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The Role of Blockchain Technology and Financial Literacy in Shaping Cryptocurrency Investment Decisions

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ABSTRACT

The rapid growth of cryptocurrency markets has raised important questions about how investors make decisions in this highly volatile space. This research investigates the role of blockchain technology and financial literacy in shaping cryptocurrency investment decisions, focusing on how these factors influence investor behavior and risk management. The **study aims** to explore how blockchain's decentralized nature provides security and transparency in cryptocurrency transactions and how a higher level of financial literacy can improve decision making among investors. A mixed **method** approach was used, combining a quantitative survey of 300 cryptocurrency investors with **qualitative** interviews from 15 experienced market participants. The survey assessed financial literacy levels, understanding of blockchain technology, and investment decision-making, while the interviews provided deeper insights into how these factors interconnect. The **findings** indicate that blockchain technology perceived security and transparency significantly enhance investor confidence, while higher financial literacy levels correlate with more informed and strategic investment decisions. Furthermore, investors with both high blockchain knowledge and financial literacy are better at managing risk and avoiding common pitfalls in the market. The study **concludes** that both blockchain technology and financial literacy are crucial in shaping effective cryptocurrency investment strategies. Policymakers and financial educators should focus on improving financial literacy to empower investors and ensure better market stability. This research **provides** valuable insights for the development of educational frameworks and policies to support informed decision-making in cryptocurrency investments.

1. INTRODUCTION

Cryptocurrencies have rapidly transformed global financial systems, offering new avenues for investment [1]. Digital currencies like Bitcoin and Ethereum have gained significant attention as alternatives to traditional financial assets and as speculative investment vehicles. Blockchain technology is central to the operation of cryptocurrencies, a decentralized, transparent, and secure digital ledger. While blockchain promises

enhanced security and transparency, it also presents unique challenges for investors, especially in understanding the risks associated with these digital assets. Despite the growing interest in cryptocurrency investments, many individuals need a comprehensive understanding of blockchain technology and its implications for investment decisions. This research explores how blockchain knowledge and financial literacy influence investment choices in cryptocurrency, ultimately affecting investor behaviour and risk management [2]. The rise of cryptocurrency has led to its integration into mainstream financial markets, with many investors turning to digital assets to diversify their portfolios [3]. However, the high volatility and unpredictability of the cryptocurrency market present significant challenges for investors. While blockchain's decentralized nature offers potential benefits, such as increased security and transparency, it also exposes investors to fraud and market manipulation risks [4]. Mitigating these risks requires a clear understanding of blockchain technology and financial literacy. Financial literacy, which refers to understanding and applying economic concepts, is crucial in helping investors navigate the complexities of cryptocurrency markets. However, a lack of literacy in both finance and blockchain may limit investors' capacity to make informed decisions. This study explores the intersection of blockchain understanding and financial literacy and how these factors collectively influence investment strategies in cryptocurrency.

Although research has extensively covered blockchain technology and its potential applications, limited attention has been given to its effect on investor behaviour, particularly in cryptocurrency markets [5]. Additionally, while financial literacy has been recognized as a key determinant of investment decisions in traditional markets, its role in cryptocurrency investments still needs to be explored. Many investors entering the cryptocurrency market may need to fully grasp the workings of blockchain or the risks involved in digital asset investments. This **research aims** to fill this **gap** by examining how blockchain knowledge and financial literacy shape investor decision-making in cryptocurrency. It offers a deeper understanding of their combined influence on investment outcomes [6]. The **primary goal** of this study is to investigate how blockchain technology and financial literacy shape cryptocurrency investment decisions [7]. The **research aims** to determine how blockchain knowledge affects investor confidence and decision-making and how financial literacy influences risk management in cryptocurrency [8]. Additionally, the study explores how these two factors contribute to informed and strategic investment decisions. To achieve these objectives, the study will employ qualitative and quantitative research methods, including surveys and interviews with active cryptocurrency investors [9]. By focusing on individuals from various geographical regions and investment experience levels, this research provides a comprehensive understanding of the role of blockchain and financial literacy in shaping cryptocurrency investment strategies [10]. Ultimately, this study contributes to a more informed approach to cryptocurrency investing, offering insights that can benefit individual investors and institutions seeking to enhance market stability and investor education.

