)

Figure 4.4 Income Level

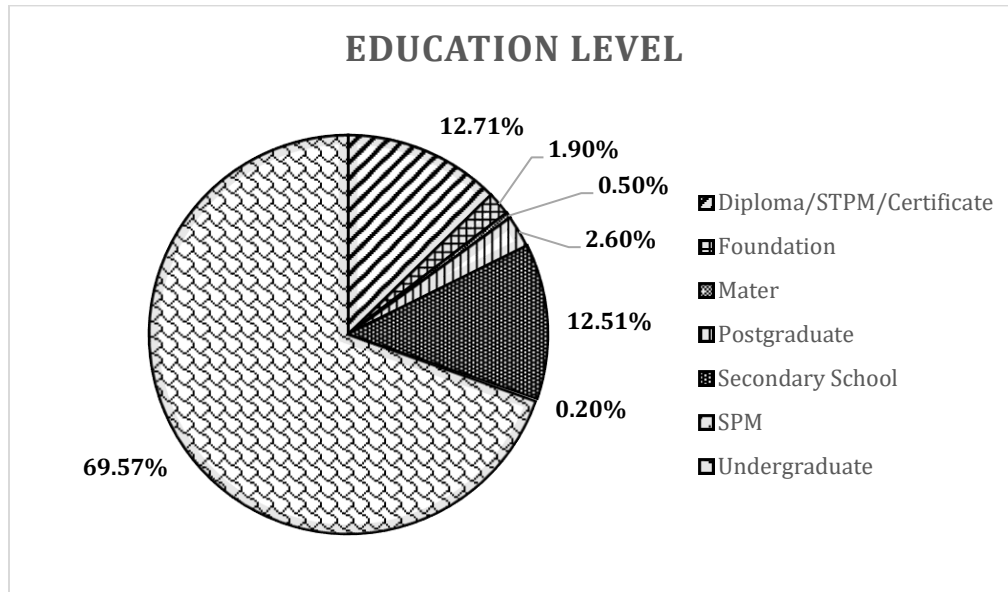


Source: Developed from SPSS system

In Figure 4.4, 360 respondents have monthly allowance or salary between RM2,001 to RM5,000 (86.5%), 29 respondents (7%) earn between above RM10,000 and 27 respondents (6.5%) earn between RM5,001 to RM10,000.

4.1.1.5 Education Level

Figure 4.5: Education Level



Source: Developed from SPSS system

The figure above illustrate the education level of the 416 respondents. A majority of the respondents, or rather 289 respondents (69.5) have an Undergraduate degree. It is followed by 53 respondents (12.7%) with Diploma/STPM/ Certificate and 52 respondents (12.5%) with Secondary School. Also, there are 11 respondents (2.6) with Postgraduate qualifications, 8 respondents (1.9) with Foundation level education and 2 respondents (0.5) with a master degree. And finally, 1 respondent (0.2) is qualified to have SPM.

4.1.2 Central Tendencies Measurement of Construct

That are only 401 responses are taken into consideration. This is because 15 responses from the participants who have not used the service of digital bank are excluded from the data, thus only relevant responses are taken into consideration.

4.1.2.1 Digital Bank Usage

Table 4.6 Central Tendencies Measurement of Digital Bank Usage

Question	Statement	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
DVQ1	I use digital bank to check my account balance.	4.17	0.857	3	7
DVQ2	I use digital bank to pay bills.	4.27	0.975	1	4
DVQ3	I use digital bank to invest.	3.65	1.197	7	1
DVQ4	I use digital bank to save.	4.26	0.959	2	6
DVQ5	I use digital bank to monitor spending.	4.05	1.037	5	3
DVQ6	I explore new features or services offered by digital banks as soon as they are launched.	3.86	1.075	6	2
DVQ7	I prefer using digital banks over visiting physical bank	4.17	0.964	3	5

The Impact of Financial Risk Awareness on Digital Bank Usage

	branches for most financial transactions.				
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Table 4.6 shows that the highest mean score is 4.27 and a standard deviation of 0.975 are registered in the DVQ2. This is closely preceded by DVQ4 that is mean 4.26 with a standard deviation of 0.959. Both DVQ1 and DVQ7 have the same mean of 4.17, but also their standard deviation varies at 0.857 and 0.964, respectively. DVQ5 has slightly low mean of 4.05 and a standard deviation of 1.037, whereby DVQ6 has mean of 3.86 with standard deviation of 1.075. Conversely DVQ3 has the lowest mean value of 3.65 and also the highest variability as represented by standard deviation 1.197.

