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The Impact of Digital Banking Services on Customer Satisfaction: Evidence from Malaysia

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Abstract

This study examined the impact of digital banking services on customer satisfaction within the Malaysian banking sector. As digital platforms become increasingly integral to financial service delivery, understanding the factors that influence customer satisfaction is essential for banks seeking to enhance customer experience and maintain competitiveness. Drawing upon the Technology Acceptance Model (TAM), the study investigated five key determinants of customer satisfaction: perceived ease of use, perceived usefulness, perceived risk, brand trust, and digital banking trends. A quantitative research approach was adopted, with data collected from 299 digital banking users in the Klang Valley through a structured bilingual questionnaire. Statistical analyses, including reliability, correlation, and multiple regression analyses, revealed that perceived ease of use, brand trust, and digital banking trends significantly influence customer satisfaction. In contrast, perceived usefulness and perceived risk were not found to have a significant effect. Among the variables examined, perceived ease of use emerged as the most influential determinant of customer satisfaction. The findings provide valuable insights for banking institutions and policymakers seeking to strengthen digital banking services and enhance customer engagement. By identifying the factors that most strongly influence customer satisfaction, the study contributes to a deeper understanding of customer behaviour in digital banking and supports the development of more customer-centric digital strategies within Malaysia's evolving financial landscape.

Keywords: *Digital banking; Customer satisfaction; Ease of use; Brand trust; Malaysia; TAM; Banking innovation*

INTRODUCTION

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One major shift reshaping the banking landscape is the rise of digital banking, which has become an essential component of modern financial services. In Malaysia, an increasing number of consumers are using mobile applications and online platforms for their daily banking activities, making financial transactions faster, more convenient, and more accessible than ever before. Digital banking enables users to manage their finances anytime and anywhere. However, despite its rapid adoption, some customers remain hesitant due to concerns arising from previous experiences and perceived security risks. This highlights the importance of understanding customer expectations to foster trust and satisfaction. While existing literature acknowledges the growing importance of digital banking, there remains a gap in understanding its impact on customer satisfaction within the Malaysian banking context. Therefore, this study examines the influence of digital banking services on customer satisfaction, providing insights that can assist banks in enhancing customer experiences and developing long-term, value-driven relationships in an increasingly digital environment.

The rapid advancement of financial technologies (FinTech), artificial intelligence (AI), cloud computing, and mobile ecosystems has fundamentally transformed the global banking sector. Customers increasingly expect seamless, personalized, and real-time banking experiences across multiple digital channels. According to the World Bank (2024), digital financial services have become a critical mechanism for promoting financial inclusion, improving transaction efficiency, and supporting economic resilience. In Malaysia, the acceleration of digital transformation has been driven by the widespread adoption of mobile banking applications, e-wallets, QR payment systems, and the introduction of digital banking licences by Bank Negara Malaysia. These developments have intensified competition among financial institutions, making customer satisfaction a key strategic objective for sustaining customer loyalty and long-term profitability.

Furthermore, contemporary banking customers are no longer concerned solely with transactional efficiency. They increasingly evaluate digital banking platforms based on security, privacy protection, personalization, convenience, and overall user experience (Deloitte, 2024). As cyber threats and data breaches continue to increase globally, customer trust has emerged as a critical determinant of digital banking adoption and satisfaction. Consequently, banks must continuously enhance their digital capabilities while ensuring robust cybersecurity measures and customer-centric service delivery. Understanding the factors that influence customer satisfaction in digital banking is therefore essential for both practitioners and policymakers seeking to strengthen Malaysia's digital financial ecosystem.

Digitalization is rapidly transforming the Malaysian banking industry, driven by increasing demand for convenience, security, and instant financial services. The adoption of digital banking has expanded significantly and continues to play an increasingly important role in consumers' financial activities. As illustrated in Figure 1,

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the Statista Research Department (2024) reported that mobile banking transactions in Malaysia increased from 1.67 billion in 2022 to more than 2 billion in 2023, reflecting a strong upward trend. Similarly, the Malaysia Fintech Report (2023) revealed that the number of e-payment transactions increased by 31.5%, rising from 7.2 billion to 9.5 billion transactions within a year. This growth reflects the increasing integration of digital financial services into consumers' daily lives (see Figure 2). These trends demonstrate that Malaysian consumers are increasingly embracing digital banking channels and that the digital banking experience has become a critical determinant of customer satisfaction. Consequently, there is a need to further investigate the relationship between digital banking service attributes and customer satisfaction within the Malaysian banking sector.

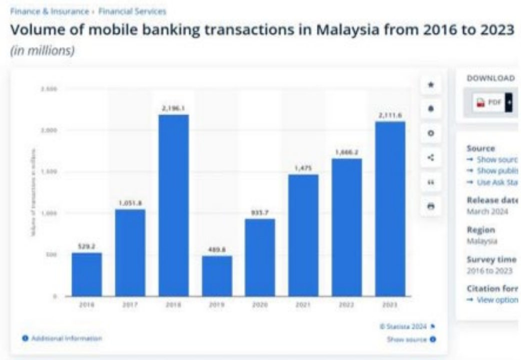

Figure 1: Volume of Mobile Banking Transactions in Malaysia from year 2016 to 2023

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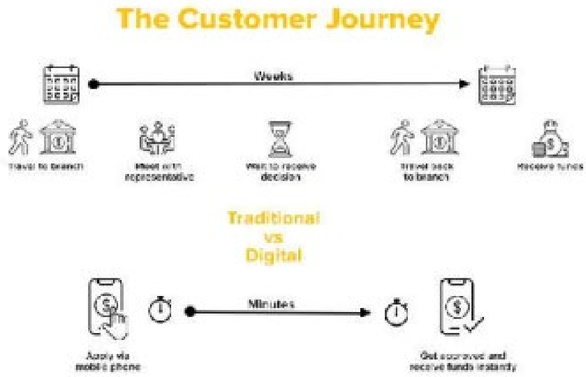

Figure 2: Digital Transformation in Banking: Opportunities and Challenges

Although the adoption of digital banking continues to increase, limited attention has been given to the emotional and brand-related factors that influence customer satisfaction, particularly within the Malaysian context. Brand trust, defined as customers' confidence in the security, reliability, and integrity of digital banking services, has become increasingly important in an environment where cybersecurity threats and data privacy concerns remain prevalent. Without sufficient trust, even technologically advanced digital banking platforms may struggle to achieve high levels of customer satisfaction. At the same time, emerging digital banking trends, such as real-time transactions, personalized services, and seamless mobile experiences, are continuously reshaping customer expectations. Despite their growing importance, the influence of these trends on customer satisfaction remains underexplored in the existing literature. Therefore, this study examines the effects of perceived ease of use, perceived usefulness, perceived risk, brand trust, and digital banking trends on customer satisfaction among digital banking users in Malaysia. In addition, the study seeks to identify the most influential factor affecting customer satisfaction in the Malaysian digital banking environment.

