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Cryptocurrency Adoption and Financial Literacy among Indonesian Users

Rafael Winata Willy Suwanto*, and Made Ratih Nurmalasari

Universitas Pendidikan Nasional, Bali, 80225, Indonesia

ABSTRACT

Purpose – This study examines the relationship between Cryptocurrency Investment Adoption and Financial Literacy, with User Trust and User Satisfaction as mediating variables among Indonesian cryptocurrency users. The study focuses on how cryptocurrency investment involvement may be associated with users' financial understanding and how trust and satisfaction contribute to this relationship.

Design/methodology/approach – This study adopts a quantitative approach using a cross-sectional survey design. Data were collected from 100 Indonesian cryptocurrency users selected through purposive sampling. The questionnaire consisted of 20 indicators measuring Cryptocurrency Investment Adoption, User Trust, User Satisfaction, and Financial Literacy using a four-point Likert scale. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. Hypotheses were tested using bootstrapping with 5,000 resamples.

Findings/Results – The results show that Cryptocurrency Investment Adoption has a positive and significant effect on Financial Literacy ($\beta = 0.347$; $p < 0.001$), User Trust ($\beta = 0.600$; $p < 0.001$), and User Satisfaction ($\beta = 0.631$; $p < 0.001$). User Trust significantly affects Financial Literacy ($\beta = 0.288$; $p = 0.013$) and significantly mediates the relationship between Cryptocurrency Investment Adoption and Financial Literacy ($\beta = 0.173$; $p = 0.023$). However, User Satisfaction does not significantly affect Financial Literacy ($\beta = 0.129$; $p = 0.305$) or mediate the relationship ($\beta = 0.081$; $p = 0.319$).

Originality/Value – This study highlights User Trust as a significant mechanism linking cryptocurrency investment adoption with financial literacy, while User Satisfaction does not provide a significant pathway.

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*Corresponding Author at:
Universitas Pendidikan Nasional, Jl. Bedugul No. 39, Sidakarya, Denpasar Selatan, Kota Denpasar, Bali 80225, Indonesia.
E-mail address: rafaelwinata0704@gmail.com (Rafael Winata Willy Suwanto)
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1. Introduction

The development of digital financial technology has changed how individuals access and manage financial services. One important development is cryptocurrency, a digital asset based on blockchain technology and accessed through digital platforms. Cryptocurrency has evolved from a new technological concept into an increasingly recognized investment instrument in many countries (García-Monleón et al., 2023). The growing availability of cryptocurrency services provides opportunities for individuals to participate in digital investment, but it also requires users to understand financial information and risks before making investment decisions. Financial literacy and technology awareness have been identified as important factors in cryptocurrency adoption (Kumari et al., 2023), while individual characteristics and personal values may also influence adoption decisions (Stanciu et al., 2024).

Cryptocurrency activity has also grown substantially in Indonesia. The Financial Services Authority (OJK) reported that registered crypto-asset customers reached 22.91 million by December 2024, with transaction value reaching Rp650.61 trillion during 2024. Since regulatory and supervisory responsibility for crypto assets was transferred to OJK in January 2025, the authority has continued to emphasize public education regarding the potential, benefits, risks, and regulation of crypto assets (OJK, 2025). This growth indicates that cryptocurrency has become part of Indonesia's digital financial environment. Consequently, understanding the factors associated with cryptocurrency investment behavior and financial understanding is increasingly relevant. Indonesian research has also demonstrated the continuing importance of financial literacy in cryptocurrency investment decisions (Rijanto & Utami, 2024).

Cryptocurrency Investment Adoption refers to an individual's acceptance and use of cryptocurrency as an investment instrument. It involves more than simply purchasing digital assets because adoption also reflects an individual's engagement with cryptocurrency services and investment activities. Previous research suggests that adoption can be influenced by perceived value, usefulness, financial literacy, and technology awareness (García-Monleón et al., 2023; Kumari et al., 2023). Individual characteristics and values have also been associated with cryptocurrency adoption (Stanciu et al., 2024). These findings suggest that cryptocurrency adoption should be examined together with users' financial knowledge, perceptions, and experiences.

Financial Literacy is particularly important because cryptocurrency investment requires users to understand financial information, evaluate investment alternatives, and recognize potential consequences. Financial literacy generally represents the knowledge and understanding needed to evaluate financial information and make appropriate financial decisions. In cryptocurrency investment, financial literacy can help users interpret digital asset information, understand investment risks, and evaluate financial products. Research has continued to examine the relationship between cryptocurrency knowledge and financial literacy (Kumari et al., 2023). Financial literacy has also been associated with cryptocurrency ownership and risk tolerance (Hayashi & Routh, 2025). Therefore, examining financial literacy in relation to cryptocurrency investment adoption can provide useful insights into users' financial behavior.

The relationship between Cryptocurrency Investment Adoption and Financial Literacy is not necessarily straightforward. Users who actively engage with cryptocurrency may have greater exposure to financial information, digital investment concepts, and financial decision-making. Such exposure may provide opportunities to improve financial understanding. However,

individuals may adopt cryptocurrency for different reasons, meaning that adoption does not automatically indicate a higher level of financial literacy. Recent research in Indonesia found that financial literacy is relevant to Bitcoin adoption intention, while trust may strengthen this relationship (Rahayu Marsha et al., 2025). This suggests that trust should also be considered when examining the relationship between cryptocurrency adoption and financial literacy.