4.1.2.2 Financial Risk Awareness

Table 4.7 Central Tendencies Measurement of Financial Risk Awareness

Question	Statement	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
IV1Q1	I am worried about becoming a victim of online fraud while using digital bank.	4.00	0.984	5	3
IV1Q2	Unauthorized access to my bank account would increase my risk exposure.	4.27	0.890	1	6

The Impact of Financial Risk Awareness on Digital Bank Usage

IV1Q3	I believe that relying on digital banks exposes me to higher cybersecurity risks.	4.01	0.931	4	5
IV1Q4	I have experienced suspicious transactions when using digital bank.	3.66	1.273	7	1
IV1Q5	Using digital bank increases my financial risk compared to traditional bank.	3.94	1.031	6	2
IV1Q6	I believe that poor customer service in digital banks may cause the fraud risk.	4.15	0.890	3	6
IV1Q7	I think that using public Wi-Fi to access digital banks increases my risk of being hacked.	4.21	0.947	2	4

Table 4.7 shows the results for financial risk awareness, where IV1Q2 records the highest mean of 4.27 and the lowest standard deviation of 0.89, indicating more consistent responses; this is followed by IV1Q7 with a mean of 4.21 and a standard deviation of 0.947, IV1Q6 with a mean of 4.15 and a standard deviation of 0.890, IV1Q3 with a mean of 4.01 and a standard deviation of 0.931, and IV1Q1 with a mean of 4.00 and a standard deviation of 0.984, while IV1Q5 shows a slightly lower

mean of 3.94 and a standard deviation of 1.031, and IV1Q4 records the lowest mean of 3.66 together with the highest standard deviation of 1.273, suggesting greater variation in responses.

4.1.2.3 Digital Financial Literacy

Table 4.8 Central Tendencies Measurement of Digital Financial Literacy

Question	Statement	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
IV2Q1	I can use digital bank features (e.g. savings goals, budgeting tools) effectively.	4.07	0.890	6	5
IV2Q2	I know how to verify whether a digital bank app is legitimate.	4.08	0.968	5	2
IV2Q3	I am familiar with basic online security practices (e.g. strong passwords, avoiding phishing).	4.20	0.874	2	7
IV2Q4	I can identify potential scams related to digital bank.	4.13	0.914	3	4

The Impact of Financial Risk Awareness on Digital Bank Usage

IV2Q5	I am confident in teaching others how to use digital bank services safely.	3.96	1.057	7	1
IV2Q6	I am able to recognize when a phone call is a scam pretending to be from a digital bank.	4.13	0.918	3	3
IV2Q7	I understand the importance of logging out after using a shared or public device to access digital bank.	4.22	0.886	1	6

Table 4.8 present the result for the variable, where IV2Q7 records the highest mean of 4.22 and the standard deviation of 0.886. A close second is followed by IV2Q3 that gives a mean of 4.20 and a standard deviation of 0.874. The mean of IV2Q4 and IV2Q6 are equal (4.13) and the standard deviations are 0.914 and 0.918 respectively. In the meantime, IV2Q2 and IV2Q1 have a mean score of 4.08 and 4.07 with standard deviation of 0.968 and 0.890 respectively. On the other hand, the mean of IV2Q5 is the lowest 3.96 and the standard deviation of 1.057, which indicates that all the responses to this question are more diverse than to the other ones.

4.1.2.4 Perceived Security and Privacy

Table 4.9 Central Tendencies Measurement of Perceived Security and Privacy

Question	Statement	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
IV3Q1	I believe digital bank platforms are secure.	4.04	0.909	5	6
IV3Q2	I trust digital banks to protect my personal and financial information.	4.08	0.928	4	4
IV3Q3	I feel confident to share my personal data on the digital bank platform.	3.85	1.047	7	2
IV3Q4	I trust that errors will not occur when I use digital bank.	3.86	1.104	6	1
IV3Q5	I avoid using digital bank when I am unsure about its safety.	4.16	0.913	3	5
IV3Q6	I feel safer using digital banks when they provide clear information about	4.17	0.940	1	3

The Impact of Financial Risk Awareness on Digital Bank Usage

	data protection measures.				
IV3Q7	I am concerned about hackers gaining access to my digital bank account.	4.17	0.895	1	7

Table 4.9 shows that IV3Q6 and IV3Q7 share the highest mean value (4.17) with standard deviations of 0.940 and 0.895, respectively. This is followed by IV3Q5 with a mean of 4.16 and standard deviation of 0.913. IV3Q2 records a mean of 4.08 with a standard deviation of 0.928, while IV3Q1 shows a mean of 4.04 and standard deviation of 0.909. Meanwhile, IV3Q4 and IV3Q3 have the lowest mean values of 3.86 and 3.85, with standard deviations of 1.104 and 1.047, respectively.