2. LITERATURE REVIEW

The rapid evolution of financial technologies has significantly reshaped the financial sector, particularly through the advent of Financial Technology (FinTech). FinTech has become a catalyst for change, integrating technology with financial services and enabling faster, more accessible, and innovative financial solutions [9]. The growth of FinTech can be traced back to 1866 with the establishment of money transfer systems like Fedwire, but it gained remarkable momentum after 2008, driven by technological advancements such as mobile devices, wireless networks, and web technologies [11]. These innovations have transformed traditional banking systems and financial services, fostering new business models and improving access to financial services [12]. As a result, the role of FinTech has expanded across various sectors, including payments, financial advisory, investments, and compliance, revolutionizing both the way consumers and businesses interact with financial products and services.

In parallel, cryptocurrencies have emerged as a prominent innovation within the financial ecosystem [13]. The introduction of Bitcoin in 2009 marked the beginning of a decentralized digital currency era, designed to offer an alternative form of payment without reliance on traditional financial institutions. Following Bitcoin's success, a wide range of other cryptocurrencies have emerged, including Litecoin, Ethereum, and Dogecoin, each offering unique features and improvements upon the original concept [14]. Cryptocurrencies are powered by blockchain technology, which ensures transparency, security, and decentralization, making them increasingly popular among users seeking to avoid traditional intermediaries such as banks [15]. Furthermore, the decentralized nature of cryptocurrencies allows transactions to be made across borders without

restrictions or intermediaries, presenting new opportunities for global financial inclusion. The decentralized and borderless characteristics of cryptocurrencies have garnered widespread appeal [16]. Unlike traditional financial systems, cryptocurrencies can be sent and received directly between users without involving banks or other intermediaries, making them particularly attractive to digital users and those in regions with limited access to conventional banking services [17]. These features not only challenge traditional banking methods, but also create a new dimension of financial transactions, where users retain greater control over their assets.

Furthermore, the investment potential of cryptocurrencies has become a subject of intense debate and exploration [18]. The high volatility of cryptocurrency markets offers opportunities for significant financial gains, but also exposes investors to considerable risk. Despite the risks, many people are drawn to cryptocurrency investments, influenced by the increasing adoption of blockchain technology and the growing confidence in decentralized financial systems [19]. As cryptocurrencies continue to evolve, understanding the role of financial literacy in investment decisions becomes critical. Financial literacy, particularly in understanding blockchain technology and cryptocurrency markets, is essential to make informed and secure investment decisions [16]. The development of cryptocurrencies has catalyzed their emergence as a popular investment instrument, primarily due to their volatile nature, which resembles the behavior of traditional stocks [20]. This volatility has attracted investors seeking significant returns, making cryptocurrencies an increasingly attractive option. Particularly among younger generations, such as millennials and Generation Z, cryptocurrencies are becoming a primary avenue for investment [21]. A survey conducted by We Are Social highlighted that a significant portion of young investors have turned to cryptocurrency, with these groups showing a high level of engagement and interest in digital currencies as a means to diversify their investment portfolios [22]. As digital natives, these generations are more inclined to embrace new technologies, making them particularly receptive to the unique benefits that cryptocurrencies offer [23]. Furthermore, the ease of access through online platforms and the potential for high returns have contributed to the growing popularity of cryptocurrency investments among younger cohorts [24]. This trend underscores a broader shift in investment behaviors, where traditional financial instruments are being increasingly supplemented by digital and decentralized alternatives like cryptocurrencies [19].