User Trust is important because cryptocurrency investment involves digital platforms, blockchain-based systems, and financial transactions that require users to have confidence in the service. Trust refers to an individual's belief that a system, platform, or transaction is reliable and can be depended upon. Previous studies have identified trust as an important factor in cryptocurrency awareness, acceptance, and adoption (Shahzad et al., 2024). Perceived trust has also been linked to cryptocurrency-related behavior (Rahardja et al., 2023), while trust remains relevant to the acceptance of blockchain-based financial services (Gan & Lau, 2024). Therefore, users' trust in cryptocurrency services may influence their willingness to adopt and continuously interact with digital investment systems.

User Satisfaction represents another important dimension of cryptocurrency users' experience. Satisfaction reflects users' evaluation of a service after interacting with or using it. In cryptocurrency investment, satisfaction may arise when the service performs according to users' expectations and provides a convenient and acceptable investment environment. Previous research has examined customer satisfaction as an important outcome of cryptocurrency adoption. Recent Indonesian evidence also indicates a significant relationship between cryptocurrency adoption and user satisfaction (Fakhrullah et al., 2025). Thus, satisfaction may help explain how users evaluate their experience after adopting cryptocurrency investment services.

The relationship between adoption and satisfaction can be explained through users' direct experience with digital financial services. When individuals adopt cryptocurrency, they interact with platforms, information, transactions, and investment processes. These experiences may influence their evaluation of the service and consequently their level of satisfaction. Research has considered customer value, trust, and financial literacy in explaining cryptocurrency-related behavior (Fakhrullah et al., 2025; Salim et al., 2025). Nevertheless, the relationship between Cryptocurrency Investment Adoption, User Satisfaction, and Financial Literacy remains insufficiently examined, particularly when satisfaction is positioned as a mediating variable.

The relationships among Cryptocurrency Investment Adoption, User Trust, User Satisfaction, and Financial Literacy can be theoretically explained using the Theory of Planned Behavior (TPB). TPB explains how individual beliefs, perceptions, and behavioral factors are associated with intention and actual behavior. Recent research has applied extended TPB to explain financial behavior, including adoption behavior in Islamic microfinance (Purwanto et al., 2022). In this study, TPB provides a theoretical foundation for understanding cryptocurrency investment behavior. Cryptocurrency Investment Adoption represents engagement in investment behavior, User Trust reflects confidence in the digital financial system, User Satisfaction reflects users' evaluation of their experience, and Financial Literacy represents the financial understanding examined as an outcome.

From the TPB perspective, individuals' beliefs can shape their willingness to engage in particular behaviors. In cryptocurrency investment, perceptions regarding usefulness, value, and reliability may encourage adoption. Continued interaction with cryptocurrency services may expose users to financial information and investment experiences, potentially

contributing to financial understanding. Trust may encourage users to interact with digital financial systems, while satisfaction may reflect their evaluation after using those systems. Examining these variables together therefore provides a more integrated understanding of cryptocurrency users (Kumari et al., 2023; Shahzad et al., 2024; Rahayu Marsha et al., 2025).

Despite the increasing number of cryptocurrency studies, a research gap remains concerning the direct and indirect relationships among adoption, trust, satisfaction, and financial literacy. Previous studies have mainly examined factors affecting cryptocurrency adoption, including perceived value, technology awareness, trust, and financial literacy (García-Monleón et al., 2023; Kumari et al., 2023; Salim et al., 2025). Other research has examined trust and user experience separately (Rahardja et al., 2023; Fadli, 2025). Therefore, further research is needed to examine Cryptocurrency Investment Adoption as the main explanatory variable, Financial Literacy as the outcome, and User Trust and User Satisfaction as mediating variables within an integrated model.

This research gap is particularly relevant in Indonesia because cryptocurrency participation has expanded while financial literacy remains an important policy concern. The increasing number of crypto-asset customers and transaction values indicates growing participation, while national financial literacy findings show the continuing need to strengthen public financial understanding (OJK, 2024; OJK, 2025). Although Indonesian studies have examined financial literacy, trust, and cryptocurrency adoption, differences in research models and populations have produced varied findings (Rahayu Marsha et al., 2025; Salim et al., 2025; Fadli, 2025).

Based on this background, this study examines the effect of Cryptocurrency Investment Adoption on Financial Literacy among Indonesian cryptocurrency users. It also investigates the effects of Cryptocurrency Investment Adoption on User Trust and User Satisfaction and examines the effects of User Trust and User Satisfaction on Financial Literacy. Furthermore, this study tests whether User Trust and User Satisfaction mediate the relationship between Cryptocurrency Investment Adoption and Financial Literacy. Using a quantitative approach and Partial Least Squares Structural Equation Modeling (PLS-SEM), the study is expected to contribute empirical evidence to the literature on cryptocurrency adoption and financial literacy and provide a clearer explanation of how adoption, trust, and satisfaction are related to users' financial understanding in Indonesia.

2. Methodology

2.1 Research Design

This study uses a deductive approach within a positivist research philosophy. The deductive approach is appropriate because the study begins with established theoretical concepts, develops hypotheses, and tests them using empirical data. The positivist perspective supports the use of measurable variables, structured instruments, and statistical procedures to examine relationships between variables (Saunders et al., 2023).

