

Mobile Banking Applications and Customer Satisfaction: An Empirical Study of University Student Users

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ABSTRACT

The rapid growth of financial technology (FinTech) has transformed banking services in Malaysia, with the MAE mobile banking application by Malayan Banking Berhad (Maybank) widely adopted, particularly among young and tech-savvy users. This study aims to examine the effects of perceived usefulness, perceived ease of use, and perceived security trust on customer satisfaction with the MAE mobile banking application. A quantitative research design was employed using an online survey administered to active MAE users, with a focus on university students from Universiti Sains Malaysia (USM). A total of 150 valid responses were collected and analyzed using descriptive statistics and multiple regression analysis in SPSS. The results indicate that perceived usefulness ($\beta = -0.378, p < 0.001$) and perceived ease of use ($\beta = 0.543, p < 0.001$) have statistically significant effects on customer satisfaction, while perceived security trust shows no significant influence ($\beta = 0.051, p = 0.171$). These findings suggest that functional value and usability are the primary drivers of satisfaction among student users. The study provides practical implications for financial institutions to prioritize application usability and functional efficiency in enhancing customer satisfaction and long-term engagement with mobile banking services.

Keywords: Customer Satisfaction; FinTech; MAE Mobile Banking; Perceived Ease of Use; Perceived Security Trust; Perceived Usefulness

INTRODUCTION

Rapid technological advancement in the mobile environment has accelerated the development of increasingly sophisticated digital services across industries, including the financial sector. Among these innovations, mobile banking has emerged as one of the most transformative digital solutions, fundamentally reshaping how financial transactions are conducted and managed. In Malaysia, major financial institutions have widely adopted mobile banking platforms to deliver faster, more efficient, and cost-effective financial services. Early evidence by [Amin et al. \(2008\)](#) emphasized that mobile banking enhances operational efficiency by reducing transaction costs and improving service delivery, thereby creating value for both financial institutions and customers. As one of the leading banks in Malaysia, Maybank has actively promoted mobile banking adoption as part of its digital transformation strategy to strengthen customer engagement and enhance service performance. The widespread use of smartphones, combined with advancements in financial technology (FinTech), has further accelerated this shift by enabling faster, simpler, and more accessible financial transactions that align with evolving consumer preferences for speed, efficiency, and seamless digital experiences.

Beyond operational efficiency, the growth of FinTech has contributed significantly to financial inclusion and changed customer behavior toward digital financial services. Mobile banking applications, digital wallets, and online payment systems have expanded access to financial services for underserved groups, including younger generations and individuals previously excluded from the formal financial system. [Liang et al. \(2024\)](#) demonstrated that FinTech services play a critical role in improving access to and trust in financial services among women in developing and emerging markets such as Malaysia. Complementing this perspective, [Kee et al. \(2024\)](#) highlighted that FinTech adoption promotes broader financial participation and strengthens the overall digital financial ecosystem. Evidence from 2024 further indicated that customer satisfaction and trust strongly influence FinTech usage, particularly among Generations Y and Z, underscoring the importance of intuitive interfaces, reliable system performance, and robust security features in shaping positive user experiences.

These developments justify the need to examine customer satisfaction with specific mobile banking applications rather than treating mobile banking as a homogeneous service category. Sustained usage of digital banking platforms depends largely on whether users perceive the application as useful, easy to use, trustworthy, and secure. Positive evaluations of these attributes encourage long-term adoption and foster stronger loyalty toward FinTech services. Consequently, understanding customer perceptions of specific platforms such as MAE provides valuable insights into how digital financial solutions meet user expectations and support continued engagement within competitive digital banking environments.

The increasing popularity of FinTech solutions in Malaysia, including mobile banking applications, e-wallets, and online payment platforms, is supported by high smartphone penetration, improved internet infrastructure, and a growing preference for cashless transactions. [Kee et al. \(2024\)](#) noted that FinTech adoption is strongly driven by digital readiness and enhanced technological infrastructure, which collectively enable smoother and more reliable digital service delivery. These developments also align with broader transitions toward Industry 4.0 and Industry 5.0, where user-centered design, technological reliability, and system trustworthiness are critical in creating satisfying and sustainable digital experiences. [Xia et al. \(2025\)](#) further emphasized that technological readiness, design quality, and system dependability significantly influence customer satisfaction in advanced digital environments, reinforcing the relevance of these factors in mobile banking contexts.

Within this evolving digital landscape, the MAE mobile banking application developed by Malayan Banking Berhad (Maybank) represents one of the most prominent digital banking platforms in Malaysia. MAE offers a wide range of features aimed at enhancing financial management, streamlining payments, and improving everyday convenience for users. These features collectively contribute to a more integrated and personalized banking experience, positioning MAE as a key component of Malaysia's digital financial ecosystem.

