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TESTING THE TECHNOLOGY ACCEPTANCE MODEL (TAM) AND THE USE OF ARTIFICIAL INTELLIGENCE IN CRYPTOCURRENCY INVESTMENT DECISION-MAKING BY RETAIL INVESTORS

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Abstract

This study aims to analyze the effect of Perceived Usefulness and Perceived Ease of Use on the use of Artificial Intelligence and its impact on cryptocurrency investment decision-making among retail investors in Indonesia. This research employs a quantitative approach using a survey method by distributing questionnaires to 123 respondents selected through purposive sampling. Data analysis was conducted using Partial Least Squares-Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The results show that Perceived Usefulness and Perceived Ease of Use have a positive and significant effect on the use of Artificial Intelligence. Furthermore, the use of Artificial Intelligence also has a positive and significant impact on investment decision-making. Both variables also have a direct significant effect on investment decisions, and the use of Artificial Intelligence is proven to mediate the relationship between user perceptions and investment decisions.

Keywords: Perceived Usefulness, Perceived Ease of Use, Artificial Intelligence, Investment Decision, Cryptocurrency

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INTRODUCTION

The rapid development of Artificial Intelligence (AI) has become a major milestone in the digital transformation of the 21st century. AI is no longer limited to industrial and manufacturing applications but is now widely utilized in education, healthcare, and particularly in the financial sector. It enables systems to analyze big data, recognize patterns, and support fast and accurate decision-making processes. This technology is capable of mimicking human cognitive processes through machine learning and deep learning, resulting in data-driven decisions (Russell & Norvig, 2021).

This evolution has driven significant transformation across various sectors, including healthcare, manufacturing, and especially finance. According to the McKinsey Global Institute (2023), the widespread adoption of AI is projected to contribute up to USD 13 trillion to the global economy by 2030, positioning it as a key driver of innovation and economic efficiency (McKinsey & Company, 2023). This highlights that AI adoption is no longer merely a technological trend but a strategic necessity, particularly in sectors increasingly reliant on data and analytical speed, such as finance.

One of the areas that extensively utilizes AI in decision-making is digital investment, including cryptocurrency, which has gained significant interest among retail investors. The emergence of digital assets such as cryptocurrency has introduced a new paradigm in the investment landscape. Since its introduction by Satoshi Nakamoto through the whitepaper "Bitcoin: A Peer-to-Peer Electronic Cash System," cryptocurrency has evolved into a global investment instrument characterized by high volatility. Bitcoin, as the pioneer, was designed as a decentralized financial system independent of traditional financial institutions, yet it exhibits substantial price fluctuations (Nakamoto, 2008).

Cryptocurrencies such as Bitcoin and Ethereum operate as decentralized digital assets, where prices can fluctuate by 20–30% within a single day due to factors such as market sentiment, regulation, and global news. AI technology is widely applied in crypto trading activities, including price prediction, social media sentiment analysis, and portfolio risk management. For instance, machine learning algorithms can integrate data from social media, transaction volumes, and economic indicators to generate more accurate investment recommendations. However, the crypto market is also vulnerable to manipulation practices such as pump-and-dump schemes. While AI can be used to detect such patterns, it may also be exploited by malicious actors, indicating that AI is not a flawless solution but rather a tool that requires strict oversight (Chen & Liu, 2022).

The Technology Acceptance Model (TAM) explains that technology adoption is influenced by Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), which shape user behavior in utilizing technology (Wicaksono, 2022). When both PU and PEOU toward AI are high, the likelihood of adopting AI in investment decision-making increases.

Furthermore, the fintech revolution has transformed the behavior and role of retail investors in digital financial markets. Technologies such as AI provide access to market information and analytical tools that were previously exclusive to institutional investors, making them available to individual investors (Gomber, Peter; Kauffman, Robert J; Parker, Chris; Weber, 2017). This phenomenon reinforces the democratization of investment in the digital era, including in high-risk assets such as cryptocurrency. However, the high volatility of the crypto market often leads to inefficiencies. For example, research by (Urquhart, 2016)

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indicates that the Bitcoin market is frequently inefficient, making investment decisions based on intuition or emotion less reliable. In Indonesia, retail investors commonly use platforms such as *Binance* or *Indodax*, which integrate AI features; however, limited risk literacy may increase the likelihood of financial losses. The volatility of cryptocurrencies can also heighten systemic risk, particularly for retail investors who are more vulnerable to market manipulation (World Economic Forum (WEF), 2024).