A quantitative research design is applied to examine the relationships among Cryptocurrency Investment Adoption (X), User Trust (M1), User Satisfaction (M2), and Financial Literacy (Y). Quantitative methods allow the proposed relationships to be measured objectively using numerical data. The hypotheses are tested using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is appropriate for analyzing latent variables and direct and indirect relationships (Hair et al., 2022).

The study also uses a cross-sectional survey, meaning that data are collected from respondents at one period through an online questionnaire. This design allows the study to assess respondents' current perceptions, experiences, and behavior regarding cryptocurrency investment. The research focuses on both direct effects and the mediating roles of User Trust and User Satisfaction.

2.2 Research Context, Population, and Sampling

Indonesia was selected as the research context because cryptocurrency has become an increasingly visible component of the country's digital financial environment. The study focuses on Indonesian individuals who have actual experience investing in cryptocurrency through digital investment platforms.

The target population consists of cryptocurrency users aged 18 years or above who actively invest in cryptocurrency and have conducted real transactions. These criteria were established to ensure that respondents have sufficient experience to evaluate cryptocurrency adoption, trust, satisfaction, and financial literacy.

Table 1. Population and Respondent Criteria

No.	Respondent Criteria	Rationale
1	Indonesian cryptocurrency users aged 18 years or above	Respondents are considered capable of making independent financial and investment decisions.
2	Active cryptocurrency investors with at least six months of experience	Ensures adequate experience with cryptocurrency investment and digital platforms.
3	Users who have conducted real cryptocurrency transactions	Provides actual experience for evaluating trust, satisfaction, adoption, and financial literacy.

The study involved 100 respondents who fulfilled all predetermined criteria. Because the research requires respondents with specific cryptocurrency investment experience, purposive sampling was employed. This non-probability technique enables the researcher to select participants who are directly relevant to the research objectives.

2.3 Measurement of Variables

The four constructs were measured using structured questionnaire items adapted from previous studies and adjusted to the Indonesian cryptocurrency investment context. A four-point Likert scale was used to reduce neutral responses and encourage respondents to indicate their level of agreement.

The scale consisted of: 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree. All items were written in the first-person form to capture respondents' perceptions, experiences, and investment-related behavior.

Table 2. Variable Measurement

Variable	Source	Indicators
Cryptocurrency Investment Adoption (X)	García-Monleón et al. (2023); Thu (2024)	Active use, regular investment, preferred investment instrument, future intention, market-information involvement
User Trust (M1)	Gan & Lau (2024); Waloyandari & Tyas (2024)	Transaction security, blockchain trust, asset-storage confidence, transparency, personal-data protection
User Satisfaction (M2)	Kumari et al. (2023); Fakhrullah et al. (2025)	Platform satisfaction, ease of use, performance, positive investment experience, overall satisfaction

Financial Literacy (Y)	Choowan et al. (2025); Zaimovic et al. (2025)	Risk understanding, risk-return management, financial-information evaluation, financial-management knowledge, diversification

Cryptocurrency Investment Adoption was measured through five items covering active cryptocurrency use, regular allocation of funds, preference for cryptocurrency as an investment instrument, intention to continue investing, and attention to cryptocurrency market developments.

User Trust was measured through five items concerning transaction security, trust in blockchain technology, confidence in storing assets, system transparency, and protection of personal information. User Satisfaction was assessed using five items related to platform experience, ease of use, performance, positive investment experience, and overall satisfaction. Financial Literacy was measured through five items assessing respondents' understanding of cryptocurrency investment risks, risk and return management, evaluation of financial information, financial-management knowledge, and portfolio diversification.

2.4 Data Collection Technique

Primary data were collected through an online questionnaire using Google Forms. The questionnaire was distributed through digital platforms and online communities relevant to Indonesian cryptocurrency users. The online method was selected because the target respondents are digital-platform users and may be geographically dispersed across Indonesia. Before the main survey, a pilot test involving 30 respondents was conducted to evaluate the clarity, readability, and understanding of the questionnaire items. Feedback from the pilot test was used to make minor wording improvements without changing the meaning of the constructs.

After the instrument was finalized, the main survey produced 100 valid responses. Only respondents who met the established criteria being Indonesian cryptocurrency users aged at least 18 years, actively investing for a minimum of six months, and having conducted real cryptocurrency transactions were included in the final dataset.

2.5 Data Analysis Technique

The collected data were analyzed using SmartPLS 4 through Partial Least Squares Structural Equation Modeling (PLS-SEM). This technique was selected because the research model contains several latent constructs and examines both direct and mediation relationships. The analysis follows a two-stage procedure consisting of measurement model assessment and structural model assessment (Hair & Alamer, 2022).

2.6 Measurement Model Assessment

The measurement model, or outer model, was evaluated to determine whether the indicators adequately measure their respective constructs. The assessment included outer loadings, Cronbach's Alpha, Composite Reliability, Average Variance Extracted (AVE), and the Heterotrait-Monotrait ratio (HTMT).

