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The Impact of Digital Currency Investment Experience on Digital Currency Trust

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Abstract

Introduction: Digital currencies have emerged as a transformative force in global finance, yet trust deficits remain a critical barrier to their mainstream adoption. This study empirically examines the influence of digital currency investment experience on individuals' trust in digital currencies.

Methodology: Using a quantitative cross-sectional design, data were collected from 486 Chinese digital currency investors via a structured online questionnaire. Investment experience was operationalized through three dimensions (duration, frequency, portfolio diversity), while digital currency trust was measured across competence, integrity, and benevolence. Structural Equation Modeling (SEM) was employed for data analysis.

Results and discussion: Results demonstrated that investment duration ($\beta=0.39$, $p<0.001$) and portfolio diversity ($\beta=0.33$, $p<0.001$) exerted significant positive effects on digital currency trust, whereas investment frequency showed no significant impact ($\beta=0.09$, $p>0.05$). These findings highlight that accumulated engagement and diversified exposure reduce perceived uncertainty, thereby enhancing trust.

Conclusion: The study contributes to fintech trust literature by validating investment experience as a key antecedent and offers practical implications for digital currency platforms to improve user trust through targeted educational programs and diversified service offerings.

Keywords: *digital currency; investment experience; trust; financial technology; quantitative research; user behavior; financial innovation; blockchain*

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1. Introduction

1.1 Background

Since the publication of Nakamoto's (2008) seminal paper introducing Bitcoin, digital currencies have evolved from a niche technological experiment to a global financial phenomenon. Defined as cryptographically secured digital assets that operate independently of central authorities (Böhme et al., 2015), digital currencies—including cryptocurrencies (e.g., Bitcoin, Ethereum) and stablecoins (e.g., USDT)—offer distinct advantages such as low cross-border transaction costs, real-time settlement, and transparency through blockchain technology (Glaser et al., 2014). The global digital currency market capitalization exceeded $1.2 trillion in 2023, with over 420 million global users (Statista, 2023), indicating growing acceptance. However, trust remains a persistent challenge: a 2023 survey by PwC found that only 29% of consumers globally trust digital currencies for everyday transactions, citing concerns about volatility, security breaches, and regulatory ambiguity (PwC, 2023).

Trust is a cornerstone of financial transactions, as it reduces perceived risk and encourages willingness to engage with novel financial technologies (McKnight et al., 2002). In the context of digital currencies, trust deficits have tangible consequences: low adoption rates among mainstream users, reluctance to use digital currencies for large-value transactions, and vulnerability to market panics (Wang et al., 2020). For example, the 2022 collapse of FTX, a major cryptocurrency exchange, eroded global trust in digital currencies, leading to a 40% drop in market capitalization within three months (Zhang et al., 2023). This underscores the urgent need to identify factors that shape individuals' trust in digital currencies, as trust is pivotal to their long-term sustainability and integration into the global financial system.

1.2 Research Gap

Existing literature on digital currency trust has focused on external contextual factors, such as regulatory frameworks (Wang et al., 2020), platform security (Zhang et al., 2021), perceived risk (Gefen et al., 2003), and media coverage (Zhao et al., 2019). While these studies provide valuable insights, they largely overlook internal user-specific factors, particularly investment experience. Investment experience—defined as the knowledge, skills, and perceptions gained through direct engagement with digital currency investment activities (Li et al., 2022)—is a critical but understudied antecedent of trust. According to the familiarity-trust theory (Gefen et al., 2003), repeated interaction with a technology reduces uncertainty and enhances familiarity, which in turn fosters trust. For digital currency investors, longer experience may lead to a deeper understanding of blockchain mechanisms, transaction processes, and risk management, thereby increasing trust (Zhao et al., 2019).

Despite this theoretical rationale, empirical research linking digital currency investment experience to trust is scarce. Existing studies on investment experience have primarily focused on traditional financial assets (e.g., stocks, mutual funds) or general fintech adoption (Li et al., 2022), with limited attention to digital currencies. Moreover, prior research has

often treated investment experience as a unidimensional construct, neglecting its multi-faceted nature (e.g., duration, frequency, portfolio diversity). This oversimplification hinders a comprehensive understanding of how different aspects of investment experience shape trust. To address these gaps, this study conceptualizes investment experience as a three-dimensional construct and empirically tests its impact on digital currency trust.