During 2023–2024, the cryptocurrency market reached a capitalization exceeding USD 2 trillion, accompanied by increased AI adoption through applications such as decentralized finance (DeFi) and non-fungible tokens (NFT). Regulatory frameworks such as the EU AI Act (2024) and guidelines from the Securities and Exchange Commission (SEC) in the United States have encouraged the ethical use of AI in trading, although market volatility remains high due to global inflation and geopolitical events such as the war in Ukraine. Globally, retail investors are increasingly relying on AI-based tools such as TradingView and QuantConnect for real-time analysis, with reports indicating a 30% increase in the use of AI-driven bots since 2020 (CoinMarketCap, 2024). This trend is not limited to developed countries but is also evident in developing nations, including Indonesia.

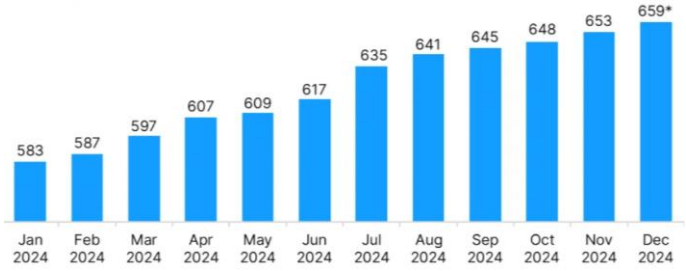

Figure 1.
Detailed Growth of Bitcoin and Ethereum
Source: crypto.news, 2025

In Indonesia, the adoption of crypto assets has increased significantly in recent years. According to Bappebti (2024), the number of crypto asset investors surpassed 20 million in 2024, with transaction values reaching IDR 211 trillion within the first four months of the year. The growth of crypto investors in Indonesia shows a rapid increase, from approximately ±4 million in 2020 to more than 20 million in 2024, with a substantial surge particularly during 2021–2024. This trend reflects expanded access to crypto platforms and rising retail interest in digital assets. Local platforms such as Pintu, Indodax, and Tokocrypto have begun integrating AI-based features for technical analysis and investment recommendations (Badan Pengawas Perdagangan Berjangka Komoditi (Bappebti), 2024).

Table 1.
Crypto Adoption by Country

Country	Overall Index Ranking	Retail Centralized Service Value Received Ranking	Centralized Service Value Received Ranking	DeFi Value Received Ranking	Institutional Centralized Service Value Received Ranking
India	1	1	1	1	1
United States	2	10	2	2	2

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Pakistan	3	2	3	10	3
Vietnam	4	3	4	6	4
Brazil	5	5	5	5	5
Nigeria	6	7	8	3	8
Indonesia	7	9	7	4	7
Ukraine	8	4	6	8	6
Philippines	9	6	9	13	10
Russian Federation	10	8	10	9	11
United Kingdom	11	27	12	12	9
Ethiopia	12	16	19	7	20

Source: Chainalysis

The data in Table 1, indicates that in 2024 Indonesia ranked third globally in the Global Crypto Adoption Index published by Chainalysis, reflecting high levels of adoption, particularly among retail users and decentralized finance (DeFi) activities. However, in the 2025 report, Indonesia dropped to seventh place due to methodological changes that increased the weighting of high-value institutional transactions. Consequently, countries with stronger institutional activity, such as India, the United States, Pakistan, and Vietnam, rose to the top rankings.

Despite the rapid growth of crypto assets in Indonesia, with more than 20 million investors, the majority of retail investors still exhibit relatively low levels of digital literacy and financial analytical capability. Only around 40% of the population understands the fundamentals of digital investment and AI (Kamendag, 2024). This condition encourages retail investors to rely on AI-based features within crypto applications, such as trading bots, robo-advisors, and automated analytics, to navigate the highly volatile and complex market environment. AI is perceived as a tool capable of bridging the analytical gap, particularly in processing large volumes of technical data.