4.1.2.5 Peer or Social Influence

Table 4.10 Central Tendencies Measurement of Peer or Social Influence

Question	Statement	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
IV4Q1	I use digital bank because people around me are using it.	4.04	0.998	6	1
IV4Q2	I feel that my bank encourages the use of digital bank services.	4.16	0.932	1	5

The Impact of Financial Risk Awareness on Digital Bank Usage

IV4Q3	My decision to continue using digital bank is affected by feedback from others.	3.99	0.986	7	2
IV4Q4	I believe peer opinions affect my perception of digital bank security.	4.08	0.925	4	6
IV4Q5	Peer usage of digital bank increases my confidence in using it.	4.10	0.903	3	7
IV4Q6	I am more likely to try new digital bank features if recommended by friends or family.	4.13	0.952	2	3
IV4Q7	Social media reviews or discussions influence my trust in digital bank services.	4.07	0.940	5	4

The table 4.10 indicates that the means of IV4Q2 (4.16) have the highest standard deviation of 0.932. Then there is IV4Q6 which has a mean of 4.13 and a standard deviation of 0.952. The minimum standard deviation is IV4Q5 which has a mean equal to 4.10. At the same time, mean values of IV4Q4 and IV4Q7 are 4.08 and

4.07, with standard deviation of 0.925 and 0.940, respectively. The mean of IV4Q1 is 4.04, and the standard deviation is 0.998; the mean of IV4Q3 is the lowest (3.99) with 0.986 as the standard deviation.

4.2 Scale Measurement

In this research, SPSS software was used to carry out the statistical analysis. Our Cronbach's Alpha reliability test was performed to verify the internal consistency reliability of the dependent variable items of digital bank usage, with the independent variables, namely financial risk awareness, digital financial literacy, perceived security and privacy, as well as peer or social influence. In addition, multiple regression analysis was conducted to examine the relationship and the effect of the independent variables on digital bank usage. The analysis was based on data collected from 401 respondents.

4.2.1 Reliability Test

Table 4.11 Cronbach's Alpha Reliability Analysis

Variable	Name of Variable	Number of item	Cronbach' s Alpha	Results of reliability
Dependent Variable	Digital Bank Usage	7	0.888	Excellent
Independent Variable	Financial Risk Awareness	7	0.853	Excellent

The Impact of Financial Risk Awareness on Digital Bank Usage

Independent Variable	Digital Financial Literacy	7	0.900	Excellent
Independent Variable	Perceived Security and Privacy	7	0.886	Excellent
Independent Variable	Peer or Social Influence	7	0.909	Excellent

Variables (Independent Variables)	Cronbach's Alpha
Financial Risk Awareness, Digital Financial Literacy, Perceived Security and Privacy, Peer or Social Influence	0.969

Table 4.11 presents the Cronbach's Alpha values for each variable used in this study. The results indicate that all variables have Cronbach's Alpha values exceeding 0.80, indicating the reliability level is remarkable. Among the independent variables, financial risk awareness has a Cronbach's Alpha value of 0.853, digital financial literacy has 0.900, perceived security and privacy has 0.886, and peer or social influence records the highest value of 0.909. Meanwhile, the dependent variable, digital bank usage, has Cronbach's Alpha value of 0.888, which also demonstrates excellent reliability. In addition, the overall reliability test for the independent variables shows Cronbach's Alpha value of 0.969, demonstrating a very high level of internal consistency among the measurement items. Since all Cronbach's Alpha values exceed 0.60, all variables in this study are considered reliable and are therefore retained for further analysis in this research.

4.3 Preliminary Data Screening

Inferential analysis is conducted after the preliminary data analysis, which ensures the reliability of the study's findings. The preliminary analysis begins with tests for normality, followed by an assessment of multicollinearity.