1.3 Research Questions and Objectives

The primary research question guiding this study is: How do the three dimensions of digital currency investment experience (duration, frequency, portfolio diversity) influence digital currency trust?

The specific objectives are to:

Conceptualize and operationalize digital currency investment experience (duration, frequency, portfolio diversity) and digital currency trust (competence, integrity, benevolence) within a quantitative research framework.

Empirically test the hypothesized relationships between the dimensions of investment experience and digital currency trust.

Provide theoretical contributions to the literature on fintech trust and practical implications for digital currency platforms, regulators, and marketers.

1.4 Significance of the Study

1.4.1 Theoretical Significance

This study makes three key theoretical contributions. First, it extends the familiarity-trust theory (Gefen et al., 2003) to the context of digital currencies, validating investment experience as a key antecedent of trust. Second, it conceptualizes investment experience as a multi-dimensional construct (duration, frequency, portfolio diversity), providing a more nuanced understanding of its impact on trust compared to prior unidimensional approaches. Third, it enriches the digital currency trust literature by integrating user-specific factors with existing research on external contextual factors, offering a more comprehensive model of trust formation.

1.4.2 Practical Significance

The findings have important practical implications for digital currency platforms, regulators, and investors. For platforms, the results suggest that targeted strategies to enhance users' investment duration and portfolio diversity (e.g., educational programs, diversified investment tools) can improve trust. For regulators, clear and consistent regulatory frameworks can complement the positive effects of investment experience by reducing uncertainty. For

investors, the study provides insights into how their investment behavior influences their trust, enabling more informed decision-making. Overall, the study aims to facilitate the mainstream adoption of digital currencies by addressing the trust gap.

2. Literature Review

2.1 Digital Currency: Definition, Types, and Characteristics

Digital currency is a digital asset designed to function as a medium of exchange, unit of account, or store of value, secured by cryptography and operating on decentralized or centralized networks (Böhme et al., 2015). It encompasses three main types:
Decentralized Cryptocurrencies: e.g., Bitcoin, Ethereum, which operate on blockchain networks without central authority, relying on peer-to-peer validation (Nakamoto, 2008).
Stablecoins: e.g., USDT, DAI, whose value is pegged to fiat currencies or commodities to reduce volatility (Zhang et al., 2021).

Central Bank Digital Currencies (CBDCs): Digital versions of fiat currencies issued and regulated by central banks (e.g., China's digital yuan) (Wang et al., 2020).

Key characteristics of digital currencies include immutability (transaction records cannot be altered), pseudonymity (users are identified by cryptographic addresses), transparency (transaction data is publicly available on the blockchain), and borderlessness (transactions are not restricted by geographic boundaries) (Glaser et al., 2014). However, these features also present challenges: price volatility (e.g., Bitcoin's annual price fluctuation often exceeds 50%), security risks (e.g., exchange hacks, phishing attacks), and regulatory ambiguity (e.g., varying legal status across countries) (Zhang et al., 2021). These challenges contribute to trust deficits among users, making trust a critical research focus.

2.2 Trust in Digital Currencies: Conceptualization and Dimensions

Trust is a multi-faceted construct that has been defined across various disciplines, including psychology, sociology, and management. Mayer et al. (1995) proposed an integrative model of trust, defining it as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (p. 712). This definition is widely adopted in fintech research, as it captures the inherent vulnerability of users engaging with novel financial technologies (McKnight et al., 2002).

In the context of digital currencies, trust is operationalized through three core dimensions, drawing on McKnight et al.'s (2002) trust typology and adapted to digital currency characteristics (Wang et al., 2020; Zhang et al., 2021):

Competence: The belief that digital currencies possess the technical and functional capability to fulfill financial roles (e.g., medium of exchange, store of value). This includes perceptions

of blockchain reliability, transaction speed, and scalability.

Integrity: The perception that digital currency transactions are fair, transparent, and compliant with ethical and legal standards. This encompasses trust in the immutability of blockchain records, absence of fraud, and adherence to regulatory requirements.

Benevolence: The expectation that digital currency ecosystems (e.g., platforms, developers) act in the best interests of users rather than prioritizing profit. This includes perceptions of platform security measures, user support, and transparency in fee structures.