However, the use of AI without adequate understanding of algorithmic mechanisms, signal validity, and prediction risks may lead to impulsive or biased investment decisions. In response, Bappebti has implemented regulations such as POJK No. 5/2022 to enhance investor protection. Nevertheless, cases of financial losses due to market manipulation, such as crypto rug pulls, remain prevalent (Badan Pengawas Perdagangan Berjangka Komoditi (Bappebti), 2024).

Previous studies in Indonesia have examined cryptocurrency investment behavior from various perspectives, including the role of trust, regulation, and digital access (Putra Jayani et al., 2025), psychological biases and irrational investor behavior (Tjondro et al., 2023a), as well as determinants of investment decisions based on financial literacy and platform-related factors (Sri Artini & Darma, 2024a). However, these studies have not specifically focused on how *Artificial Intelligence* is utilized by retail investors as a decision-support tool in cryptocurrency investments.

Similarly, international research on AI in cryptocurrency markets has largely emphasized technical models for market prediction or data classification, rather than user perceptions and behavioral aspects of investment decision-making (Chen & Liu, 2022). Therefore, a research gap remains regarding the factors influencing AI utilization and its impact on the rationality of investment decisions among retail cryptocurrency investors in Indonesia.

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The novelty of this study lies in examining user perceptions of AI in cryptocurrency investment decisions among Indonesian retail investors, as well as measuring investment decisions based on rationality and bias control an area that has rarely been explored in the context of digital financial markets in Indonesia. This research is expected to provide empirical evidence that is still limited in the Indonesian digital finance literature, particularly concerning the implementation of AI by retail investors in cryptocurrency assets.

REVIEW OF LITERATURE

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was initially introduced by Fred D. Davis in 1989 as a framework to explain technology adoption through two primary constructs: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Although the theory was developed decades ago, recent literature confirms that PU and PEOU remain relevant in explaining technology adoption behavior in the modern digital era. For instance, recent academic reviews indicate that TAM continues to be widely applied across studies on information systems, digital services, and artificial intelligence adoption (Harsanto et al., 2023). Therefore, despite its early development, the use of PU and PEOU constructs remains valid and justifiable in this study.

Concept of Artificial Intelligence (AI)

Artificial Intelligence (AI) according to (Russell & Norvig, 2021) is a field of computer science that focuses on developing systems capable of performing tasks that typically require human intelligence. In Artificial Intelligence: A Modern Approach, they explain that AI can be understood through four main approaches: systems that think like humans, systems that act like humans, systems that think rationally, and systems that act rationally. The most widely used approach in modern research is the rational agent approach, which refers to systems capable of making optimal decisions based on the information available. In other words, AI does not merely imitate human behavior but also adopts logical and measurable decision-making principles (Russell & Norvig, 2021).

Cryptocurrency

Cryptocurrency is a digital asset that utilizes cryptographic technology to ensure the security and integrity of transactions. Satoshi Nakamoto (2008), in the document Bitcoin: A Peer-to-Peer Electronic Cash System, defines cryptocurrency as an electronic cash system that operates without intermediaries such as banks or financial institutions. The underlying technology, namely blockchain, provides transparency and decentralization through a distributed network that records all transactions permanently (Nakamoto, 2008).

Retail Investors

Retail investors are individual participants who engage in investment activities in financial markets using personal funds, rather than representing institutions. Typically, retail investors invest relatively small amounts, and their investment decisions are influenced by financial literacy, access to information, and personal financial goals such as savings, emergency funds, or future planning (Setiawan, 2020).

Investment Decision-Making

Investment decision-making is the process of selecting and allocating funds across various instruments or assets with the objective of generating returns and future value growth.

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This process requires rational consideration of the level of risk associated with each investment option. Tandelilin explains that investment decision-making involves several key stages, including defining investment objectives, formulating policies, developing portfolio strategies, selecting appropriate assets, and evaluating investment performance (Mahadevi & Asandimitra, 2021).