4.3.1 Multicollinearity Test

Table 4.12 Tolerance Value and Variance Inflation Factor (VIF)

	Collinearity Statistics	
Independent variable	VIF	Tolerance
Financial Risk Awareness	2.509	0.399
Digital Financial Literacy	3.517	0.284
Perceived Security and Privacy	5.047	0.198
Peer or Social Influence	4.255	0.235

Multicollinearity is a phenomenon that is characterized where there are high correlations among the independent variables in a regression model and can create inaccurate estimates of the coefficients and complicate the process of interpreting the model (Murel & Kavlakoglu, 2023). Multicollinearity tests quantify the level of correlation among independent variables, their common strategies are the

variance inflation factor (VIF) and tolerance value to detect and overcome multicollinearity challenges (Murel & Kavlakoglu, 2023).

4.3.2 Normality Test

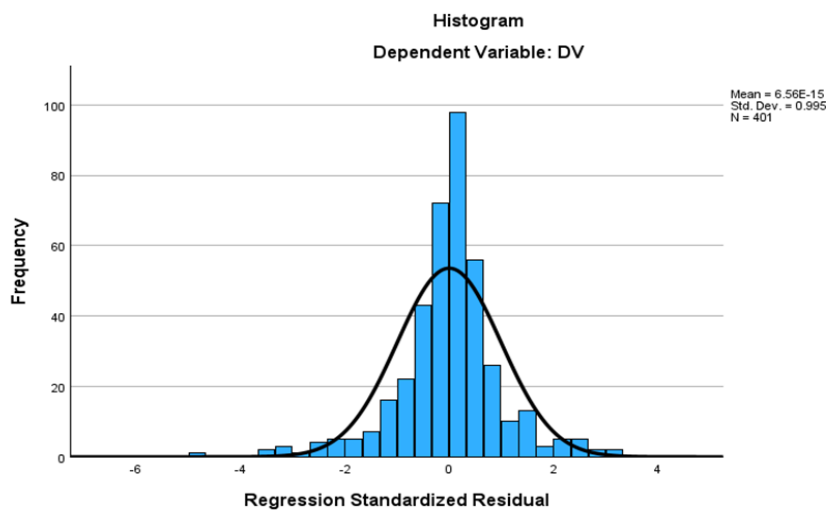
Upon ensuring that there is no multicollinearity, the data is then normalised to make sure it is normally distributed. The paper utilizes three approaches to data normalcy evaluation including skewness and kurtosis evaluation, histograms, and normal Q-Q plots.

Table 4.13 Normality Test Result

Variables	Skewness	Kurtosis
Dependent Variable: Digital Bank Usage	(1.480)	2.600
Independent Variable: Financial Risk Awareness	(1.145)	1.600
Independent Variable: Digital Financial Literacy	(1.377)	2.381
Independent Variable: Perceived Security and Privacy	(1.142)	1.765
Independent Variable: Peer or Social Influence	(1.137)	1.301

Graphs used to test the normality of the data are skew and kurtosis. By analyzing datasets that have sample sizes that are larger than 400, it is a safe assumption that the distribution is normal when the values of skewness and kurtosis are found in the given range (Demir, 2022). Table 4.14 shows that the skew values lie between -2 and +2. Peer or social influence displayed the highest skewness value at -1.137, while digital bank usage records the lowest at -1.480. The values of all the kurtosis are within acceptable range from -7 to +7. The maximum kurtosis value is 2.6, which belongs to Digital Bank Usage, and the minimum kurtosis value is 1.301 which belongs to peer or social influence. All the values of skewness are within the range from -2 to +2, but the values of kurtosis are -7 to +7. This implies that the data of all variables are normally distributed.