LITERATURE REVIEW

Digital Banking

Digital banking refers to the use of digital technologies to transform traditional banking services, making them more accessible, efficient, and cost-effective (Butt et al.,

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2021). Importantly, digital banking extends financial services to previously underserved and unbanked populations, thereby promoting financial inclusion on a global scale. This transformation not only enhances the reach and effectiveness of banking institutions but also contributes to economic growth by providing individuals and businesses with easier access to financial products and services.

Growth of Digital Banking

According to the Malaysia Fintech Report (2023), the number of e-payment transactions increased by 31.5%, rising from 7.2 billion to 9.5 billion transactions within a year, reflecting the growing integration of digital financial services into everyday life (see Figure 3). This trend indicates that Malaysian consumers are increasingly adopting digital banking channels, making the digital banking experience an important determinant of customer satisfaction. The continued growth of digital banking presents an opportunity to further investigate the relationship between digital banking service attributes and customer satisfaction within the Malaysian banking sector.

Recent developments also indicate that Malaysia is among the leading countries in Southeast Asia in terms of digital payment and mobile banking adoption. Bank Negara Malaysia (2024) reported sustained growth in electronic payment transactions, driven by the increasing use of DuitNow, online banking platforms, and contactless payment technologies. The growing acceptance of digital banking services reflects consumers' preference for faster, more convenient, and easily accessible financial solutions. Furthermore, the introduction of licensed digital banks is expected to accelerate innovation and enhance financial inclusion, particularly among underserved communities and small businesses. These developments suggest that customer expectations regarding service quality, accessibility, and technological sophistication will continue to evolve, making customer satisfaction an increasingly important area of academic and practical interest.

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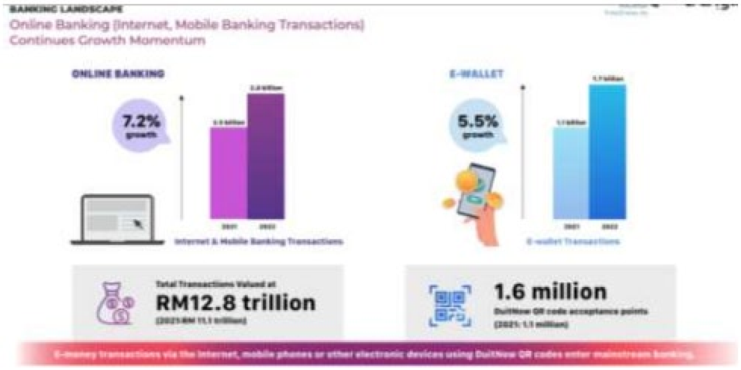

Figure 3: Online Banking (Internet, Mobile Banking Transactions) continues Growth Momentum, Malaysia Fintech Report 2023

Perceived Ease of Use

Perceived ease of use has consistently been identified as an important determinant of customer satisfaction in digital banking. Razak et al. (2024) found that ease of use, together with efficiency and responsiveness, significantly influences customer satisfaction, as user-friendly and seamless platforms encourage greater engagement. Similarly, Omar Ali et al. (2020), drawing on the Technology Acceptance Model (TAM), reported that perceived ease of use not only strengthens customer trust in digital banking services but also promotes continued usage. These findings suggest that digital banking platforms that are simple to navigate and operate are more likely to enhance customer satisfaction and foster long-term customer loyalty.

Perceived ease of use remains one of the most consistently validated predictors of digital banking adoption and customer satisfaction. According to Davis (1989), users are more likely to accept and continue using a technology when it requires minimal effort to operate. More recently, Alalwan et al. (2023) reported that user-friendly interfaces significantly enhance customer engagement and satisfaction in digital banking platforms. Likewise, Sharma and Kansal (2024) found that intuitive navigation, simplified transaction processes, and responsive mobile applications positively influence customers' perceptions of service quality. Similar findings were reported by Lin et al. (2024), who concluded that ease of use directly affects both customer trust and satisfaction. Furthermore, Suryanto et al. (2024) demonstrated that banking applications with clear layouts and simplified functionalities improve customer experiences and

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increase continuance intention. These findings collectively suggest that ease of use remains a critical determinant of customer satisfaction in digital banking environments.

Perceived Usefulness

Perceived usefulness plays an important role in shaping customer acceptance and satisfaction with digital banking services. Customers are more likely to adopt and continue using digital banking when they perceive it as beneficial in managing their financial activities efficiently. Hussain et al. (2021) reported that features such as convenient fund transfers and bill payment services enhance users' perceptions of usefulness. Similarly, Mohamad et al. (2023) found that perceived usefulness positively influences customer attitudes and satisfaction, suggesting that digital banking services that provide practical value and improve financial management are more likely to meet customer expectations and encourage continued usage.

Perceived usefulness refers to the extent to which customers believe that digital banking services enhance the effectiveness and efficiency of their financial activities. Previous studies have consistently demonstrated a positive relationship between perceived usefulness and customer satisfaction. Venkatesh and Davis (2000) argued that users are more likely to adopt technologies that provide tangible benefits in accomplishing daily tasks. In the banking context, Sharma and Singh (2024) found that digital banking customers value services that reduce transaction time and provide greater convenience. Similarly, Nguyen et al. (2024) reported that customers who perceive digital banking services as useful exhibit stronger satisfaction and loyalty intentions. Alalwan et al. (2023) further emphasized that usefulness significantly contributes to positive customer experiences and long-term usage behaviour. Consequently, digital banking platforms that offer meaningful value to customers are more likely to achieve higher levels of customer satisfaction.

Perceived Risk

Perceived risk remains an important factor influencing customer attitudes and satisfaction toward digital banking services. Despite the convenience, accessibility, and efficiency offered by digital platforms, concerns related to cybersecurity, privacy protection, identity theft, and unauthorized transactions continue to shape customer perceptions. Ghani et al. (2022) highlighted that security-related concerns may discourage customers from fully adopting digital banking services, thereby negatively

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affecting their overall satisfaction. Similarly, Mohamad et al. (2023) found that fears of online fraud, data breaches, and the misuse of personal information can diminish customer confidence and overshadow the perceived benefits of digital banking. As digital financial transactions become increasingly embedded in everyday life, customers place greater emphasis on the security and reliability of banking platforms. Consequently, banks that demonstrate strong security measures, transparent data protection practices, and effective risk management strategies are more likely to enhance customer trust and satisfaction. These findings suggest that reducing perceived risk is not only essential for encouraging technology adoption but also for sustaining long-term customer satisfaction and loyalty in digital banking environments.

