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A Study on Teaching Cryptocurrency Investment in Higher Education Using PI Coin

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ABSTRACT

In modern society, cryptocurrency transactions have become increasingly widespread. However, from a student's perspective, when considering cryptocurrency as an investment, there are few academic programs that incorporate simulated trading courses. This study, serving as a preliminary investigation, analyzes practical applications while addressing potential concerns related to students' financial management and risk control. It aims to effectively design course content that facilitates student learning and trading experiences. Using qualitative research methods such as interviews, this study attempts to propose an initial framework for cryptocurrency investment education, utilizing PI Coin a cryptocurrency not yet listed on major exchanges as the medium. The research seeks to contribute to reducing cryptocurrency-related fraud by promoting better educational practices.

INTRODUCTION

In today's higher education environment, university students' investment decisions are often influenced by expectations of high returns and the desire for quick profits. This misconception has made cryptocurrency an exploitable tool for fraudulent schemes. Due to their limited understanding of financial markets and inadequate risk assessment, students often invest substantial sums of money without taking proper precautions, thereby exacerbating speculation in the cryptocurrency market. The nature of cryptocurrencies lies in their decentralization and high volatility. However, as this market is still in its developmental stage with incomplete regulatory measures, it has become a breeding ground for fraudulent activities. Investors who fail to establish adequate risk awareness and anti-fraud knowledge are vulnerable to deceptive investment schemes, cryptocurrency scams, Ponzi schemes, and other illegal activities, leading to financial losses (Knežević *et al.*, 2020). In reality, some cryptocurrency exchanges face operational risks, including insufficient trading liquidity, cybersecurity vulnerabilities, and inadequate regulatory oversight (Harrast *et al.*, 2022). Nevertheless, as the digital asset market continues to evolve, cryptocurrency has become an integral part of financial technology. In the future business environment, blockchain technology and cryptocurrency applications are expanding across various domains, including payment systems, supply chain management, and digital identity verification. Therefore, business and management programs in higher education should recognize the irreversible nature of this trend and actively provide students with relevant education to ensure they acquire sufficient professional knowledge and market awareness. Through course design and practical training, students can develop an understanding of

how cryptocurrency markets operate, thereby reducing investment risks and fostering responsible financial management.

This study adopts a practical approach to explore how cryptocurrency-related knowledge can be integrated into higher education curricula to cultivate students' investment literacy and market analysis skills. First, students should acquire basic technical knowledge, such as downloading applications, converting currencies across exchanges, depositing and withdrawing funds, and executing actual trades. These operations involve not only technical learning but also aspects of financial regulation, legal compliance, and risk management. Furthermore, through simulated trading and case studies, students can experience the impact of market fluctuations firsthand, understand the driving forces behind price changes, and develop strategies to cope with market uncertainties. In addition to basic trading operations, students should also be exposed to fraud cases in the cryptocurrency market to recognize common scam tactics such as fake investment promises, phishing websites, and fraudulent trading platforms, thereby enhancing their ability to prevent financial fraud.

Beyond technical and transactional learning, business and management curricula should extend to the macroeconomic implications of cryptocurrency. With the evolving global economic landscape and political environment, governments worldwide are exploring digital currency applications, indicating that cryptocurrency is not merely an investment tool but also a potential component of the international financial system. For instance, some countries have begun researching the development of Central Bank Digital Currencies (CBDCs) to enhance the efficiency and transparency of financial transactions (Ward & Rochemont, 2019).

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Therefore, cultivating students' understanding of digital currency trends and guiding them to consider future challenges and opportunities will help enhance their global perspective and competitiveness.

The strategic role of cryptocurrency in international finance is also gaining recognition, with some countries incorporating digital assets into their national reserves to mitigate financial market volatility. Against this backdrop, young learners should actively strengthen their knowledge and skills, mastering cryptocurrency applications and market mechanisms to remain competitive in the global economy. By integrating theoretical knowledge with practical experience, students can develop a deeper understanding of digital finance operations and become more adaptable to future workplace demands.