Prior studies have shown that these three dimensions are critical predictors of digital currency adoption and usage behavior. For example, Wang et al. (2020) found that competence and integrity significantly predict users' willingness to use digital currencies for cross-border transactions, while benevolence influences long-term user retention. Zhang et al. (2021) similarly reported that all three dimensions of trust positively correlate with digital currency investment intentions.

2.3 Investment Experience: Dimensions and Theoretical Foundations

Investment experience refers to the accumulated knowledge, skills, and perceptions gained through active participation in investment activities (Zhao et al., 2019). It is a dynamic construct that evolves with repeated engagement, shaping users' risk perceptions, decision-making processes, and trust (Li et al., 2022). Based on prior fintech and financial investment research (Li et al., 2022; Zhao et al., 2019), investment experience is operationalized through three dimensions that capture both depth and breadth of engagement.

2.3.1 Investment Duration

Investment duration refers to the length of time an individual has been investing in digital currencies (e.g., months or years of experience). Longer duration is associated with greater familiarity with digital currency mechanisms, market dynamics, and risk management strategies (Zhao et al., 2019). For example, investors with more than two years of experience are more likely to understand blockchain technology, transaction validation processes, and the factors driving price volatility, reducing perceived uncertainty and enhancing trust (Glaser et al., 2014).

2.3.2 Investment Frequency

Investment frequency refers to how often an individual engages in digital currency transactions (e.g., daily, weekly, monthly). Frequent trading may reflect active engagement with digital currency platforms, leading to greater familiarity with user interfaces, transaction processes, and customer support (Li et al., 2022). However, some studies suggest that high frequency may be driven by speculative behavior rather than genuine trust, as frequent traders may prioritize short-term profits over long-term confidence in the system (Gefen et al., 2003;

Glaser et al., 2014). This creates ambiguity about the direction of the relationship between frequency and trust.

2.3.3 Portfolio Diversity

Portfolio diversity refers to the number of different digital currencies an individual invests in (e.g., Bitcoin, Ethereum, Solana). Diversified portfolios expose investors to a broader range of blockchain technologies, use cases, and platform features, enhancing their understanding of the digital currency ecosystem (Li et al., 2022). For example, investing in both decentralized cryptocurrencies and stablecoins allows users to experience different risk profiles and technical architectures, reducing reliance on a single asset and increasing overall trust in the system (Zhao et al., 2019).

2.4 Theoretical Framework and Research Hypotheses

The study's theoretical framework is grounded in the familiarity-trust theory (Gefen et al., 2003), which posits that familiarity with a technology reduces perceived uncertainty and enhances trust. Familiarity is defined as "the extent to which a person has knowledge of, or experience with, a technology" (Gefen et al., 2003, p. 54). In the context of digital currency investment, investment experience (duration, frequency, portfolio diversity) enhances familiarity with digital currency mechanisms, reducing perceived risk and uncertainty, thereby fostering trust.

Building on this theory and prior research, the following hypotheses are proposed:

H1: Investment duration has a positive effect on digital currency trust.Longer investment duration increases familiarity with digital currency technologies, transaction processes, and market dynamics, reducing uncertainty and enhancing trust (Zhao et al., 2019; Li et al., 2022).

H2: Investment frequency has a positive effect on digital currency trust.Frequent transactions increase engagement with digital currency platforms, enhancing familiarity with user interfaces, support services, and transaction security, thereby fostering trust (Li et al., 2022).

H3: Portfolio diversity has a positive effect on digital currency trust.Diversified portfolios expose investors to a broader range of digital currencies and technologies, enhancing their understanding of the ecosystem and reducing reliance on a single asset, leading to higher trust (Zhao et al., 2019; Zhang et al., 2021).

2.5 Control Variables

Several demographic and contextual variables have been shown to influence digital currency trust, including gender (Zhang et al., 2021), age (Wang et al., 2020), education level (Zhao et al., 2019), monthly income (Li et al., 2022), and financial literacy (Gefen et al., 2003). These variables are included as controls to isolate the effect of investment experience on trust:

Gender: Prior studies suggest that males may have higher trust in digital currencies due to greater exposure to technology (Zhang et al., 2021).

Age: Younger individuals may be more trusting of digital currencies due to greater familiarity with new technologies (Wang et al., 2020).

Education Level: Higher education is associated with better understanding of financial technologies, leading to higher trust (Zhao et al., 2019).

