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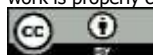
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FACTORS INFLUENCING THE INTENTION TO ADOPT DIGITAL BANKING: EVIDENCE FROM INDONESIAN BANK CUSTOMERS USING THE TECHNOLOGY ACCEPTANCE MODEL (TAM)

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ABSTRACT

Objective: This study aims to analyze the factors influencing the intention to adopt digital banking among bank customers in Indonesia using the Technology Acceptance Model (TAM) framework, which has been extended to include the variables of trust, perceived security, and social influence.

Research Design & Methods: This study employs a quantitative approach with a survey design. Data were collected from 385 active bank customers via a structured questionnaire. Data analysis was conducted using Partial Least Squares-based Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS 4.0 to test the relationships among variables and the strength of the structural model.

Findings: The results indicate that perceived ease of use, perceived usefulness, trust, perceived security, and social influence have a positive and significant effect on the intention to adopt digital banking. Perceived usefulness was the most dominant factor ($\beta = 0.412$; $t = 8.914$; $p < 0.001$), followed by trust ($\beta = 0.318$; $t = 6.241$; $p < 0.001$). The research model explains 67.3% of the variation in adoption intention ($R^2 = 0.673$) with good predictive power ($Q^2 = 0.441$).

Contributions: This study enriches the literature on financial technology adoption in developing countries by integrating the extended TAM constructs within the context of digital banking in Indonesia. In practical terms, the findings of this study provide insights for the banking industry on how to increase the adoption of digital services by enhancing the benefits, trust, and security of the system.

Novelty: The novelty of this study lies in the simultaneous integration of the variables of trust, perceived security, and social influence into the TAM model within the context of digital banking in developing countries, supported by comprehensive PLS-SEM-based empirical evidence.

Keywords: Digital Banking; Technology Acceptance Model (TAM); Social Influence

JEL codes: G21; O33; M15

Article type: research paper

INTRODUCTION

Digital transformation in the financial services sector has become one of the most significant structural changes in the modern global economy. Digitalization has not only revolutionized the way financial institutions operate but has also fundamentally transformed the banking business model from branch-based banking to platform-based banking. This shift is driven by advancements in information technology, cloud computing, artificial intelligence, and increasing global internet connectivity, which is projected to reach approximately 6 billion users by 2025, representing about 75% of the world's population (ITU, 2025). Consequently, digital financial services have become the new standard in the banking industry because they improve operational efficiency, expand service accessibility, and enhance customer experience without geographical constraints (Gomber et al., 2017).

Indonesia has experienced rapid digital transformation in the banking sector, supported by internet penetration exceeding 78% of the population and widespread smartphone ownership among the productive-age population. According to the Financial Services Authority (OJK, 2023), digital banking transactions continue to grow annually, with mobile banking and internet banking accounting for the largest share of financial transactions. This transformation accelerated during the COVID-19 pandemic as consumers increasingly shifted from conventional banking services to digital financial platforms that offer greater convenience, speed, and safety (The World Economic Forum and Deloitte, 2021). Despite this remarkable growth, digital banking adoption remains uneven across demographic groups.

Indonesia provides a particularly important context for examining digital banking adoption because it combines one of the largest digital economies in Southeast Asia with substantial disparities in digital literacy, financial inclusion, and infrastructure across regions. As an archipelagic country consisting of thousands of islands, Indonesia faces unequal access to digital infrastructure, while cultural characteristics emphasizing collectivism also shape technology adoption behavior through social influence. These unique demographic, geographical, and socio-cultural conditions distinguish Indonesia from many other developing countries and make it an important setting for extending technology adoption theories.

The growth of digital banking in Indonesia shows a positive trend, but there is a significant adoption gap across different segments of society. The elderly, people with low digital literacy, and residents in non-urban areas still exhibit relatively low levels of digital banking usage compared to younger generations in urban areas. This phenomenon indicates that technology adoption is not solely determined by the availability of infrastructure but also by psychological factors such as risk perception, trust levels, and the ability to adapt to new technologies (Rahi et al., 2020; Venkatesh et al., 2012). The understanding of factors influencing adoption intent is therefore crucial in the context of digital financial inclusion in developing countries.

The Technology Acceptance Model (TAM), proposed by Davis (1989) is one of the most widely adopted theoretical frameworks for explaining user acceptance of new technologies. TAM argues that behavioral intention is primarily determined by perceived usefulness and perceived ease of use. Due to its simplicity and strong predictive ability, TAM has been extensively validated in studies of e-commerce, e-government, mobile applications, and digital banking (Davis, 1989; King & He, 2006). However, the rapid evolution of digital financial services has exposed several limitations of the original TAM, suggesting the need to incorporate additional contextual variables that better reflect users' decision-making processes.

Digital financial services such as digital banking and fintech: traditional TAM has limitations in comprehensively explaining user adoption decisions. This is due to the characteristics of digital financial services, which involve high levels of risk, including data security risks, digital fraud, and system uncertainty. Therefore, factors such as trust, perceived security, and perceived risk are important determinants that cannot be ignored in modern technology adoption models (Oliveira et al., 2016). A study by Dedy et al., (2025) shows that integrating external variables into the TAM can significantly improve the model's explanatory power in the fintech context.

Trust represents users' confidence that digital banking providers are competent, reliable, and capable of protecting customers' financial and personal information. Previous research consistently identifies trust as a major determinant of digital banking adoption (Sathar et al., 2023). Likewise, perceived security plays a critical role because customers evaluate the effectiveness of security mechanisms before deciding to perform online financial transactions. Strong security perceptions reduce uncertainty and increase users' confidence in adopting digital banking services (Belanche et al., 2020; Oliveira et al., 2016). Furthermore, in collectivist societies such as Indonesia, social influence is expected to exert a substantial effect on technology adoption because individuals often rely on recommendations and experiences shared by family members, friends, and colleagues when deciding whether to adopt new technologies (Venkatesh et al., 2012; Singh & Srivastava, 2020).

Despite the growing body of literature, previous studies have produced inconsistent findings regarding the determinants of digital banking adoption. While several studies report that perceived usefulness directly and significantly influences adoption intention, others find that its effect becomes insignificant when trust or perceived security is incorporated into the research model. Similarly, the effect of social influence remains inconsistent across different countries and demographic contexts, with some studies reporting significant effects while others find only indirect or insignificant relationships. These inconsistencies indicate that the explanatory power of existing technology adoption models remains inconclusive and may depend on contextual factors.

Furthermore, most previous studies have examined only individual extensions of TAM by incorporating one or two additional variables, while relatively few studies have simultaneously integrated perceived usefulness, perceived ease of use, trust, perceived security, and social influence within a comprehensive structural model. Empirical evidence from Indonesia also remains limited despite the country's distinctive demographic diversity, rapid digitalization, and unequal digital inclusion. Therefore, a more comprehensive investigation is needed to explain digital banking adoption behavior within the Indonesian context.

Based on these research gaps, this study develops an extended Technology Acceptance Model by integrating trust, perceived security, and social influence into the original TAM framework to explain digital banking adoption intention among Indonesian bank customers. Specifically, this study examines the effects of perceived ease of use on perceived usefulness and adoption intention, the influence of perceived usefulness on adoption intention, and the effects of trust, perceived security, and social influence on adoption intention. The findings are expected to contribute theoretically by extending the Technology Acceptance Model in the digital banking context and practically by providing insights for banks and policymakers in designing strategies that promote more inclusive, secure, and sustainable digital banking adoption.