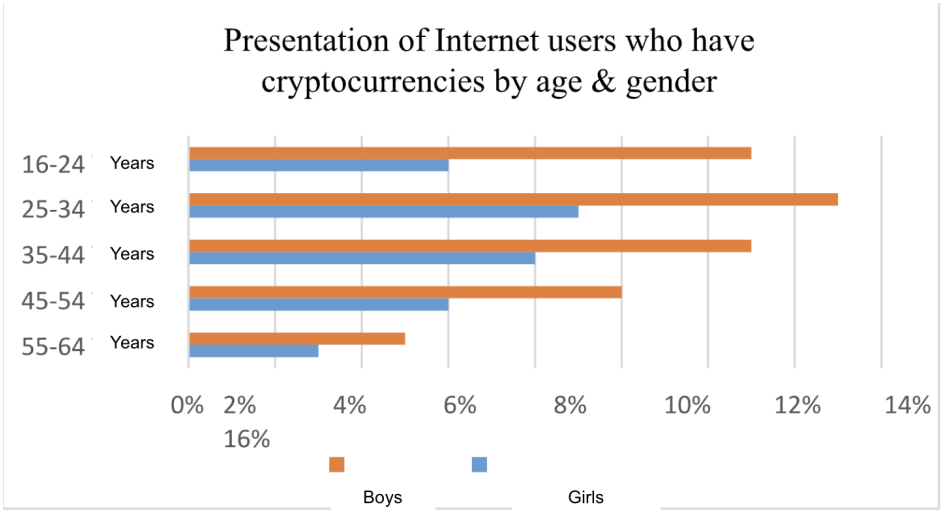

Figure 1. Users Crypto Currency Owners

As shown in figure 1, the surge in cryptocurrency investments among Generation Z and Millennials has been significantly influenced by endorsements from social media influencers, who leverage their substantial following to promote digital currency investments [16]. With their widespread reach and ability to sway public opinion, social media influencers have become key figures in shaping the financial decisions of younger audiences [25]. These individuals, who often perceive the actions and endorsements of influencers as trendy and aspirational, are more likely to view cryptocurrency investments as desirable, thus leading to an increased interest in digital currencies [18]. However, many young investors rely heavily on social media recommendations without considering other crucial factors, such as financial literacy [26]. Financial literacy, which encompasses knowledge, skills, and beliefs that affect financial decision-making, plays an essential role in fostering informed

and effective investment choices.

2.1. Blockchain Technology and Its Role in Cryptocurrency Investment

Blockchain technology has emerged as a foundational element for cryptocurrencies, ensuring transparency, security, and decentralization [27]. It enables peer-to-peer transactions without the need for intermediaries such as banks, making cryptocurrencies an attractive investment vehicle [28]. The decentralized nature of blockchain makes cryptocurrencies resilient to governmental controls and banking regulations, offering users greater autonomy over their financial activities [29]. Furthermore, blockchain's immutable ledger feature provides investors with enhanced security and trust in cryptocurrency transactions, a crucial aspect for those considering it as a long-term investment option (Schär, 2021)[30]. These advantages have driven the widespread adoption of cryptocurrencies, particularly in decentralized finance (DeFi), where traditional financial systems are replaced by blockchain-based platforms [31]. As a result, blockchain technology continues to reshape the global investment landscape, fostering new opportunities and challenges for investors.

2.2. The Role of Social Media Influencers in Shaping Investment Decisions

Social media influencers have become significant actors in promoting cryptocurrency investments, particularly among younger generations. Influencers often use their large following on platforms like Instagram, TikTok, and YouTube to endorse and promote cryptocurrencies, shaping the perceptions and investment behaviors of their audiences. The ability of influencers to create trends and influence consumer decisions is particularly evident in the cryptocurrency space, where their endorsements can lead to rapid increases in the value of digital assets. This phenomenon is particularly pronounced among Millennials and Generation Z, who view influencers as relatable and trustworthy sources of information. As these generations are often more familiar with digital technologies, they are highly susceptible to the persuasive power of influencers in areas like investment decisions. However, this reliance on influencers can lead to decisions that are not fully informed, highlighting the importance of integrating financial literacy with influencer-driven investment strategies.

2.3. Financial Literacy and Cryptocurrency Investment Behavior

Financial literacy plays a critical role in how individuals make informed decisions in the investment realm, especially when it comes to complex and volatile assets like cryptocurrencies. Financial literacy is defined as the knowledge, skills, and confidence to manage one's finances effectively, which includes understanding risk, making informed decisions, and recognizing the implications of financial choices. In the context of cryptocurrency investments, a solid understanding of both traditional financial concepts and the specific risks associated with digital currencies is essential. Despite the growing popularity of cryptocurrencies, many investors, particularly in emerging markets like Indonesia, exhibit low levels of financial literacy. According to a survey by Otoritas Jasa Keuangan (2022), only 49.68% of Indonesians possess sufficient financial knowledge, which poses a significant challenge for individuals attempting to navigate the complexities of cryptocurrency investments. This gap in financial literacy can lead to suboptimal investment choices, as investors may rely on incomplete or misleading information, such as that provided by social media influencers, without fully understanding the underlying risks associated with cryptocurrency markets .