Despite the rapid growth of mobile banking usage, customer satisfaction remains a crucial determinant of long-term adoption and continued usage. Research grounded in the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) consistently demonstrates that perceived usefulness and perceived ease of use strongly influence users' adoption of mobile banking services. In addition, [Lim et al. \(2019\)](#) found that trust and perceived security play pivotal roles in encouraging continued usage, particularly in financial applications where users are highly sensitive to risk and privacy concerns. As digital services become more advanced, users increasingly expect platforms that are not only functional but also reliable, trustworthy, and capable of delivering meaningful digital experiences. Empirical evidence from [Chen et al. \(2025\)](#) and [Qian et al. \(2025\)](#) confirmed that perceived trustworthiness and system reliability significantly enhance user confidence and satisfaction, highlighting the growing importance of digital trust in sustaining user engagement.

Customer satisfaction with digital platforms is further shaped by organizational practices, transparency, and service reliability. Studies examining corporate sustainability reporting and responsible organizational behavior suggest that openness, accountability, and user-oriented service delivery strengthen customer trust and elevate perceived service quality ([Kee, Chen et al., 2025](#)). In financial institutions, trust is particularly critical because users must feel confident that their personal and financial information is secure when using mobile banking applications. [Yo et al. \(2021\)](#) identified perceived value, service quality, and trust as key determinants of customer satisfaction in Malaysia, reinforcing the centrality of these factors in digital banking environments.

Although numerous studies have examined mobile banking adoption and usage, limited research has focused on customer satisfaction with specific platforms such as MAE. Given that mobile banking plays a central role in modern digital financial ecosystems, customer satisfaction determines whether users continue engaging with these platforms over time. [Amin et al. \(2008\)](#) emphasized that perceived usefulness, ease of use, and trust significantly influence digital banking adoption, indicating the importance of examining these factors within a specific application context. Evaluating MAE from the user's perspective provides practical insights for financial institutions seeking to maintain competitiveness in an increasingly dynamic and technology-driven environment.

Accordingly, this study investigates how the MAE mobile banking application influences customer satisfaction in Malaysia by examining perceived usefulness, perceived ease of use, and perceived security trust. The study aims to determine whether MAE effectively meets user expectations and contributes meaningfully to the delivery of digital financial services. By focusing on these key constructs, the study provides empirical evidence regarding the effectiveness of MAE as a mobile banking platform.

This study offers both theoretical and practical contributions. From a theoretical perspective, it enriches the mobile banking and customer satisfaction literature by integrating TAM-based constructs with trust-related dimensions within the Malaysian context. From a practical standpoint, the findings provide actionable insights for financial

institutions such as Maybank in refining digital strategies, improving application usability, and strengthening customer trust and satisfaction. The results also offer guidance for policymakers and FinTech developers seeking to promote digital inclusion and innovation in Malaysia. As digital banking services continue to evolve rapidly, customer satisfaction has become a strategic priority for sustaining long-term engagement with mobile applications.

University students and young working professionals represent a key segment of mobile banking users due to their high levels of technological engagement and frequent interaction with digital financial services. Understanding their perceptions provides meaningful insights into emerging user expectations and potential areas for service improvement. This study is distinctive in its specific focus on the MAE mobile banking application and its effort to identify satisfaction drivers within the Malaysian market. By combining constructs derived from the TAM with trust-related perspectives, the study presents a holistic and context-specific analysis of customer satisfaction in mobile banking, contributing valuable empirical evidence for both academic research and industry practice.

LITERATURE REVIEW

Impact of Mobile Banking App MAE on Customer Satisfaction

Perceived Usefulness

Perceived usefulness is widely acknowledged as one of the most influential determinants of user satisfaction and technology adoption in digital financial services. Within the context of mobile banking, perceived usefulness refers to the extent to which users believe that a mobile application enhances the effectiveness, speed, and efficiency of their banking activities. Recent empirical evidence focusing on MAE highlights that functional features such as instant fund transfers, expense-tracking tools, and integrated payment services significantly improve users' task performance and operational efficiency (Abd Karim, 2025). These features enable users to complete financial transactions conveniently and accurately, reinforcing positive evaluations of the application's overall utility.

Existing literature consistently demonstrates a strong relationship between perceived usefulness and customer satisfaction in digital banking environments. Ghani et al. (2022) found that perceived usefulness and system reliability substantially enhance the effectiveness of digital banking services, leading to improved customer satisfaction and continued usage. Similarly, Razak et al. (2024) reported that efficiency and responsiveness, key dimensions of perceived usefulness, significantly influence satisfaction levels among mobile banking users in Malaysia. These findings suggest that when users perceive mobile banking applications as useful in facilitating daily financial activities, their satisfaction and loyalty are likely to increase.

