

The effects of financial literacy, digital financial literacy, technological literacy, perceived risk, and trust in artificial intelligence on trust in financial technology



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ABSTRACT

There is a growing need to comprehend what influences consumers' confidence in online banking and other digital financial services due to the exponential growth of financial technology (FinTech). This research delves into the ways in which digital financial literacy, technology literacy, perceived risk, trust in artificial intelligence, and financial literacy impact the confidence that people in Indonesia have in FinTech. To provide a more thorough explanation of trust creation, perceived risk was included in the study model. The data was analyzed using Structural Equation Modeling (SEM) with AMOS. A total of 236 employed postgraduate students from the Greater Jakarta region were surveyed using purposive sampling. Digital financial literacy does not substantially impact users' trust, but financial literacy has a substantial negative impact on FinTech trust, according to the empirical results. confidence in FinTech is favorably impacted by technical literacy and confidence in AI, but it is significantly negatively impacted by perceived risk. Among the factors that were taken into consideration, people's faith in FinTech is most strongly explained by their confidence in artificial intelligence. The results of this study add to our knowledge of how people trust digital financial services by demonstrating the importance of users' perceptions of AI-related trust and risk, and by indicating that, in the FinTech context of Indonesia, factors related to technology have a greater impact on users' trust than factors related to literacy.

Keywords: Digital Financial Literacy; Financial Literacy; Perceived Risk; Trust; Technological Literacy; Artificial Intelligence; Financial Technology



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INTRODUCTION

The expansion of digital technologies has accelerated the evolution of financial services, allowing financial transactions to be conducted more efficiently, conveniently, and with broader accessibility through FinTech platforms (Firmansyah et al., 2023). As digital financial services become increasingly embedded in everyday financial activities, establishing users' trust is essential to encourage both the initial adoption and the continued use of FinTech services (Amnas et al., 2023). Given the central role of trust in shaping users' acceptance of digital financial innovations, identifying the factors that influence trust has become an important area of investigation in FinTech research (Firmansyah et al., 2023).

Trust in artificial intelligence has become an increasingly important factor in the development of the FinTech industry (Balaskas, 2026). Various FinTech services have integrated artificial intelligence technologies in the form of fraud detection, chatbots, credit scoring, automated recommendations, and risk assessment (Balaskas, 2026). Digital financial services' perceived security, transparency, and dependability are heavily influenced by consumers' faith in artificial intelligence, according to Aldboush and Ferdous (2023). One of the most important factors impacting consumers' faith in FinTech is their level of confidence in artificial intelligence, which is becoming more and more incorporated into these systems.

Research has shown time and time again that consumers' confidence in AI is a strong indicator of their confidence in FinTech services. According to Hanson and Ott (2026), confidence in AI significantly affects confidence in FinTech in a good way. Users have more faith in tech-based financial services when AI systems are more transparent and easy to understand, according to Balaskas (2026). Users have more faith in digital wallet systems when they employ AI apps that are backed by strong security measures (Bodorin and Ciobanu, 2025). When these findings are considered together, they show that people have more faith in AI when they have more faith in FinTech services.

Despite the growing adoption of artificial intelligence in FinTech, several challenges remain, particularly those related to data security, algorithmic transparency, and users' understanding of AI-driven decisions. In addition, existing empirical evidence has largely been generated from countries with different technological environments and user characteristics, limiting the generalizability of previous findings to the Indonesian context. Given the rapid expansion of AI-enabled financial services in Indonesia, further investigation is needed to better understand how trust in artificial intelligence influences users' trust in FinTech.

Users' perceptions of risk have received considerable attention in FinTech research because concerns about potential negative consequences may weaken their confidence in digital financial services (Bland et al., 2024). In the context of FinTech, perceived risk encompasses users' expectations of adverse outcomes, including privacy violations, unauthorized use of personal information, transaction failures, cybersecurity threats, and possible financial losses associated with digital transactions (Bland et al., 2024). As financial activities increasingly rely on digital platforms that require the exchange of sensitive personal and financial information, users' assessment of these risks becomes an important consideration in determining whether they trust and continue using FinTech services (Bland et al., 2024).

The existing empirical evidence suggests that consumers' perceptions of risk significantly impact their trust in FinTech services. Amnas et al. (2023) found that users' trust

in financial technology is significantly reduced when they perceive higher levels of risk. As per the research conducted by Bland et al. (2024) and Jangir et al. (2023), users have concerns about data privacy, transaction security, and the possibility of financial losses, which makes them cautious to trust digital financial services. People are becoming more aware of these risks, thus they will likely exercise more caution when choosing to use FinTech services. Despite these outcomes, there is a lack of accessible empirical data inside the Indonesian context. This study seeks to answer the question, "How does users' perceptions of risk affect their trust in FinTech?" by examining the relationship between users' perceptions of risk and their confidence in digital financial services in Indonesia.

This research builds on earlier work by Hanson and Ott (2026) that examined the relationship between customers' confidence in FinTech and their knowledge of money, digital money, technology, and AI. Based on their findings, only trust in AI significantly impacted trust in FinTech; none of the other three literacy-related variables did. While other studies have shown a positive relationship between customers' literacy levels and their trust in FinTech, we found the opposite to be true. More empirical investigation in different research settings is needed to resolve these inconsistencies.

Many gaps remain in the literature concerning research on trust in FinTech. Previous study on the effects of technological literacy, digital financial literacy, and customer trust in FinTech has shown contradictory results. Consumers' trust in FinTech was shown to be unaffected by these literacy-related variables, according to Hanson and Ott (2026), despite the wealth of studies demonstrating beneficial relationships. Also, although everyone agrees that risk perception is a major component of trust, studies integrating this concept with others concerning financial literacy, digital financial literacy, tech literacy, and AI trust are few and far between.