LITERATURE REVIEW

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was developed by Fred D. Davis in 1989 as an adaptation of the Theory of Reasoned Action (TRA) proposed by [Fishbein and Ajzen \(1975\)](#) in the context of information system acceptance. TAM posits that an individual's behavioral intention to use a technology is directly influenced by two main constructs: perceived usefulness and perceived ease of use. This model is based on the assumption that the decision to use technology is a rational and predictable behavior based on the user's attitudes and beliefs regarding that technology ([Davis, 1989](#)).

The TAM model has been widely used in various fields of research, including e-commerce, e-government, mobile banking, fintech, e-learning, and digital health services. The main strengths of TAM lie in the model's simplicity and its ability to consistently explain user behavior across various technological contexts. A meta-analysis conducted by [King and He \(2006\)](#) indicates that TAM demonstrates high levels of validity and reliability in explaining technology usage intentions across different countries and industrial sectors.

The TAM serves as a relevant theoretical framework in the context of digital banking because the use of digital banking services is heavily influenced by customers' perceptions of the system's benefits and ease of use. Customers tend to adopt digital services if they believe that these services can improve transaction efficiency, save time, and are easy to use. Therefore, the TAM serves as the primary theoretical foundation in this study to explain the intention to adopt digital banking.

Perceived Ease of Use

Perceived ease of use is one of the fundamental constructs in the Technology Acceptance Model (TAM) that reflects users' cognitive evaluation of the level of effort required to learn and use a technological system. [King and He \(2006\)](#) define this construct as the extent to which a person believes that using a particular system does not require significant physical or mental effort. In the context of digital banking, perceived ease of use encompasses assessments of the ease of navigating the application interface, the speed of service access, and the clarity of instructions available to users.

Theoretically, perceived ease of use serves as a precursor to perceived usefulness, as a system that is easy to use will be perceived as more useful by users because it reduces cognitive barriers to its use. This relationship has been confirmed in various empirical studies across different technological contexts ([King & He, 2006](#)). Furthermore, perceived ease of use also directly influences behavioral intention by fostering positive user attitudes toward the technology. Users who perceive a digital banking app as easy to operate are more likely to be motivated to continue using it regularly.

Research on digital banking adoption often links perceived ease of use to user interface design, feature accessibility, and the quality of the user experience. A study by [Rahi et al., \(2020\)](#) found that customers who rated mobile banking apps as easy to use showed a higher intention to adopt them, particularly when that ease contributed to time savings and simplified transaction processes. These findings have significant practical implications for digital banking app developers in designing intuitive and user-friendly interfaces.

Perceived Ease of Use is the degree to which customers believe that digital banking services are easy to learn and use ([Davis, 1989](#)). This construct is measured using 5 PEOU indicator items ([Davis, 1989](#)): 1) Digital banking applications are easy to learn; 2) Interactions with digital banking applications are easy to understand; 3) Features in digital banking are easy to use; 4) I can use digital banking without significant difficulty; 5) Overall, digital banking is easy to use.

Perceived Usefulness

Perceived usefulness is defined as the degree to which an individual believes that using a particular system will improve their performance and productivity in completing specific tasks ([Davis, 1989](#)). This construct reflects users' utilitarian evaluation of the instrumental benefits that can be derived from adopting technology, and in various empirical studies has proven to be the strongest predictor of the intention to use technology. In the context of digital banking, perceived usefulness encompasses users' perceptions of benefits such as 24-hour account access, transaction time efficiency, cost savings, and the convenience of transacting from anywhere.

The perceived usefulness of digital banking can be defined as an app's ability to speed up transactions, facilitate access to banking services, reduce transaction costs, and improve financial management efficiency. When users experience significant benefits from digital banking services, they are more likely to adopt and continue using those services.

Perceived Usefulness is the degree to which customers believe that using digital banking services will improve the effectiveness and convenience of conducting financial transactions ([Davis, 1989](#)). This construct is

measured using five indicator items, including: 1) Using digital banking helps me complete transactions faster; 2) Digital banking improves the efficiency of my banking activities; 3) Digital banking makes it easier for me to manage my finances; 4) Using digital banking increases my productivity when conducting transactions; 5) Overall, digital banking provides significant benefits for me.

Trust

Trust is a fundamental factor in the adoption of digital financial services, as using these services requires users to provide sensitive personal and financial information to systems that cannot be physically verified. [Morgan and Hunt \(1994\)](#) define trust as belief in the reliability and integrity of another party, while in the context of technology, [Gefen et al., \(2003\)](#) define it as the user's belief that the system will behave in accordance with their expectations. In the context of digital banking, trust reflects customers' belief that the bank and its technological systems will operate securely, honestly, and responsibly in managing their data and transactions.

Research by [Chen et al., \(2025\)](#) shows that trust has a significant direct effect on the intention to use mobile banking and acts as a mediator between risk perception and adoption decisions. When customer trust is high, they tend to be more willing to overlook perceived risks and continue using digital banking services. Conversely, low trust is a major barrier to adoption even when the technology is perceived as beneficial and easy to use. These findings reinforce the position of trust as a construct that cannot be overlooked in models of digital financial service adoption.

The multidimensional perspective on trust in the context of digital banking encompasses at least three dimensions: trust in the bank's competence (ability), trust in the bank's benevolence, and trust in the system's integrity ([Mayer et al., 1995](#)). These three dimensions reinforce one another in shaping users' holistic confidence in digital banking services. In practice, banks can build customer trust through information transparency, consistent service quality, responsive problem resolution, and open communication regarding data security policies.

Trust is the customer's belief that a digital banking service provider is reliable, honest, and capable of protecting users' interests ([McKnight et al., 2002](#)). This construct is measured using 5 items: 1) I believe the bank provides reliable digital services; 2) I believe the bank safeguards customers' interests in digital banking services; 3) I believe the information provided in digital banking is accurate and honest; 4) I believe the bank is capable of protecting my personal data; 5) Overall, I trust the digital banking services provided by the bank.

Perceived Security

Perceived security is defined as a user's subjective assessment of the level of security offered by a system in protecting personal data and financial information from unauthorized access, fraud, and other cyber threats ([Belanche et al., 2020](#)). This construct differs from objective technical security, as it reflects users' perceptions, which are influenced by their knowledge, experience, and exposure to information regarding digital security risks. In the context of digital banking, perceived security encompasses perceptions regarding the protection of personal data, transaction encryption, two-factor authentication, and mechanisms for reporting suspicious activity.

The study of [Oliveira et al., \(2016\)](#) and [Belanche et al., \(2020\)](#) consistently show that perceived security has a significant influence on the intention to use fintech and digital banking services, particularly among users with limited digital experience. Users who perceive digital banking systems as secure tend to have higher trust and stronger adoption intentions. This relationship indicates that banks' investments in cybersecurity infrastructure are important not only from a technical perspective but also from the perspective of managing user perceptions.

From a technology adoption perspective, perceived security interacts with the trust variable in shaping users' adoption intentions. When users perceive the system as secure, this directly increases their trust in digital banking services, which in turn drives adoption intentions. The mediating relationship between perceived security and adoption intention through trust has been identified in several studies ([Siagian et al., 2022](#)), indicating that robust security mechanisms are a vital foundation for building a trustworthy and sustainable digital banking ecosystem.