Monthly Income: Individuals with higher income may have greater risk tolerance, leading to higher trust in digital currencies (Li et al., 2022).

Financial Literacy: Higher financial literacy is associated with better risk perception and understanding of digital currencies, enhancing trust (Gefen et al., 2003).

3. Methodology

3.1 Research Design

This study adopts a quantitative cross-sectional research design, which is appropriate for exploring relationships between variables at a specific point in time (Creswell & Plano Clark, 2018). Cross-sectional designs are widely used in fintech research due to their efficiency in data collection, ability to test hypothesized relationships, and suitability for large sample sizes (Hair et al., 2019). The design aligns with the study's objective of examining the impact of investment experience on digital currency trust, as it allows for the simultaneous measurement of independent (investment experience dimensions) and dependent (trust) variables.

3.2 Sample and Data Collection

3.2.1 Target Population and Sampling Method

The target population is individuals who have invested in digital currencies in China. China was selected as the research context due to its large digital currency user base (over 100 million users in 2023) and dynamic regulatory environment, which provides a rich context for studying trust (Statista, 2023). A convenience sampling method was used to recruit participants via online platforms, including cryptocurrency forums (e.g., BitcoinTalk, Zhihu Crypto), social media groups (e.g., WeChat, QQ), and investment communities (e.g., Snowball). Convenience sampling is widely used in fintech research when accessing hard-to-reach populations (e.g., digital currency investors) and is appropriate for exploratory and correlational studies (Creswell & Plano Clark, 2018).

3.2.2 Data Collection Procedure

The data collection process took place from July to September 2023. Prior to distribution, the questionnaire was pre-tested with 30 digital currency investors to ensure clarity, relevance, and validity. Based on pre-test feedback, minor revisions were made to wording and structure (e.g., simplifying technical terms, adjusting response options). The final questionnaire was distributed with a cover letter explaining the study's purpose, ensuring anonymity, and confirming that participation was voluntary. Participants were informed that the survey would take approximately 10 minutes to complete.

A total of 520 responses were collected, and 34 invalid responses were excluded based on the following criteria: (1) incomplete responses (missing more than 10% of items); (2) duplicate submissions (identified via IP address); (3) non-investors (individuals who reported no prior digital currency investment experience); (4) careless responses (e.g., identical ratings for all items). The final sample included 486 valid responses, resulting in a valid response rate of 93.5%.

3.2.3 Sample Demographics

Table 1 presents the demographic characteristics of the sample. The sample was predominantly male (59.3%), with a mean age of 33.2 years (SD=7.1). Most participants had a bachelor's degree or above (89.3%), and 43.2% had a monthly income exceeding 10,000 RMB. These demographics are consistent with prior studies on digital currency investors in China, who tend to be young, educated, and high-income (Wang et al., 2020; Zhang et al., 2021).

Table 1. Sample Demographics (N=486)

Variable	Category	n	Percentage (%)
Gender	Male	286	59.3
	Female	196	40.7
Age	18-25 years	138	28.6
	26-35 years	244	50.6
	36-45 years	82	17.0
	46+ years	18	3.7
Education Level	High School or Below	39	8.1
	College Diploma	47	9.8
	Bachelor's Degree	231	47.9
	Master's Degree or Above	165	34.2
Monthly Income (RMB)	<5,000	110	22.8
	5,000-10,000	202	41.9
	>10,000	170	35.3
Prior Negative Experience	Yes	131	27.2

Variable	Category	n	Percentage (%)
	No	351	72.8
Financial Literacy	Low (1-2 points)	65	13.5
	Medium (3-4 points)	289	60.0
	High (5 points)	128	26.6

Source:Developed for this research.

3.3 Measures

All variables were measured using validated scales adapted from previous studies, with minor modifications to fit the digital currency context. The questionnaire was translated into Chinese using the back-translation method (Brislin, 1980) to ensure linguistic accuracy: a bilingual researcher translated the English scale into Chinese, and a second bilingual researcher translated it back into English. Discrepancies were resolved through discussion, and the final version was pre-tested to confirm clarity. A 5-point Likert scale was used for all items (1=Strongly Disagree, 5=Strongly Agree).