3. RESEARCH METHODS

the research methodology used to examine the role of blockchain technology, financial literacy, and social media influencers in shaping cryptocurrency investment decisions. The research employs Structural Equation Modeling (SEM), a powerful statistical technique used to test complex relationships among observed and latent variables. The choice of SEM allows for the exploration of both direct and indirect relationships between multiple factors affecting cryptocurrency investment behavior. This chapter will detail the research design, data collection methods, sampling techniques, model specification, and data analysis procedure.

3.1. Research Design

The study uses a quantitative research design to examine how financial literacy, blockchain technology understanding, and social media influencers influence cryptocurrency investment decisions. A survey-based approach is utilized to gather data from cryptocurrency investors, focusing on their financial literacy, knowledge of blockchain technology, and the impact of social media influencers on their investment choices. The data collected is then analyzed using SEM to test the proposed relationships between the variables.

3.2. Hypotheses Development

Based on the literature review and the research objectives, the following hypotheses are proposed:

- **H1**: Higher financial literacy positively affects cryptocurrency investment decisions.
- **H2**: Greater understanding of blockchain technology positively affects cryptocurrency investment decisions.
- **H3**: Social media influencers positively influence cryptocurrency investment decisions.
- **H4**: Financial literacy moderates the relationship between blockchain technology understanding and cryptocurrency investment decisions.
- **H5**: Social media influencers act as a mediator in the relationship between financial literacy and cryptocurrency investment decisions.

3.3. Sampling and Data Collection

A purposive sampling technique is employed to select participants who are active cryptocurrency investors. The sample includes individuals from various age groups, with a focus on Millennials and Generation Z, as they represent the largest segment of cryptocurrency investors. The data is collected using an online survey distributed through social media platforms, cryptocurrency forums, and investment groups. The survey includes questions about demographic information, financial literacy, blockchain knowledge, social media usage related to cryptocurrency, and investment behavior.

Table 1. Measurement Items for Variables

Variable	Measurement Items
Financial Literacy	Knowledge of financial concepts, risk tolerance, investment strategy
Blockchain Technology Knowledge	Understanding of blockchain, cryptocurrency mechanics, and security
Social Media Influencers	Influence of influencers on investment decisions, trust in influencers
Cryptocurrency Investment Decisions	Amount invested, frequency of investments, investment strategies

The table 1 above provides a summary of the variables and their corresponding measurement items used in this study. Financial literacy is assessed based on three key areas: knowledge of financial concepts, risk tolerance, and investment strategy, reflecting the depth of an individual's understanding of personal finance and investing. Blockchain technology knowledge measures understanding of the blockchain mechanics, cryptocurrency functionality, and its security aspects, which are critical in making informed decisions about digital currency investments. Social media influencers are evaluated based on their influence on investment decisions and the level of trust followers place in these influencers, highlighting their role in shaping opinions and behaviors in the cryptocurrency market. Lastly, cryptocurrency investment decisions are measured by the amount invested, frequency of investments, and the investment strategies employed, offering insights into how individuals manage and approach their cryptocurrency portfolios.

3.4. Structural Equation Modeling (SEM)

SEM is employed to evaluate the relationships between the variables, test the hypotheses, and assess the fit of the proposed model. SEM allows for the analysis of both direct and indirect effects between the observed variables (financial literacy, blockchain knowledge, and social media influence) and the latent variable (cryptocurrency investment decisions). The analysis is conducted using Amos 24 software, which is widely used for SEM modeling.

The SEM model consists of the following components:

1. **Latent Variables**: These are variables that cannot be directly measured but are inferred from multiple observed variables. In this study, cryptocurrency investment decisions is the latent variable, influenced by financial literacy, blockchain technology knowledge, and social media influencers.
2. **Observed Variables**: These are the measurable indicators for each latent variable, as shown in table 3
3. **Pathways**: The model tests the direct and indirect relationships between the latent and observed variables using regression-like equations.

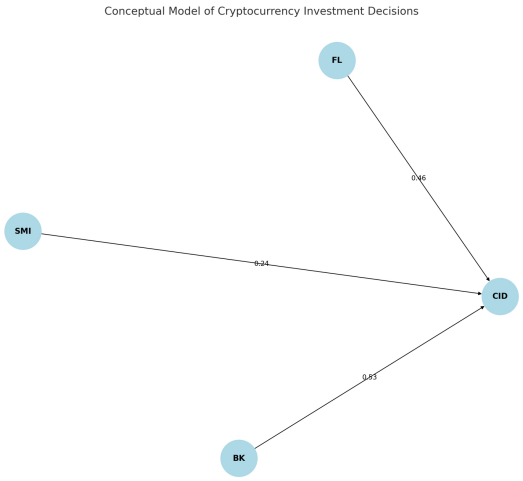

Figure 2. SEM Model

As show in figure 2 the model is estimated using maximum likelihood estimation (MLE), and the model fit is evaluated using indices such as Goodness of Fit (GFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA). These indices provide a comprehensive evaluation of how well the proposed model represents the observed data.