Currently, university students are highly susceptible to short-term high-return investment mindsets, exacerbating speculative behavior in the cryptocurrency market and increasing their exposure to fraud. Therefore, business and management programs should actively integrate relevant education through technical training, risk assessment, and international market trend analysis to help students develop comprehensive financial knowledge and sound investment principles. As digital assets continue to evolve and international markets shift, the strategic importance of cryptocurrency will continue to grow. Consequently, a well-structured educational system will be crucial in cultivating the next generation of financial professionals.

MATERIALS AND METHODS

This paper mainly uses literature review and empirical analysis to conduct follow-up research. Bitcoin, as a form of virtual currency, has attracted significant attention since its inception due to its technological architecture and operational mechanisms. Böhme *et al.* (2015) pointed out that Bitcoin functions as an electronic payment system based on an online communication protocol, utilizing a decentralized transaction ledger distributed among participating nodes. It incentivizes honest participation while preventing centralized control. Key features of Bitcoin include irreversible transactions, a predefined monetary creation path, and a public transaction history, allowing users to create accounts without providing real identities. These design elements enhance the flexibility and privacy of the payment system while reducing regulatory oversight. However, the authors also highlighted the limitations of these advantages. The appeal of Bitcoin to economists lies in its potential disruptive impact on existing payment and monetary systems. Their study provides an in-depth discussion of Bitcoin's design principles, past and future applications, as well as the risks and regulatory challenges associated with its interaction with traditional financial systems and the real economy.

Schilling and Uhlig (2019) developed an asset economy model featuring two competing but intrinsically valueless currencies: the US dollar and Bitcoin. While the Federal Reserve supplies dollars to achieve inflation targets,

Bitcoin follows a deterministic growth path in supply. According to their pricing equation, Bitcoin follows a martingale process, and in scenarios where agents are not sufficiently patient, speculative behavior does not exist, implying that price volatility does not affect Bitcoin's function as a medium of exchange. Additionally, the authors argue that Bitcoin block rewards are indirectly funded by US dollar taxation and discuss implications for monetary policy, Bitcoin production, taxation, welfare, and market equilibrium.

Blockchain technology, the core infrastructure supporting Bitcoin, has become a focal point in both academia and industry. Khalil *et al.* (2021) provided a comprehensive analysis of blockchain mechanisms and real-world applications, detailing how blockchain is constructed, the mining process, and cryptocurrency creation. Their study emphasized the immutability and decentralization of blockchain technology, which serve as catalysts for innovation. Moreover, the proof-of-work (PoW) consensus mechanism ensures transaction security and trust within the system.

As cryptocurrency adoption grows, investor motivations and concerns have become central research topics. Hadan *et al.* (2024) conducted a survey of 395 cryptocurrency investors and potential investors, revealing that extreme price volatility is both a key driver of market participation and a major deterrent. Other common barriers include fraud risks, insufficient funds, lack of knowledge, and difficulty in identifying reliable information sources. Their study underscores the necessity of establishing trustworthy trading platforms with integrated educational features and proposes the development of user-friendly trading platforms and educational components tailored to novice investors.

The role of social media in cryptocurrency investment behavior has also garnered attention. Kim and Fan (2025) used data from the 2021 National Financial Capability Survey to examine the relationship between social media usage and cryptocurrency investment behavior through logistic regression analysis. Their findings indicate that investors who rely on social media as an information source are more likely to invest in cryptocurrencies, and those who engage with multiple social media platforms exhibit a higher likelihood of investment. Furthermore, different social media platforms influence investment experience and future investment considerations differently, offering critical insights for policymakers, researchers, and practitioners.

Financial technology and social media influencers also play a crucial role. Rijanto and Utami (2024) explored the effects of financial technology usage, social media influencers, and investment experience on cryptocurrency investment decisions, incorporating financial literacy as a moderating variable. Using a structural equation model (SEM) based on responses from 192 cryptocurrency investors aged 20–30, their study found that financial technology and social media influencers had significant positive effects on investment decisions, whereas investment experience

had no significant impact. Additionally, financial literacy did not enhance these effects. The study recommends formal education and financial literacy programs to improve young investors' knowledge and urges financial institutions to provide relevant educational content to promote rational investment decision-making.