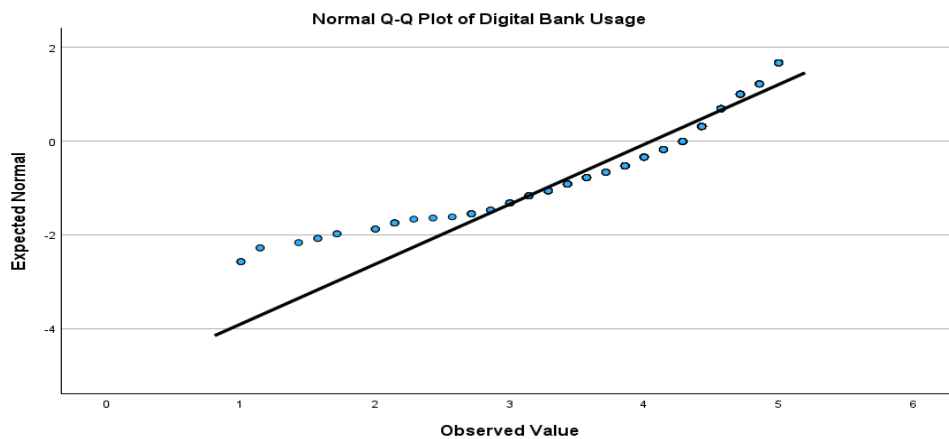
Figure 4.6. Histogram.



Secondly, histograms are illustrations that are used to indicate the distribution data dividing them into intervals, and the number of observations in the intervals. They are usually utilized to graphically determine the conformity of a dataset to a normal distribution (Analyse-it Software, 2023). Figure 4.6 shows the histogram of the dependent variable, which is the use of digital banks, and a normal distribution curve. According to the figure the majority of the responses are concentrated on the

centre with the few values at the extremities and the difference between the two values is symmetrical and bell shaped. Resting on this observation, the data on the digital bank usage can be viewed as abnormally distributed, hence, meeting one of the most important assumptions of the regression analysis.

Figure 4.7 Normal Q-Q Plot.



Thirdly, we have a quantile-quantile plot which used to compare the quantiles of a sample data with quantiles of a normal distribution. It is one of the tools that are commonly used to determine the normality of data (Zach, 2021). The fundamental premise is that in case the data are distributed normally, the points plotted will be along a straight line. The points which are closer to this line are the closer to a normal distribution are the data (Analyse-it Software, 2023). Figure 4.7 demonstrates that the majority of the data points show as above are located near the plot of diagonal line in a linear trend, which means that the dataset is practically normally distributed.

4.4 Inferential Analysis

4.4.1 Multiple Regression Analysis

Table 4.4.1 Multiple Regression Analysis. Dependent Variable: Digital Bank Usage

Model	Unstandardized Coefficients		Standardised Coefficients	T- statistics
	Beta	Std. Error	Beta	
1 (Constant)	0.064	0.124		0.518
Financial Risk Awareness (IV1)	0.103	0.044	0.096	2.342
Digital Financial Literacy (IV2)	0.471	0.051	0.442	9.152
Perceived Security and Privacy (IV3)	0.222	0.061	0.211	3.645
Peer or Social Influence (IV4)	0.183	0.055	0.178	3.342

R-squared	0.737
Adjusted R-squared	0.734
F-test	277.402

This analyzes how the use of digital banks is correlated with the four independent variables, including financial risk awareness, digital financial literacy, perceived security and privacy and peer or social influence. Table 4.4.1 presents the results and demonstrates the significance of the awareness to financial risk, digital financial literacy, perceived security and privacy. Because of this, p-value is equivalent to less than 0.10 and t-statistics is equivalent to 2.342, 9.152, 3.645, and 3.342 respectively.

The multiple regression results indicate that awareness to financial risk is significant with a 99 percent degree of confidence because the p-value is less than the 0.001 significance threshold. The result provides evidence supporting the hypothesis that there is a strong relationship exists between the awareness to and the interaction with the digital bank and the awareness to the financial risk. Further, the findings show that financial risk awareness has a positive effect on digital bank usage, where a one-unit increase in financial risk awareness increases digital bank usage by 0.103 units, all else being equal.

Moreover, digital financial literacy is also considered to be extremely important with a 99% degree of confidence with a p-value of below 0.001. The outcome confirms that digital financial literacy is a strong predictor of digital bank usage. The unstandardized regression coefficient stands at 0.471 which is a positive relationship linking digital financial literacy and using digital bank. This implies that an increase in digital financial literacy by a unit will increase digitally using the banks by 0.471 units, other things being equal.

Besides that the perceived security and privacy is statistically significant at the 99 percent range since the p-value does not exceed 0.001, which is lower than the 0.01 significance threshold. This result implies that the perceived security and privacy affect the usage of the digital bank greatly. A positive, although not standardized, value of 0.222 as a regression coefficient indicates that the positive effect of increasing the perceived security and privacy by one unit is to increase the use of the digital bank by 0.222 other factors held constant.