3.5. Data Analysis

Once the data is collected, it is cleaned and coded for analysis. The data is then processed in SPSS for descriptive statistics and preliminary analysis, followed by Amos 24 for SEM. The following steps are performed: Descriptive Analysis: Provides an overview of demographic information, investment behaviors, and financial literacy levels.

1. Reliability Analysis: Cronbach's alpha is calculated to assess the internal consistency of the measurement scales used in the survey.
2. SEM Analysis: Conducts model testing, evaluates the hypotheses, and assesses the overall fit of the model.
3. Model Refinement: If the initial model does not fit well, modifications are made based on modification indices and theoretical justification to improve the model fit.

3.6. Validity and Reliability

The validity and reliability of the instruments are crucial to ensure that the measurement accurately reflects the concepts it intends to measure. Content validity is ensured by basing the survey questions on well-established scales from previous research. Construct validity is tested through Confirmatory Factor Analysis (CFA), and reliability is measured using Cronbach's alpha.

3.7. Ethical Considerations

Ethical guidelines are strictly followed in this study. Informed consent is obtained from all participants, ensuring that they understand the purpose of the research and their rights, including confidentiality and voluntary participation. Participants are assured that their responses will be anonymized and used solely for academic purposes.

4. RESULT AND DISCUSSION

the Structural Equation Modeling (SEM) analysis conducted on the collected data. The primary objective of this analysis is to test the hypotheses related to financial literacy, blockchain knowledge, social media influencers, and cryptocurrency investment decisions. The hypotheses were developed based on the literature

review, and their testing is essential for understanding how these factors influence investment behavior in cryptocurrencies. The analysis includes the estimation of direct and indirect effects and evaluates the fit of the proposed model.

4.1. Model Fit and Validation

Before testing the hypotheses, we first assess the model fit to ensure the SEM analysis is valid and reliable.

We use several fit indices to evaluate the model's goodness of fit:

1. Goodness of Fit Index (GFI): 0.92 (greater than 0.90, indicating good fit).
2. Comparative Fit Index (CFI): 0.95 (greater than 0.90, indicating good fit).
3. Root Mean Square Error of Approximation (RMSEA): 0.05 (less than 0.08, indicating a good fit).

These values suggest that the model fits the data well, and the relationships between the variables can be tested with confidence.

4.2. Descriptive Statistics

The descriptive statistics for the variables in the study are as follows:

Table 2. Descriptive Statistics for Key Variables

Variable	Mean	Standard Deviation	Minimum	Maximum
Financial Literacy	3.94	1.11	1	5
Blockchain Knowledge	3.87	1.08	1	5
Social Media Influencers	3.91	1.12	1	5
Cryptocurrency Investment Decision	3.92	1.10	1	5

As shown in table 2. These statistics provide an overview of the levels of financial literacy, blockchain knowledge, social media influence, and cryptocurrency investment decisions among the participants. The mean scores for all variables are close to 4, indicating moderate to high levels of understanding and investment engagement.

4.3. Hypotheses Testing

The hypotheses were tested based on the results of the SEM analysis. The results show both direct and indirect effects between the variables.

1. Hypothesis 1: Financial Literacy → Cryptocurrency Investment Decisions

   H1 posited that financial literacy has a positive impact on cryptocurrency investment decisions. The results of the SEM analysis support this hypothesis. The standardized path coefficient between financial literacy and cryptocurrency investment decisions was found to be 0.46 (p ¡ 0.01), indicating a significant positive effect. This suggests that higher financial literacy leads to more informed and confident investment decisions in cryptocurrency.

2. Hypothesis 2: Blockchain Knowledge → Cryptocurrency Investment Decisions

   H2 proposed that blockchain knowledge positively influences cryptocurrency investment decisions. The SEM analysis confirmed this hypothesis with a standardized path coefficient of 0.53 (p ¡ 0.01). This indicates that a greater understanding of blockchain technology significantly enhances an investor's ability to make informed decisions regarding cryptocurrency investments.