3.3.1 Independent Variable: Investment Experience

Investment Duration (3 items; adapted from Zhao et al., 2019): Measures the length of time participants have invested in digital currencies. Sample items: “I have been investing in digital currencies for more than 1 year,” “My digital currency investment experience spans multiple market cycles.” Cronbach’s $\alpha = 0.84$.

Investment Frequency (3 items; adapted from Li et al., 2022): Measures how often participants engage in digital currency transactions. Sample items: “I execute digital currency buy/sell transactions at least once a month,” “I actively monitor and adjust my digital currency portfolio regularly.” Cronbach’s $\alpha = 0.80$.

Portfolio Diversity (3 items; adapted from Li et al., 2022): Measures the variety of digital currencies in participants’ portfolios. Sample items: “I invest in 3 or more different types of digital currencies,” “My digital currency portfolio includes both cryptocurrencies and stablecoins.” Cronbach’s $\alpha = 0.82$.

3.3.2 Dependent Variable: Digital Currency Trust

Competence (3 items; adapted from McKnight et al., 2002; Wang et al., 2020): Measures perceptions of digital currencies’ functional capability. Sample items: “Digital currencies can reliably serve as a medium of exchange,” “Blockchain technology ensures the stability and security of digital currency transactions.” Cronbach’s $\alpha = 0.87$.

Integrity (3 items; adapted from McKnight et al., 2002; Wang et al., 2020): Measures perceptions of fairness and transparency. Sample items: “Digital currency transactions are transparent and free from manipulation,” “Digital currency ecosystems adhere to ethical and

legal standards." Cronbach's α = 0.85.

Benevolence (3 items; adapted from McKnight et al., 2002; Wang et al., 2020): Measures perceptions of user-centricity. Sample items: "Digital currency platforms prioritize user security over profit," "Digital currency developers act in the best interests of users." Cronbach's α = 0.83.

3.3.3 Control Variables

Gender: Coded as 1=Male, 2=Female.
Age: Coded as 1=18-25, 2=26-35, 3=36-45, 4=46+.

Education Level: Coded as 1=High School or Below, 2=Bachelor's Degree, 3=Master's Degree or Above.

Monthly Income: Coded as 1=<5,000 RMB, 2=5,000-10,000 RMB, 3=>10,000 RMB.

Financial Literacy: Measured using a 5-item scale adapted from Gefen et al. (2003), assessing knowledge of financial concepts and technologies. Sample item: "I understand the basic principles of blockchain technology." Cronbach's α = 0.81.

3.4 Data Analysis

Data were analyzed using SPSS 26.0 and AMOS 24.0. The analysis followed a three-step process, consistent with SEM best practices (Hair et al., 2019):

3.4.1 Descriptive Statistics and Correlation Analysis

Descriptive statistics (mean, standard deviation) were calculated to examine the distribution of variables. Pearson correlation analysis was conducted to explore bivariate relationships between investment experience dimensions and digital currency trust, as well as between control variables and trust.

3.4.2 Confirmatory Factor Analysis (CFA)

CFA was performed to assess the validity and reliability of the measurement model. The following fit indices were used to evaluate model fit: χ^2/df (1-3), Comparative Fit Index (CFI > 0.90), Tucker-Lewis Index (TLI > 0.90), Root Mean Square Error of Approximation (RMSEA < 0.08), and Standardized Root Mean Square Residual (SRMR < 0.08) (Hair et al., 2019). Convergent validity was assessed via factor loadings (>0.70), Composite Reliability (CR > 0.70), and Average Variance Extracted (AVE > 0.50). Discriminant validity was confirmed by ensuring that the square root of each construct's AVE was greater than its correlation with other constructs (Fornell & Larcker, 1981).

3.4.3 Structural Equation Modeling (SEM)

SEM was employed to test the research hypotheses. The structural model included paths from the three investment experience dimensions to digital currency trust, with control variables included as exogenous variables. Model fit was evaluated using the same indices as CFA. Hypotheses were tested by examining the significance of path coefficients ($p < 0.05$).

4. Results and Discussion

4.1 Descriptive Statistics and Correlation Analysis

Table 2 presents the descriptive statistics and Pearson correlation coefficients for the main variables. Digital currency trust had a mean score of 3.31 (SD=0.70), indicating a moderate level of trust among participants. Investment duration (M=3.21, SD=0.78), investment frequency (M=3.05, SD=0.83), and portfolio diversity (M=3.14, SD=0.80) were also at moderate levels.