Moving on the same note, peer or social influence also ranks, but with the level of confidence at 99% and the p-value below 0.001. This finding supports the hypothesis that the peer or social influence is an important factor in determining the use of digital banks. The regression coefficient is not standardized and it equals 0.183 meaning a positive correlation. It implies that an increase in the peer or social influence by a unit result in an increase in usage of the digital bank by 0.183 units, other things being constant.

R-squared is a statistical measure that reflects how well the independent variables explain changes in the dependent variable. In the present study, the R-squared is 0.737 implying that financial risk awareness, digital financial literacy, perceived security and privacy, and peer or social influence explain 73.7 percent of the change in the use of digital banks. The 26.3 percent difference in the use of digital banks can be explained by other factors not considered in this study.

The amount of predictors used within the regression model is 4 and the adjusted R-squared is 0.734 indicating 73.4 percent of the difference in the usage of the digital banks can be explained by the four independent variables.

Secondly, regression model value is statistically significant at 99% level of confidence. This is backed by an F-statistic of 277.402 at a p-value of less than 0.01 within which a model is judged significant. So, a positive result on the regression model indicates that the awareness to financial risk, digital financial literacy, perceived security and privacy, and peer or social influence are the independent

variables that are strongly correlated with the digital bank usage.

4.5 Conclusion

The analysis of 401 digital bank users found that digital bank usage is affected by financial risk awareness, digital financial literacy, security and privacy, and peer influence. Of these factors, digital financial literacy has the highest effect on digital bank usage, followed by security and privacy, peer influence, and financial risk awareness. The tests for reliability found that the variables are consistent. Normality and multicollinearity conditions are also met, as confirmed earlier statistical tests. The regression equation accounted for 73.7% of digital bank usage. This study found that digital financial literacy, security and privacy, and peer influence are significant factors in digital bank and should be used as strategies to promote digital bank.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.0 Introduction

This chapter provides both discussion and conclusion of the research findings in view based on the results of the statistical analysis which were presented in Chapter 4. This chapter will provide a synopsis of the findings of the statistical analysis as well as the discussion of the key findings based on the research objectives and hypotheses. Besides this, this chapter has the managerial implications of our research, limitation of our research, future research recommendations and lastly, the conclusion of the research.

5.1 Summary of Statistical Analysis

Table 5.1 Summary of the Statistical Finding (Independent Variable)

Independent Variable	T-value	Coefficient	P-value	Result
Financial Risk Awareness (IV1)	2.342	0.103	0.020	Significant
Digital Financial Literacy (IV2)	9.152	0.471	<0.001	Significant
Perceived Security and Privacy (IV3)	3.645	0.222	<0.001	Significant
Peer or Social Influence (IV4)	3.342	0.183	<0.001	Significant

The target population to use in this study will be Malaysian citizens of age 18 years and above. According to the statistical results, provided in Table 5.1, Financial Risk Awareness, Digital Financial literacy, Perceived security and privacy, and Peer or Social Influence are found to be significantly related to Digital Bank Usage. In the findings, these independent variables are relevant variables that determine the degree of digital bank usage.

On the whole, the results indicate that the consumption of digital banking services is largely influenced by the possession of financial knowledge-related knowledge, attitude to security issues, awareness to financial risk, and social aspects. The results have significance in offering the understanding of the determinants that are critical in the adoption of the digital banking service.

5.2 Discussion on Major Findings

This study intends to analyze what has led to Digital Bank Usage in Malaysia. In this section, the main findings of the study are described.

5.2.1 Financial Risk Awareness and Digital Bank Usage

H1: Financial risk awareness significantly affects digital bank usage.

From the results obtained from the study conducted, it can be seen that there is a significant relationship between financial risk awareness and digital bank utilization in Malaysia, since the coefficient and p-value of 0.103 and 0.020 respectively are below 0.05. Thus, the alternate hypothesis is supported. These results are aligned with earlier research stating that consumer awareness of financial risks may affect their behavior in digital finance. According to Lee and Kim (2021), when people are aware of the potential cybersecurity risks, phishing, and online scams, they tend to practice more secure behaviors on the internet, resulting in greater utilization of digital bank. Also, according to Nguyen et al. (2022), financial risk awareness promotes secure bank practices by individuals.