Perceived Security refers to customers' perception of the level of security provided by digital banking systems in protecting data and financial transactions from the threat of misuse ([Kim et al., 2008](#)). This construct is measured using four items: 1) I feel that transactions via digital banking are safe to conduct; 2) I am confident that my personal data is protected when using digital banking; 3) The digital banking system has adequate security mechanisms; 4) I feel that the risk of data misuse in digital banking is low.

Social Influence

Social influence refers to the extent to which an individual perceives that significant others in their environment—such as family, friends, and coworkers—believe that they should use a particular technology ([Venkatesh et al., 2012](#)). This construct is rooted in the theory of subjective norms within the Theory of Reasoned Action ([Fishbein & Ajzen, 1975](#)) and Social Cognitive Theory ([Bandura, 1986](#)), which emphasize the role of social

context in shaping individual behavior. In the context of digital banking, social influence reflects the normative pressure from the user's social environment that either encourages or hinders the adoption of digital services.

Venkatesh et al., (2012) in the UTAUT2 model, social influence is identified as one of the constructs that significantly influences the intention to use technology, particularly under conditions of mandatory use and during the early stages of adoption. In the context of collectivist Asian societies such as Indonesia, social influence tends to play a more prominent role compared to individualistic societies, as individual decisions are often influenced by the expectations and norms of social groups. This makes social influence a relevant and important variable in the digital banking adoption model in Indonesia.

Singh and Srivastava (2020) found that recommendations from one's social circle increase users' initial trust in mobile banking services, which in turn drives their intention to adopt them. This mechanism operates through the process of social proof, whereby the use of the technology by trusted individuals sends a positive signal regarding the reliability and security of the service. The practical implication is that word-of-mouth and referral marketing strategies are effective tools for increasing digital banking adoption, particularly among users who have not yet had direct experience with such services.

Social influence refers to the extent to which people in a customer's social circle influence their decision to use digital banking services (Venkatesh et al., 2012). This construct is measured using 5 items: 1) My family encourages me to use digital banking; 2) My friends suggest using digital banking; 3) My coworkers or people around me influence me to use digital banking; 4) People who are important to me support the use of digital banking; 5) Other people's positive experiences make me interested in using digital banking.

Behavioral Intention to Adopt Digital Banking (Adoption Intention)

Behavioral Intention is a concept that describes an individual's level of desire, readiness, and commitment to use a particular technology within a specific time period. Within the Technology Acceptance Model (TAM) developed by Fred D. Davis, behavioral intention is positioned as a variable that directly influences actual system use. The stronger a person's intention to use a technology, the greater the likelihood that the technology will actually be used in daily activities. Therefore, behavioral intention is often considered the best indicator for predicting the level of acceptance and adoption of an information system before actual use can be directly observed. In various studies on technology adoption, behavioral intention has been shown to have a strong and significant relationship with actual usage behavior, making it a central variable in explaining the success of a digital innovation's implementation.

The term "behavioral intention" or "intention to adopt" in the context of digital banking refers to customers' willingness to use technology-based banking services such as mobile banking, internet banking, digital banking applications, and various other digital financial services. This intention is reflected in customers' desire to conduct financial transactions digitally, utilize available features, and rely on digital services as their primary means of managing their financial activities. A high level of adoption intention indicates that customers have a positive perception of the services offered and believe that the technology provides added value compared to conventional banking services. Conversely, low adoption intent may indicate the presence of doubts, mistrust, or certain barriers that make customers reluctant to switch to digital services. Thus, understanding the factors that influence adoption intent is crucial for the banking industry in designing effective digital transformation strategies.

The intention to adopt digital banking does not arise spontaneously but is influenced by various psychological and social factors that shape users' perceptions of the technology. In this study, adoption intention is predicted by five main variables: Perceived Usefulness, Perceived Ease of Use, Trust, Perceived Security, and Social Influence. Customers tend to have a higher intention to use digital banking if they perceive tangible benefits, find the system easy to use, trust the service provider, feel that their data and transactions are secure, and receive support or recommendations from their social circle. Therefore, in this study, behavioral intention is positioned as the primary dependent variable, representing the level of customer acceptance of digital banking services. Measuring this variable is important because it provides insight into the potential success of digital banking adoption and helps banks formulate policies and strategies to increase the sustainable use of digital services.

Adoption intention refers to a customer's desire and propensity to use digital banking services both now and in the future (Ajzen, 1991). This construct is measured by four items: 1) I intend to use digital banking regularly; 2) I will continue to use digital banking in the future; 3) I prefer using digital banking over conventional banking services; 4) I am willing to recommend digital banking to others.

Conceptual Framework

Based on the Technology Acceptance Model (TAM) and the extended literature on digital banking adoption, this study proposes a conceptual model integrating the original TAM constructs with three additional variables, namely trust, perceived security, and social influence. The model assumes that perceived ease of use positively

influences perceived usefulness as well as customers' intention to adopt digital banking. Furthermore, perceived usefulness, trust, perceived security, and social influence are proposed to directly influence adoption intention.

The conceptual framework is developed to provide a comprehensive explanation of digital banking adoption behavior in Indonesia by combining technological, psychological, and social factors. Figure 1 illustrates the proposed research model and the hypothesized relationships among the study variables.

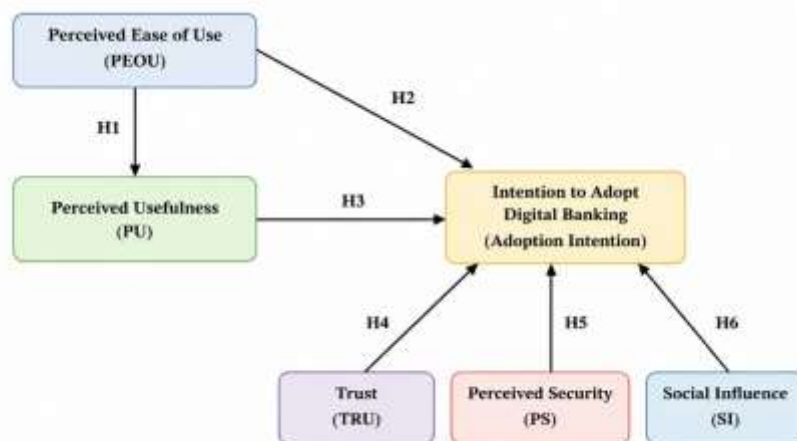


Figure 1. Conceptual Framework

Hypothesis Development

H1: Perceived Ease of Use has a positive effect on Perceived Usefulness.

Users who find the system easy to use will more readily perceive the benefits of using it. The higher the perceived ease of use, the higher the perceived usefulness experienced by users.

H2: Perceived Ease of Use has a positive effect on the Intention to Adopt Digital Banking.

Ease of use can enhance user comfort, thereby encouraging the intention to use digital banking services.

H3: Perceived Usefulness has a positive effect on the Intention to Adopt Digital Banking.

Users who perceive tangible benefits from digital banking services will be more likely to use them.

H4: Trust has a positive effect on the Intention to Adopt Digital Banking.

The higher the level of user trust in the system and service providers, the higher their intention to adopt digital banking services.

H5: Perceived Security has a positive effect on the Intention to Adopt Digital Banking.

Users who feel secure when conducting digital transactions will be more motivated to use digital banking services.

H6: Social Influence has a positive effect on the Intention to Adopt Digital Banking.

Support and recommendations from one's social circle can increase users' intention to adopt digital banking services.