The conditions in which previous research were carried out also presented challenges. According to Hanson and Ott (2026), most research that have examined the relationship between AI trust and FinTech trust have been conducted in countries with very different user demographics, regulatory landscapes, and technological infrastructures compared to Indonesia. As digital banking services driven by AI become more commonplace in Indonesia, further data is needed to determine whether these relationships are still valid.

Working master's degree holders in the Greater Jakarta (Jabodetabek) area who make use of FinTech services are the subjects of this study, which seeks to understand the relationship between users' trust in FinTech and factors such as financial literacy, digital financial literacy, technological literacy, trust in artificial intelligence, and perceived risk. By including perceived risk, an extra explanatory variable borrowed from Amnas et al. (2023), the suggested research model expands upon the framework provided by Hanson and Ott (2026). The current study paradigm is expanded with the addition of perceived risk, which acknowledges that users' assessments of data security, privacy protection, and possible transaction hazards impact the establishment of trust in digital financial services. Furthermore, this study adds to the body of empirical findings from Indonesia, a country where the FinTech ecosystem is seeing fast expansion and where user characteristics may vary from what has been seen in earlier research. These findings are expected to broaden the current understanding of trust in FinTech and provide practical guidance for service providers in developing secure, reliable, and sustainable digital financial services.

LITERATURE REVIEW, RESEARCH FRAMEWORK, AND HYPOTHESIS

Financial Literacy

According to Chen et al. (2024), financial literacy is defined as the capacity to comprehend and apply basic financial ideas, as well as to handle one's own financial resources, assess investment risks, and make sound financial choices. People that are financially literate are better able to assess financial offerings, which in turn leads to more prudent decision-making and more effective planning (Chen et al., 2024). With more and more people using FinTech services, it's important for consumers to be aware of the pros, cons, transaction processes, and hazards of these digital financial products (Mohapatra et al., 2025). According to Mohapatra et al. (2025), users who possess a deeper understanding of financial matters are often more equipped to determine the reliability of FinTech providers, weigh the risks involved, and make well-informed judgments when it comes to using digital financial services (Mohapatra et al., 2025). As a result of these features, people should have more faith in FinTech and feel more secure doing financial transactions (Mohapatra et al., 2025).

Digital Financial Literacy

According to Vieira et al. (2024), digital financial literacy is defined as the capacity to comprehend, acquire, assess, and responsibly use digital financial services. This competency include understanding of digital financial services supported by technology, such as online transactions, data security, digital financial apps, electronic payment systems, and online transactions (Vieira et al., 2024). Digital financial literacy is crucial for consumers to make proper use of digital financial services, which is becoming more vital as FinTech adoption rates rise (Vieira et al., 2024).

Customers using FinTech services should be knowledgeable about digital payment methods and the safety measures built into online banking systems (Hanson & Ott, 2026). Higher levels of digital financial literacy are associated with increased confidence in using FinTech services, increased ability to manage digital financial systems, and stronger ability to spot dangers (Hanson & Ott, 2026). Users' faith in FinTech is anticipated to be bolstered by digital financial literacy, which is anticipated to enhance their capacity to assess digital financial services and instill confidence in financial transactions that are facilitated by technology (Vieira et al., 2024).

Technological Literacy

Technological literacy refers to an individual's ability to understand, use, and adapt to the development of digital technology (Hanson & Ott, 2026). It reflects users' ability to operate digital devices, understand technological systems, and utilize technology to support various daily activities. In the era of digital transformation, technological literacy has become an essential competency for effectively using technology-based services (Hanson & Ott, 2026). Therefore, technological literacy is considered a relevant factor in the adoption of financial technology services (Hanson & Ott, 2026).

Technological literacy enables users to understand how FinTech systems operate, thereby reducing uncertainty when using digital financial services (Hanson & Ott, 2026). Individuals with a high level of technological literacy are generally more willing to adopt technological innovations and tend to place greater trust in digital services (Hanson & Ott, 2026). Jang (2026) explained that technological capability contributes to the development of positive perceptions toward digital innovation. These findings are supported by Aoun et

al. (2026), who reported that technological literacy is associated with the use of financial technology and the development of trust in digital services.

Perceived Risk

Perceived risk refers to an individual's perception of the potential losses or negative consequences that may arise from using a product, service, or technology (Jangir et al., 2023). Users of FinTech services are exposed to a range of perceived risks, such as privacy violations, unauthorized use of personal information, cyber fraud, transaction failures, system malfunctions, and monetary losses. The extent to which these risks are perceived influences users' evaluations and adoption of digital financial services. Accordingly, perceived risk is widely regarded as an important factor affecting user behavior toward FinTech (Amnas et al., 2023).

Perceived risk is closely associated with users' trust in FinTech services. The higher the level of perceived risk, the lower the level of users' trust in digital financial services (Jangir et al., 2023). Bland et al. (2024) explained that security risk, privacy risk, and system performance risk are major considerations in the use of digital payment services. This perspective is consistent with the findings of Jangir et al. (2023) and Amnas et al. (2023), who also identified perceived risk as a significant determinant of users' trust in digital financial services.

Trust in Artificial Intelligence

When people have faith in AI systems, they know that they can depend on them to do tasks in a safe, accurate, transparent, and reliable mannery (Jang, 2026). As AI's use in FinTech services grows, confidence in the technology is paramount. A number of services use AI to enhance the quality of their offerings; they include chatbots, automated recommendation systems, credit evaluation, and fraud detection (Balaskas, 2026). As a result, the contemporary ecosystem of digital financial services relies heavily on faith in AI (Balaskas, 2026).