Investment decisions are fundamentally determined by the extent to which investors are able to understand and process the available information. According to Sadewo et al. (2022), the quality of investment decisions is strongly influenced by the analysis of financial performance, as well as by the presence of intervening variables that serve as a link between information and the resulting decisions. This highlights that investment decisions depend not only on the availability of information, but also on how investors process and interpret such information.

Use of AI by Retail Investors in Cryptocurrency

The use of AI by retail investors in cryptocurrency encompasses various tools such as trading bots, signal generators, auto-analysis tools, and portfolio automation tools. These tools primarily function to assist investors in making faster and more accurate decisions through automated data analysis, automated trading execution, and efficient portfolio management (eToro, 2025).

RESEARCH METHOD

This study employs a quantitative approach using a survey method and a cross-sectional design to analyze the influence of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) on the use of Artificial Intelligence (AI) and its impact on cryptocurrency investment decision-making among retail investors in Indonesia. Data were collected online through a Likert-scale questionnaire distributed to 120–150 respondents selected using purposive sampling, targeting retail investors with experience in cryptocurrency investment and prior use of AI-based features. Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software, including both outer model and inner model evaluations to examine the relationships between variables and the mediating effects within the research model.

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RESULTS AND DISCUSSION

Data Analysis (*PLS-SEM*)

The following represents the research model tested in this study:

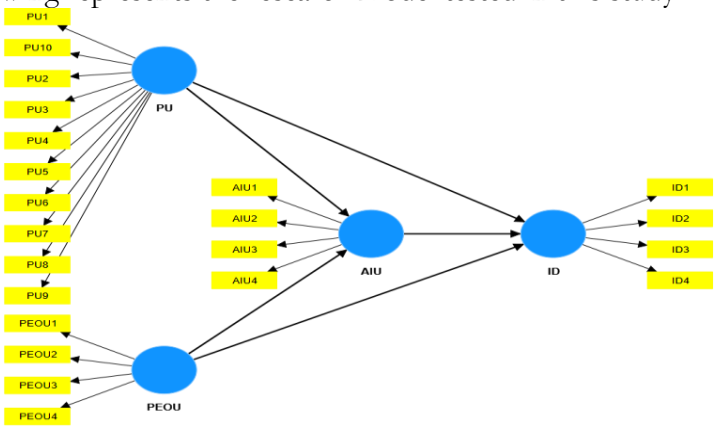

Figure 2.
Research Model
Source: Processed Data (2026)

The results of the overall model estimation using SmartPLS version 4 are presented as follows:

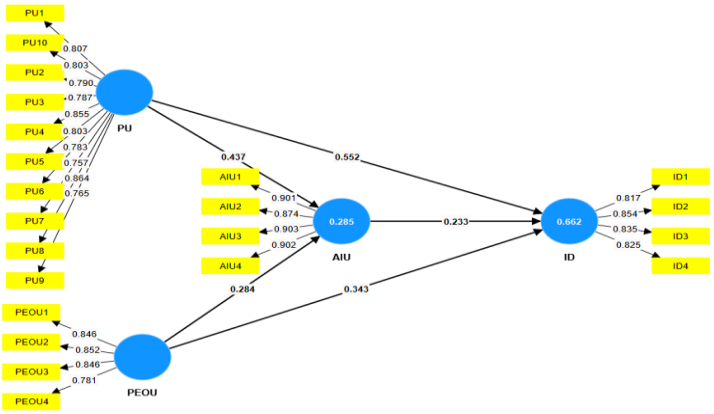

Figure 3.
Path Diagram with Loading Factor Values Before Indicator Elimination
Source: Processed Data (2026)

Based on the figure above, the evaluation of the SEM-PLS model is conducted by examining both the measurement model (outer model) and the structural model (inner model) of the proposed research model.

Measurement Model Evaluation (*Outer Model*)

Validity Test

Convergent Validity

Convergent validity is assessed using the *outer loading* values. Indicators with loading values ≥ 0.70 are considered valid, while those ≤ 0.70 are considered invalid.