METHODS

This study employed a quantitative approach using a cross-sectional survey design to examine the factors influencing customers' intention to adopt digital banking in Indonesia. The study population consisted of active bank customers in Indonesia who held savings or checking accounts at commercial banks and had used digital banking services at least once during the previous six months. A purposive sampling technique was applied using the following criteria: (a) respondents were at least 18 years old, (b) possessed an active account at a conventional commercial bank, and (c) owned a smartphone with internet access. Following the recommendations of [Hair et al., \(2019\)](#) for Partial Least Squares Structural Equation Modeling (PLS-SEM), a minimum sample size was determined, resulting in a final sample of 385 valid respondents.

Data were collected through a structured online questionnaire distributed using Google Forms. The survey link was disseminated through social media platforms (WhatsApp, Instagram, Facebook, and Telegram) and professional networks to reach respondents across different regions of Indonesia. Prior to the full survey, the questionnaire was pilot-tested with 30 respondents to evaluate item clarity, wording, and comprehensibility. Feedback obtained during the pilot study was used to improve several statements before the final questionnaire was distributed. Responses were screened to eliminate incomplete questionnaires and duplicate submissions, ensuring that only complete and valid responses were included in the final analysis.

The questionnaire was developed by adapting measurement instruments that had been validated in previous studies. All constructs were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Perceived Usefulness and Perceived Ease of Use were measured using five items adapted from

Davis (1989), Trust using five items adapted from McKnight et al., (2002) Perceived Security using four items adapted from Kim et al., (2008), Social Influence using five items adapted from Venkatesh et al., (2012), and Adoption Intention using four items adapted from Ajzen (1991). To ensure linguistic equivalence, the questionnaire was translated from English into Indonesian using the back-translation procedure.

Because all variables were collected using a self-administered questionnaire, several procedural and statistical measures were employed to minimize common method bias (CMB). Procedurally, respondents were assured that their responses would remain anonymous and confidential, reducing evaluation apprehension and social desirability bias. In addition, question order was randomized where appropriate to minimize response patterns. Statistically, Harman's single-factor test was performed, and no single factor accounted for more than 50% of the total variance, indicating that common method bias was unlikely to threaten the validity of the findings. Furthermore, variance inflation factor (VIF) values were examined to detect potential collinearity issues among the latent constructs.

Ethical considerations were carefully observed throughout the research process. Participation in the survey was entirely voluntary, and informed consent was obtained electronically before respondents proceeded with the questionnaire. Participants were informed about the purpose of the study, the confidentiality of their responses, and their right to withdraw from the survey at any stage without penalty. No personally identifiable information was collected, and all data were analyzed only in aggregate form for academic research purposes.

Data analysis was conducted using SmartPLS 4.0 following the two-step approach recommended for PLS-SEM. The measurement model (outer model) was first evaluated by assessing convergent validity using factor loadings (≥ 0.70) and Average Variance Extracted ($AVE \geq 0.50$), discriminant validity using the Fornell-Larcker criterion and Heterotrait-Monotrait ratio ($HTMT < 0.90$), and construct reliability using Cronbach's alpha (≥ 0.70) and Composite Reliability ($CR \geq 0.70$). Subsequently, the structural model (inner model) was evaluated using bootstrapping with 5,000 resamples to estimate path coefficients and test the proposed hypotheses. The structural model assessment also included collinearity diagnostics (VIF), coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2).

RESULT

Respondent Profile

Data collection was conducted via a questionnaire survey. Of the 420 questionnaires distributed, 397 were returned (response rate: 94.5%), and after the screening process, 385 valid questionnaires were available for analysis. The demographic profile of the respondents is presented in the following table:

Tabel 1. Respondent Profile (n = 385)

Characteristics	Category	n	%
Gender	Male	198	51,4
	Female	187	48,6
Age	18–25 years	112	29,1
	26–35 years	148	38,4
	36–45 years	89	23,1
	> 45 years	36	9,4
Educations	High school/equivalent	78	20,3
	Diploma/Bachelor's degree	231	60,0
	Master's/PhD	76	19,7
Income	< IDR 3 million	67	17,4
	IDR 3–7 million	163	42,3
	> IDR 7 million	155	40,3
DB Experience	< 1 year	54	14,0
	1–3 year	178	46,2
	> 3 year	153	39,7

Source: Processed primary data (2026).

Note: DB = Digital Banking.

Descriptive Statistical Analysis

Descriptive statistics are used to provide an overview of the distribution of respondents' answers for each research variable. The mean and standard deviation (SD) are calculated based on the average score of the indicators within each construct. The interpretation categories use the following scale ranges: 1.00–2.33 (Low), 2.34–3.67 (Moderate), 3.68–5.00 (High).

Tabel 2. Descriptive Statistics of Research Variables

Variables	Code	Item	Mean	SD	Min–Maks	Interpretation
Intention to Adopt	BI	4	3,98	0,672	1,00–5,00	High
Perceived Usefulness	PU	5	4,12	0,614	1,00–5,00	High
Perceived Ease of Use	PEOU	5	3,87	0,701	1,00–5,00	High
Trust	TR	5	3,74	0,738	1,00–5,00	High
Perceived Security	SEC	4	3,61	0,789	1,00–5,00	Moderate
Social Influence	SI	5	3,52	0,812	1,00–5,00	Moderate

Source: Processed primary data (2026).

All research variables fall into the High interpretation category except for Social Influence (SI), which falls into the Moderate category (mean = 3.52). Perceived Usefulness has the highest mean value (4.12), indicating that respondents generally perceive digital banking services as a useful and efficient solution for financial management. Perceived Security has the lowest mean value among the High-category variables (3.61), yet it still falls into the Moderate category, reflecting residual customer concerns regarding data protection.

Evaluation of the Measurement Model (Outer Model)

The measurement model is evaluated to verify that each indicator accurately and consistently measures the intended construct. The evaluation includes convergent validity, discriminant validity, and construct reliability.

1. Convergent Validity Test

Convergent validity is assessed through the factor loadings of each indicator and the Average Variance Extracted (AVE) values. The criteria used are: (1) factor loading ≥ 0.70 (Hair et al., 2019); and (2) AVE ≥ 0.50 (Fornell & Larcker, 1981).

Tabel 3. Indicator Factor Loadings

Construct	Item	Loading	Threshold	Status
Perceived Usefulness (PU)	PU1	0,841	$\geq 0,70$	✓
	PU2	0,812	$\geq 0,70$	✓
	PU3	0,856	$\geq 0,70$	✓
	PU4	0,782	$\geq 0,70$	✓
	PU5	0,798	$\geq 0,70$	✓
Perceived Ease of Use (PEOU)	PEOU1	0,764	$\geq 0,70$	✓
	PEOU2	0,821	$\geq 0,70$	✓
	PEOU3	0,789	$\geq 0,70$	✓
	PEOU4	0,801	$\geq 0,70$	✓
	PEOU5	0,779	$\geq 0,70$	✓
Trust (TR)	TR1	0,834	$\geq 0,70$	✓
	TR2	0,801	$\geq 0,70$	✓
	TR3	0,856	$\geq 0,70$	✓
	TR4	0,812	$\geq 0,70$	✓
	TR5	0,867	$\geq 0,70$	✓
Perceived Security (SEC)	SEC1	0,812	$\geq 0,70$	✓

Construct	Item	Loading	Threshold	Status
Social Influence (SI)	SEC2	0,845	≥ 0,70	✓
	SEC3	0,821	≥ 0,70	✓
	SEC4	0,876	≥ 0,70	✓
	SI1	0,793	≥ 0,70	✓
	SI2	0,812	≥ 0,70	✓
	SI3	0,801	≥ 0,70	✓
	SI4	0,834	≥ 0,70	✓
	SI5	0,823	≥ 0,70	✓
Intention to Adopt (BI)	BI1	0,854	≥ 0,70	✓
	BI2	0,867	≥ 0,70	✓
	BI3	0,878	≥ 0,70	✓
	BI4	0,898	≥ 0,70	✓

Source: Processed primary data (2026).