The relevance of perceived usefulness extends beyond banking services and is evident across various digital platforms. Chen et al. (2025) demonstrated that task-enhancing features within digital platforms such as Foodpanda positively influence user satisfaction by improving convenience and performance efficiency. This evidence supports the expectation that similar mechanisms operate within mobile banking applications, including MAE, where functional value plays a central role in shaping user perceptions and satisfaction outcomes.

Despite MAE having millions of active users in Malaysia, empirical research specifically examining perceived usefulness among student users remains limited. Students represent a technologically savvy demographic that frequently engages with digital

financial services, yet their unique usage patterns and expectations are often underexplored. Investigating perceived usefulness within this segment provides timely insights into mobile banking adoption trends and contributes to a more nuanced understanding of satisfaction formation among younger users. MAE features such as expense tracking, instant transfers, and real-time account monitoring are widely perceived as useful, which is expected to contribute to stronger satisfaction and continued usage intentions. Based on the theoretical arguments and empirical evidence discussed above, the following hypothesis is proposed:

H1: Perceived usefulness has a positive effect on customer satisfaction with the MAE mobile banking app.

Perceived Ease of Use

Perceived ease of use is a critical determinant of customer satisfaction and the adoption of digital financial technologies. It refers to the degree to which users believe that using a mobile banking application requires minimal effort and is free from complexity. In mobile banking contexts, ease of use encompasses intuitive navigation, clear interface design, and the simplicity of executing routine banking transactions. Recent studies provide updated empirical evidence highlighting the continued relevance of this construct. [Abd Karim \(2025\)](#) demonstrated that MAE's intuitive layout, streamlined navigation, and quick-access functions significantly reduce user effort, thereby enhancing overall usability among Malaysian users.

MAE offers several features that exemplify ease of use in practice, such as real-time transfers to other Maybank accounts with minimal steps and a bill-splitting function that allows users to divide expenses directly within the application. These features simplify routine banking procedures and reduce cognitive effort, contributing to a more positive user experience ([Hamid et al., 2024](#)). When users perceive an application as easy to use, they are more likely to evaluate it favorably and continue using it over time.

Empirical findings consistently reinforce the importance of perceived ease of use in shaping customer satisfaction and behavioral intentions. [Yen and Hui \(2023\)](#) reported that perceived ease of use significantly influences Malaysian consumers' intentions to adopt mobile banking services, emphasizing the importance of user-friendly interfaces and intuitive system design. Similarly, [Yo et al. \(2021\)](#) found that ease of use and system quality play a significant role in determining customer satisfaction within digital platforms in Malaysia. Although their study focused on e-commerce services, the findings remain applicable to mobile banking applications such as MAE, as logical system design and ease of interaction are fundamental to user satisfaction across digital environments.

Further supporting this argument, [Kee, Cordova et al. \(2025\)](#) emphasized that smooth digital interactions and convenient interface designs enhance satisfaction and loyalty in digital platforms, a conclusion that can be readily extended to mobile banking contexts. [Okour et al. \(2023\)](#) also found that ease of use, as a component of electronic service quality, positively influences perceived value and customer satisfaction among Malaysian banking users. Collectively, these studies suggest that ease of use remains a foundational element in determining users' evaluations of mobile banking services.

Despite MAE's widespread adoption, limited empirical research has specifically examined the perceived ease of use of MAE and its impact on customer satisfaction among student users. Students are frequent users of mobile technologies and may have higher expectations regarding usability and efficiency. Examining this relationship provides valuable insights into how simplified design elements and user-friendly

interfaces influence satisfaction among future generations of digital banking users. Based on the above discussion, the following hypothesis is proposed:

H2: Perceived ease of use has a positive effect on customer satisfaction with the MAE mobile banking app.

Perceived Security Trust

Perceived security trust is a fundamental determinant of customer satisfaction and continued usage of mobile banking services. It refers to the extent to which users believe that a mobile banking application is secure, reliable, and capable of protecting their personal and financial information. In digital financial environments, trust plays a central role in reducing perceived risk and uncertainty, thereby encouraging adoption and sustained use. Recent research consistently highlights perceived security trust as a key driver of mobile banking acceptance. [Almaiah et al. \(2023\)](#) found that Malaysian consumers' intentions to use mobile banking applications are strongly influenced by trust in system security, reliability, and data confidentiality.