Trust in artificial intelligence enhances users' trust in FinTech services because users believe that AI systems are capable of producing accurate and reliable outcomes (Hanson & Ott, 2026). The greater users' trust in AI technology, the higher their confidence in digital financial services that incorporate AI (Hanson & Ott, 2026). Confidence in AI significantly affects confidence in FinTech, according to Hanson and Ott (2026). Both Rubio and Tulcanaza-Prieto (2025) and Bodorin and Ciobanu (2025) came to the same conclusion: customers' faith in digital financial services is heavily influenced by their trust in AI.

Trust in Financial Technology

Trust in FinTech refers to users' confidence that financial technology services are capable of providing benefits, security, and reliability in conducting financial transactions (Aldboush & Ferdous, 2023). Trust is a critical factor in determining the successful implementation of digital financial technologies because users are more willing to adopt services they perceive as secure and trustworthy. A high level of trust also encourages the continued use of FinTech services and strengthens user loyalty toward digital financial platforms (Aldboush & Ferdous, 2023). Therefore, trust in FinTech is considered one of the key indicators of the success of digital financial services (Aldboush & Ferdous, 2023).

Trust in FinTech is influenced by various financial, technological, and risk-related factors (Hanson & Ott, 2026; Jangir et al., 2023). Financial literacy, digital financial literacy, technological literacy, perceived risk, and trust in artificial intelligence are believed to contribute to the development of users' trust in digital financial services (Hanson & Ott, 2026; Jangir et al., 2023). A key component of building confidence in FinTech, according to Hanson and Ott (2026), is faith in technology and AI. Users' confidence in financial tech services is influenced by their perceptions of risk, according to Amnas et al. (2023).

The level of confidence that users have in financial technology is now one of the most important factors in its uptake. Adopting FinTech improves business performance and fortifies technology governance, according to Hamdiyani and Anis (2024). Because of their crucial significance in promoting the long-term usage of digital financial services, our results stress the need to investigate the psychological and cognitive aspects that impact trust.

Research Framework

Users' trust determines whether financial technology (FinTech) services are adopted and continuously used, particularly when financial transactions involve digital interactions and uncertainty (Hanson & Ott, 2026). Previous studies indicate that trust develops through the combined influence of financial capability, digital competence, technological proficiency, confidence in artificial intelligence, and users' perceptions of potential risks (Hanson & Ott, 2026).

Greater financial literacy enables users to evaluate digital financial products, understand transaction risks, and make informed financial decisions (Chen et al., 2024). Better digital financial literacy helps users navigate digital financial services, understand transaction procedures, and utilize FinTech applications more effectively (Vieira et al., 2024). Stronger technological literacy supports users in adapting to technology-based financial services and increases confidence when interacting with digital financial platforms (Hanson & Ott, 2026).

Confidence in artificial intelligence encourages users to rely on AI-enabled financial services because AI increasingly supports fraud detection, automated credit assessment, and personalized financial recommendations (Hanson & Ott, 2026). Conversely, concerns about data privacy, cybersecurity, transaction failures, and potential financial losses may reduce users' confidence in digital financial services (Amnas et al., 2023).

This study uses these theoretical arguments to propose that among employed postgraduate students in the Greater Jakarta (Jabodetabek) area who actively use FinTech services, users' trust in the technology is influenced by their level of financial literacy, digital financial literacy, technological literacy, trust in artificial intelligence, and perceived risk.

Based on the research background and theoretical foundations presented above, the proposed conceptual framework is illustrated in Figure 1.

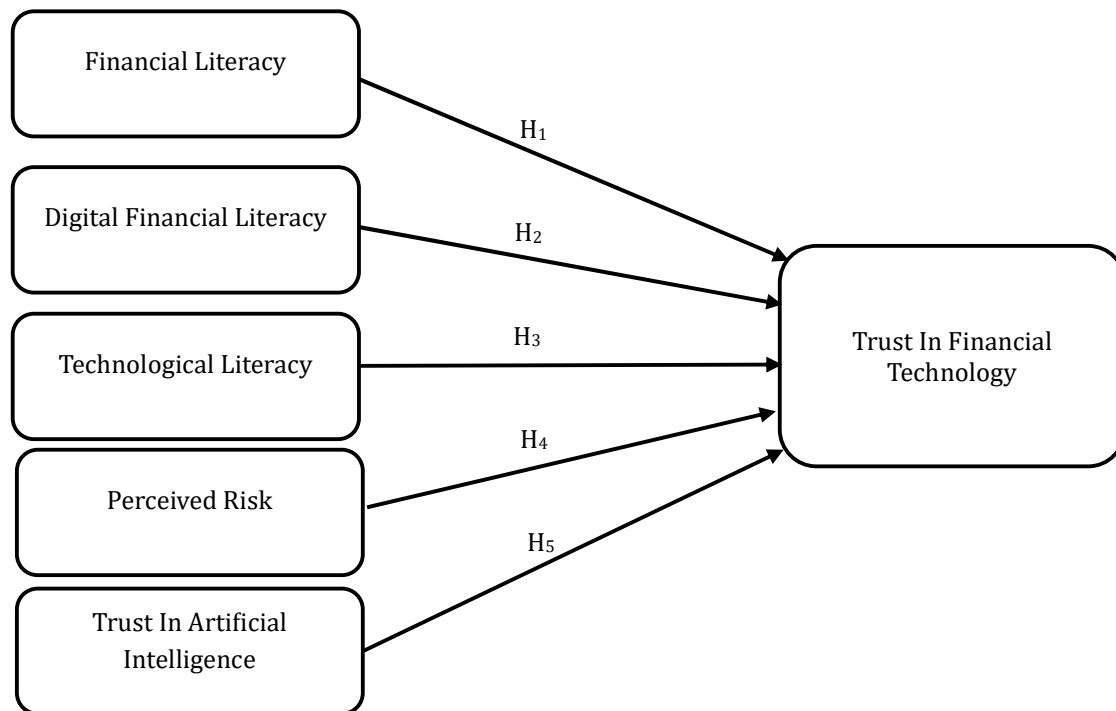


Figure 1
Research Framework

Hypotheses

Users' faith in financial technology (FinTech), perceived risk, digital financial literacy, technical literacy, and financial literacy are all shown in Figure 1, which also serves as the study's conceptual framework. This set of research hypotheses is based on the suggested framework.