All constructs have an AVE above 0.50, confirming adequate convergent validity.

Tabel 4. Summary of Convergent Validity and Reliability

Construct	CR	AVE	α	$\sqrt{\text{AVE}}$	Status
Perceived Usefulness (PU)	0,912	0,678	0,889	0,823	✓ Valid
Perceived Ease of Use (PEOU)	0,897	0,645	0,869	0,803	✓ Valid
Trust (TR)	0,934	0,701	0,916	0,837	✓ Valid
Perceived Security (SEC)	0,906	0,707	0,867	0,841	✓ Valid
Social Influence (SI)	0,921	0,699	0,898	0,836	✓ Valid
Intention to Adopt (BI)	0,943	0,772	0,921	0,879	✓ Valid

Source: Processed primary data (2026).

Note: CR = Composite Reliability; AVE = Average Variance Extracted; α = Cronbach's Alpha.

2. Discriminant Validity Test

Discriminant validity was tested using three criteria: (1) the Fornell-Larcker Criterion—the square root of the AVE for each construct must be greater than the correlation with other constructs; (2) Cross Loadings — the loading of an indicator on its construct must be higher than the loading on other constructs; and (3) Heterotrait-Monotrait Ratio (HTMT) — the HTMT value must be below 0.90 (Henseler et al., 2015).

Tabel 5. Matriks Fornell-Larcker Criterion

	BI	PEOU	PU	SEC	SI	TR
BI	0,879	0,598	0,687	0,531	0,512	0,643
PEOU	0,598	0,803	0,656	0,489	0,467	0,512
PU	0,687	0,656	0,823	0,521	0,498	0,587
SEC	0,531	0,489	0,521	0,841	0,478	0,534
SI	0,512	0,467	0,498	0,478	0,836	0,489
TR	0,643	0,512	0,587	0,534	0,489	0,837

Source: Processed primary data (2026).

The results in the table above show that the $\sqrt{\text{AVE}}$ value for each construct (diagonal) is greater than the interconstruct correlation, thus satisfying the Fornell-Larker criterion. An examination of the cross-loadings also confirms that each indicator has the highest loading on its respective construct.

Tabel 6. HTMT (Heterotrait-Monotrait Ratio) Test Result

Construct	HTMT	Threshold	95% CI	Status
BI → PEOU	0,612	< 0,90	[0,550; 0,670]	✓ Valid
BI → PU	0,701	< 0,90	[0,639; 0,759]	✓ Valid
BI → SEC	0,543	< 0,90	[0,481; 0,601]	✓ Valid
BI → SI	0,523	< 0,90	[0,461; 0,581]	✓ Valid
BI → TR	0,658	< 0,90	[0,596; 0,716]	✓ Valid
PEOU → PU	0,671	< 0,90	[0,609; 0,729]	✓ Valid
PEOU → SEC	0,502	< 0,90	[0,440; 0,560]	✓ Valid
PEOU → SI	0,481	< 0,90	[0,419; 0,539]	✓ Valid
PEOU → TR	0,523	< 0,90	[0,461; 0,581]	✓ Valid
PU → SEC	0,534	< 0,90	[0,472; 0,592]	✓ Valid
PU → SI	0,511	< 0,90	[0,449; 0,569]	✓ Valid
PU → TR	0,598	< 0,90	[0,536; 0,656]	✓ Valid
SEC → SI	0,490	< 0,90	[0,428; 0,548]	✓ Valid
SEC → TR	0,547	< 0,90	[0,485; 0,605]	✓ Valid
SI → TR	0,502	< 0,90	[0,440; 0,560]	✓ Valid

Source: Processed primary data (2026).

3. Reliability Test

Construct reliability was assessed using two criteria: Cronbach's Alpha ($\alpha \geq 0.70$) and Composite Reliability (CR ≥ 0.70). These two criteria are presented in Table 4. All constructs met the reliability thresholds, with CR values ranging from 0.897 to 0.943 and Cronbach's Alpha values ranging from 0.867 to 0.921. Overall, the results of the outer model testing confirm that the research instrument has excellent reliability and validity for use in structural model testing.

Struktural Model Evaluation (Inner Model)

Structural model evaluation is conducted to assess the strength and quality of relationships among constructs. The evaluation steps include testing for multicollinearity (VIF), the coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2).

1. Multikolinearitas Uji (Variance Inflation Factor / VIF)

Multicollinearity among predictor variables is tested using the Variance Inflation Factor (VIF). A VIF value ≤ 3.33 indicates the absence of serious multicollinearity issues in the model (Hair et al., 2019). Table 7 presents the VIF test results for each predictor path.

Tabel 7. Multicollinearity Test Results (VIF)

Construct	Predictor	VIF	Threshold	Status
PU → BI	PU	1,812	$\leq 3,33$	✓ Not Multicol
PEOU → BI	PEOU	1,698	$\leq 3,33$	✓ Not Multicol
TR → BI	TR	1,934	$\leq 3,33$	✓ Not Multicol
SEC → BI	SEC	1,612	$\leq 3,33$	✓ Not Multicol
SI → BI	SI	1,547	$\leq 3,33$	✓ Not Multicol
PEOU → PU	PEOU	1,000	$\leq 3,33$	✓ Not Multicol

Source: Processed primary data (2026).

2. Coefficient of Determination (R^2 and Adjusted R^2)

The coefficient of determination (R^2) measures the proportion of the dependent variable's variance that can be explained by the independent variables in the model. Cohen (1988) classifies R^2 as: weak (0.02),

moderate (0.13), and strong/substantial (0.26). Table 8 presents the R^2 and Adjusted R^2 values for the endogenous constructs in the model.

Tabel 8. Coefficients of Determination (R^2 and Adjusted R^2)

Endogenous Construct	R^2	R^2 Adjusted	Classification
Intention to Adopt (BI)	0,673	0,668	Strong (Substantial)
Perceived Usefulness (PU)	0,272	0,270	Moderate

Source: Processed primary data (2026).

The model explains 67.3% of the variance in Adoption Intention (BI) and 27.2% of the variance in Perceived Usefulness (PU). The R^2 value of 0.673 for the BI construct falls into the substantial category, indicating that the combination of the five predictors (PU, PEOU, TR, SEC, SI) is capable of explaining most of the variability in digital banking adoption intention in this study's sample.

3. Effect Size (f^2)

Effect size (f^2) measures the relative contribution of each predictor to the endogenous variable when that predictor is removed from the model. Cohen (1988) classifies f^2 as: small (0.02), moderate (0.15), and large (0.35). The f^2 value is calculated using the formula: $f^2 = (R^2_{\text{incl}} - R^2_{\text{excl}}) / (1 - R^2_{\text{incl}})$.