Despite the convenience offered by digital banking, perceived risk remains a significant concern among customers. Perceived risk generally encompasses concerns regarding privacy, financial losses, cybersecurity threats, and unauthorized access to personal information. Featherman and Pavlou (2003) identified perceived risk as a major inhibitor of electronic service adoption. Recent studies continue to support this position. Khan et al. (2024) found that concerns about cybercrime and identity theft negatively influence customer satisfaction and trust in digital banking systems. Likewise, Li and Wang (2024) reported that customers with higher security concerns tend to exhibit lower satisfaction levels despite recognizing the usefulness of digital banking services. Similar findings were observed by Rehman et al. (2023), who concluded that privacy concerns significantly affect customer confidence in digital financial platforms. Therefore, reducing perceived risk through effective security measures is essential for enhancing customer satisfaction.

Brand Trust

Brand trust plays a crucial role in shaping customer satisfaction in digital banking. Hussain and Aziz (2021) found that customers who trust their bank's brand are more likely to remain satisfied and loyal, even when minor service issues arise, as trust enhances confidence in the use of digital banking services. Similarly, Mohamad et al. (2023) reported that strong brand trust can mitigate the negative effects of technical disruptions, with customers demonstrating greater tolerance toward service shortcomings when they perceive their bank as reliable, dependable, and committed to meeting their needs. These findings highlight the importance of brand trust in strengthening customer satisfaction and fostering long-term customer relationships in digital banking environments.

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Trust has become increasingly important in digital banking because customers interact with financial institutions primarily through virtual channels. According to Morgan and Hunt (1994), trust serves as a fundamental element in maintaining long-term relationships between organizations and customers. In digital banking settings, trust reduces uncertainty and enhances users' willingness to engage with online services. Al-Hawari et al. (2024) found that trust significantly strengthens customer satisfaction and loyalty towards digital banking platforms. Similarly, Chen and Huang (2024) demonstrated that trust mediates the relationship between service quality and customer satisfaction. Furthermore, Sitorus et al. (2023) reported that trustworthy banking brands are more likely to retain customers despite occasional service disruptions. These findings indicate that brand trust is a crucial predictor of customer satisfaction in digital banking environments.

Trend on Digital Banking

Digital banking trends have become increasingly important in shaping customer satisfaction within the banking sector. Mohamad et al. (2023) found that features such as personalized dashboards, real-time alerts, and instant fund transfers are now considered standard expectations, providing customers with greater convenience, control, and satisfaction. Similarly, Hussain and Aziz (2021) reported that innovative features such as biometric authentication and QR payment systems influence customers' perceptions of their banks, with institutions that adopt these technologies being viewed as more customer-oriented and innovative.

The rapid advancement of digital technologies continues to reshape customer expectations and experiences in banking. Emerging innovations such as artificial intelligence, biometric authentication, blockchain, machine learning, and open banking have transformed the way customers interact with financial institutions. According to McKinsey & Company (2024), customers increasingly expect personalized, real-time, and seamless banking experiences across multiple channels. Similarly, Accenture (2024) reported that financial institutions that embrace advanced digital innovations tend to achieve higher levels of customer engagement and satisfaction. Alalwan et al. (2023) further argued that technologically advanced banks are often perceived as more responsive to customer needs, while Deloitte (2024) highlighted that AI-driven personalization and predictive financial services have become important differentiators in enhancing customer satisfaction. Collectively, these findings suggest that the ability

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to adapt to evolving digital banking trends is essential for maintaining customer satisfaction and sustaining competitive advantage in the banking industry.

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), introduced by Davis (1989), is one of the most widely used theoretical frameworks for understanding technology adoption and usage behaviour. The model is built upon two key constructs: Perceived Ease of Use (PEOU) and Perceived Usefulness (PU). Perceived ease of use refers to the degree to which an individual believes that using a particular system requires minimal effort, while perceived usefulness refers to the extent to which an individual believes that using the system enhances task performance. In the context of digital banking, these constructs are fundamental in shaping customers' perceptions, acceptance, and evaluation of digital banking services.

Within the Malaysian context, Mohd Shafie Rosli et al. (2022) conducted a comprehensive review of TAM applications across various sectors and confirmed its widespread use in banking research. Their findings suggest that although PU and PEOU remain the core determinants of technology acceptance, the inclusion of external variables such as trust, enjoyment, and perceived risk enhances the explanatory power of the model, particularly in contemporary digital environments. In digital banking settings, these additional factors provide a more comprehensive understanding of how customers cognitively and emotionally engage with technology, influencing not only adoption intentions but also overall satisfaction with digital banking services.

Since its introduction by Davis (1989), TAM has become one of the most widely applied theories for understanding technology adoption behaviour. The model posits that perceived usefulness and perceived ease of use are the primary determinants influencing an individual's intention to adopt and use technology. Numerous studies have validated TAM within banking and financial technology contexts (Venkatesh & Davis, 2000; Venkatesh et al., 2003; Alalwan et al., 2023). However, contemporary digital banking environments involve additional considerations such as trust, security, privacy concerns, and technological innovation. Consequently, recent researchers have extended TAM by incorporating external variables including perceived risk, trust, service quality, and customer experience (Sharma & Singh, 2024; Nguyen et al., 2024). These extensions provide a more comprehensive understanding of customer satisfaction and technology acceptance within modern digital banking ecosystems.

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Conceptual Framework

The conceptual framework of this study provides a systematic representation of the relationships between key digital banking service attributes and customer satisfaction. The framework proposes that customer satisfaction is influenced by five independent variables: perceived ease of use, perceived usefulness, perceived risk, brand trust, and digital banking trends. These variables were selected based on the Technology Acceptance Model (TAM) and evidence from previous studies highlighting their importance in shaping customers' perceptions and experiences of digital banking services. Collectively, the framework offers a comprehensive approach to understanding the factors that influence customer satisfaction in the Malaysian digital banking environment.

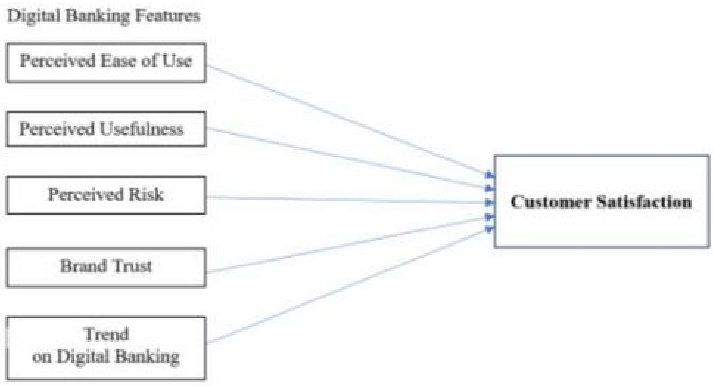

Figure 4: Conceptual Framework of the study adopted from Mbama et al, 2018

Hypothesis

H1: Perceived ease of use of digital banking services in Malaysian banks significantly influences customer satisfaction.