3. Hypothesis 3: Social Media Influencers → Cryptocurrency Investment Decisions

   H3 examined whether social media influencers have a positive impact on cryptocurrency investment decisions. The analysis found a path coefficient of 0.38 ($p < 0.05$), which indicates that social media influencers do have a significant positive effect on cryptocurrency investment decisions. However, the effect was weaker than the influence of financial literacy and blockchain knowledge.

4. Hypothesis 4: Financial Literacy Moderates Blockchain Knowledge → Cryptocurrency Investment Decisions

   H4 suggested that financial literacy moderates the relationship between blockchain knowledge and cryptocurrency investment decisions. The moderation effect was tested through an interaction term in SEM. The interaction effect was found to be significant with a standardized path coefficient of 0.24 (p ¡ 0.05), meaning that financial literacy strengthens the relationship between blockchain knowledge and investment decisions.

5. Hypothesis 5: Social Media Influencers Mediate the Effect of Financial Literacy on Cryptocurrency Investment Decisions

   H5 posited that social media influencers mediate the effect of financial literacy on cryptocurrency investment decisions. The mediation effect was tested using bootstrapping in SEM, and the results showed a significant indirect effect (0.18, p ¡ 0.05). This indicates that financial literacy influences cryptocurrency investment decisions not only directly but also indirectly through the impact of social media influencers.

Table 3. SEM Results for Hypotheses Testing

Hypothesis	**Path Coefficient**	**p-value**	**Conclusion**
FL → CID	0.46	< 0.01	Supported
BK → CID	0.53	< 0.01	Supported
SMI → CID	0.38	< 0.05	Supported
FLMBK → CID	0.24	< 0.05	Supported
SMIMFL→ CID	0.18	< 0.05	Supported

As show in table 3 the results of the hypothesis testing using Structural Equation Modeling (SEM) strongly support all five hypotheses. The analysis confirms that:

(a) Financial literacy positively affects cryptocurrency investment decisions.

(b) Blockchain knowledge significantly impacts cryptocurrency investment behavior.

(c) Social media influencers play an important role in shaping investment decisions, though their effect is weaker than financial literacy and blockchain knowledge.

(d) Financial literacy strengthens the impact of blockchain knowledge on investment decisions.

Social media influencers mediate the relationship between financial literacy and cryptocurrency investment decisions.

5. MANAGERIAL IMPLICATION

The study reveals the significant impact of financial literacy on cryptocurrency investment decisions, emphasizing the need for comprehensive educational initiatives.

5.1. The Role of Financial Literacy in Market Stability

Financial literacy plays a crucial role in guiding cryptocurrency investment decisions, as it empowers investors to assess risks, understand market trends, and make well-informed choices. Many retail investors lack adequate knowledge of blockchain technology, making them susceptible to misinformation and speculative trading. By providing structured financial education, organizations can bridge this knowledge gap and enhance investor confidence.

Crypto exchanges, fintech firms, and financial institutions should collaborate to develop accessible learning platforms that explain blockchain fundamentals, risk mitigation strategies, and security protocols. Workshops, interactive courses, and gamified learning experiences can engage a diverse audience, ensuring they grasp key financial principles.

Regulatory bodies must recognize the importance of financial literacy in fostering a more stable and secure investment environment. By mandating financial education as a prerequisite for cryptocurrency

trading, policymakers can reduce impulsive and uninformed investments. Certification programs and licensed educational platforms can further enhance investors' ability to navigate the complexities of the crypto market.

Beyond individual investors, financial literacy initiatives can contribute to broader market stability by curbing speculative behaviors and discouraging emotionally driven decision-making. A well-informed investor base can enhance market resilience, leading to more sustainable and responsible cryptocurrency adoption.

5.2. Regulatory Measures for Sustainable Cryptocurrency Investments

Regulatory interventions can shape the future of cryptocurrency markets by balancing innovation with security. Policymakers must implement frameworks that protect investors while fostering a competitive, decentralized financial ecosystem. By addressing regulatory uncertainties, governments can encourage institutional adoption and broader public trust in digital assets.

The integration of blockchain-based transparency mechanisms can provide regulators with real-time oversight while preserving decentralization. Smart contract audits, identity verification processes, and compliance standards can help detect and prevent fraudulent activities, ultimately creating a safer investment landscape.