This is an indication of the applicability of the theory of Risk Perception Theory, showing that the perception of risk could affect usage adoption behavior. In this instance, when people know about the risks involved in financial dealings, it does not discourage them from adopting the system but makes them use the system with greater confidence. On the other hand, it enhances their knowledge base and confidence levels, thus giving them control over the risks involved and making them adopt digital bank usage. This is despite the risks involved in financial transactions; knowledge makes them manage the risks effectively.

5.2.2 Digital Financial Literacy and Digital Bank Usage

H2: Digital financial literacy significantly affects digital bank usage.

Chapter 4 result shows that digital financial literacy and digital bank usage in Malaysia have a high correlation because the p-value (0.001) is less than 0.05. The value of the coefficient (0.471) implies the presence of the positive relationship between the digital financial literacy and the use of a digital bank. Therefore, in the present study the other hypothesis is identified. Digital financial literacy refers to an individual who has the ability to understand and use digital financial services correctly. Economists and people who have a better idea about money and digital users are more confident in their capabilities to utilize digital banking services, control the online transactions as well as recognize potential risks, thereby triggering the development of online banking services.

5.2.3 Perceived Security and Privacy and Digital Bank Usage

H3: Perceived security and privacy significantly affects digital bank usage.

This research showed that the relationship between perceived security and privacy and the use of digital banks in Malaysia has a positive interrelation, but this relationship is statistically insignificant since the value of the coefficient of 0.222 falls below the 0.05 p-value. In this way, the alternative hypothesis is also identified. Security and privacy issues have a significant role in affecting consumer confidence in online financial services. When consumers think that their financial information is safe and cannot be stolen by malicious individuals, they will be willing to utilize online banking services, and financial institutions may boost this trust by adding cutting-edge security systems, which can include encryptions, biometric authentication, and fraud detection solutions.

5.2.4 Peer or Social Influence and Digital Bank Usage

H4: Peer or social influence significantly affects digital bank usage.

The result of Chapter 4 demonstrates that peer or social influence is significantly related to digital bank usage in Malaysia due to the p-value (<0.001) is smaller than 0.05. The value of the coefficient of 0.183 shows that peer or social influence has a positive relation with digital bank usage. Thus, alternative hypothesis is considered in this study. Friends, family members, colleagues, or online communities can pressure the individual to embrace the concept of digital banking services. When individuals see members of their social circle using digital bank, they will tend to adopt the trend and use the technology themselves.

5.3 Implications of the Study

The findings of this study provide several important implications for financial institutions, digital banking service providers, and policymakers. These implications can help improve the adoption and safe usage of digital banking services among consumers.

5.3.1 Policy Implication

According to the Chapter 4 analysis result, we determine all independent variables have a significant influence on digital bank usage among Malaysians. To encourage more digital bank usage, digital bank should focus on improving digital financial literacy among consumers. Educational programs, financial awareness campaigns, and training initiatives can help consumers better understand digital financial services and develop the necessary skills to use digital bank platforms effectively. By increasing consumers' knowledge of digital financial tools and online

transaction processes, users may become more confident and comfortable when performing digital banking service activities.

Second, the government plays an important role in strengthening cybersecurity protection in the digital bank environment. Policymakers should introduce and enhance policies and regulations that focus on improving cybersecurity systems and ensuring the protection of users' personal and financial information. Strong regulatory frameworks, data protection laws, and stricter cybersecurity standards can help reduce the risks of online fraud, hacking, and financial scams. These measures will help increase public trust in digital bank systems and create a safer digital financial ecosystem.

Third, digital bank should actively promote digital banking services through social engagement and positive customer experiences. Marketing strategies, customer education programs, and user-friendly digital platforms can help improve customer satisfaction. Encouraging satisfied customers to share their experiences and recommendations with others may also influence potential users to adopt digital banking services, as peer or social influence plays an important role in technology adoption.

5.3.2 Theoretical Implications

This study contributes to the existing literature as it aims to combine Risk Perception Theory and the Technology Acceptance Model (TAM) towards the better understanding of digital bank usage.

Firstly, the findings of the study have confirmed the Risk Perception Theory, which states that the behaviour of the user is affected more by the perceived risk than the real risk. It implies that the subjective judgment of the individual plays a vital role in the usage of digital bank.

Secondly, this study extends the use of the TAM model by considering additional variables, such as perceived security and privacy, social factors, and digital financial literacy, in explaining consumers' intentions to use technology. The study shows that, in addition to perceived usefulness and usability, consumers' intentions to use technology are influenced by trust factors and social factors as well.