Table 3. Measurement Model Criteria

Assessment	Recommended Criterion	Purpose
Outer Loading	> 0.70	Indicator reliability
Cronbach's Alpha	> 0.70	Internal consistency
Composite Reliability	> 0.70	Construct reliability
AVE	> 0.50	Convergent validity
HTMT	< 0.85	Discriminant validity

Indicators with adequate outer loadings demonstrate that they appropriately represent their constructs. Reliability is established when Cronbach's Alpha and Composite Reliability exceed 0.70, while convergent validity is supported when AVE is above 0.50. Discriminant validity is assessed using HTMT, with values below 0.85 indicating satisfactory distinction between constructs.

2.7 Structural Model Assessment

After the measurement model meets the required criteria, the structural model or inner model is evaluated. The assessment focuses on multicollinearity, path coefficients, and the coefficient of determination (R^2).

Table 4. Structural Model Assessment

Assessment	Main Criterion	Purpose
VIF	Preferably < 5.00	Assess multicollinearity
Path Coefficient (β)	Positive/negative magnitude	Examine relationship direction and strength
R^2	0–1	Assess explained variance
p-value	< 0.05	Determine statistical significance
t-statistic	> 1.96	Determine hypothesis support

The Variance Inflation Factor (VIF) is used to identify potential collinearity among predictor constructs. Path coefficients are examined to determine the direction and magnitude of relationships. R^2 indicates the proportion of variance in an endogenous construct explained by its predictors.

2.8 Mediation Analysis

Mediation analysis was conducted to determine whether User Trust (M1) and User Satisfaction (M2) transmit the effect of Cryptocurrency Investment Adoption (X) on Financial Literacy (Y). The analysis used the bootstrapping procedure with 5,000 subsamples.

An indirect effect is considered statistically significant when the p-value is below 0.05 and its confidence interval does not contain zero. This procedure enables the study to determine whether the influence of Cryptocurrency Investment Adoption on Financial Literacy occurs directly, indirectly through User Trust and User Satisfaction, or through both pathways.

2.9 Hypothesis Testing

Hypotheses were tested using the bootstrapping results generated by SmartPLS 4. A relationship is considered statistically significant when the t-statistic exceeds 1.96 and the p-value is below 0.05. The decision rule is applied to both direct and indirect effects.

Table 5. Hypothesis Testing Framework

Relationship	Type of Effect	Decision Criterion
X → Y	Direct effect	t > 1.96; p < 0.05
X → M1	Direct effect	t > 1.96; p < 0.05
X → M2	Direct effect	t > 1.96; p < 0.05
M1 → Y	Direct effect	t > 1.96; p < 0.05
M2 → Y	Direct effect	t > 1.96; p < 0.05
X → M1 → Y	Indirect/mediation effect	p < 0.05; CI excludes zero
X → M2 → Y	Indirect/mediation effect	p < 0.05; CI excludes zero

Overall, this methodology provides a systematic framework for testing the proposed relationships among Cryptocurrency Investment Adoption, User Trust, User Satisfaction, and Financial Literacy. The combination of purposive sampling, structured measurement, online data collection, and PLS-SEM analysis is designed to provide empirical evidence regarding both direct and mediating relationships in the Indonesian cryptocurrency investment context.

3. Results and Discussions

3.1 Result

3.1.1 Overview of the Results

This study examines the relationships among Cryptocurrency Investment Adoption (X), User Trust (M1), User Satisfaction (M2), and Financial Literacy (Y) among Indonesian cryptocurrency users. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS 4. The analysis consisted of two main stages: the measurement model (outer model) and the structural model (inner model).