[Kee, Lim et al. \(2025\)](#) further emphasized that heightened awareness of cybersecurity in online financial transactions strengthens user trust, leading to higher satisfaction and continued use of mobile banking solutions such as MAE. Earlier evidence by [Kee et al. \(2021\)](#) demonstrated that during the COVID-19 pandemic, Malaysian users exhibited strong trust in Maybank's digital payment systems. Positive experiences with the MAE platform, combined with the bank's strong corporate reputation, contributed to enhanced consumer confidence and sustained usage behavior.

Additional empirical support is provided by [Okour et al. \(2023\)](#), who found that trust, as a dimension of electronic service quality, significantly increases customer satisfaction and perceived value among Malaysian banking users. In the context of MAE, system characteristics such as biometric authentication, real-time transaction notifications, and secure payment mechanisms further reinforce users' confidence in the platform ([Ramindran & Lee, 2024](#)). These security features help mitigate concerns related to fraud and data breaches, thereby strengthening trust and satisfaction.

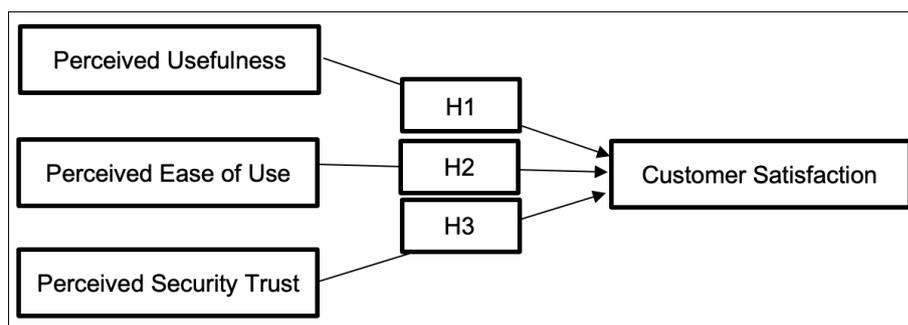
Despite the growing importance of security trust in mobile banking research, a notable gap remains regarding its influence on satisfaction among student users of MAE. Younger users represent an expanding segment of digital banking adopters and are often more aware of cybersecurity issues, yet limited studies have focused on how perceived trust affects their satisfaction. Addressing this gap, the present study examines the role of perceived security trust in shaping customer satisfaction among student users of MAE, thereby extending existing literature into a more specific and contemporary user context. Based on this discussion, the following hypothesis is proposed:

H3: Perceived security trust has a positive effect on customer satisfaction with the MAE mobile banking app.

Conceptual Framework

The study framework model is depicted in [Figure 1](#).

Figure 1. Research Framework



RESEARCH METHOD

Research Design

This study adopted a quantitative research design to examine the effects of perceived usefulness, perceived ease of use, and perceived security trust on customer satisfaction with the MAE mobile banking application. The quantitative approach was considered appropriate as it allows for objective measurement and statistical examination of relationships among predefined constructs. The research process involved sampling, data collection, and measurement procedures. The unit of analysis in this study was the individual MAE mobile banking user.

Sampling Method

The target population comprised active users of the MAE mobile banking application in Malaysia, with a specific focus on university students from Universiti Sains Malaysia (USM). This group was selected because university students are among the most frequent and technologically adept users of digital banking services, making them a relevant segment for examining mobile banking satisfaction. A convenience sampling technique was employed to facilitate efficient data collection through online platforms. Using this approach, a total of 150 valid responses were obtained and deemed sufficient for regression-based analysis.

Data Collection and Data Analysis

Data were collected through a structured online questionnaire administered via Google Forms. The survey link was distributed through WhatsApp and student social media groups within USM to reach respondents who actively use the MAE application. Participation in the study was voluntary, and respondents were informed that their responses would remain anonymous and be used solely for academic purposes.

The questionnaire consisted of two main sections. The first section captured demographic information, including age, gender, educational level, occupation, duration of MAE usage, and usage frequency. The second section measured the study constructs. After data collection, the responses were coded and analyzed using Statistical Package for the Social Sciences (SPSS). Descriptive statistics were used to summarize respondent characteristics, while multiple regression analysis was conducted to test the proposed hypotheses and examine the influence of the independent variables on customer satisfaction. Statistical significance was evaluated at the 0.05 level.

Measures

All constructs in this study were measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The measurement items were adapted from [Kee, Ali et al. \(2025\)](#) and were pretested to ensure clarity, relevance, and suitability for MAE users, particularly within a student context.

Perceived Usefulness

Perceived usefulness was measured using four items assessing the extent to which the MAE mobile banking application enhances the effectiveness and efficiency of users' banking activities (e.g., "The MAE app helps me complete my banking tasks more quickly"). The reliability analysis indicated high internal consistency for this construct, with a Cronbach's alpha value of 0.895.