- H₁: Financial literacy positively influences users' trust in financial technology (FinTech) among employed postgraduate (master's degree) students who actively use FinTech services in the Greater Jakarta (Jabodetabek) area.*
- H₂: Digital financial literacy positively influences users' trust in financial technology (FinTech) among employed postgraduate (master's degree) students who actively use FinTech services in the Greater Jakarta (Jabodetabek) area.*
- H₃: Technological literacy positively influences users' trust in financial technology (FinTech) among employed postgraduate (master's degree) students who actively use FinTech services in the Greater Jakarta (Jabodetabek) area.*
- H₄: Perceived risk negatively influences users' trust in financial technology (FinTech) among employed postgraduate (master's degree) students who actively use FinTech services in the Greater Jakarta (Jabodetabek) area.*
- H₅: Trust in artificial intelligence positively influences users' trust in financial technology (FinTech) among employed postgraduate (master's degree) students who actively use FinTech services in the Greater Jakarta (Jabodetabek) area.*

METHOD

In order to test the hypothesized correlations between the variables, this study used a quantitative research strategy. According to Anton et al. (2024), a quantitative method makes it easier to assess study constructs systematically using numerical data and statistical analysis. This helps test hypotheses objectively and develop conclusions from the evidence that is seen. This research seeks to address that gap by exploring the factors that affect consumers' confidence in FinTech, including digital financial literacy, technical literacy, perceived risk, and trust in artificial intelligence.

This study employed a purposive sampling technique, a non-probability sampling method in which respondents were selected based on predetermined criteria established by the researcher (Sekaran & Bougie, 2019). One must be a current employee, two must actively use fintech services, and four must dwell in the Greater Jakarta metropolitan region (Jabodetabek) in order to be eligible to participate in the survey. Another requirement is that the responder must be enrolled in or have finished a graduate degree program. The research made use of numerical data gathered via a Google Forms-based structured online questionnaire.

A minimum sample size that is five times the number of observed indicators should be included in studies that use Structural Equation Modeling (SEM), as indicated by Hair et al. (2021), which is the basis for the minimum sample size that was established. The minimal number of respondents needed for this survey was 235 ($47 \times 5 = 235$), since it used 47 measurement indicators.

A total of 287 questionnaires were filled out over the two-week data gathering period. After going through the screening and verification procedure, 51 replies were deemed ineligible for the research. This was mostly due to the fact that the respondents were not working or were not actively pursuing a Master's degree. As a result, statistics were derived from 236 legitimate replies. That being said, 236 people were included in the final sample.

Respondents who make regular use of fintech services were polled using a standardized questionnaire to glean primary data. The purpose of the data collection was to get insights into how respondents' experiences with digital financial services influenced their opinions of the study variables. A five-point Likert scale was used in the study instrument, with options ranging from (1) Strongly Disagree to (5) Strongly Agree. We chose the Likert scale because it is a well-known and reliable method for gauging how people feel about and agree with the assertions made in the survey. The items used for measuring were all derived from well-established research to guarantee that each

Applying Structural Equation Modeling (SEM) inside IBM SPSS AMOS software, the data were evaluated. The reason SEM was chosen is that it allows for the simultaneous evaluation of the research model's overall goodness-of-fit and the analysis of causal links among latent variables (Hair et al., 2021). To further guarantee the measurement model's robustness, SEM allows for the evaluation of construct validity and reliability before hypothesis testing (Hair et al., 2021). Users' confidence in financial technology services served as the basis for operationalizing each study variable via the use of measuring indicators tailored from pertinent prior research.

Conceptual and operational definitions, measurement indicators and scales, and related literature are all part of the variables' operationalization. In Table 1 you can see the variables that were defined operationally for this investigation.

Table 1
Research Variables and Measurement Indicators

Variable	Measurement Indicators	Source
Financial literacy	1. Understanding of savings interest rates. 2. Understanding of inflation and purchasing 3. Understanding the relationship between interest rates and bond prices. 4. Understanding the costs and benefits of long-term credit. 5. Understanding stock investment risk. 6. Understanding investment diversification. 7. Understanding long-term retirement investment. 8. Understanding financial protection in digital financial services.	Hanson & Ott (2026)
Digital Financial literacy	1. Understanding digital lending services. 2. Understanding digital stock trading. 3. Understanding digital payment services. 4. Ability to conduct digital financial transactions. 5. Ability to resolve digital transaction errors. 6. Awareness of maintaining digital account security. 7. Ability to identify digital threats and online fraud.	Hanson & Ott (2026)
Technological Literacy	1. Ability to learn new technologies. 2. Frequency of technology use in daily life. 3. Ability to use mobile applications. 4. Ability to solve basic technological problems. 5. Comfort in using digital platforms. 6. Use of technology in decision-making. 7. Confidence in using AI technologies. 8. Understanding online personal information security. 9. Knowledge of digital technology developments. 10. Comfort with automated systems.	Hanson & Ott (2026)
Perceived Risk	1. Risk of financial transaction errors. 2. Risk of unauthorized access to financial accounts. 3. Risk of technical disruptions or system failures. 4. Risk of fraud and misuse of digital transactions.	Amnas et al. (2023)
Trust in Artificial Intelligence	1. Trust in AI security. 2. Trust in the quality of AI decision-making. 3. Trust in the reliability of AI recommendations. 4. Trust in the ethical aspects of AI. 5. Trust in AI objectivity. 6. Comfort in using AI in daily life. 7. Trust in AI's ability to reduce human error. 8. Concern about potential AI errors. 9. Trust in AI transparency. 10. Trust in AI based on an understanding of how it works.	Hanson & Ott (2026)
Trust in Financial Technology	1. Comfort in using AI-enabled fintech services. 2. Trust in AI-assisted investment decisions provided by fintech services. 3. Trust in the quality of AI-enabled fintech services. 4. Confidence in using AI-supported fintech services. 5. Willingness to entrust financial management to AI-enabled fintech services.	Hanson & Ott (2026)