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Table 2.
Results of AVE for Convergent Validity Test

Variable	Average Variance Extracted (AVE)	Description
AI Usage	0.801	Valid
Investment Decision	0.694	Valid
Perceived Ease of Use	0.692	Valid
Perceived Usefulness	0.643	Valid

Source: Processed Data (2026)

The AVE values for each variable are as follows: AI Usage = 0.801, Investment Decision = 0.694, Perceived Ease of Use = 0.692, and Perceived Usefulness = 0.643. All variables have AVE values ≥ 0.50, indicating that they meet the criteria for convergent validity.

Discriminant Validity

Discriminant validity in this study is tested using the *cross-loading* method, which compares the correlation of each indicator with its respective construct against other constructs.

Table 3.
Cross-Loading Results for Discriminant Validity Test

Instrument	AI Usage	Investment Decision	Perceived Ease of Use	Perceived Usefulness	Description
AIU1	**0.901**	0.532	0.310	0.408	Valid
AIU2	**0.874**	0.460	0.223	0.367	Valid
AIU3	**0.903**	0.567	0.300	0.431	Valid
AIU4	**0.902**	0.534	0.260	0.407	Valid
ID1	0.532	**0.817**	0.342	0.563	Valid
ID2	0.451	**0.854**	0.314	0.555	Valid
ID3	0.442	**0.835**	0.376	0.587	Valid
ID4	0.527	**0.825**	0.441	0.544	Valid
PEOU1	0.283	0.338	**0.846**	-0.027	Valid
PEOU2	0.242	0.381	**0.852**	0.025	Valid
PEOU3	0.313	0.423	**0.846**	0.146	Valid
PEOU4	0.161	0.322	**0.781**	0.011	Valid
PU1	0.322	0.520	0.023	**0.807**	Valid
PU2	0.407	0.531	0.149	**0.790**	Valid
PU3	0.379	0.569	0.038	**0.787**	Valid
PU4	0.408	0.630	0.082	**0.855**	Valid
PU5	0.417	0.507	-0.102	**0.803**	Valid
PU6	0.316	0.490	0.058	**0.783**	Valid
PU7	0.352	0.555	0.118	**0.757**	Valid
PU8	0.376	0.562	0.014	**0.864**	Valid
PU9	0.319	0.479	-0.009	**0.765**	Valid

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PU10	0.309	0.551	0.052	**0.803**	Valid

Source: Processed Data (2026)

Based on the cross-loading results presented above, all indicators exhibit the highest loading values on their respective constructs compared to other constructs. This pattern consistently applies to all indicators, indicating that there is no issue of overlap among latent variables in the research model.

Reliability Test

Reliability testing aims to measure the internal consistency of indicators in representing a latent construct. A construct is considered reliable if it has a Cronbach's Alpha value greater than 0.70. Values closer to 1 indicate a higher level of reliability

Table 4.
Cronbach's Alpha Values

Variable	Conbach's Alpha	Description
AI Usage	0.917	Reliable
Investment Decision	0.853	Reliable
Perceived Ease of Use	0.853	Reliable
Perceived Usefulness	0.938	Reliable

Source: Processed Data (2026)

Based on the table above, all variables in this study have Cronbach's Alpha values above 0.70, indicating that they are reliable. The Perceived Usefulness variable has the highest Cronbach's Alpha value of 0.938, demonstrating excellent internal consistency among its indicators. This is followed by the AI Usage variable with a value of 0.917, which also indicates a very high level of reliability. Meanwhile, Investment Decision and Perceived Ease of Use each have Cronbach's Alpha values of 0.853, exceeding the minimum threshold and thus categorized as reliable. These results indicate that all indicators consistently and stably measure their respective constructs.

Structural Model Evaluation (*Inner Model*)

R-Square (R^2) Test

The R-Square test is used to determine the extent to which independent variables explain the variance of dependent variables in the research model.

Table 5.
R-Square Test Results

Dependent Variable	R-square	R-square adjusted
AI Usage	0.285	0.273
Investment Decision	0.662	0.653

Source: Processed Data (2026)

Based on the table above, the R-Square value for the *AI Usage* variable is 0.285, indicating that *Perceived Usefulness* and *Perceived Ease of Use* explain 28.5% of the variance in *AI Usage*, while the remaining 71.5% is explained by other variables outside the research model.