Perceived Ease of Use

Perceived ease of use was measured using five items reflecting the simplicity, clarity, and ease of navigating the MAE mobile banking application (e.g., "The MAE app is easy to navigate and use"). This construct demonstrated excellent reliability, with a Cronbach's alpha coefficient of 0.931.

Perceived Security Trust

Perceived security trust was measured using four items capturing users' confidence in the MAE application's ability to safeguard personal and financial information (e.g., "I trust MAE to protect my personal and financial data"). The reliability analysis yielded a Cronbach's alpha value of 0.296, indicating weak internal consistency. This limitation suggests potential issues with item interpretation among respondents and highlights the need for further refinement of security trust measurement in future research.

Customer Satisfaction

Customer satisfaction was measured using three items reflecting respondents' overall evaluation and satisfaction with their experience using the MAE mobile banking application (e.g., "I am satisfied with my overall experience using MAE"). The reliability coefficient for this construct was high, with a Cronbach's alpha value of 0.904, indicating strong internal consistency.

RESULTS

Table 1. Summary of Respondent Demography Analysis (N=150)

Response	Frequency	Percentage (%)
Gender		
Female	80	53.0
Male	70	46.4
Age		
Below 18 years old	6	4.0
18-24 years old	107	70.9
25-34 years old	23	15.2
35-44 years old	9	6.0
44 years old and above	5	3.3
Education		
Secondary level	6	4.0
Diploma	9	6.0
Undergraduate (bachelor's degree)	108	71.5
Postgraduate	22	14.6
Other	5	3.3
Occupation		
Employed	24	15.9
Self-employed	18	11.9
Student	107	70.9
Other	1	0.7
USM student		
No	67	44.7

Yes	83	55.3
Duration of MAE App Use		
Less than 6 months	38	25.2
6 months-1year	42	27.8
1-2 years	31	20.5
More than 2 years	39	25.8
Frequency of Using MAE App		
Daily	60	39.7
Weekly	55	36.4
Monthly	21	13.9
Rarely	14	9.3

Table 1 summarizes the demographic characteristics of the 150 respondents involved in this study. The gender distribution is relatively balanced, with female respondents accounting for 53 percent and male respondents comprising 46.4 percent of the sample, indicating adequate representation of both genders.

In terms of age, the majority of respondents fall within the 18–24 age group (70.9 percent), followed by those aged 25–34 years (15.2 percent). Smaller proportions are represented by respondents below 18 years old (4 percent), those aged 35–44 years (6 percent), and individuals aged 44 years and above (3.3 percent). This distribution suggests that the sample is predominantly composed of young adults, who are generally more familiar with and active in using mobile banking applications.

With respect to educational background, most respondents hold an undergraduate degree (71.5 percent), followed by postgraduate qualifications (14.6 percent). Diploma holders account for 6 percent, respondents with secondary education represent 4 percent, and 3.3 percent fall into other categories. This reflects a relatively well-educated sample, consistent with the profile of digital banking users.

Regarding occupation, students form the largest group (70.9 percent), while employed respondents account for 15.9 percent, and self-employed individuals represent 11.9 percent. Only a small proportion falls under other occupations (0.7 percent), which is expected given the university-based sampling context.

In terms of MAE application usage duration, 27.8 percent of respondents have used the application for six months to one year, followed by users with more than two years of experience (25.8 percent), those who have used it for less than six months (25.2 percent), and users with one to two years of experience (20.5 percent). This indicates a mix of both new and long-term users. Regarding usage frequency, 39.7 percent of respondents reported using the MAE application daily, while 36.4 percent use it weekly. Monthly and rare usage were reported by 13.9 percent and 9.3 percent of respondents, respectively, suggesting that the majority of users engage with the application on a regular basis.

Table 2. Descriptive Statistics, Cronbach's Alpha, and Zero-Order Correlations for All Study Variables

Variables		1	2	3	4
1	Perceived Usefulness	0.895			.
2	Perceived Ease of Use	0.892**	0.931		
3	Perceived Security Trust	0.540**	0.508**	0.296	
4	Customer Satisfaction	0.890**	0.906**	0.531**	0.904
Number of items		4	5	4	3
Mean		4.08	3.94	3.93	4.00

Standard Deviation	0.75	0.76	0.60	0.79
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Note. N=150. Bold diagonal values represent Cronbach's alpha coefficients. **p<0.01 (2-tailed)

According to the results presented in [Table 2](#), the descriptive statistics indicate that all constructs exhibit relatively high mean values, suggesting generally positive user perceptions of the MAE mobile banking application. Perceived usefulness recorded the highest mean score (M = 4.08), indicating strong agreement among respondents regarding the application's benefits. Perceived ease of use (M = 3.94) and perceived security trust (M = 3.93) also demonstrated favorable evaluations, although users appear slightly more cautious in their assessment of security-related aspects. Customer satisfaction showed a high mean score of 4.00, reflecting an overall positive user experience.