Variable	Measurement Indicators	Source
	6. Trust in chatbots for handling financial issues.	
	7. Trust in chatbots for selecting financial products.	
	8. Trust in chatbots for managing insurance services.	

The data were analyzed using Structural Equation Modeling (SEM) with IBM SPSS AMOS software. The analysis consisted of respondent profile analysis, measurement model evaluation, goodness-of-fit assessment, and hypothesis testing.

RESULT AND DISCUSSION

Validity and Reliability Assessment

Checking the Financial Literacy construct's validity and reliability yielded the findings shown in Table 2. With factor loadings greater than the cutoff of 0.35, all eight measurement indications were considered legitimate. The construct also showed strong internal consistency; its Cronbach's Alpha coefficient of 0.809 is higher than the minimal threshold of 0.60, which is considered excellent. These results provide credence to the validity and reliability of the financial literacy metrics.

Table 2
Validity and Reliability Assessment of the Financial Literacy Variable

Indicator	Validity Assessment		Reliability Assessment	
	Factor loading	Conclusion	Cronbach Alpha	Conclusion
FL1	0.568	Valid	0.809	Reliable
FL2	0.701	Valid		
FL3	0.675	Valid		
FL4	0.670	Valid		
FL5	0.710	Valid		
FL6	0.696	Valid		
FL7	0.697	Valid		
FL8	0.529	Valid		

Source: Data Analyzed, 2026

Table 3 displays the results of the validity and reliability assessments conducted on the Digital Financial Literacy construct. The validity criteria was met by all seven measurement indicators, as they all attained factor loadings above the minimal level of 0.35. Furthermore, the construct's Cronbach's Alpha coefficient of 0.820 was higher than the minimum suggested value of 0.60, indicating acceptable internal consistency. These findings show that the variables used to evaluate digital financial literacy are genuine and dependable.

Table 3
Validity and Reliability Assessment of the Digital Financial Literacy Variable

Indicator	Validity Assessment		Reliability Assessment	
	Factor loading	Conclusion	Cronbach Alpha	Conclusion
DFL1	0.696	Valid	0.820	Reliable
DFL2	0.635	Valid		
DFL3	0.738	Valid		

Indicator	Validity Assessment		Reliability Assessment	
	Factor loading	Conclusion	Cronbach Alpha	Conclusion
DFL4	0.722	Valid	0.879	Reliable
DFL5	0.618	Valid		
DFL6	0.738	Valid		
DFL7	0.728	Valid		

Source: Data Analyzed, 2026

All 10 measurement indicators that make up the Technological Literacy variable were found to have factor loadings larger than 0.35 in the validity test findings. The 10 relevant indicators of technological literacy were found to be consistent (reliable) according to the reliability test, which yielded a Cronbach's Alpha score of 0.879, which is higher than 0.60. Thus, it is safe to say that all indicators used to evaluate Technological Literacy are accurate and trustworthy.

Table 4
Validity and Reliability Assessment of the Technological Literacy Variable

Indicator	Validity Assessment		Reliability Assessment	
	Factor loading	Conclusion	Cronbach Alpha	Conclusion
TL1	0.686	Valid	0.879	Reliable
TL2	0.685	Valid		
TL3	0.674	Valid		
TL4	0.720	Valid		
TL5	0.673	Valid		
TL6	0.709	Valid		
TL7	0.737	Valid		
TL8	0.674	Valid		
TL9	0.706	Valid		
TL10	0.659	Valid		

Source: Data Analyzed, 2026

All eight measurement indicators that make up the Trust in Financial Technology variable were found to be valid in the validity test findings, with factor loadings larger than 0.35. A Cronbach's Alpha of 0.868 greater than 0.60 was achieved by the reliability test for the eight valid indicators of the Trust in Financial Technology variable, suggesting that they are consistent and dependable. All of the Trust in Financial Technology measuring indicators are valid and reliable, therefore it can be concluded.

Table 5
Validity and Reliability Assessment of the Trust in Financial Technology Variable

Indicator	Validity Assessment		Reliability Assessment	
	Factor loading	Conclusion	Cronbach Alpha	Factor loading
TIF1	0.723	Valid	0.868	Reliable
TIF2	0.714	Valid		
TIF3	0.746	Valid		
TIF4	0.681	Valid		

Indicator	Validity Assessment		Reliability Assessment	
	Factor loading	Conclusion	Cronbach Alpha	Factor loading
TIF5	0.747	Valid	0.813	Reliable
TIF6	0.742	Valid		
TIF7	0.734	Valid		
TIF8	0.688	Valid		

Source: Data Analyzed, 2026

The results of the reliability and validity tests for the Perceived Risk construct are shown in Table 6. Factor loadings for all four measurement indicators were more than the cutoff of 0.35, indicating that they are all legitimate. Furthermore, the construct's Cronbach's Alpha coefficient of 0.813 surpasses the suggested minimal value of 0.60, indicating acceptable internal consistency. These results show that the indicators used to assess the Perceived Risk construct are valid and reliable.