Moreover, the addition of digital financial literacy adds further theoretical depth to the discussion by highlighting user capabilities. It demonstrates that those who are more knowledgeable and skilled are more confident in using digital bank.

Overall, this study provides a more complete framework by using technological, behavioural, and social approaches, which can create a better understanding of digital bank adoption.

5.4 Limitations of Study

Even though there are many aspects in which this research is important and relevant, certain limitations must be addressed. The first limitation associated with this study is that of an unbalanced representation in terms of demographics of the survey respondents. Most of the sample group belongs to younger generation, specifically those who are in the range of 18-30 years old. It is possible that the results would be more skewed towards the youth.

The method of sampling applied during this research can influence the generalizability of the findings obtained. This is because the information has been collected among a certain population of the respondents, which mainly involves young people who have better familiarity with the use of digital bank. Besides, the fact that the respondents were users of the services makes it difficult for generalization of the results to other non-users of the digital banking services.

5.5 Recommendations for Future Research

Future research may expand this study by incorporating other variables that may affect digital bank usage. These variables include trust, perceived usefulness, user experience, perceived ease of use, and service quality. This may help provide a deeper understanding of the determinants that affect digital bank usage by consumers. This study may be expanded by incorporating other variables that may affect digital bank usage. This will help provide a deeper understanding of the determinants that affect digital bank usage by consumers.

Researchers can also explore the option of increasing the number of samples to obtain more comprehensive insights into the digital bank system adoption phenomenon. The inclusion of a wide range of samples from different demographic groups can aid the research.

Moreover, future studies can also adopt qualitative data collection methods like interviews, focus group discussions, or case studies to explore the issue of consumer perception or attitude towards digital bank. The above data collection methods can be used to explore the issue of consumer perception or attitude towards digital bank.

5.6 Conclusion

This study aimed to identify the factors that affect digital bank usage among consumers. The study's findings show that financial risk awareness, digital financial literacy, perceived security and privacy, and peer or social influence are all major factors that affect digital bank usage among consumers. The study's findings suggest that several factors are major contributors to digital bank usage among consumers.

Among these four variables, digital financial literacy was found to have the highest impact on digital bank usage. This emphasizes the need for consumers to be

financially literate in order to be confident in using digital banking services. When consumers are financially literate in terms of digital financial tools and financial management through digital media, they are likely to use digital banking services in their daily lives.

In conclusion, the results of the current research contribute to a deeper understanding of the essential factors that affect the adoption of digital banking services. The results of the current research also offer useful insights for financial institutions, policymakers, and digital banking services providers to formulate strategies for promoting the safe, efficient, and widespread adoption of digital banking services among consumers.

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Appendix

Appendix 1: 4.1.1.1 Do you currently use digital bank?

Table 4.1: Do you currently use digital bank

	Frequency	Percentage(%)	Cumulative Frequency
No	15	3.6	15
Yes	401	96.4	416

Source: Developed from SPSS system

Appendix 2: 4.1.1.2 Gender

Table 4.2: Gender

Gender	Frequency	Percentage(%)	Cumulative Frequency
Female	282	67.8	282
Male	134	32.2	416

Source: Developed from SPSS system

Appendix 3: 4.1.1.3 Age

Table 4.3: Age

Age	Frequency	Percentage(%)	Cumulative Frequency
18 – 20 years old	175	42.1	175
21 – 30 years old	195	46.9	370
31 – 40 years old	12	2.9	382
41 – 50 years old	23	5.5	405
Above 60	11	2.6	416

Source: Developed from SPSS system

Appendix 4: 4.1.1.4 Income Level (Monthly)

Table 4.4: Income Level

Income Level	Frequency	Percentage(%)	Cumulative Frequency
Above RM10,000	29	7.0	29
RM2,001- RM5,000	360	86.5	389
RM5,001- RM10,000	27	6.5	416

Source: Developed from SPSS system

Appendix 5: 4.1.1.5 Education level

Table 4.5: Education Level

Education Level	Frequency	Percentage(%)	Cumulative Frequency
Diploma/STPM/Certificate	53	12.7	53
Foundation	8	1.9	61
Master	2	0.5	63
Postgraduate	11	2.6	74
Secondary School	52	12.5	126

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SPM	1	0.2	127
Undergraduate	289	69.5	416

Source: Developed from SPSS system