The reliability analysis reveals strong internal consistency for perceived usefulness ($\alpha = 0.895$), perceived ease of use ($\alpha = 0.931$), and customer satisfaction ($\alpha = 0.904$), all exceeding the recommended threshold of 0.70. In contrast, perceived security trust reported a low Cronbach's alpha value ($\alpha = 0.296$), indicating weak reliability and suggesting potential measurement issues within this construct.

The correlation results demonstrate that perceived usefulness and perceived ease of use are both strongly and positively associated with customer satisfaction ($r = 0.890$ and $r = 0.906$, respectively; $p < 0.01$). Perceived security trust also shows a moderate positive correlation with customer satisfaction ($r = 0.531$, $p < 0.01$); however, this relationship should be interpreted with caution due to the construct's low internal consistency.

Overall, the findings support Hypothesis 1 (H1) and Hypothesis 2 (H2), confirming that perceived usefulness and perceived ease of use are positively related to customer satisfaction. Hypothesis 3 (H3) is statistically supported at the correlation level; nevertheless, the weak reliability of perceived security trust suggests that further refinement of the measurement items is necessary before drawing definitive conclusions regarding its effect.

Table 3. Regression Analysis

Variable		Customer Satisfaction
1	Perceived usefulness	0.378***
2	Perceived Ease of Use	0.543***
3	Perceived Security Trust	0.051
R ²		0.856
F value		289.485

Note. R² = 0.856 ($p < 0.01$) **p < 0.01

[Table 3](#) reports the results of the multiple regression analysis assessing the influence of perceived usefulness, perceived ease of use, and perceived security trust on customer satisfaction with the MAE mobile banking application.

The findings indicate that perceived usefulness has a positive and statistically significant effect on customer satisfaction ($\beta = 0.378$, $p < 0.01$). This result confirms H1, suggesting that users who consider the application beneficial for their banking activities tend to express higher satisfaction.

Likewise, perceived ease of use shows a positive and significant relationship with customer satisfaction ($\beta = 0.543$, $p < 0.01$), supporting H2. Among the variables examined, ease of use exhibits the largest standardized coefficient, indicating that clarity,

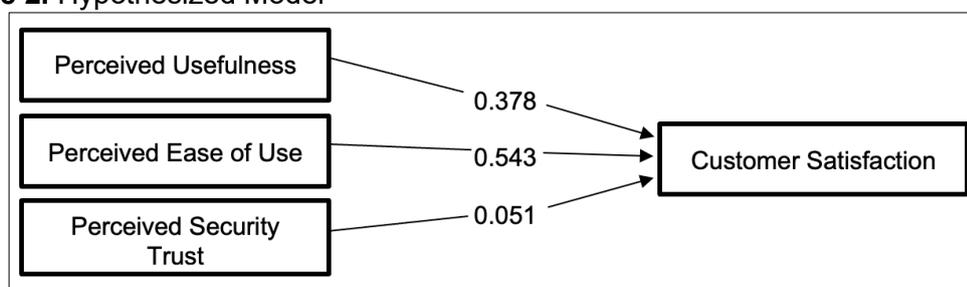
simplicity, and ease of navigation play a central role in shaping users' satisfaction with the application.

In contrast, perceived security trust does not demonstrate a statistically significant effect on customer satisfaction ($\beta = 0.051$, $p > 0.05$). Accordingly, H3 is not supported. This outcome implies that while security may be an expected feature of mobile banking services, it does not directly contribute to variations in user satisfaction within this model.

Overall, the regression model explains a substantial proportion of variance in customer satisfaction ($R^2 = 0.856$), indicating that perceived usefulness and perceived ease of use jointly account for most of the observed differences in users' satisfaction levels with the MAE mobile banking application.

Figure 2 illustrates the hypothesized model of this study, depicting the proposed relationships between perceived usefulness, perceived ease of use, perceived security trust, and customer satisfaction.

Figure 2. Hypothesized Model



DISCUSSION

This study examines the determinants of customer satisfaction with the MAE mobile banking application by focusing on three key perceptual factors: perceived usefulness, perceived ease of use, and perceived security trust. Grounded in the TAM and supported by relevant mobile banking literature, the discussion interprets the empirical findings in relation to the research objectives and hypotheses. By concentrating on MAE, a mobile banking application developed by a major Malaysian financial institution, this study contributes context-specific insights into how digital banking applications are evaluated by university students, a segment that represents a significant and growing group of mobile banking users.