Table 6
Validity and Reliability Assessment of the Perceived Risk Variable

Indicator	Validity Assessment		Reliability Assessment	
	Factor loading	Conclusion	Cronbach Alpha	Factor loading
PRI1	0.784	Valid	0.813	Reliable
PRI2	0.808	Valid		
PRI3	0.789	Valid		
PRI4	0.821	Valid		

Source: Data Analyzed, 2026

It turns out that the Trust in AI construct is valid and reliable, according to the evaluation findings. The eleven indicators of measurement all had factor loadings over 0.35, which is considered a good sign of validity. In addition, the construct is assessed using credible and valid indicators, as shown by the Cronbach's Alpha score of 0.862, which indicates excellent internal consistency.

Table 7
Validity and Reliability Assessment of the Trust in Artificial Intelligence Variable

Indicator	Validity Assessment		Reliability Assessment	
	Factor loading	Conclusion	Cronbach Alpha	Factor loading
TIAI1	0.625	Valid	0.862	Reliable
TIAI2	0.717	Valid		
TIAI3	0.743	Valid		
TIAI4	0.626	Valid		
TIAI5	0.669	Valid		
TIAI6	0.726	Valid		
TIAI7	0.685	Valid		
TIAI8	0.553	Valid		
TIAI9	0.752	Valid		
TIAI10	0.592	Valid		

Source: Data Analyzed, 2026

Model Fit Assessment

Prior to conducting hypothesis testing utilizing the Structural Equation Modeling (SEM) technique, the model fit evaluation was carried out. The suggested SEM model is shown in Figure 2.

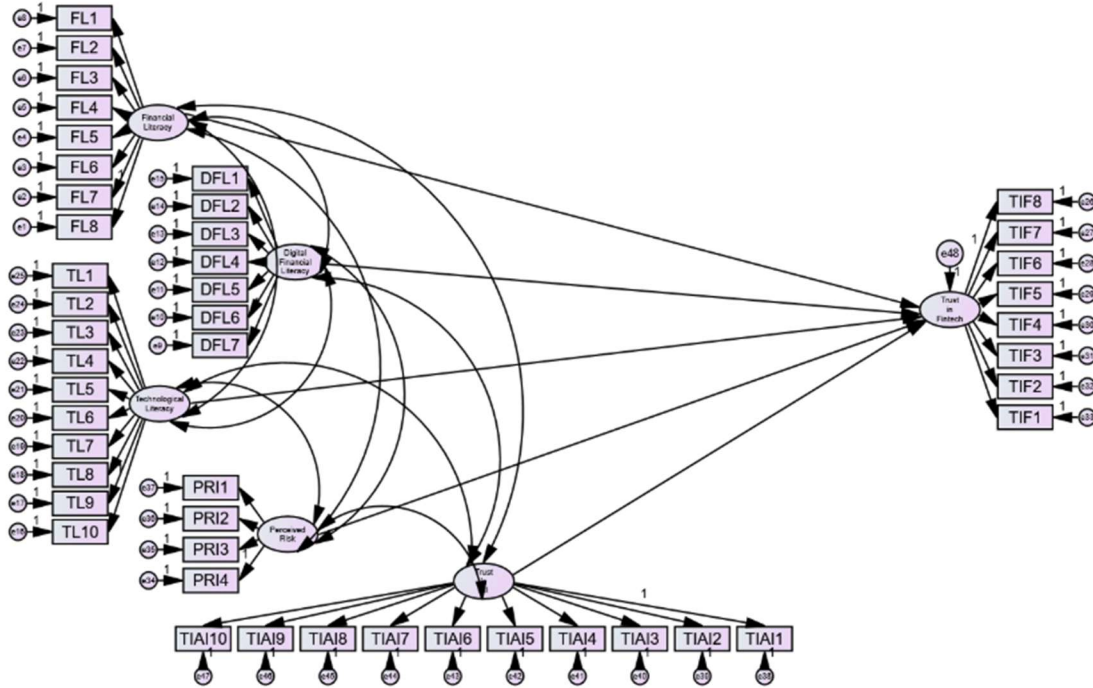


Figure 2
Research SEM Model

Table 8 displays the outcomes of the model fit evaluation. According to the data in the table, out of the eight goodness-of-fit criteria, five—RMSEA, IFI, TLI, CFI, and CMIN/DF—satisfied the model fit requirements. In addition, one criterion (GFI) was classified as marginal fit, while two criteria (Chi-square p-value and NFI) were classified as poor fit. Since the majority of the goodness-of-fit indices satisfied the recommended criteria, the proposed SEM model was considered acceptable. Therefore, hypothesis testing was conducted.

Table 8
Goodness-of-Fit Indices

Goodness-of-Fit Index	Cut-off Value	Model Fit Criterion	Obtained Value	Decision
Absolute fit measures	Chi-square	low Chi Square	1458,376	
	p-value Chi-Square	$\geq 0,05$	0.000	Poor Fit
	GFI	$\geq 0,90$	0,822	Marginal fit
	RMSEA	$\leq 0,10$	0,039	Model fit
	NFI	$\geq 0,90$	0,754	Poor fit
	IFI	$\geq 0,90$	0,911	Model fit

	TLI	$\geq 0,90$	0,904	Model fit
	CFI	$\geq 0,90$	0,909	Model fit
Parsimoniousfit measure	CMIN/DF	Between 1 and 5	1,431	Model fit

Source: Data Analyzed, 2026

Hypothesis Testing

Hypothesis test was carried out to investigate how Trust in Financial Technology is influenced by factors such as Digital Financial Literacy, Technological Literacy, Perceived Risk, and Financial Literacy. The study was carried out using IBM SPSS AMOS software and Structural Equation Modeling (SEM). The p-value at a significance level of 5% ($\alpha = 0.05$) was used to assess the hypotheses, and a hypothesis was deemed supported if the p-value was lower than 0.05 (Hair et al., 2021). You can see the outcomes of the hypothesis testing in Table 9, which displays all the hypothesized associations.