Tabel 9. Effect Size (f^2)

Construct	β	f^2	Threshold	Classification
PU $\rightarrow$ BI	0,412	0,267	$\geq 0,02$	Moderate
TR $\rightarrow$ BI	0,318	0,148	$\geq 0,02$	Small
SEC $\rightarrow$ BI	0,187	0,042	$\geq 0,02$	Small
PEOU $\rightarrow$ BI	0,143	0,029	$\geq 0,02$	Small
SI $\rightarrow$ BI	0,156	0,034	$\geq 0,02$	Small
PEOU $\rightarrow$ PU	0,521	0,387	$\geq 0,02$	Large

Source: Processed primary data (2026).

4. Predictive Relevance (Q^2)

Predictive relevance (Q^2) was measured using the blindfolding procedure with an omission distance of $D = 7$. A Q^2 value > 0 indicates that the model has predictive relevance for the endogenous construct in question (Hair et al., 2019). Table 10 presents the results of the Q^2 test.

Tabel 10. Predictive Relevance (Q^2)

Endogenous Construct	Q^2	Threshold	Status
Intention to Adopt (BI)	0,441	> 0	Relevant (> 0)
Perceived Usefulness (PU)	0,178	> 0	Relevant (> 0)

Source: Processed primary data (2026).

The Q^2 value of 0.441 for Intention to Adopt indicates that the model has a sufficiently strong predictive relevance. Overall, the internal model evaluation shows that the structural model of this study meets all the quality criteria required in PLS-SEM analysis.

Hypothesis Test(Bootstrapping)

Hypothesis testing was conducted using the bootstrapping method with 5,000 subsamples and a two-tailed test at a significance level of $\alpha = 5\%$ (t-statistic > 1.96 or p-value < 0.05). This non-parametric method does not require the assumption of normality of the data distribution and is suitable for medium sample sizes as in this study (Hair et al., 2019). The complete results of the hypothesis testing are presented in Table 11.

Tabel 11. Hypothesis Test Results — Path Coefficients

H	Construct	β	SE	t-stat	p-value	Decision
H ₁	PEOU → PU	0,521	0,046	11,247	< 0,001	Accepted
H ₂	PEOU → BI	0,143	0,050	2,876	0,004	Accepted
H ₃	PU → BI	0,412	0,046	8,914	< 0,001	Accepted
H ₄	TR → BI	0,318	0,051	6,241	< 0,001	Accepted
H ₅	SEC → BI	0,187	0,048	3,892	< 0,001	Accepted
H ₆	SI → BI	0,156	0,049	3,214	0,001	Accepted

Source: Processed primary data (2026).

DISCUSSION

The Effect of Perceived Ease of Use on Perceived Usefulness

The results of the fifth hypothesis test indicate that perceived ease of use (PEOU) has a positive and significant effect on perceived usefulness (PU), with a path coefficient of $\beta = 0.521$ ($t = 11.247$; $p < 0.001$). This coefficient value indicates that the higher the level of ease customers perceive in using digital banking services, the higher their perception of the benefits derived from those services. In addition to being statistically significant, this relationship also has a strong effect size ($f^2 = 0.387$), leading to the conclusion that PEOU is one of the primary determinants in shaping perceived usefulness in this research model. This finding indicates that the ease-of-use factor plays a role not only as a technical aspect but also as a strategic element that influences how users evaluate the value and benefits of a digital banking technology.

Theoretically, the results of this study reinforce the foundational framework of the Technology Acceptance Model (TAM), which identifies PEOU as a key antecedent of PU. Users who perceive digital banking apps as easy to understand, easy to operate, and requiring minimal effort to complete transactions will tend to view the technology as more beneficial in supporting their financial activities. The ease of accessing account information, transferring funds, paying bills, and managing transactions independently allows users to fulfill various financial needs more quickly and efficiently. Therefore, perceptions regarding ease of use will increase the belief that technology can improve users' performance and productivity in carrying out daily activities. This causal relationship has become one of the primary mechanisms explaining technology adoption across various digital service contexts, including the banking sector.

The findings of this study align with various recent empirical studies that confirm the positive influence of PEOU on PU in the adoption of digital financial services. Research conducted by [Abu-Taieh et al., \(2022\)](#) found that ease of use is a key factor in enhancing users' perceived benefits of mobile banking services, particularly in an increasingly competitive digital environment. Similar results were also reported by [Saibaba \(2024\)](#) who demonstrated that a simple app design, clear navigation, and easily understandable transaction processes significantly contribute to enhancing the perceived usefulness of digital banking services. When users do not face significant technical barriers, their attention can be more focused on the benefits provided by the system, such as time efficiency, flexibility of access, and ease of financial management. Thus, ease of use serves as a mechanism that reinforces the perceived value of a technology.

The strong influence of PEOU on PU can be explained by the increasingly diverse characteristics of digital banking service users, in terms of age, education level, and digital literacy. Although internet penetration and smartphone usage continue to rise, there remains a digital skills gap among user groups. Therefore, banking applications with intuitive interfaces, clear instructions, and simple transaction processes will be more readily accepted and perceived as beneficial technology. The relatively high path coefficient ($\beta = 0.521$) indicates that banks' efforts to simplify the user experience can have a direct impact on improving the perceived benefits of the service. The managerial implications of these findings are that banks need to prioritize user-centered design, app navigation optimization, simplification of transaction flows, and improvement of digital interaction quality as strategic priorities. By enhancing usability, banking institutions can not only improve the customer experience but also strengthen the perception of usefulness, which ultimately increases the intention to adopt and sustain the use of digital banking services.

The Effect of Perceived Usefulness on the Intention to Adopt Digital Banking

The results of the third hypothesis test indicate that perceived usefulness (PU) has a positive and significant effect on the behavioral intention to adopt digital banking, with a path coefficient of $\beta = 0.412$ ($t = 8.914$; $p < 0.001$). This finding indicates that the higher customers' perception of the benefits derived from using digital banking services, the stronger their desire to use these services on an ongoing basis. The effect size, which

falls into the moderate category ($f^2 = 0.267$), indicates that PU makes a substantial contribution to explaining the variation in customers' adoption intentions. Furthermore, the mean PU value—which was the highest among all constructs in the study (mean = 4.12)—indicates that the majority of respondents hold a very positive perception of the benefits of digital banking services. Thus, perceived usefulness emerges as the dominant factor shaping customers' decisions to adopt and use digital banking technology. This finding aligns with the fundamental assumption of the Technology Acceptance Model (TAM), which positions perceived usefulness as the primary determinant of users' behavioral intentions toward a technology (Davis, 1989). Various recent studies and meta-analyses also indicate that perceived benefits remain the most consistent factor in explaining the adoption of digital technology in the financial services sector (Abdullah et al., 2016).

In essence, the findings of this study indicate that bank customers in Indonesia tend to be rational and utility-oriented when making decisions regarding the use of digital banking services. Users will be motivated to adopt digital banking applications if they believe that the technology can improve the effectiveness of financial management, accelerate transaction processes, and provide greater flexibility compared to conventional banking services. The ability to transfer funds, pay bills, purchase financial products, and monitor balances in real-time via mobile devices provides tangible added value for users. In the Indonesian context, characterized by high population mobility, urban traffic congestion, and a growing need for cashless transactions, practical benefits such as time savings and 24/7 access to services are the primary drivers of digital banking adoption. The greater the benefits customers experience in their daily lives, the stronger their intention to continue using and recommending these services to others.