While previous studies have broadly examined mobile banking adoption and usage intentions using frameworks such as TAM and UTAUT (Sam et al., 2023; Venkatesh, 2015), this research extends the literature by emphasizing customer satisfaction rather than adoption intention and by empirically testing how specific user perceptions influence satisfaction within a student-dominated sample. The findings reveal that perceived usefulness and perceived ease of use play critical roles in shaping customer satisfaction, whereas perceived security trust does not emerge as a significant predictor in the regression model. These outcomes offer important theoretical and practical implications for digital banking service design and user experience management.

Perceived Usefulness and Customer Satisfaction

The findings demonstrate that perceived usefulness remains an important factor associated with customer satisfaction in the context of the MAE mobile banking application. Consistent with the foundational definition proposed by Davis (1989), perceived usefulness reflects the extent to which users believe that using a system

enhances their task performance. In this study, MAE is perceived as a functional platform that facilitates essential banking activities, including fund transfers, bill payments, and transaction monitoring, thereby contributing to users' overall satisfaction.

The regression analysis indicates that perceived usefulness is a statistically significant predictor of customer satisfaction, supporting H1. However, the standardized beta coefficient for perceived usefulness appears negative when estimated alongside perceived ease of use. This result suggests the presence of overlapping explanatory power between these two closely related constructs, a phenomenon that has been reported in prior TAM-based studies. When perceived ease of use is strongly emphasized, particularly among digitally literate users such as university students, perceived usefulness may exert an indirect rather than dominant influence on satisfaction. In such cases, ease of use may subsume aspects of usefulness, especially when basic banking functionalities are already perceived as standard features rather than distinctive value propositions.

Despite this statistical nuance, the significance of perceived usefulness aligns with prior empirical findings. Studies by [Ghani et al. \(2022\)](#) and [Razak et al. \(2024\)](#) similarly reported that users who perceive mobile banking applications as useful are more likely to experience higher satisfaction and continued usage. The present findings suggest that usefulness remains a foundational requirement for satisfaction, although its impact may be comparatively less pronounced in user groups that already possess high familiarity with digital technologies. Thus, H1 is accepted, confirming that perceived usefulness contributes meaningfully to customer satisfaction, albeit in interaction with other usability-related factors.

Perceived Ease of Use and Its Influence on Customer Satisfaction

Perceived ease of use emerges as the strongest predictor of customer satisfaction in this study, highlighting its critical role in shaping users' experiences with the MAE application. According to TAM, perceived ease of use refers to the degree to which a system is perceived as free of effort, and it directly influences users' attitudes and satisfaction ([Davis, 1989](#)). The findings indicate that users who find MAE intuitive, easy to navigate, and simple to operate tend to report significantly higher satisfaction levels.

The regression results show that perceived ease of use has the highest standardized beta coefficient among the independent variables and is statistically significant at the 0.001 level. This result provides strong empirical support for H2, confirming that ease of use has a positive and substantial effect on customer satisfaction. Among university students, who are accustomed to fast, seamless digital interactions, application simplicity becomes a decisive factor in evaluating service quality and overall experience.

This finding is consistent with prior studies emphasizing the importance of user-friendly design in digital financial services. [Okour et al. \(2023\)](#) and [Yen & Hui \(2023\)](#) found that intuitive interfaces, clear navigation structures, and reduced cognitive effort significantly enhance satisfaction and continued usage of online banking platforms. In the context of MAE, ease of use appears to outweigh other considerations, suggesting that users prioritize efficiency and convenience over more abstract benefits when forming satisfaction judgments.

From a theoretical perspective, this result reinforces the central role of perceived ease of use within TAM, particularly in mature digital environments where functional usefulness is often taken for granted. Practically, the finding underscores the importance for financial institutions to continuously refine interface design and usability features to

sustain customer satisfaction. Overall, H2 is accepted, and perceived ease of use is identified as the most influential determinant of customer satisfaction in this study.

Perceived Security Trust and Customer Satisfaction

Perceived security trust is widely recognized as a critical factor in digital banking contexts, as financial transactions involve sensitive personal and financial information. Prior research has consistently emphasized that trust reduces perceived risk, enhances confidence, and strengthens long-term relationships between users and digital platforms (Gefen et al., 2003; Kee et al., 2021). Accordingly, it was hypothesized that perceived security trust would positively influence customer satisfaction with the MAE application.

Contrary to expectations, the regression analysis indicates that perceived security trust does not have a statistically significant effect on customer satisfaction, with a standardized beta coefficient of 0.051 and a p-value exceeding the 0.05 threshold. As a result, H3 is rejected. This finding suggests that, within the context of this study, perceived security trust does not serve as a direct driver of satisfaction among student users of the MAE application.