Perceived ease of use plays a pivotal role in shaping how customers interact with and evaluate digital banking platforms. Lim et al. (2023) found that customers are generally more satisfied when digital banking services are intuitive and user-friendly. Similarly, Lin et al. (2024) reported that ease of use is one of the most influential determinants of customer satisfaction, alongside reliability and security. These findings

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suggest that simplicity and efficiency in digital banking design positively influence customer satisfaction in the Malaysian banking sector.

H2: Perceived usefulness of digital banking services in Malaysian banks significantly influences customer satisfaction.

Okour et al. (2023) found that customers who perceive digital banking services as valuable and beneficial are more likely to report higher levels of satisfaction. When digital banking services improve financial management and enhance transaction efficiency, customers tend to evaluate their banking experience more positively. These findings support the hypothesis that perceived usefulness positively influences customer satisfaction.

H3: Perceived risk of digital banking services in Malaysian banks significantly influences customer satisfaction.

Perceived risk remains an important factor affecting customer satisfaction with digital banking services. Rehman et al. (2020) reported that concerns regarding fraud, privacy breaches, and data security can reduce customers' willingness to use digital banking services and negatively affect their satisfaction. Similarly, Wan Hanafi et al. (2023) found that security and privacy concerns significantly influence users' perceptions of mobile banking. Md Kassim et al. (2015) further highlighted that financial, social, and time-related risks may discourage continued usage of online banking services. These findings suggest that perceived risk plays a significant role in shaping customer satisfaction.

H4: Brand trust in digital banking services in Malaysian banks significantly influences customer satisfaction.

Brand trust is an important determinant of customer satisfaction in digital banking. Wah Yap et al. (2012) highlighted that reliable and fair banking services help build institutional trust, which subsequently enhances customer satisfaction and loyalty. Similarly, Choong et al. (2020) found that service quality dimensions such as assurance, reliability, and responsiveness are strongly associated with customer satisfaction. These attributes contribute to the development of brand trust, suggesting that customers who perceive their bank as trustworthy are more likely to experience higher levels of satisfaction.

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H5: Digital banking trends significantly influence customer satisfaction in Malaysian banks.

Digital banking trends continue to shape customer expectations and satisfaction. Mohsin et al. (2023) found that customers increasingly value user-friendly interfaces and innovative features such as QR payments and real-time banking services. Similarly, Razak et al. (2024) reported that customers were more satisfied when mobile banking applications incorporated advanced features such as biometric authentication, artificial intelligence-driven support, and instant transaction updates. These findings suggest that the adoption of innovative digital banking features positively influences customer satisfaction.

H6: Perceived ease of use is the most significant factor influencing customer satisfaction with digital banking services in Malaysian banks.

Previous studies suggest that perceived ease of use may be the strongest determinant of customer satisfaction in digital banking. Razak et al. (2024) found that ease of use had a greater influence on customer satisfaction than factors such as reliability and privacy. Similarly, Mohamad et al. (2023) emphasized that ease of use not only encourages initial adoption but also sustains long-term satisfaction by enabling customers to perform banking activities efficiently and effortlessly. These findings support the proposition that perceived ease of use is the most significant factor influencing customer satisfaction in digital banking services.

Research Gaps

Despite the growing body of literature on digital banking adoption and customer satisfaction, several important research gaps remain. First, many previous studies have focused primarily on the technology adoption stage, emphasizing factors such as perceived usefulness and perceived ease of use through the Technology Acceptance Model (TAM) framework (Davis, 1989; Venkatesh & Davis, 2000). While these studies provide valuable insights into customer acceptance of digital banking technologies, they pay relatively less attention to customer satisfaction after adoption, particularly within mature digital banking environments where usage has become routine. Second, existing studies frequently examine digital banking determinants in isolation. For example, several studies investigate ease of use and usefulness as primary predictors of customer behaviour, whereas others focus exclusively on trust, security, or service quality. As a result, limited empirical evidence exists regarding the relative importance of these

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factors when assessed simultaneously within a comprehensive model. Consequently, it remains unclear which factor exerts the strongest influence on customer satisfaction in digital banking contexts. Third, the rapid advancement of financial technologies has transformed customer expectations significantly. Emerging features such as biometric authentication, real-time payment systems, artificial intelligence-driven services, personalized financial recommendations, and seamless mobile banking experiences have become increasingly important. However, many earlier studies were conducted before the widespread adoption of these innovations and therefore may not adequately capture contemporary digital banking experiences. Fourth, although digital banking research has expanded globally, evidence from Malaysia remains relatively limited compared with studies conducted in developed economies. Malaysia presents a unique context characterized by rapid digitalization, increasing fintech adoption, government-led digital transformation initiatives, widespread use of DuitNow and QR payment systems, and the recent introduction of licensed digital banks. These developments necessitate updated empirical evidence to better understand Malaysian customers' perceptions and satisfaction with digital banking services. Finally, while trust and perceived risk have been recognized as important determinants of digital banking behaviour, few Malaysian studies have integrated traditional TAM constructs together with brand trust and digital banking trends within a single analytical framework. Therefore, a more comprehensive examination is needed to understand how technological, psychological, and innovation-related factors collectively influence customer satisfaction in digital banking services.

Unlike previous studies that predominantly focused on technology adoption intention using traditional Technology Acceptance Model (TAM) variables, the present study investigates customer satisfaction among active digital banking users. While earlier studies often examined perceived usefulness, perceived ease of use, trust, or risk independently, this study integrates technological factors, psychological factors, and innovation-related factors within a single framework. Furthermore, this study introduces digital banking trends as a contemporary construct reflecting evolving customer expectations regarding mobile-first banking, real-time transactions, biometric authentication, and digitally enabled financial services. By simultaneously examining perceived ease of use, perceived usefulness, perceived risk, brand trust, and digital banking trends, the study provides a more comprehensive understanding of the determinants of customer satisfaction in Malaysia's rapidly evolving digital banking environment. The study also seeks to identify the most influential predictor of customer

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satisfaction, thereby offering practical guidance for banking institutions in prioritizing digital transformation initiatives.

This study enhances understanding of customer satisfaction in digital banking by examining the influence of perceived ease of use, perceived usefulness, perceived risk, brand trust, and digital banking trends. The findings provide valuable insights for banks in improving digital services and customer experiences, while also supporting policymakers in promoting consumer confidence and sustainable digital banking development in Malaysia.

METHODOLOGY

This study adopts a cross-sectional research design to examine the key factors influencing customer satisfaction with digital banking services in Malaysian banks. A quantitative approach was selected because it provides a structured method for testing specific hypotheses and assessing the effects of variables such as perceived ease of use, perceived usefulness, perceived risk, brand trust, and digital banking trends. Data were collected through a structured questionnaire distributed to a diverse group of digital banking users across various banks in Malaysia, enabling statistical analyses to identify meaningful patterns and relationships among the variables.