Meanwhile, the R-Square value for *Investment Decision* is 0.662, indicating that *Perceived Usefulness*, *Perceived Ease of Use*, and *AI Usage* collectively explain 66.2% of the variance in *Investment Decision*, while the remaining 33.8% is influenced by other variables outside the

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model. An R-Square value of 0.662 is categorized as strong, whereas 0.285 is considered moderate in social science research.

Multicollinearity Test (VIF)

The multicollinearity test aims to determine whether there is a high correlation among independent variables in the model. The criterion used is VIF < 5, which indicates no multicollinearity issues.

Table 6.
Collinearity Statistics (VIF)

Variabel	VIF
PEOU4	1.788
PEOU3	1.862
ID1	1.952
PU7	2.007
PU9	2.102
PEOU2	2.118
PEOU1	2.133
ID4	2.147
PU2	2.196
ID3	2.221
PU3	2.310
PU6	2.319
PU10	2.397
PU5	2.422
ID2	2.532
PU1	2.650
AIU2	2.916
AIU3	3.176
PU4	3.181
AIU1	3.301
AIU4	3.345
PU8	3.515

Source: Processed Data (2026)

Based on the VIF results, all variables in this study have VIF values below 5. This indicates that there are no multicollinearity issues in the research model. Therefore, it can be concluded that the independent variables are not highly correlated and are appropriate for further analysis.

Model Fit Test

The model fit test aims to evaluate the overall suitability of the research model.

Table 7.
Model Fit Test Results

Parameter	Rule of Thumb	Parameter Value	Description
SRMR	Lebih kecil dari 0.10	0.059	Fit

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d_ULS	> 0,05	0.881	Fit
d_G	> 0,05	0.484	Fit
Chi-square	x^2 statistik ≥ x^2 tabel	326.278 ≥ 32,671	Fit
NFI	Close to 1	0.836	Fit

Source: Processed Data (2026)

Based on the table above, all model fit parameters meet the established criteria. The SRMR value of 0.059 indicates a low level of model error. The NFI value of 0.836, which is close to 1, suggests a good model fit. Additionally, the values of d_ULS, d_G, and Chi-square also meet the required criteria. Therefore, it can be concluded that the research model demonstrates good goodness of fit and is suitable for hypothesis testing.

Hypothesis Testing

The significance testing of relationships in *PLS-SEM* is conducted to determine whether the relationships among latent variables in the model are statistically significant. This process typically employs the *bootstrapping* technique, in which the data are resampled to calculate *path coefficients* and their standard errors. The results are reported in the form of *t-statistics* or *p-values*. A relationship is considered significant if the *p-value* is smaller than the predetermined significance level (in this study, 0.05). Significant path coefficients indicate strong statistical support for the relationship between independent and dependent latent variables, meaning that the proposed hypotheses can be accepted.

Table 8.
Results of Path Coefficient Bootstrapping (Direct Effect)

Path Coefficient	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Desc.
AI Usage -> Investment Decision	0.233	0.231	0.066	3.510	0.000	Proven
Perceived Ease of Use -> AI Usage	0.284	0.286	0.082	3.463	0.000	Proven
Perceived Ease of Use -> Investment Decision	0.409	0.410	0.057	7.222	0.000	Proven
Perceived Usefulness -> AI Usage	0.437	0.440	0.071	6.178	0.000	Proven
Perceived Usefulness -> Investment Decision	0.653	0.654	0.044	14.946	0.000	Proven

Source: Processed data (2026)

1. **The Effect of AI Usage on Investment Decision**

   The results show a coefficient value of 0.233, a *t-statistic* of 3.510, and a *p-value* of 0.000, indicating that the hypothesis is accepted. This finding suggests that *AI Usage* has a positive and significant effect on *Investment Decision*. In other words, the higher the use of Artificial Intelligence in investment activities, the better the quality of investment decisions made by retail investors. AI enables investors to obtain more accurate data analysis, reduce emotional bias, and respond more quickly to dynamic cryptocurrency market changes, thereby enhancing decision-making rationality.