Figure 1. PLS-SEM Research Model

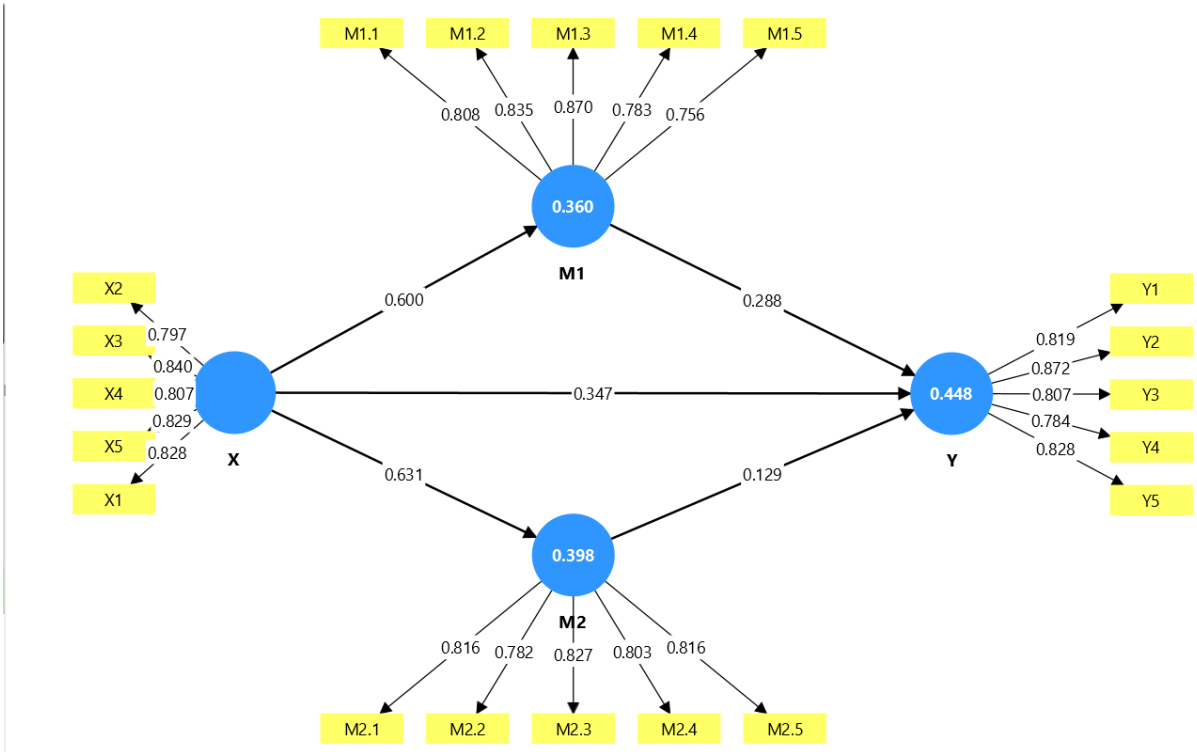


Figure 1 presents the structural relationships among Cryptocurrency Investment Adoption (X), User Trust (M1), User Satisfaction (M2), and Financial Literacy (Y), including the direct paths X → Y, X → M1, M1 → Y, X → M2, and M2 → Y, as well as the indirect paths X → M1 → Y and X → M2 → Y.

Source: SmartPLS 4 output, processed by the researchers, 2026.

The measurement model was evaluated through convergent validity, discriminant validity, reliability, and multicollinearity. The structural model was then examined using path coefficients, t-statistics, p-values, mediation analysis, and coefficient of determination (R^2). Bootstrapping with 5,000 subsamples was used to test the significance of the proposed relationships.

Overall, the results indicate that the measurement instruments satisfy the required validity and reliability criteria. At the structural level, Cryptocurrency Investment Adoption significantly affects Financial Literacy, User Trust, and User Satisfaction. User Trust also significantly affects Financial Literacy and mediates the relationship between Cryptocurrency Investment Adoption and Financial Literacy. In contrast, User Satisfaction does not significantly affect Financial Literacy and does not provide a significant mediating effect.

3.2 Measurement Model Assessment

3.2.1 Convergent Validity

Convergent validity was evaluated using outer loading and Average Variance Extracted (AVE). An outer loading above 0.70 indicates that an indicator strongly represents its construct. The AVE value should exceed 0.50, indicating that the construct explains more than half of the variance in its indicators.

The results show that all indicators have outer loading values above 0.70. The values for Cryptocurrency Investment Adoption range from 0.797 to 0.840, while User Trust ranges from 0.756 to 0.870. User Satisfaction has loading values between 0.782 and 0.827, and Financial Literacy ranges from 0.784 to 0.872.

Table 1. Outer Loading Results

Construct	Indicator	Outer Loading	Decision
Cryptocurrency Investment Adoption	X1	0.828	Valid
	X2	0.797	Valid
	X3	0.840	Valid
	X4	0.807	Valid
	X5	0.829	Valid
User Trust	M1.1	0.808	Valid
	M1.2	0.835	Valid
	M1.3	0.870	Valid
	M1.4	0.783	Valid
	M1.5	0.756	Valid
User Satisfaction	M2.1	0.816	Valid
	M2.2	0.782	Valid
	M2.3	0.827	Valid
	M2.4	0.803	Valid
	M2.5	0.816	Valid
Financial Literacy	Y1	0.819	Valid
	Y2	0.872	Valid
	Y3	0.807	Valid
	Y4	0.784	Valid
	Y5	0.828	Valid

All indicators therefore meet the recommended loading criterion and can be retained for further analysis. The results demonstrate that each indicator adequately represents its corresponding latent construct.

The AVE results also confirm convergent validity. Cryptocurrency Investment Adoption has an AVE of 0.673, User Trust has 0.658, User Satisfaction has 0.654, and Financial Literacy has 0.677. Since all values exceed 0.50, all four constructs satisfy the convergent validity requirement.

Table 2. Average Variance Extracted (AVE)

Construct	AVE	Criterion	Decision
Cryptocurrency Investment Adoption (X)	0.673	> 0.50	Valid
User Trust (M1)	0.658	> 0.50	Valid
User Satisfaction (M2)	0.654	> 0.50	Valid
Financial Literacy (Y)	0.677	> 0.50	Valid

3.3 Discriminant Validity

Discriminant validity was assessed using the Heterotrait-Monotrait (HTMT) ratio. The criterion applied in this study is a value below 0.85. A value below this threshold indicates that the constructs are sufficiently different from each other.

Table 3. HTMT Results

Construct	X	M1	M2	Y
Cryptocurrency Investment Adoption (X)	–	0.789	0.671	0.650
User Trust (M1)	0.789	–	0.710	0.620
User Satisfaction (M2)	0.671	0.710	–	0.662
Financial Literacy (Y)	0.650	0.620	0.662	–

All HTMT values are below 0.85. The highest value is **0.789**, observed between Cryptocurrency Investment Adoption and User Trust. The result confirms that the constructs are empirically distinct and that discriminant validity has been achieved.

3.4 Reliability Assessment

Reliability was evaluated using Cronbach's Alpha and Composite Reliability. Both values should generally exceed 0.70. The results demonstrate high internal consistency across all constructs.