Sampling is essential for obtaining a representative subset of the target population. This study focuses on individual customers who actively use digital banking services, including mobile banking applications and online banking platforms offered by banks in Malaysia. As these users interact directly with the digital banking features under investigation, they are well positioned to provide informed feedback regarding their satisfaction levels. By targeting actual users of digital banking services, the study captures customers' behaviours, preferences, and perceptions, thereby enhancing the accuracy and relevance of the findings (Bowling, 2002).

The target population for this study consists of digital banking users residing in the Klang Valley, Malaysia, one of the country's most urbanized and technologically advanced regions. This includes individuals who use internet banking or mobile banking services provided by banks regulated by Bank Negara Malaysia (BNM). According to Bank Negara Malaysia's list of regulated financial institutions as of June 2024, 31 banks offer internet banking services, while 18 banks provide mobile banking services. To ensure consistency and relevance, this study focuses exclusively on

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customers of Malaysian banks regulated by BNM. Table 1 presents the list of regulated banking institutions included in the study.

Table 1:
List of Regulatees

No.	Name of Bank	Internet Banking	Mobile Banking
1	Affin Bank Berhad	/	
2	Agrobank	/	
3	Al Rajhi Banking & Investment Corporation (Malaysia) Berhad	/	/
4	Alliance Bank Malaysia Berhad	/	/
5	AmBank (M) Berhad	/	/
6	Bangkok Bank Berhad	/	
7	Bank Islam Malaysia Berhad	/	/
8	Bank Kerjasama Rakyat Malaysia	/	
9	Bank Muamalat Malaysia Berhad	/	/
10	Bank of America Malaysia Berhad	/	
11	Bank of China (Malaysia) Berhad	/	/
12	Bank of Tokyo-Mitsubishi UFJ (Malaysia) Bhd	/	
13	Bank Simpanan Nasional	/	/
14	BNP Paribas Malaysia Berhad	/	
15	China Construction Bank Malaysia Berhad	/	
16	CIMB Bank Berhad	/	/
17	Citibank Berhad	/	/
18	Deutsche Bank (Malaysia) Berhad	/	
19	Hong Leong Bank Berhad	/	
20	HSBC Bank Malaysia Berhad	/	/
21	Industrial and Commercial Bank of China (Malaysia) Berhad	/	/
22	J.P. Morgan Chase Bank Berhad	/	
23	Kuwait Finance House (M) Berhad	/	
24	Malayan Banking Berhad (Maybank)	/	/
25	Mizuho Bank (Malaysia) Berhad	/	
26	OCBC Bank (Malaysia) Berhad	/	/
27	Public Bank Berhad	/	/
28	RHB Bank Berhad	/	/
29	Standard Chartered Bank Malaysia Berhad	/	/

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30	Sumitomo Mitsui Banking Corporation Malaysia Berhad	/	
31	United Overseas Bank (Malaysia) Berhad	/	/

Source: Bank Negara Malaysia (2024)

The questionnaire was developed using reliable and validated constructs adapted from Mbama (2018). It comprised seven sections designed to capture the key dimensions of digital banking services and customer satisfaction. Sections B to G utilized a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The use of a standardized measurement scale enhanced response consistency and facilitated the analysis and comparison of respondents' perceptions and behaviours.

Table 2:
Questionnaire Structure

Section	Title (English/Malay)	Number of Questions	Purpose
A	Demographic Information / Maklumat Demografi	11	Understand respondent background and digital habits
B	Perceived Ease of Use / Persepsi Kemudahan Penggunaan	5	Assess simplicity and user-friendliness of digital tools
C	Perceived Usefulness / Persepsi Terhadap Kegunaan	5	Evaluate how beneficial digital banking is to customers
D	Perceived Risk / Persepsi Risiko	4	Identify concerns about trust and online security
E	Brand Trust / Kepercayaan Terhadap Jenama	5	Measure the role of brand in building customer confidence
F	Trend on Digital Banking / Perkembangan Perbankan Digital	3	Examine growth and personal adoption of digital banking
G	Customer Satisfaction / Kepuasan Pelanggan	4	Gauge overall satisfaction with digital banking services

For this study, a minimum sample size of 300 completed responses was targeted to ensure sufficient statistical power while maintaining data manageability. This sample size is considered adequate for statistical techniques such as correlation and regression analyses, thereby enhancing the reliability and robustness of the findings (Pakurár et al., 2019).

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Given the impracticality of surveying the entire population, this study employed a simple random sampling (SRS) technique. As a probability sampling method, SRS provides every member of the target population with an equal opportunity of selection, thereby minimizing sampling bias and enhancing sample representativeness. The required sample size was determined through statistical power analysis, taking into account the significance level, effect size, and desired statistical power. Questionnaires were distributed to customers of Malaysian banks between October 2024 and March 2025, with a target of at least 300 usable responses for analysis. The survey aimed to identify the key factors influencing customer satisfaction with digital banking services (Mohsin et al., 2022).

Data were collected using a structured bilingual questionnaire administered in both English and Malay to accommodate Malaysia's diverse population. The survey focused on digital banking users within the Klang Valley region, one of the country's most technologically advanced and digitally connected areas.

The collected data were analysed using SPSS Version 29. Several statistical techniques were employed, including descriptive analysis to summarize respondents' demographic characteristics, Cronbach's Alpha to assess the reliability of the measurement scales, Pearson correlation analysis to examine the strength and direction of relationships among variables, and multiple regression analysis to determine the relative influence of each independent variable on customer satisfaction while controlling for the effects of other variables.

Descriptive analysis was used to provide an overview of respondents' demographic profiles, including age, gender, education level, employment status, and patterns of digital banking usage. This analysis facilitated a better understanding of the characteristics of the study sample and provided context for the interpretation of subsequent findings.

Cronbach's Alpha was employed to assess the internal consistency of the questionnaire items and ensure that they reliably measured the intended constructs. As one of the most widely used indicators of reliability, Cronbach's Alpha values range from 0 to 1, with values above 0.70 generally considered acceptable and values above 0.80 indicating good reliability (Nunnally & Bernstein, 1994; Pakurár et al., 2019). The use of this measure enhanced confidence in the reliability of the survey instrument and the validity of the findings.

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Prior to the main survey, a pilot study involving 30 Malaysian digital banking users aged between 18 and 55 years was conducted to evaluate the clarity, relevance, and cultural appropriateness of the questionnaire. The pilot study enabled the refinement of questionnaire items and confirmed that the instrument adequately measured the intended constructs, including perceived ease of use, perceived usefulness, perceived risk, brand trust, digital banking trends, and customer satisfaction. To avoid potential bias, participants involved in the pilot study were excluded from the main survey.