Table 9
Research Hypothesis Testing

Hypothesis	Coefficient	p-value	Result
Financial literacy → Trust in Financial Technology	-0,375	0,018	Negative Effect
Digital Financial literacy → Trust in Financial Technology	-0,061	0,307	No Significant Effect
Technological Literacy → Trust in Financial Technology	0,396	0,000	Positive Effect
Perceived Risk → Trust in Financial Technology	-0,312	0,000	Negative Effect
Trust in Artificial Intelligence → Trust in Financial Technology	0,464	0,000	Positive Effect

Source: Data Analyzed, 2026

H₁: The Effect of Financial Literacy on Trust in Financial Technology

Using a coefficient of -0.375, the findings reveal a significance value of 0.018, which is less than 0.05. Trust in financial technology is negatively impacted by financial literacy, according to these studies. Thus, there is no evidence to support the notion that financial literacy has a favorable effect on trust in financial technology. Those who are more financially literate are less likely to have faith in fintech services, according to the results. An individual's ability to weigh the pros and drawbacks of fintech services in terms of data security, consumer protection, and possible losses is inversely proportional to their level of financial literacy. Users who are well-versed in financial matters analyze digital financial services with more caution before putting their confidence in them.

The results contradict those of Hanson and Ott (2026), who found that trust in financial technology is unaffected by financial literacy. Possible explanations for this discrepancy include variations in study setting and respondent demographics. People from Indonesia participated in this survey because there are still a lot of problems with consumer protection, digital fraud, and the security of personal data. On the other hand, Chen et al. (2024) found the same thing: people who are financially literate are more likely to be careful with technology-based financial choices because they are better equipped to recognize financial hazards.

H₂: The Effect of Digital Financial Literacy on Trust in Financial Technology

With a coefficient of -0.061 , the findings demonstrate a significance value of 0.307 , above the threshold of 0.05 . Based on these results, it seems that digital financial literacy does not influence confidence in financial tech. This disproves the null hypothesis that suggests increased trust in financial technology is a result of increased digital financial literacy. According to the results, people's confidence in fintech services is unrelated to their proficiency with digital financial services. Users still look at things like corporate reputation, system security, service quality, information transparency, and personal data protection before putting their faith in fintech services, even when they have sufficient digital skills.

Hanson and Ott (2026) also discovered that digital financial literacy does not affect trust in financial technology; our results are in line with theirs. This indicates that customers' digital competence is only one of many psychological variables, user experience, and perceptions of service security that influence fintech trust.

H₃: The Effect of Technological Literacy on Trust in Financial Technology

A coefficient of 0.396 has a significance level of 0.000 , which is less than the threshold of 0.05 . These results show that trust in financial technology is positively affected by technological literacy. Hence, the theory that was put out is confirmed. The results show that those who are more computer savvy are more likely to have faith in fintech services. People who are more tech-savvy are less likely to be confused while utilizing fintech services because they have a better grasp of digital apps, security mechanisms, and the advantages provided by these technologies.

These results are in line with those of Jang (2026) and Hanson and Ott (2026), who also discovered that technical aptitude is a key factor in boosting confidence in digital technologies. Users' trust in the safety and dependability of fintech services is bolstered when they possess technological literacy, which allows them to comprehend the inner workings of these services.

H₄: The Effect of Perceived Risk on Trust in Financial Technology

With a coefficient of -0.312 , the data reveal a significance value of 0.000 , which is less than 0.05 . These results show that Trust in Financial Technology is negatively affected by Perceived Risk. Users' confidence in fintech services decreases when perceived risk increases, according to the study. Concerns about data security, unauthorized access to personal information, incorrect transactions, broken systems, and possible monetary loss are all on the list of possible hazards. Users lose faith in fintech services when they think they pose significant dangers.

The results corroborate those of Jangir et al. (2023), Amnas et al. (2023), and Bland et al. (2024), all of which showed that consumers' confidence in fintech services is adversely impacted by Perceived Risk. Based on these results, it's clear that better system security and risk management are must-haves for digital financial service consumers.

H₅: The Effect of Trust in Artificial Intelligence on Trust in Financial Technology

A significance level of 0.000 , below the threshold of 0.05 , and a coefficient of 0.464 are shown in the findings. Based on these results, it seems that confidence in AI boosts confidence in financial tech. Hence, the theory that was put out is confirmed. Users have more faith in fintech services when they have more faith in artificial intelligence, according to the results.

Fintech services are more likely to earn users' trust when they demonstrate confidence in AI's ability to provide informed suggestions, improve transaction security, identify fraud, and assist with financial decision-making.

Consistent with other research, the current results confirm that confidence in AI is a critical factor in digital financial service trust (Hanson and Ott, 2026; Rubio and Tulcanaza-Prieto, 2025; Bodorin and Ciobanu, 2025; Balaskas, 2026). Trust in AI was the most robust predictor of trust in financial tech among the independent factors that were considered.

CONCLUSION AND SUGGESTION

Findings from this research provide light on the factors that influence fintech consumers' trust in technology in Indonesia. These factors include technological literacy, perceived risk, trust in artificial intelligence, digital financial literacy, and overall financial literacy. The results show that confidence in financial technology is negatively correlated with financial literacy. This means that people who are more financially literate are less likely to trust fintech services because they are more likely to critically assess its dangers and security. The results showed that digital financial literacy did not significantly impact trust in financial technology. This suggests that consumers' confidence in fintech services is not directly proportional to their proficiency with digital financial services.