Several explanations may account for this result. First, users may perceive security as a basic or hygiene factor, particularly when the application is provided by a well-established and reputable financial institution. In such cases, security is expected as a minimum standard rather than a differentiating feature that enhances satisfaction. Second, the student-dominated sample may exhibit relatively high baseline trust in digital banking systems, leading security considerations to play a less prominent role in shaping satisfaction judgments. Third, the low internal consistency reported for the perceived security trust construct suggests potential measurement limitations, which may have weakened its explanatory power in the regression model.

These findings align with prior studies that observed diminishing marginal effects of security trust once a minimum level of confidence is established. In digitally mature user groups, satisfaction may be more strongly influenced by experiential factors such as usability and convenience rather than trust-related concerns. Therefore, while security remains essential for system acceptance and risk reduction, it does not necessarily translate into higher satisfaction levels in all user contexts.

Overall Discussion Summary

In summary, the findings of this study confirm that perceived usefulness and perceived ease of use are significant determinants of customer satisfaction with the MAE mobile banking application, with perceived ease of use exerting the strongest influence. Perceived security trust, although theoretically important, does not significantly affect satisfaction in this sample. These results highlight the evolving nature of customer expectations in digital banking, particularly among young and technologically experienced users, and underscore the importance of prioritizing usability and functional efficiency in mobile banking service design.

CONCLUSION

This study examined the influence of perceived usefulness, perceived ease of use, and perceived security trust on customer satisfaction with the MAE mobile banking application among active users in Malaysia, with a particular focus on university students. Drawing on the TAM and trust-related theories, the research provides empirical insights into how user perceptions shape satisfaction in a rapidly evolving digital banking environment. The findings highlight that mobile banking has evolved beyond an optional

financial tool and has become an essential platform for daily financial management, especially among young, technologically proficient users.

The results demonstrate that perceived usefulness and perceived ease of use significantly influence customer satisfaction with the MAE application. In particular, perceived ease of use emerged as the strongest determinant of satisfaction, underscoring the importance of intuitive design, simple navigation, and low cognitive effort in mobile banking applications. Perceived usefulness also contributed meaningfully to satisfaction, although its influence appears to be closely intertwined with ease of use, especially within a digitally literate student population. These findings are consistent with TAM-based literature, which emphasizes the central role of usability and functional value in shaping positive user experiences.

In contrast, perceived security trust did not exhibit a statistically significant effect on customer satisfaction in the regression analysis. This suggests that, although security remains an essential prerequisite for mobile banking adoption, it may function as a baseline expectation rather than a differentiating factor influencing satisfaction among student users. Users may assume a minimum level of security when dealing with applications provided by established financial institutions, causing experiential factors such as ease of use and efficiency to play a more dominant role in satisfaction formation.

From a practical perspective, the findings provide valuable implications for financial institutions, particularly Maybank. To enhance customer satisfaction and remain competitive in the digital banking sector, banks should prioritize continuous improvements in application usability, interface simplicity, and seamless functionality. While security features must be maintained at high standards, greater emphasis should be placed on communicating usability benefits and ensuring a smooth user experience. Additionally, as digital banking usage among students and young adults continues to grow, banks may consider developing tailored features, financial literacy tools, and engagement strategies that cater specifically to this segment to strengthen long-term customer relationships.

Theoretically, this study contributes to the existing literature by extending TAM within the context of mobile banking satisfaction rather than adoption intention, while also examining the role of security trust in a student-based sample. By focusing on a specific application and user group, the study offers context-sensitive insights that enhance understanding of how satisfaction is formed in digital financial services. These findings reinforce the relevance of TAM in contemporary digital banking research while highlighting the evolving role of trust in technologically mature user segments.

LIMITATION

Despite its contributions, this study has several limitations that should be acknowledged. First, the use of convenience sampling among university students limits the generalizability of the findings to other user groups, such as working adults, older consumers, and users in rural areas. Future studies should incorporate more diverse demographic profiles to enhance external validity and provide a broader understanding of mobile banking satisfaction across different population segments.

Second, the study focused on a limited set of variables derived primarily from TAM and trust theory. Other factors, such as system quality, service quality, emotional experience, customer support, and digital literacy, may also play important roles in shaping customer satisfaction and should be explored in future research. Additionally, the low reliability observed for the perceived security trust construct suggests that further refinement of measurement items is necessary.

Finally, this study employed a cross-sectional and quantitative research design, which limits the ability to capture changes in user perceptions over time. Future research could adopt longitudinal or mixed-method approaches, including interviews or focus group discussions, to gain deeper insights into users' emotional responses, expectations, and evolving experiences with mobile banking applications.

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DECLARATION OF CONFLICTING INTERESTS

The authors have declared no potential conflicts of interest concerning the study, authorship, and/or publication of this article.

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