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2. **The Effect of Perceived Ease of Use on AI Usage**
   The results indicate a coefficient of 0.284, a *t-statistic* of 3.463, and a *p-value* of 0.000, confirming that the hypothesis is accepted. This implies that *Perceived Ease of Use* has a positive and significant effect on *AI Usage*. The easier the AI technology is to use, the higher the likelihood that retail investors will adopt it. Within the *Technology Acceptance Model (TAM)* framework, ease of use is a crucial factor driving technology adoption.
3. **The Effect of Perceived Ease of Use on Investment Decision**
   The analysis yields a coefficient of 0.409, a *t-statistic* of 7.222, and a *p-value* of 0.000, indicating a significant positive relationship. This means that the easier AI technology is to use, the better the investment decisions made. Ease of use allows investors to focus more on analysis and strategy without being burdened by system complexity, thus improving decision effectiveness and reducing potential errors.
4. **The Effect of Perceived Usefulness on AI Usage**
   The results show a coefficient of 0.437, a *t-statistic* of 6.178, and a *p-value* of 0.000, supporting the hypothesis. This indicates that *Perceived Usefulness* has a positive and significant effect on *AI Usage*. The higher the perceived benefits of AI, the greater its utilization by investors. In the TAM framework, perceived usefulness is a primary determinant of technology adoption.
5. **The Effect of Perceived Usefulness on Investment Decision**
   The results indicate a coefficient of 0.653, a *t-statistic* of 14.946, and a *p-value* of 0.000, confirming the hypothesis. This demonstrates that *Perceived Usefulness* has a positive and significant effect on *Investment Decision*. This coefficient is the largest among all relationships, indicating that perceived usefulness is the most dominant factor influencing investment decisions. Investors who perceive tangible benefits from AI tend to be more confident in making investment decisions.

Table 9.
Results of Path Coefficient Bootstrapping (Indirect Effect)

Path Coefficient	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Perceived Ease of Use -> AI Usage -> Investment Decision	0.066	0.067	0.029	2.258	0.012
Perceived Usefulness -> AI Usage -> Investment Decision	0.102	0.102	0.034	2.958	0.002

Source: Processed data (2026)

1. **The Effect of Perceived Ease of Use on Investment Decision through AI Usage**
   The results show a coefficient of 0.066, a t-statistic of 2.258, and a p-value of 0.012, indicating that the hypothesis is accepted. This means that AI Usage mediates the effect of Perceived Ease of Use on Investment Decision. Ease of use influences investment decisions not only directly but also indirectly through increased AI usage.
2. **The Effect of Perceived Usefulness on Investment Decision through AI Usage**
   The results indicate a coefficient of 0.102, a t-statistic of 2.958, and a p-value of 0.002, confirming the hypothesis. This suggests that AI Usage mediates the effect of Perceived

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Usefulness on Investment Decision. In other words, higher perceived usefulness leads to increased AI usage, which in turn improves the quality of investment decisions.

CONCLUSION

Based on the research findings, it can be concluded that the use of Artificial Intelligence in cryptocurrency investment decision-making among retail investors is influenced by perceived usefulness and perceived ease of use of the technology.

Perceived usefulness is proven to be the primary factor driving the adoption of Artificial Intelligence. Investors who perceive tangible benefits from the technology—such as improved analytical accuracy and greater efficiency in decision-making—tend to be more active in utilizing AI. In addition, perceived ease of use plays a significant role in enhancing AI adoption, as systems that are easier to understand and operate increase investors' comfort in embracing the technology.

The use of Artificial Intelligence has been shown to improve the quality of investment decision-making. AI assists investors in processing information objectively, reducing emotional bias, and enhancing rationality in making cryptocurrency investment decisions. Beyond its direct effects, perceived usefulness and perceived ease of use also influence investment decisions indirectly through the use of AI as an intervening variable. This indicates that technology usage serves as an important mechanism that bridges investor perceptions and the quality of decisions produced.

Overall, these findings reinforce the Technology Acceptance Model (TAM), which posits that perceived usefulness and perceived ease of use are key determinants of technology adoption. This study also contributes to the cryptocurrency investment literature by demonstrating that Artificial Intelligence functions as a strategic factor in improving the quality of retail investors' decision-making.

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