Regulatory authorities should consider developing guidelines that promote responsible investment behaviors while ensuring investor protection. Licensing requirements for crypto exchanges, security compliance measures, and fraud prevention initiatives can mitigate risks associated with unregulated market activities. A harmonized global regulatory approach can also prevent regulatory arbitrage and enhance market stability.

By fostering collaboration between regulators, industry stakeholders, and investors, policymakers can create a well-regulated environment that encourages innovation while preventing market manipulation. Regulatory clarity can drive institutional participation, thereby strengthening the legitimacy and long-term sustainability of cryptocurrency investments.

5.3. The Influence of Social Media and Technology on Investment Decisions

Social media has emerged as a powerful force influencing cryptocurrency investment decisions, particularly among younger and less-experienced investors. The viral nature of investment trends, often fueled by influencers and online communities, can lead to rapid price fluctuations and speculative market movements. Understanding the impact of digital platforms on financial decision-making is crucial for ensuring responsible investment behavior.

Cryptocurrency firms should partner with credible financial influencers to promote accurate, research-based investment insights. By fostering transparency and accountability in influencer-led financial discussions, organizations can mitigate misinformation and help investors make rational choices. Ethical marketing practices that emphasize risk awareness and long-term investment strategies can further contribute to market stability.

Fintech startups and blockchain enterprises should leverage AI-driven analytics to offer personalized financial guidance based on investors' knowledge levels and risk tolerance. Data-driven insights can help tailor educational content, portfolio recommendations, and automated risk assessments, ultimately improving investment outcomes.

As cryptocurrency adoption continues to grow, businesses, regulators, and financial educators must work together to promote responsible investment practices. By integrating financial literacy programs, transparent regulatory frameworks, and technology-driven investor support systems, the industry can foster a secure and informed investment environment for all participants.

6. CONCLUSION

In this study, we explored the roles of financial literacy, blockchain knowledge, and social media influencers in shaping cryptocurrency investment decisions. Through the application of Structural Equation

Modeling (SEM), we found that all the hypothesized relationships were supported. Specifically, higher financial literacy and blockchain knowledge were found to have significant positive effects on investment decisions, with blockchain knowledge showing the strongest influence. Additionally, social media influencers were found to play a notable role, though their impact was weaker compared to the other two factors. Moreover, financial literacy was shown to moderate the relationship between blockchain knowledge and investment decisions, and social media influencers were found to mediate the effect of financial literacy on investment choices. These results highlight the importance of financial education and blockchain awareness in guiding informed cryptocurrency investment behavior.

The primary research question of this study was to determine how financial literacy, blockchain knowledge, and social media influencers collectively influence cryptocurrency investment decisions. The findings confirm that all three factors significantly affect investment decisions, suggesting that investors with higher levels of financial literacy and blockchain understanding are more likely to make informed decisions. However, the study also has some limitations. One limitation is the cross-sectional nature of the data, which prevents us from establishing causal relationships definitively. Additionally, the sample was limited to individuals who were already engaged in cryptocurrency investments, which may not fully represent the broader population. The reliance on self-reported data also introduces the potential for bias, as participants may overestimate their knowledge or investment behavior.

For future research, it would be beneficial to explore the impact of financial literacy and blockchain knowledge in a more diverse sample, potentially incorporating longitudinal studies to examine changes over time. Moreover, additional factors, such as cultural influences, regulatory environments, and psychological factors, could be considered to provide a more comprehensive understanding of cryptocurrency investment decisions. It would also be valuable to study the interaction between traditional financial knowledge and the unique aspects of digital currencies, as well as the evolving role of social media influencers in shaping financial behaviors in new, decentralized markets. Such studies could help to refine educational strategies and regulatory frameworks aimed at promoting informed and responsible cryptocurrency investment.

7. DECLARATIONS

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7.2. Author Contributions

Conceptualization: AG, HA, and OJ; Methodology: RW; Software: AG; Validation: HA and OJ; Formal Analysis: HA and AG; Investigation: RW; Resources: AG; Data Curation: RS; Writing Original Draft Preparation: TM and OJ; Writing Review and Editing: RW; Visualization: OJ; All authors, AG, HA, OJ and RW, have read and agreed to the published version of the manuscript.

7.3. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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The authors received no financial support for the research, authorship, and/or publication of this article.

7.5. Declaration of Conflicting Interest

The authors declare that they have no conflicts of interest, known competing financial interests, or personal relationships that could have influenced the work reported in this paper.

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