The reliability of the questionnaire was subsequently evaluated using Cronbach's Alpha. All six constructs recorded values exceeding the recommended threshold of 0.70, indicating good to excellent reliability. Specifically, Perceived Ease of Use achieved a reliability coefficient of 0.883, Perceived Usefulness 0.871, Perceived Risk 0.845, Brand Trust 0.864, Digital Banking Trends 0.829, and Customer Satisfaction 0.896. These results demonstrate that the measurement items consistently captured their intended constructs, thereby supporting the reliability and credibility of the research instrument.

Table 3:
Pilot Test Result

Construct	Cronbach's Alpha	Interpretation
Perceived Ease of Use	0.883	Strong consistency
Perceived Usefulness	0.871	Strong consistency
Perceived Risk	0.845	Strong consistency
Brand Trust	0.864	Strong consistency
Trend on Digital Banking	0.829	Strong consistency
Customer Satisfaction	0.896	Strong consistency

FINDINGS AND DISCUSSION

Before conducting the analysis, it was essential to ensure that the collected data were clean, accurate, and aligned with the objectives of the study. Initially, 302 responses were collected from individuals residing or working in the Klang Valley, a region selected due to its high adoption of digital banking services. All respondents

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were active users of digital banking services, including mobile banking and internet banking platforms provided by banks regulated by Bank Negara Malaysia. Three responses were excluded because the respondents were located outside the Klang Valley, resulting in a final dataset of 299 valid responses.

Before examining the main findings of the study, it is important to understand the demographic characteristics of the respondents. This section presents a summary of the profiles of digital banking users within the Klang Valley region. Information relating to age, gender, education level, and employment status provides important context for interpreting customer satisfaction levels. Furthermore, these demographic characteristics support the credibility of the findings by demonstrating that the study included a diverse group of respondents representing different segments of digital banking users.

Table 4:
Demographic Profile of Respondents

Demographic Variable	**Category**	**Frequency (n)**	**Percentage (%)**
Gender	Male	138	46.2
	Female	161	53.8
Age	18–30 years	32	10.7
	31–45 years	159	53.2
	46–60 years	104	34.8
	Above 60 years	4	1.3
Educational Level	Secondary School	41	13.7
	Diploma/Certificate	76	25.4
	Bachelor's Degree	117	39.1
	Master's Degree	43	14.4
	Doctorate (PhD)	22	7.4
Employment Status/Type	Outside Labor Force	3	1.0
	Private Employee	49	16.4
	Government Employee	188	62.9
	Self-employed	59	19.7

The digital banking relationship section examines respondents' preferred banking institutions, the duration of their relationship with their banks, and the length of time they have been using digital banking services. These questions were designed to provide a foundational understanding of respondents' banking backgrounds and their

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familiarity with digital banking platforms. Understanding the nature of these relationships is important, as long-term engagement may influence customers' perceptions of service quality, trust, and satisfaction.

The findings indicate that the majority of respondents use digital banking services provided by RHB Bank (33.9%), followed by Maybank (25.8%) and CIMB Bank (18.3%). In contrast, smaller institutions such as Agrobank and Affin Bank recorded relatively low levels of usage. This suggests a stronger preference for well-established banking institutions when engaging with digital banking services.
In terms of customer relationships, a substantial majority of respondents (62.5%) have maintained their banking relationship for more than ten years, indicating a high level of customer retention and loyalty. Furthermore, more than 80% of respondents have been using digital banking services for over six years, reflecting a high degree of familiarity and experience with digital banking platforms. These findings suggest that the respondents are well-positioned to provide informed assessments of digital banking services and customer satisfaction.

Table 5:
Demographic Profile of Respondents – Digital Banking Relationship

Demographic Variable	**Category**	**Frequency (n)**	**Percentage (%)**
Financial Institution Used for Digital Banking Services	RHB Bank	196	33.9
	Maybank	149	25.8
	CIMB Bank	106	18.3
	Bank Islam	45	7.8
	Public Bank	14	2.4
	Hong Leong Bank	19	3.3
	AmBank	13	2.2
	Bank Muamalat	12	2.1
	Bank Simpanan Nasional	7	1.2
	Alliance Bank	7	1.2
	AgroBank	7	1.2
Duration as a Customer at Current Bank	More than 10 years	187	62.5
	6 – 10 years	80	26.8

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	1 – 5 years	26	8.7
	Less than 1 year	6	2.0
Duration of Digital Banking Usage	More than 10 years	152	50.8
	6 – 10 years	87	29.1
	1 – 5 years	57	19.1
	Less than 1 year	3	1.0

This section examines the types of digital banking services used by respondents and the frequency with which they access these services. Understanding the range of services utilized and the frequency of usage provides valuable insights into the extent to which digital banking has become integrated into customers' daily financial activities. Such information helps to illustrate the importance of digital banking in managing routine financial transactions and supports a better understanding of customer satisfaction with these services. The findings indicate that Quick Transfer/DuitNow is the most frequently used digital banking service, accounting for 68.2% of respondents. This highlights customers' strong reliance on instant fund transfer facilities for their daily financial transactions. In-store QR payments and bill payment services were also commonly used, each accounting for approximately 12% of respondents. These results demonstrate the growing importance of convenient and efficient digital payment solutions in Malaysia. In terms of usage frequency, the majority of respondents (68.6%, n = 205) reported using digital banking services on a daily basis, reflecting the increasing dependence on digital platforms for managing everyday financial activities. A further 25.1% (n = 75) indicated that they used digital banking services on a weekly basis, suggesting a high level of regular engagement. Only 6.4% (n = 19) reported using digital banking services monthly, indicating that infrequent users represent a relatively small proportion of the sample. Overall, these findings demonstrate that digital banking has become deeply embedded in consumers' daily routines, underscoring the importance of understanding the factors that influence customer satisfaction in the contemporary banking environment.

Table 6:
Demographic Profile of Respondents – Digital Banking Usage Behaviour

Demographic Variable	Category	Frequency (n)	Percentage (%)
Most Frequently Used Digital Banking Services	Quick Transfer/DuitNow Transfer	204	68.2

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(Service Type)	Make In-Store Payment/QR Code	36	12.0
	Bill Payments (Utilities)	34	11.4
	Standing Instruction / Loans / Credit Card Payment	6	2.0
	Balance Inquiry	10	3.3
	Overseas Transfer	4	1.3
	Top-up (mobile reload, etc.)	3	1.0
	Savings/Investment (FD,Gold,etc.)	2	0.7
Frequency of Digital Banking Use	Daily	205	68.6
	Weekly	75	25.1
	Monthly	19	6.4
	Rarely (Few times in a year)	0	0

This subsection was examined separately because it directly measures customer satisfaction by assessing respondents' willingness to recommend their bank's digital banking services to others. This type of measure, commonly associated with the Net Promoter Score (NPS), is widely recognized as an indicator of overall customer satisfaction and loyalty. Customers who are willing to recommend a service to others generally perceive it as valuable and are more likely to have a positive and enduring relationship with the service provider (Reichheld, 2003). The findings reveal that approximately 95% of respondents indicated their willingness to recommend their bank's digital banking services to others (Agree and Strongly Agree). This result suggests a high level of customer satisfaction and reflects the positive experiences that users have with digital banking services in Malaysia.