Table 4. Reliability Results

Construct	Cronbach's Alpha	Composite Reliability	Decision
Cryptocurrency Investment Adoption (X)	0.879	0.911	Reliable
User Trust (M1)	0.870	0.906	Reliable
User Satisfaction (M2)	0.868	0.904	Reliable
Financial Literacy (Y)	0.880	0.913	Reliable

Cronbach's Alpha ranges from 0.868 to 0.880, while Composite Reliability ranges from 0.904 to 0.913. These results are well above the minimum criterion of 0.70. Therefore, the indicators consistently measure their respective constructs, and all constructs are suitable for structural model analysis.

3.5 Multicollinearity Assessment

Multicollinearity was examined using the Variance Inflation Factor (VIF). High VIF values may indicate excessive correlation among indicators or predictors and can reduce the stability of model estimates. In this study, VIF values below 5.00 were considered acceptable.

The VIF values range from 1.652 to 2.808. The highest value is recorded for Y2 at 2.808, while the lowest value is M1.5 at 1.652.

Table 5. VIF Results

Indicator	VIF	Indicator	VIF
X1	2.287	Y1	2.302
X2	2.198	Y2	2.808
X3	2.392	Y3	2.193
X4	1.906	Y4	1.778
X5	2.221	Y5	2.489
M1.1	1.972	M2.1	2.081
M1.2	2.078	M2.2	1.745
M1.3	2.367	M2.3	1.988
M1.4	1.929	M2.4	1.925
M1.5	1.652	M2.5	1.981

Because all VIF values are below 5.00, the model does not show a serious multicollinearity problem. Thus, the indicators can be used in the subsequent structural model analysis.

3.6 Structural Model and Hypothesis Testing

After the measurement model fulfilled the validity and reliability requirements, the structural model was evaluated. Hypotheses were tested using bootstrapping with 5,000 subsamples. A relationship was considered significant when the t-statistic was greater than 1.96 and the p-value was below 0.05.

Table 6. Direct and Indirect Effects

Hypothesis	Relationship	β	T-Statistics	P-Values	Decision
H1	X → Y	0.347	3.585	0.000	Accepted
H2	X → M1	0.600	7.868	0.000	Accepted
H3	M1 → Y	0.288	2.484	0.013	Accepted
H4	X → M2	0.631	9.249	0.000	Accepted
H5	M2 → Y	0.129	1.025	0.305	Rejected
H6	X → M2 → Y	0.081	0.998	0.319	Rejected
H7	X → M1 → Y	0.173	2.281	0.023	Accepted

3.6.1 Effect of Cryptocurrency Investment Adoption on Financial Literacy

The results support H1. Cryptocurrency Investment Adoption has a positive and significant effect on Financial Literacy, with a path coefficient of 0.347, t-statistic of 3.585, and p-value of 0.000. This indicates that higher levels of cryptocurrency investment adoption are associated with higher levels of financial literacy among the respondents.

3.6.2 Effect of Cryptocurrency Investment Adoption on User Trust

H2 is also supported. Cryptocurrency Investment Adoption has a positive and significant effect on User Trust, with a coefficient of **0.600**, t-statistic of **7.868**, and p-value of **0.000**. This is a relatively strong relationship, indicating that respondents with greater engagement in cryptocurrency investment tend to report higher levels of trust.

3.6.3 Effect of User Trust on Financial Literacy

H3 is accepted because User Trust significantly affects Financial Literacy. The coefficient is 0.288, with a t-statistic of 2.484 and p-value of 0.013. The positive coefficient indicates that greater trust is associated with higher financial literacy.

3.6.4 Effect of Cryptocurrency Investment Adoption on User Satisfaction

H4 is supported. Cryptocurrency Investment Adoption has the strongest direct relationship among the tested predictors of the two mediators, with a coefficient of 0.631, t-statistic of 9.249, and p-value of 0.000. This indicates that greater adoption is strongly associated with higher User Satisfaction.

3.6.5 Effect of User Satisfaction on Financial Literacy

In contrast, H5 is rejected. User Satisfaction does not significantly affect Financial Literacy. The path coefficient is 0.129, with a t-statistic of 1.025 and p-value of 0.305. Although the relationship is positive, its statistical evidence is insufficient to support the hypothesis.

3.7 Mediation Analysis

The mediation analysis examined whether User Trust and User Satisfaction transmit the effect of Cryptocurrency Investment Adoption to Financial Literacy.

First, User Satisfaction does not significantly mediate the relationship between Cryptocurrency Investment Adoption and Financial Literacy. The indirect effect is 0.081, with a t-statistic of 0.998 and p-value of 0.319. Therefore, H6 is rejected. The result is consistent with the non-significant direct relationship between User Satisfaction and Financial Literacy.

Second, User Trust significantly mediates the relationship between Cryptocurrency Investment Adoption and Financial Literacy. The indirect effect is 0.173, with a t-statistic of 2.281 and p-value of 0.023. Therefore, H7 is accepted.

This result indicates that cryptocurrency adoption can contribute to financial literacy not only through its direct relationship but also through increased user trust. User Trust therefore plays a meaningful mediating role in the research model.