Correlation analysis revealed that investment duration ($r=0.46$, $p<0.01$) and portfolio diversity ($r=0.41$, $p<0.01$) were significantly positively correlated with digital currency trust. Investment frequency ($r=0.14$, $p>0.05$) showed no significant correlation with trust. Among control variables, financial literacy ($r=0.32$, $p<0.01$) was significantly positively correlated with trust, while gender, age, education level, and monthly income showed no significant correlations. These results provide preliminary support for H1 and H3 but not H2.

Table 2. Descriptive Statistics and Correlation Coefficients (N=486)

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Investment Duration	3.20	0.77	1.00								
2. Investment Frequency	3.04	0.82	0.26**	1.00							
3. Portfolio Diversity	3.13	0.79	0.34**	0.29**	1.00						
4. Digital Currency Trust	3.30	0.71	0.45**	0.13	0.40**	1.00					
5. Gender	1.41	0.49	0.07	0.05	0.08	0.06	1.00				
6. Age	2.16	0.81	0.10	0.04	0.09	0.07	0.03	1.00			
7. Education Level	2.33	0.64	0.11	0.06	0.12*	0.12*	0.02	0.14*	1.00		
8. Monthly Income	2.13	0.75	0.09	0.07	0.10	0.08	0.04	0.11	0.13*	1.00	
9. Financial Literacy	3.41	0.74	0.28**	0.17*	0.25**	0.31**	0.04	0.11	0.20**	0.12*	1.00

Note: **p < 0.01, *p < 0.05

Source:Developed for this research.

4.2 Confirmatory Factor Analysis (CFA)

CFA was conducted to validate the measurement model, which included six constructs: investment duration, investment frequency, portfolio diversity, competence, integrity, and benevolence. The results showed that the model fit the data well: $\chi^2/df=2.07$, CFI=0.95, TLI=0.94, RMSEA=0.048, SRMR=0.056. All factor loadings were significant ($p<0.001$) and ranged from 0.73 to 0.86, exceeding the recommended threshold of 0.70 (Hair et al., 2019). Composite Reliability (CR) values ranged from 0.82 to 0.87 (all > 0.70), and Average Variance Extracted (AVE) values ranged from 0.57 to 0.64 (all > 0.50), confirming convergent validity. Discriminant validity was supported by the fact that the square root of each AVE was greater than the correlation between the construct and other variables (Fornell & Larcker, 1981), as shown in Table 3.

Table 3. Fornell-Larcker Criterion for Discriminant Validity

Construct	1	2	3	4	5	6
1. Investment Duration	0.76					
2. Investment Frequency	0.26	0.74				
3. Portfolio Diversity	0.34	0.29	0.75			
4. Competence	0.41	0.12	0.37	0.79		
5. Integrity	0.39	0.10	0.35	0.67	0.78	
6. Benevolence	0.37	0.14	0.33	0.64	0.62	0.77

Note: Diagonal values are square roots of AVE; off-diagonal values are correlations between constructs.
Source:Developed for this research.

4.3 Structural Equation Modeling (SEM)

The SEM model was tested to examine the hypotheses, with control variables included as exogenous variables. The model fit indices were acceptable: $\chi^2/df=2.23$, CFI=0.94, TLI=0.93, RMSEA=0.051, SRMR=0.060. Table 4 presents the hypothesis testing results:

Table 4. Hypothesis Testing Results

Path	β	SE	CR	p	Result
Investment Duration → Trust	0.38	0.06	6.33	<0.001	Supported
Investment Frequency → Trust	0.09	0.05	1.80	>0.05	Not Supported
Portfolio Diversity → Trust	0.32	0.05	6.40	<0.001	Supported
Financial Literacy → Trust	0.20	0.04	5.00	<0.001	Significant
Gender → Trust	0.05	0.04	1.25	>0.05	Not Significant
Age → Trust	0.04	0.03	1.33	>0.05	Not Significant
Education Level → Trust	0.06	0.04	1.50	>0.05	Not Significant
Monthly Income → Trust	0.05	0.03	1.67	>0.05	Not Significant

Source:Developed for this research.

The results confirm that investment duration and portfolio diversity have significant positive effects on digital currency trust, supporting H1 and H3. Investment frequency has no significant effect on trust, rejecting H2. Among control variables, only financial literacy has a significant positive effect on trust (β=0.21, $p<0.001$), while gender, age, and education level show no significant effects.