Table 7:
Demographic Profile of Respondents – Perceived Digital Banking Satisfaction

Demographic Variable	Category	Frequency (n)	Percentage (%)
Likelihood of Recommending Digital	Strongly Agree	186	62.2
	Agree	98	32.8

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Banking Services (Response)	Neutral	6	2.0
	Disagree	2	0.7
	Strongly Disagree	7	2.3

Descriptive analysis is useful for summarizing response patterns and identifying general trends in respondents' perceptions. By examining the mean and standard deviation values, researchers can assess both the average level of agreement and the consistency of responses among the 299 respondents (Sekaran & Bougie, 2016). Overall, the results suggest that respondents hold favourable perceptions of digital banking services, particularly when such services deliver convenience, efficiency, and practical value. Nevertheless, the findings also indicate the need for continuous improvements in trust-building initiatives and security measures to further enhance customer satisfaction and strengthen long-term customer relationships.

Table 8:
Descriptive Analysis

	Mean, M	Standard Deviation, SD
Perceived Ease of Use	4.290	0.864
Perceived Usefulness	4.447	0.900
Perceived Risk	3.840	0.937
Brand Trust	4.049	0.820
Trend in Digital Banking	4.307	0.784
Customer Satisfaction	4.114	0.889

To assess the reliability of the measurement scales, Cronbach's Alpha was employed. This widely used statistical measure evaluates the internal consistency of items within a construct (George & Mallery, 2003). Generally, values above 0.70 indicate acceptable reliability, values above 0.80 indicate good reliability, and values above 0.90 reflect excellent internal consistency. The results show that all constructs exceeded the recommended threshold, demonstrating strong reliability. Perceived Ease of Use recorded the highest Cronbach's Alpha value ($\alpha = 0.968$), indicating a high level of consistency in respondents' evaluations of the ease of using digital banking services. Perceived Usefulness ($\alpha = 0.943$) and Perceived Risk ($\alpha = 0.926$) also achieved excellent levels of internal consistency, suggesting that respondents shared similar perceptions regarding the benefits and risks associated with digital banking. Brand Trust ($\alpha = 0.893$) and Digital Banking Trends ($\alpha = 0.862$) demonstrated good reliability,

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reflecting consistent responses regarding trust in banking institutions and perceptions of emerging digital banking innovations. Finally, Customer Satisfaction, the dependent variable of the study, recorded a Cronbach's Alpha value of 0.950, indicating excellent internal consistency among the measurement items. Overall, these findings confirm that the research instrument is reliable and suitable for subsequent statistical analyses.

Table 9:
Reliability Statistics Using Cronbach's Alpha

Construct	Number of items	Cronbach's Alpha	Interpretation
Perceived Ease of Use	5	0.968	Excellent
Perceived Usefulness	5	0.943	Excellent
Perceived Risk	4	0.926	Excellent
Brand Trust	5	0.893	Good
Trend on Digital banking	3	0.862	Good
Customer Satisfaction	4	0.950	Excellent

This section examines the relationships between five key digital banking constructs, Perceived Ease of Use, Perceived Usefulness, Perceived Risk, Brand Trust, and Digital Banking Trends—and Customer Satisfaction. To assess these relationships, Pearson correlation analysis was employed. This statistical technique measures the strength and direction of linear relationships between variables, with Pearson's correlation coefficient (r) ranging from -1 to +1. A positive coefficient indicates a direct relationship, whereas a negative coefficient indicates an inverse relationship (Pallant, 2020). Although correlation analysis does not establish causality, it provides valuable insights into the extent to which variables are associated with one another. In the context of digital banking, understanding these relationships can help identify factors that are closely linked to customer satisfaction and provide useful guidance for enhancing customer experiences. The results of the correlation analysis are presented in Table 10. The findings reveal strong and statistically significant relationships among the study variables, with several noteworthy patterns emerging that warrant further discussion.

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Table 10:
Correlation Analysis

	Perceived Ease of Use	Perceived Usefulness	Perceived Risk	Brand Trust	Trend on Digital Banking	Customer Satisfaction
Perceived Ease of Use	1	0.771**	0.703**	0.823**	0.872**	0.878**
Perceived Usefulness	0.771**	1	0.519**	0.662**	0.808**	0.706**
Perceived Risk	0.703**	0.519**	1	0.793**	0.699**	0.726**
Brand Trust	0.823**	0.662**	0.793**	1	0.862**	0.877**
Trend on Digital Banking	0.872**	0.808**	0.699**	0.862**	1	0.882**
Customer Satisfaction	0.878**	0.706**	0.726**	0.877**	0.882**	1

** Note: All correlations are significant at the 0.01 level (2-tailed)

The regression model produced a high multiple correlation coefficient ($R = 0.927$), indicating a strong relationship between the independent variables and customer satisfaction. The coefficient of determination ($R^2 = 0.859$) shows that approximately 85.9% of the variance in customer satisfaction can be explained by the five predictor variables included in the model. Furthermore, the adjusted R^2 value of 0.857 remains very close to the R^2 value, suggesting that the model possesses strong explanatory power and that the results are unlikely to be influenced by overfitting. These findings indicate that the selected variables collectively provide a substantial explanation of customer satisfaction with digital banking services.

Table 11:
Model Summary

Model	R	R^2	Adjusted R^2	Standard Error of the Estimate
1	0.927	0.859	0.857	0.33650

The ANOVA results indicate that the regression model is statistically significant ($F = 357.602$, $p < 0.001$). This finding demonstrates that the set of independent variables collectively has a significant effect on customer satisfaction and that the model provides a good fit for explaining variations in customer satisfaction with digital banking services.

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Table 12:
ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	202.457	5	40.491	357.602	0.000**
	Residual	33.177	293	0.113		
	Total	235.634	298			

Note: Significant at $p < 0.01$

The regression results indicate that the predictor variables collectively contribute to customer satisfaction with digital banking services. Among the variables examined, Perceived Ease of Use (β = 0.364), Brand Trust (β = 0.333), and Digital Banking Trends (β = 0.309) emerged as the strongest predictors of customer satisfaction. These findings suggest that customers place considerable importance on user-friendly digital platforms, trust in their banking institutions, and the availability of innovative digital banking features.