3.8 Coefficient of Determination (R^2)

The explanatory power of the structural model was evaluated using R^2. The results indicate that Cryptocurrency Investment Adoption explains **36.0%** of the variance in User Trust. For User Satisfaction, Cryptocurrency Investment Adoption explains **39.8%** of the variance. Financial Literacy has an R^2 value of **0.448**, meaning that Cryptocurrency Investment Adoption, User Trust, and User Satisfaction jointly explain **44.8%** of the variance in Financial Literacy.

Table 7. Coefficient of Determination

Endogenous Construct	R^2	Adjusted R^2
User Trust (M1)	0.360	0.354
User Satisfaction (M2)	0.398	0.392
Financial Literacy (Y)	0.448	0.430

The R^2 value of 0.360 for User Trust indicates that 36.0% of its variance is explained by Cryptocurrency Investment Adoption, while the remaining 64.0% is attributable to other factors outside the model. Similarly, the R^2 value of 0.398 for User Satisfaction indicates that 39.8% of its variance is explained by Cryptocurrency Investment Adoption.

For Financial Literacy, the R^2 value of 0.448 indicates that the three explanatory constructs account for 44.8% of its variance. The remaining 55.2% may be associated with other variables not included in the present model, such as financial experience, investment knowledge, risk tolerance, education, income, digital literacy, or other behavioral factors.

Overall, the structural model demonstrates moderate explanatory power. The results provide empirical support for five of the seven proposed direct and indirect hypotheses: H1, H2, H3, H4, and H7. H5 and H6 are not supported.

3.9 Discussion

3.9.1 The Effect of Cryptocurrency Investment Adoption on Financial Literacy (H1)

The results show that Cryptocurrency Investment Adoption has a positive and significant effect on Financial Literacy ($\beta = 0.347$; $t = 3.585$; $p = 0.000341$). Therefore, H1 is accepted. This finding indicates that respondents who are more actively involved in cryptocurrency investment tend to have higher levels of financial literacy.

This relationship may be explained by the experience gained through investment activities. Cryptocurrency investors are exposed to financial information, market movements, investment risks, returns, and portfolio decisions. Such activities can encourage users to understand financial concepts and make more informed investment decisions.

The finding is consistent with Kumari et al. (2023), who discussed the relationship between financial literacy, technology awareness, and cryptocurrency adoption. Hayashi and Routh (2025) also examined financial literacy in relation to cryptocurrency ownership and risk tolerance, while Imamah and Nafisa (2024) highlighted the relevance of financial literacy to cryptocurrency investment decisions in Indonesia. However, because this study uses a cross-sectional design, the result should be interpreted as a significant statistical relationship rather than definitive evidence of causality.

3.9.2 The Effect of Cryptocurrency Investment Adoption on User Trust (H2)

Cryptocurrency Investment Adoption has a positive and significant effect on User Trust (β = 0.600; t = 7.868; p < 0.001). Therefore, H2 is accepted. This result suggests that greater involvement in cryptocurrency investment is associated with stronger trust in cryptocurrency platforms and related systems.

Direct and repeated experience may help users become familiar with transaction processes, platform functions, and blockchain-based systems. Through these interactions, users can evaluate the reliability, security, and performance of the services they use. This experience may gradually strengthen their confidence.

The result supports previous research emphasizing the importance of trust in cryptocurrency awareness, acceptance, and adoption (Shahzad et al., 2024). Rahardja et al. (2023) also identified trust as an important factor in cryptocurrency-related behavior, while Gan and Lau (2024) emphasized its role in blockchain-based financial services.

3.9.3 The Effect of User Trust on Financial Literacy (H3)

User Trust has a positive and significant effect on Financial Literacy (β = 0.288; t = 2.484; p = 0.013). Thus, H3 is accepted. Users who have greater confidence in cryptocurrency platforms may be more willing to interact with financial information and investment services.

Continued interaction can provide opportunities to evaluate financial information, understand investment risks, and make financial decisions. Gan and Lau (2024) identified trust as an important element in blockchain-based financial services, while Shahzad et al. (2024) discussed its relevance to cryptocurrency behavior and adoption. In Indonesia, Rahayu Marsha et al. (2025) also examined financial literacy and trust in relation to cryptocurrency adoption intention. These findings support the positive relationship between User Trust and Financial Literacy found in this study.

3.9.4 The Effect of Cryptocurrency Investment Adoption on User Satisfaction (H4)

Cryptocurrency Investment Adoption has a positive and significant effect on User Satisfaction (β = 0.631; t = 9.249; p < 0.001). Therefore, H4 is accepted. This is the strongest direct relationship among the paths from Cryptocurrency Investment Adoption to the two mediating variables.

Active participation provides users with direct experience in digital investment platforms, transactions, market information, and investment management. These experiences can shape users' overall evaluation of the services and benefits they receive. García-Monleón et al. (2023) and Fakhrullah et al. (2025) emphasized the importance of perceived value and user-centered factors in cryptocurrency adoption and service evaluation. Therefore, positive experiences associated with cryptocurrency investment may increase User Satisfaction.

3.9.5 The Effect of User Satisfaction on Financial Literacy (H5)

User Satisfaction does not have a significant effect on Financial Literacy (β = 0.129; t = 1.025; p = 0.305). Therefore, H5 is rejected. This result indicates that satisfaction with cryptocurrency investment services does not necessarily lead to greater financial knowledge or understanding.