These findings are also consistent with various recent studies on the adoption of financial technology in developing countries, which indicate that perceived usefulness is the strongest predictor of the intention to use digital services. Research by Yonavi et al., (2023) found that the benefits perceived by users have a significant direct influence on the intention to use mobile banking and digital financial services. Similarly, research by Abdullah et al., (2016) indicates that perceptions regarding increased efficiency, productivity, and ease in completing financial activities are the primary factors determining the success of digital banking technology adoption. The path coefficient value of $\beta = 0.412$ in this study confirms that perceived benefits remain the primary consideration for Indonesian customers when deciding to use digital banking services. Therefore, the managerial implication is that banks need to emphasize marketing communications focused on tangible benefits users can experience, such as time efficiency, ease of service access, transaction security, and reduced operational costs. Additionally, the development of new features should focus on enhancing functional value that is truly relevant to customer needs so that the perception of usefulness can be continuously strengthened and ultimately increase the adoption rate of digital banking services.

The Effect of Trust on the Intention to Adopt Digital Banking

The results of the fourth hypothesis test indicate that trust has a positive and significant effect on the intention to adopt digital banking, with a path coefficient of $\beta = 0.318$ ($t = 6.241$; $p < 0.001$). This finding confirms that the higher the level of customer trust in digital banking services, the greater their tendency to adopt and use these services on an ongoing basis. Although the effect size falls into the weak to moderate category ($f^2 = 0.148$), the strong statistical significance indicates that trust is one of the key factors determining the success of digital transformation in the banking sector. Compared to other variables in the model, trust is the second strongest predictor after perceived usefulness, indicating that in addition to considering functional benefits, customers also place great emphasis on their confidence in the service-providing institution. This finding aligns with recent studies that position trust as a key factor in the adoption of digital financial services, particularly in transactions involving users' personal information and financial assets (Alrawad et al., 2023; Musyaffi et al., 2023).

Conceptually, the findings of this study reinforce the view that digital banking services have distinct characteristics compared to information technology in general, as they involve a relatively high level of uncertainty and risk. In a digital environment, customers do not interact directly with bank staff or physical facilities; therefore, they must rely on the assurance that the bank is capable of delivering services securely, reliably, and responsibly. When users believe that the bank has the capability to protect personal data, maintain the confidentiality of financial information, and provide consistent and transparent services, psychological barriers to using the technology will decrease significantly. Trust, in this context, acts as a mechanism that reduces the perception of risk and increases users' confidence in conducting online transactions. In other words, even though customers recognize the benefits offered by digital banking, those benefits will not fully translate into an intention to use the service if the level of trust in the service provider remains low.

The influence of trust on adoption intentions has become increasingly relevant as the use of digital financial services rises, accompanied by various cases of online fraud, phishing, identity theft, and data breaches that have garnered widespread public attention. These conditions make the aspect of trust a critical consideration in decisions regarding the use of digital banking services. The relatively high average trust score (mean = 3.74) compared to the security perception score (mean = 3.61) indicates that customers tend to have greater confidence in banking institutions than in the technical systems used. This finding indicates that a bank's reputation, credibility, and

positive image remain the primary assets in building digital trust. Therefore, banks need to continue strengthening their communication regarding data protection, transparency of privacy policies, and commitment to transaction security to maintain customer trust amid rising cyber threats.

When viewed from the perspective of the multidimensional trust theory developed by Mayer et al., (1995), the results of this study indicate that customers evaluate digital banking services based on three main dimensions: ability, benevolence, and integrity. The ability dimension is reflected in the bank's capacity to provide a stable, fast, and reliable system for processing transactions. The benevolence dimension is evident in the perception that the bank cares about customers' interests through responsive support services and protection against potential losses. Meanwhile, the integrity dimension relates to the bank's consistency in applying principles of transparency, regulatory compliance, and responsible data management. When these three dimensions are perceived positively by customers, trust levels will increase and ultimately drive the intention to use digital banking services. Therefore, strategies to increase digital adoption should not only focus on technological development but must also include building long-term, trust-based relationships between banks and customers.

The Effect of Perceived Ease of Use on the Intention to Adopt Digital Banking

The results of the hypothesis testing indicate that perceived ease of use (PEOU) has a positive and significant effect on the intention to adopt digital banking, with a path coefficient of $\beta = 0.143$ ($t = 2.876$; $p = 0.004$). Although statistically significant, the relatively small coefficient and effect size ($f^2 = 0.029$) indicate that the direct effect of PEOU on adoption intention is weaker compared to other variables in the model, such as perceived usefulness and trust. This finding aligns with the foundational framework of the Technology Acceptance Model (TAM), which states that ease of use does influence users' behavioral intentions, but its impact is often not as significant as the perceived benefits of the technology. In many studies on technology adoption, including in the digital banking sector, users tend to prioritize tangible benefits over mere ease of system operation. Therefore, while ease of use remains important, it is not the primary consideration in the final decision to adopt digital banking services.

Although its direct effect is relatively small, PEOU plays a broader role in the model through indirect mechanisms. The results indicate that PEOU has a strong relationship with perceived usefulness ($\beta = 0.521$), which in turn significantly influences adoption intention. Thus, ease of use not only encourages users to use the service directly but also enhances the perception that the service is beneficial for their financial activities. When a digital banking app is easy to understand, has clear navigation, and allows transactions to be carried out without difficulty, users will more easily experience benefits such as time efficiency, flexibility of access, and ease of financial management. This suggests that most of the influence of PEOU on usage intention operates through the mediation of PU. In other words, ease of use becomes more effective in increasing adoption intention when that ease is successfully translated into benefits perceived by users. This finding supports recent studies that have found that PU often serves as the primary mediator in the relationship between PEOU and the intention to use digital financial services (Ghazali et al., 2026; Widiar et al., 2023).

The relatively high average PEOU score (mean = 3.87) indicates that most respondents found the digital banking services they use to be relatively easy to learn and operate. This finding reflects positive developments in the Indonesian banking industry, which in recent years has increasingly focused on improving the quality of user experience (UX) and user interface (UI). Increasingly fierce competition among conventional banks, digital banks, and fintech companies has driven banking institutions to develop applications that are simpler, more intuitive, and more user-friendly. Various innovations, such as shorter registration processes, biometric authentication, personalized app interfaces, and simplified transaction workflows, have successfully reduced barriers to use for customers. However, the results of this study also indicate that once the level of ease of use has reached a relatively high level and is considered a service standard by the majority of users, its direct impact on adoption intent tends to decline. Under such conditions, other factors such as perceived benefits, trust in the bank, and transaction security become more dominant considerations in driving the decision to use digital banking services on an ongoing basis.

The Effect of Perceived Security on the Intention to Adopt Digital Banking

The results of the second hypothesis test indicate that perceived security has a positive and significant effect on the intention to adopt digital banking, with a path coefficient of $\beta = 0.187$ ($t = 3.892$; $p < 0.001$). This finding indicates that the higher the level of security customers perceive regarding digital banking services, the greater their tendency to use such services. Although the effect size obtained is relatively weak ($f^2 = 0.042$), the strong statistical significance indicates that security remains a crucial factor in users' decision-making process. In the context of digital financial services, security is a highly sensitive aspect because transactions involve users' personal information, identity data, and financial assets. Therefore, the perception that the system can protect data and transactions from various cyber threats can enhance users' comfort and confidence in interacting through digital platforms. These findings align with various recent studies showing that perceived security is one of the

primary determinants in the adoption of digital banking and fintech services, particularly in developing countries currently undergoing accelerated digital transformation (Purwantini & Afif, 2026; Zhang et al., 2023).