In contrast, Perceived Usefulness (β = -0.055) exhibited a negative relationship with customer satisfaction. This finding may indicate that, within the contemporary digital banking environment, usefulness has become a basic expectation rather than a distinguishing factor influencing satisfaction. As a result, factors such as ease of use, trust, and innovation appear to play a more prominent role in shaping customer satisfaction than the perceived functional benefits of digital banking services.

Table 13:
Coefficient of Variables

Predictor Variable	Understandardized B	Coefficients Std. Error	Standardized Coefficients (Beta, β)	t-value	Significant (p-value)
Perceived Ease of Use	0.374	0.051	0.364	7.367	0.000
Perceived Usefulness	-0.054	0.039	-0.055	-1.407	0.161
Perceived Risk	0.017	0.035	0.018	0.499	0.618
Brand Trust	0.362	0.056	0.333	6.413	0.000
Trend on Digital Banking	0.351	0.067	0.309	5.221	0.000

Note: $*p < 0.05$, $*p < 0.01$

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The findings of this study provide important insights into the factors that influence customer satisfaction in digital banking services. The results suggest that customers place greater emphasis on ease of use, trust, and innovative digital features than on basic functionality or perceived risk. These findings indicate that customer satisfaction is increasingly shaped by the quality of the digital experience, rather than solely by the functional benefits of digital banking services.

Of the six hypotheses tested, four hypotheses (H1, H4, H5, and H6) were supported, while two hypotheses (H2 and H3) were not supported. The results demonstrate that Perceived Ease of Use, Brand Trust, and Digital Banking Trends significantly influence customer satisfaction and represent the most important determinants of satisfaction among digital banking users. In contrast, Perceived Usefulness and Perceived Risk did not have a significant influence on customer satisfaction within the context of this study. These findings suggest that while usefulness and security remain important foundations of digital banking services, customers increasingly view them as basic expectations rather than key drivers of satisfaction.

Table 14:
Hypothesis Testing Results

Hypothesis	Statement	Result	Justification
H1	Perceived ease of use significantly influences customer satisfaction.	$p = 0.000 < 0.05$ $\beta = 0.364$	Significant and strong positive influence; H1 is Accepted
H2	Perceived usefulness significantly influences customer satisfaction.	$p = 0.161 > 0.05$ $\beta = -0.055$	Not significant and no positive influence; H2 is Rejected
H3	Perceived risk significantly influences customer satisfaction.	$p = 0.618 > 0.05$ $\beta = 0.018$	Not significant and no positive influence; H3 is Rejected
H4	Brand trust significantly influences customer satisfaction.	$p = 0.000 < 0.05$ $\beta = 0.333$	Significant and strong positive influence; H4 is Accepted
H5	Digital trend significantly influences customer satisfaction.	$p = 0.000 < 0.05$ $\beta = 0.309$	Significant and positive influence; H5 is Accepted
H6	Perceived ease of use is the most significant factor in influencing customer satisfaction.	Perceived Ease of Use ; $\beta = 0.364$	β is the highest among all predictors; Perceived Ease of Use is the most significant factor

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CONCLUSION

This study contributes to the growing body of knowledge on digital banking and customer satisfaction by providing empirical evidence that extends the applicability of the Technology Acceptance Model (TAM) in contemporary banking environments. While TAM traditionally emphasizes Perceived Ease of Use and Perceived Usefulness as the primary determinants of technology acceptance, the findings reveal that Perceived Ease of Use remains a significant predictor of customer satisfaction, whereas Perceived Usefulness does not exert a significant influence. This suggests that usefulness may have evolved into a basic expectation rather than a differentiating factor among digital banking users. More importantly, Brand Trust and Digital Banking Trends emerged as significant determinants of customer satisfaction, highlighting the increasing importance of emotional, relational, and innovation-related factors in shaping customer experiences. These findings indicate that customer satisfaction in digital banking extends beyond technological functionality and is increasingly influenced by trust, confidence, and the ability of banks to respond to evolving digital expectations. Therefore, the study supports the argument that TAM should be complemented with constructs such as trust, perceived security, and digital innovation to provide a more comprehensive explanation of customer behaviour in modern digital banking contexts.

The findings offer valuable insights for banking institutions seeking to enhance customer satisfaction and strengthen long-term customer relationships. Given that Perceived Ease of Use remains a significant determinant, banks should continue investing in user-friendly interfaces, seamless navigation, and efficient transaction processes that reduce customer effort. The significance of Brand Trust further emphasizes the need for banks to strengthen customer confidence through transparent communication, robust cybersecurity measures, data privacy protection, and reliable service delivery.

The importance of Digital Banking Trends suggests that customers increasingly value innovative features and modern banking experiences. Consequently, banks should continuously improve their digital offerings by incorporating emerging technologies such as artificial intelligence, personalized financial services, biometric authentication, and real-time transaction capabilities. Although Perceived Usefulness and Perceived Risk were not found to significantly influence customer satisfaction in this study, these factors remain important foundations for service quality and customer confidence.

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Overall, banks must focus on creating a secure, innovative, and customer-centric digital ecosystem to remain competitive in an increasingly digital financial landscape.

Several limitations should be acknowledged when interpreting the findings of this study. First, the study was conducted within the Klang Valley region, which represents one of the most urbanized and digitally connected areas in Malaysia. As a result, the findings may not fully reflect the experiences and perceptions of customers residing in rural or semi-urban regions, where levels of digital access, infrastructure, and technological literacy may differ significantly. Second, the cross-sectional nature of the study limits the ability to observe changes in customer perceptions and satisfaction over time. Customer expectations and digital banking behaviours may evolve rapidly due to technological advancements and changing market conditions. Third, the study relied exclusively on quantitative survey data, which may not fully capture the depth and complexity of customer experiences. Finally, the study focused on five selected determinants of customer satisfaction and did not examine other potentially influential factors such as service personalization, customer engagement, digital service quality, artificial intelligence-driven support, or mobile application performance.

Future studies should expand the geographical scope by including respondents from rural and semi-urban areas to provide a more comprehensive understanding of digital banking experiences across Malaysia. Comparative studies between different regions may reveal important differences in customer expectations and satisfaction levels. Future research may also adopt longitudinal research designs to examine how customer satisfaction evolves over time in response to technological innovation and changing digital banking practices. In addition, qualitative approaches such as interviews, focus groups, or mixed-method designs could provide deeper insights into customer perceptions, motivations, and experiences that may not be fully captured through quantitative surveys. Furthermore, future studies should consider incorporating additional variables such as service personalization, artificial intelligence-enabled customer support, digital service quality, mobile application usability, customer engagement, and financial literacy. Comparative studies across different countries or banking systems would also be valuable in identifying how cultural, economic, and regulatory environments influence customer satisfaction with digital banking services and in highlighting international best practices for digital banking development.

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