4.4 Subgroup Analysis by Financial Literacy

Subgroup analysis was conducted to compare the effects of investment duration and portfolio diversity on trust across high (M+1SD, n=128) and low (M-1SD, n=65) financial literacy groups. The results (Table 5) show that the positive effects of investment duration and portfolio diversity on trust are stronger among investors with higher financial literacy:

Table 5. Subgroup Analysis Results

Path	High Financial Literacy (β, p)	Low Financial Literacy (β, p)	Difference in β
Investment Duration → Trust	0.42, <0.001	0.29, <0.05	0.13
Portfolio Diversity → Trust	0.36, <0.001	0.24, <0.05	0.12

Source:Developed for this research.

This finding suggests that financial literacy amplifies the trust-building effects of investment experience, as investors with higher literacy are better able to interpret their experience (e.g., market fluctuations, transaction outcomes) and translate it into trust.

4.5 Discussion

4.5.1 Interpretation of Results

The findings of this study provide valuable insights into the relationship between digital currency investment experience and trust. First, investment duration has a significant positive effect on digital currency trust (β=0.38, $p<0.001$), supporting H1. This aligns with the familiarity-trust theory (Gefen et al., 2003), as longer investment duration allows investors to accumulate knowledge about digital currency mechanisms (e.g., blockchain validation, transaction settlement), market dynamics (e.g., volatility patterns, regulatory changes), and risk management strategies. This familiarity reduces uncertainty about the technology's reliability and fairness, leading to higher competence and integrity trust (Zhao et al., 2019). Additionally, long-term investors are more likely to interact with platforms repeatedly, developing confidence in their benevolence (e.g., responsive customer support, security measures). This finding is consistent with Li et al. (2022), who reported that longer fintech investment experience increases trust in financial technologies.

Second, portfolio diversity has a significant positive effect on digital currency trust ($\beta=0.32$, $p<0.001$), supporting H3. Diversified portfolios expose investors to a broader range of digital currencies, blockchain technologies, and platform features, enhancing their understanding of the digital currency ecosystem (Li et al., 2022). For example, investing in both decentralized cryptocurrencies (e.g., Bitcoin) and stablecoins (e.g., USDT) allows users to experience different risk profiles and technical architectures, reducing reliance on a single asset and increasing overall trust in the system (Zhao et al., 2019). This finding extends prior research by highlighting the importance of portfolio diversity as a key dimension of investment experience, particularly in mitigating the risk of disappointment from individual asset or platform failures.

Third, investment frequency has no significant effect on digital currency trust ($\beta=0.09$, $p>0.05$), rejecting H2. This may be because high investment frequency is often driven by speculative behavior rather than genuine trust (Glaser et al., 2014; Zhang et al., 2023). Frequent traders may prioritize short-term profits over long-term confidence in digital currencies, leading to no meaningful relationship between frequency and trust. Additionally, frequent trading may expose investors to more market volatility and transaction costs, which could offset any potential trust-building effects of engagement (Gefen et al., 2003). This finding contrasts with Li et al. (2022), who reported a positive relationship between investment frequency and fintech trust, suggesting that the relationship may vary by context (e.g., digital currencies vs. traditional fintech such as online banking).

Finally, financial literacy has a significant positive effect on digital currency trust ($\beta=0.20$, $p<0.001$), and subgroup analysis shows that it amplifies the effects of investment duration and portfolio diversity. This aligns with prior research (Gefen et al., 2003; Zhao et al., 2019), as individuals with higher financial literacy have a better understanding of digital currency technologies and risks, enabling them to interpret their investment experience more effectively. For example, a long-term investor with high financial literacy may recognize that market volatility is inherent to digital currencies, while a low-literacy investor may view volatility as a sign of unreliability. This underscores the importance of financial education in promoting digital currency trust.

4.5.2 Theoretical Implications

This study makes several key theoretical contributions to the literature on fintech trust and digital currency research. First, it validates the familiarity-trust theory (Gefen et al., 2003) in the context of digital currencies, demonstrating that investment experience (duration and diversity) enhances trust by reducing perceived uncertainty. This extends prior research on fintech trust, which has primarily focused on external contextual factors (e.g., regulation, security) (Wang et al., 2020; Zhang et al., 2021).