One of the interesting findings in this study is that perceived security had the lowest average score among all the variables examined (mean = 3.61), although it still fell within the moderate category. This indicates that some customers still have doubts about the security of the digital banking services they use. This phenomenon is understandable given the rise of various cybersecurity threats in Indonesia, such as phishing, smishing, identity theft, banking malware, and various forms of social engineering targeting users of digital financial services. The high volume of media coverage regarding digital fraud cases and data breaches in recent years has also influenced public perception of the security of electronic transactions. Consequently, although users acknowledge the benefits and convenience offered by digital banking services, concerns about potential security risks can still act as a barrier to adoption. These findings indicate that the success of banking digital transformation is determined not only by service and feature innovations but also by a bank's ability to instill a sense of security in customers when conducting digital transactions.

Theoretically, the results of this study indicate that perceived security is closely linked to the development of trust in digital environments. When customers assess that a banking system has adequate protection mechanisms, such as data encryption, multi-factor authentication, real-time detection of suspicious activity, and effective account recovery procedures, they will be more confident that the bank has the ability to manage digital risks professionally. Thus, security functions not only as a technical attribute of the system but also as a quality signal that reinforces users' confidence in the credibility and competence of banking institutions. This relationship between security and trust has been extensively discussed in the literature on financial technology adoption, where perceived security often serves as the primary foundation for building user trust in digital services (Ridwan et al., 2025). Therefore, investment in cybersecurity infrastructure is not only intended to prevent digital attacks, but also to foster a positive user perception, which can ultimately drive higher service adoption rates.

The managerial implications of these findings suggest that banks need to adopt an approach that focuses not only on improving actual security but also on enhancing perceived security. Many customers do not yet fully understand the various security features available in digital banking apps, so the benefits of security investments are often not immediately apparent to users. Therefore, proactive communication regarding security features, transparency in data protection policies, and education on safe digital transaction practices are crucial. Digital security literacy programs can help improve customers' understanding of how to avoid online fraud, recognize phishing attempts, and utilize the security features available within the app. These efforts are particularly relevant for users with lower digital literacy or those who are new to digital banking services. By enhancing the perception of security through a combination of technological innovation and user education, banks can strengthen customer trust while sustainably expanding the adoption of digital banking services.

The Effect of Social Influence on the Intention to Adopt Digital Banking

The results of the sixth hypothesis test indicate that social influence has a positive and significant effect on the intention to adopt digital banking, with a path coefficient of $\beta = 0.156$ ($t = 3.214$; $p = 0.001$). This finding indicates that support, recommendations, and positive views from one's social environment can increase an individual's tendency to use digital banking services. Although the effect size obtained is relatively small ($f^2 = 0.034$), the strong statistical significance indicates that social factors still make a tangible contribution to shaping users' behavioral intentions. These research results align with the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) framework, which positions social influence as a key determinant in explaining technology adoption. According to this theory, individuals tend to consider the opinions of people they deem important within their social environment when deciding to adopt a new technology. In the context of digital banking, recommendations from family, friends, coworkers, and social communities can serve as sources of information and validation that influence users' perceptions of the services offered (Saprikis et al., 2022; Sugiharto & Tjhin, 2025).

The findings of this study also indicate that social influence had the lowest mean score among all variables examined (mean = 3.52), although it still fell within the moderate category. This suggests that decisions regarding the use of digital banking in Indonesia are influenced more by considerations of benefits, trust, and security than by social pressure or encouragement. Nevertheless, the significance of the relationship found indicates that the social proof mechanism still plays a role in the technology adoption process. When someone observes a family member, close friend, or coworker having a positive experience using digital banking services, that individual is likely to develop the belief that the technology is worth trying and using. In situations involving uncertainty or risk, such as the use of digital financial services, the experiences of others often serve as an important reference in reducing user hesitation. Therefore, although social influence is not the dominant factor, its presence still helps reinforce confidence and reduce psychological barriers in the adoption process.

The social influence plays a significant role in the diffusion of financial technology innovations in Indonesia, a country known for its collectivist cultural characteristics and relatively high levels of social interaction. People tend to consider the opinions and experiences of those within their social circles before making decisions regarding the

use of new services. Recent studies on the adoption of digital financial services indicate that recommendations from trusted individuals can increase the intention to use such services by enhancing perceived credibility and reducing perceived risk (Bashir & Madhavaiah, 2015; Pratiwi, 2023). In practice, users who receive recommendations from family members or friends who have already used digital banking services often have a higher initial level of trust compared to those who obtain information solely through advertisements. These findings suggest that marketing strategies based on word-of-mouth, user testimonials, digital communities, and referral programs can be effective tools for expanding the adoption of digital banking services, particularly among segments of the population that remain hesitant to switch from conventional banking services.

Social influence likely has a stronger impact on certain user groups than on the general population. Older age groups, communities with lower levels of digital literacy, or individuals with limited experience using financial technology tend to rely more heavily on the opinions of those around them in their decision-making processes. For these groups, recommendations and positive experiences from trusted sources can be a more important source of confidence than technical evaluations of features, ease of use, or service benefits. Thus, although social influence shows only a relatively small effect size in this research model, its role remains strategic in reaching user segments that are not yet fully familiar with digital banking technology. Therefore, banks need to develop marketing approaches that leverage users' social networks, such as referral programs, community-based campaigns, collaborations with community leaders, and the use of user reviews and experiences on social media to strengthen the intention to adopt digital banking services more broadly.

CONCLUSION

This study examined the factors influencing the intention to adopt digital banking in Indonesia by extending the Technology Acceptance Model (TAM) through the integration of trust, perceived security, and social influence. The findings indicate that all proposed hypotheses were supported. Perceived Ease of Use positively and significantly influenced both Perceived Usefulness and the intention to adopt digital banking, while Perceived Usefulness emerged as the strongest predictor of adoption intention, followed by trust, perceived security, social influence, and perceived ease of use. Furthermore, the proposed model explained 67.3% of the variance in adoption intention, demonstrating substantial explanatory power. Theoretically, this study contributes to the technology acceptance literature by providing empirical evidence that integrating trust, perceived security, and social influence significantly strengthens the explanatory capability of the original TAM in the context of digital banking. The findings also support the view that technology adoption in digital financial services is determined not only by technological attributes but also by psychological and social factors, particularly within the context of an emerging digital economy such as Indonesia.

From a practical perspective, the findings suggest that banks and policymakers should prioritize strategies that enhance the perceived usefulness and ease of use of digital banking services while simultaneously strengthening customer trust, improving cybersecurity measures, and promoting digital financial literacy. These initiatives are expected to increase customer confidence and encourage broader adoption of digital banking services. Nevertheless, this study has several limitations. First, the use of a cross-sectional design limits the ability to capture changes in customer behavior over time. Second, the study relied on self-reported data, which may be subject to response bias despite efforts to minimize common method bias. Third, the sample was limited to Indonesian bank customers, which may restrict the generalizability of the findings to other countries or cultural contexts. Therefore, future studies are encouraged to employ longitudinal research designs, include additional variables such as perceived risk, digital literacy, facilitating conditions, or customer experience, and conduct comparative studies across different countries or banking systems to further validate and extend the proposed research model.

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