In addition, the data show that confidence in financial technology is positively correlated with technological literacy, suggesting that consumers who are more technically competent are more likely to trust fintech services. Users' confidence in fintech services is adversely impacted by increased levels of perceived risk, as seen in the negative effect of Perceived Risk on confidence in Financial Technology. Trust in AI also has the most favourable influence on Trust in Financial Technology compared to all other independent factors. Users' confidence in fintech services is shaped by technology-related characteristics rather than financial knowledge, according to these research. Users' faith in digital financial services can only be enhanced by better technology, more openness about AI, safer systems, and better risk management.

This study's shortcomings should be taken into account before drawing conclusions. The suggested study model just looked at how Trust in Financial Technology is impacted by Perceived Risk, Technological Literacy, Digital Financial Literacy, Technological Literacy, and Financial Literacy. Consequently, not all elements impacting consumers' confidence in financial technology services may be well explained by the model. More openness about AI may boost customers' faith in financial tech services powered by AI, therefore it would be wise to include AI Transparency as a new variable in future studies (Balaskas, 2026). Furthermore, participants in this research had to be local residents of the Greater Jakarta (Jabodetabek) region in order to utilize fintech. Hence, to make the results more applicable to a wider range of people, future studies should recruit participants from a variety of demographics, including age, location, education level, employment, and kind of fintech user.

REFERENCES

- Aldboush, H. H. H., & Ferdous, M. (2023). *Building trust in fintech: An analysis of ethical and privacy considerations in the intersection of big data, AI, and customer trust. International Journal of Financial Studies*, 11(3).
<https://doi.org/10.3390/ijfs11030090>

- Amnas, M. B., Selvam, M., Raja, M., Santhoshkumar, S., & Parayitam, S. (2023). Understanding the Determinants of *Fintech* Adoption: Integrating UTAUT2 with Trust Theoretic Model. *Journal of Risk and Financial Management*, 16(12).
<https://doi.org/10.3390/jrfm16120505>
- Anton, Bela, Y., Splendid, J. H. K., Lestari, H. S., & Leon, F. M. (2024). *Factors influencing the digital transformation of non-financial companies*. *Jurnal Ekonomi*, 29(3), 401–420.
<https://doi.org/10.24912/je.v29i3.2388>
- Aoun, D., Rahal, R., Sfeir, L., & Jabbour Al Maalouf, N. (2026). *Understanding millennials' financial behavior: The role of fintech adoption, financial literacy, and the mediating effect of financial attitudes in a crisis-affected emerging economy*. *International Journal of Financial Studies*, 14(2). <https://doi.org/10.3390/ijfs14020035>
- Balaskas, S. (2026). *Transparency by design: A narrative synthesis of AI disclosure, explainability, and trust in consumer-facing fintech*. *Fintech*, 5(2), 41.
<https://doi.org/10.3390/fintech5020041>
- Bland, E., Changchit, C., Changchit, C., Cutshall, R., & Pham, L. (2024). *Investigating the components of perceived risk factors affecting mobile payment adoption*. *Journal of Risk and Financial Management*, 17(6). <https://doi.org/10.3390/jrfm17060216>
- Bodorin, B.-E., & Ciobanu, E. (2025). *AI, security, and trust in the digital wallet: Evidence from current Romanian fintech users*. *International Journal of Financial Studies*, 14(1), 1.
<https://doi.org/10.3390/ijfs14010001>
- Chen, L., Bai, J., Xu, S., Cheng, Z., & Chen, J. (2024). *Financial literacy, fintech, and risky financial investment in urban households: An analysis based on CHFS data*. *Mathematics*, 12(21).
<https://doi.org/10.3390/math12213393>
- Firmansyah, E. A., Masri, M., Anshari, M., & Besar, M. H. A. (2023). *Factors affecting fintech adoption: A systematic literature review*. *Fintech*, 2(1), 21–33.
<https://doi.org/10.3390/fintech2010002>
- Hamdiyani, A. N., & Anis, I. (2024). The impact of IT governance practices on profitability: Mediating role of financial technology adoption. *Jurnal Akuntansi Trisakti*, 11(1), 111–128. <http://dx.doi.org/10.25105/jat.v11i1.19418>
- Hanson, T. A., & Ott, C. (2026). *Trust in financial technology: The role of financial literacy, digital financial literacy, technological literacy, and trust in artificial intelligence*. *Journal of Risk and Financial Management*, 19(2).
<https://doi.org/10.3390/jrfm19020097>
- Jang, M. (2026). *Building trust in AI: The role of technical capacity, social risk, and corporate institutional accountability*. *Information*, 17(2).
<https://doi.org/10.3390/info17020212>
- Jangir, K., Sharma, V., Taneja, S., & Rupeika-Apoga, R. (2023). *The moderating effect of perceived risk on users' continuance intention for fintech services*. *Journal of Risk and Financial Management*, 16(1). <https://doi.org/10.3390/jrfm16010021>
- Mohapatra, N., Das, M., Shekhar, S., Singh, R., Khan, S., Tewari, L. M., Félix, M. J., & Santos, G. (2025). *Assessing the role of financial literacy in fintech adoption by MSEs: Ensuring sustainability through a fuzzy AHP approach*. *Sustainability*, 17(10).
<https://doi.org/10.3390/su17104340>
- Rubio, J., & Tulcanaza-Prieto, A. B. (2025). *Digital payments trust in Latin America and the Caribbean*. *Economies*, 13(5). <https://doi.org/10.3390/economies13050140>

- Sekaran, U., & Bougie, R. (2019). *Research methods for business: A skill-building approach* (8th ed.). Wiley.
- Vieira, K. M., Matheis, T. K., & Lehnhart, E. dos R. (2024). *Digital financial capability scale. Journal of Risk and Financial Management*, 17(9).
<https://doi.org/10.3390/jrfm17090404>