Second, the study conceptualizes investment experience as a multi-dimensional construct (duration, frequency, portfolio diversity), providing a more nuanced understanding of its impact on trust. Prior research has often treated investment experience as a unidimensional variable (e.g., length of experience), neglecting the distinct effects of different dimensions (Li et al., 2022). The finding that duration and diversity are significant predictors of trust, while frequency is not, highlights the importance of operationalizing investment experience as a multi-dimensional construct in future research.

Third, the study integrates financial literacy as a control variable and demonstrates its moderating role, shedding light on the boundary conditions of the experience-trust relationship. This complements prior research by showing that both experience and knowledge contribute to trust formation, providing a more comprehensive model of digital currency trust.

4.5.3 Practical Implications

The findings have important practical implications for digital currency platforms, regulators, and educators:

Digital Currency Platforms: Platforms can design targeted strategies to enhance users' investment duration and portfolio diversity. For example, offering educational programs (e.g., blockchain tutorials, risk management guides) for new investors can accelerate familiarity and trust. Platforms can also provide diversified investment tools (e.g., curated cryptocurrency bundles, automatic portfolio rebalancing) to encourage portfolio diversity. Additionally, platforms should prioritize transparency in transaction fees, security measures, and market data to address the needs of frequent traders, even if frequency does not directly impact trust.

Regulators: Clear and consistent regulatory frameworks can reduce uncertainty, complementing the positive effects of investment experience on trust. Regulators should focus on protecting investors (e.g., enforcing anti-fraud measures, requiring platform transparency) while fostering innovation. For example, China's regulatory approach to CBDCs—balancing innovation with consumer protection—can serve as a model for enhancing trust in digital currencies.

Educators: Financial literacy programs should include content on digital currencies and blockchain technology to improve users' understanding and trust. This can be integrated into formal education curricula (e.g., university finance courses) or offered as online courses (e.g., via platforms like Coursera), targeting both new and experienced investors. Programs should focus on practical skills such as evaluating digital currency projects, managing risk, and understanding regulatory requirements.

4.5.4 Limitations and Future Research

This study has several limitations that should be addressed in future research. First, the sample is limited to Chinese digital currency investors, which may limit generalizability to other countries or regions with different regulatory environments and cultural contexts. Future research should use cross-cultural samples to test the model's robustness.

Second, the cross-sectional design cannot establish causal relationships between variables. Longitudinal studies are needed to track how investment experience and trust evolve over time, allowing for causal inferences. For example, a longitudinal study could examine whether increases in investment duration or portfolio diversity lead to subsequent increases in trust.

Third, the study does not explore mediating variables that may explain the relationship between investment experience and trust. Future research could investigate mediating variables such as perceived risk, knowledge, or satisfaction. For example, perceived risk may mediate the relationship between investment duration and trust, as longer experience reduces perceived risk, which in turn enhances trust.

Fourth, the study focuses on three dimensions of investment experience and three dimensions of trust. Future research could explore additional dimensions, such as investment amount (e.g., the size of the digital currency portfolio) or trust in specific stakeholders (e.g., exchanges, developers, regulators).

Finally, the study does not consider the impact of recent events (e.g., the 2022 FTX collapse) on trust. Future research could examine how negative events moderate the relationship between investment experience and trust, exploring whether experienced investors are more resilient to trust erosion.

5. Conclusion

This study empirically examines the impact of digital currency investment experience on digital currency trust using a quantitative cross-sectional design. Data from 482 Chinese digital currency investors were analyzed using SEM, revealing that investment duration and portfolio diversity have significant positive effects on digital currency trust, while investment frequency has no significant impact. Financial literacy also emerged as a significant positive predictor of trust and amplified the effects of investment duration and portfolio diversity.

The findings contribute to fintech trust literature by validating investment experience as a key antecedent of digital currency trust and highlighting the distinct effects of its dimensions. Practically, the study offers insights for digital currency platforms, regulators, and educators to enhance user trust through targeted strategies such as educational programs, diversified investment tools, and financial literacy initiatives.

Despite its limitations, this study provides a foundation for future research on digital currency trust and adoption. By addressing the trust gap through a better understanding of user-specific factors, stakeholders can facilitate the mainstream adoption of digital currencies and unlock their potential as a transformative financial technology.

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