User Satisfaction and Financial Literacy represent different dimensions. Satisfaction reflects users' evaluation of their experience, convenience, and service performance, whereas Financial Literacy concerns knowledge and understanding of financial information, risks, returns, and investment decisions. A user may be satisfied because a platform is easy to use or convenient without necessarily having a strong understanding of financial concepts (Khoiruman & Irawan, 2026; Ahmad et al., 2026).

Thus, financial literacy may depend more on learning, information-seeking, investment experience, and financial education than on satisfaction with cryptocurrency services.

3.9.6 The Mediating Role of User Satisfaction (H6)

User Satisfaction does not significantly mediate the relationship between Cryptocurrency Investment Adoption and Financial Literacy ($\beta = 0.081$; $p = 0.319$). Therefore, H6 is rejected.

Although Cryptocurrency Investment Adoption significantly affects User Satisfaction, User Satisfaction does not significantly affect Financial Literacy. Consequently, the indirect effect through User Satisfaction is not significant. This finding suggests that a positive investment experience does not automatically translate into greater financial knowledge (Irawan & Khoiruman, 2026).

The result further confirms the distinction between satisfaction and financial literacy. Satisfaction concerns how users evaluate their investment experience, while financial literacy requires knowledge, understanding, and the ability to evaluate financial decisions. Therefore, User Satisfaction does not function as a significant mediating mechanism in this relationship.

3.9.7 The Mediating Role of User Trust (H7)

User Trust significantly mediates the relationship between Cryptocurrency Investment Adoption and Financial Literacy ($\beta = 0.173$; $p = 0.023$). Therefore, H7 is accepted. Cryptocurrency Investment Adoption significantly affects User Trust, and User Trust subsequently affects Financial Literacy, producing a significant indirect effect.

One possible explanation is that active cryptocurrency investment provides users with greater experience and confidence in using digital investment platforms. Greater trust may encourage users to interact more frequently with financial information, evaluate risks, and participate in financial decision-making. These activities can support the development of financial understanding.

This result is consistent with Rahardja et al. (2023) and Shahzad et al. (2024), who emphasized the importance of trust in cryptocurrency adoption and related financial behavior. Thus, User Trust represents an important mechanism linking cryptocurrency investment involvement with financial literacy.

4. Limitations and Future Research

This study has several limitations. First, the sample consisted of only 100 respondents, which may limit the generalizability of the findings to all cryptocurrency users in Indonesia. Future research should involve larger and more diverse samples from different regions and demographic groups.

Second, the cross-sectional design limits the ability to establish causal relationships. Future studies could use longitudinal designs to examine whether continued cryptocurrency investment contributes to changes in trust, satisfaction, and financial literacy over time.

Third, this study focused only on Indonesian cryptocurrency users. Differences in regulations, financial systems, technology, and investment behavior across countries may produce different results. Comparative studies involving several countries could therefore provide broader evidence.

Finally, this study examined only User Trust and User Satisfaction as mediating variables. Future research could include investment experience, risk tolerance, technology awareness, digital financial literacy, financial behavior, and financial education. Qualitative or mixed-method research could also provide deeper insights into how cryptocurrency users develop trust and financial literacy through their investment experiences.

5. Conclusions and Recommendations

5.1 Conclusions

Based on the findings, Cryptocurrency Investment Adoption has a positive and significant effect on Financial Literacy ($\beta = 0.347$; $p = 0.000341$), User Trust ($\beta = 0.600$; $p < 0.001$), and User Satisfaction ($\beta = 0.631$; $p < 0.001$), supporting H1, H2, and H4. User Trust also has a positive and significant effect on Financial Literacy ($\beta = 0.288$; $p = 0.013$), supporting H3, and significantly mediates the relationship between Cryptocurrency Investment Adoption and Financial Literacy (indirect effect = 0.173; $p = 0.023$), supporting H7. In contrast, User Satisfaction does not significantly affect Financial Literacy ($\beta = 0.129$; $p = 0.305$) and does not significantly mediate the relationship between Cryptocurrency Investment Adoption and Financial Literacy (indirect effect = 0.081; $p = 0.319$), leading to the rejection of H5 and H6. Overall, the findings indicate that cryptocurrency investment involvement is positively associated with financial literacy, trust, and satisfaction among Indonesian cryptocurrency users, while User Trust plays a more important mediating role than User Satisfaction in explaining the relationship between cryptocurrency investment and financial literacy.

5.2 Recommendations

Based on these findings, cryptocurrency users are encouraged to continuously improve their financial knowledge by understanding investment risks, market volatility, potential returns, portfolio diversification, and responsible financial management, while using reliable information sources rather than relying only on personal experience. Cryptocurrency platforms should provide accessible educational features, including information on risks, market analysis, portfolio management, security, and responsible investment, while maintaining transparency, reliability, and user-friendly services to strengthen trust and satisfaction. Government agencies, educational institutions, and financial educators are also encouraged to develop accessible digital financial education programs covering cryptocurrency, digital assets, market risks, security, and responsible financial decision-making. For future research, larger and more diverse samples from different regions of Indonesia are recommended, together with additional variables such as investment experience, financial behavior, risk tolerance, technology awareness, digital financial literacy, and financial education. Longitudinal, qualitative, or mixed-method approaches could also be used to examine changes over time and provide deeper explanations of how trust, satisfaction, and financial knowledge develop among cryptocurrency users.

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