Behavioral biases also significantly influence cryptocurrency investment decisions. Kaur *et al.* (2024) surveyed 473 retail investors and employed a structural equation model to analyze the effects of herding behavior, loss aversion, overconfidence, and fear of missing out (FOMO) on investment decisions. Their results demonstrate that these behavioral biases have a substantial impact on investment decisions, with FOMO acting as a partial mediator between herding behavior, loss aversion, and investment behavior. This study enriches the field of behavioral finance and offers valuable insights for individual and institutional investors, policymakers, and market regulators.

The relationship between personality traits and investment decisions has also been examined. Luo *et al.* (2024) conducted two questionnaire-based studies to analyze the effects of dark personality traits (Machiavellianism, narcissism, psychopathy, and sadism) and the Big Five personality traits (extraversion, neuroticism, openness, agreeableness, and conscientiousness) on cryptocurrency and NFT investment decisions. Their findings indicate that dark personality traits and extraversion positively influence cryptocurrency investments. Moreover, for actual investors, Machiavellianism, narcissism, psychopathy, conscientiousness, and extraversion exhibited statistically significant effects on Bitcoin investment decisions, offering a novel perspective on market behavior research.

Finally, market volatility and macroeconomic factors have a profound impact on cryptocurrency returns. Chowdhury and Abdullah (2024) used a vector error correction model (VECM) and regression analysis to examine the effects of economic policy uncertainty, stock market volatility (VIX), gold prices, interest rates, inflation rates, and oil prices on cryptocurrency returns. Their findings reveal that these macroeconomic variables have a significant positive impact on cryptocurrency returns, suggesting that cryptocurrencies may serve as a hedge against economic uncertainty. The study calls for policy coordination and regulatory measures to stabilize economic uncertainty and promote the rational development and acceptance of cryptocurrencies.

RESULTS AND DISCUSSION

Results

The core concept behind designing cryptocurrency courses is to enable students to effectively grasp the decentralization principle of blockchain technology through hands-on operations. Decentralization is one of the fundamental features of blockchain (Zarrin *et al.*, 2021) and a key distinction from traditional financial systems. By actively participating in blockchain

transactions, students can better understand the trust mechanisms and transparency that decentralization offers. Additionally, engaging in cross-chain transactions allows students to explore interoperability solutions and enhance their comprehension of the broader blockchain ecosystem. During asset transfers, the secure storage of mnemonic phrases is crucial, as it relates to private key management, digital asset security, and personal financial responsibility. This aspect of the course can help students develop proper cybersecurity awareness and prevent asset loss due to mismanagement or inadvertent exposure of private keys.

Furthermore, understanding how cryptocurrency exchanges operate is another essential skill for students. As the primary platforms for digital asset circulation, cryptocurrency exchanges have different trading mechanisms, liquidity structures, market depth, and fee calculation models compared to traditional stock markets. Through trading experience, students can distinguish between centralized exchanges (CEX) and decentralized exchanges (DEX) while learning about order matching mechanisms, liquidity provision, and risk management strategies (Brasse & Hyun, 2023). The fundamental differences between cryptocurrencies and stocks also warrant further exploration. Cryptocurrencies are significantly influenced by market sentiment and global regulatory changes, exhibiting higher price volatility than stocks, which are generally driven by corporate financial performance and macroeconomic factors. Comparative analysis can help students develop financial market sensitivity and a more comprehensive investment decision-making framework.

This study aims to address the lack of academic literature on cryptocurrency education in current educational settings. The academic community has paid relatively little attention to cryptocurrency education, and this research seeks to fill that gap by providing a theoretical foundation for future studies. Additionally, this paper aspires to encourage interdisciplinary discussions between financial technology, economics, and information engineering, fostering a broader dialogue between academia and industry regarding cryptocurrency education. On a practical level, this study aims to provide educators with pedagogical recommendations, enabling them to systematically teach cryptocurrency concepts while enhancing students' financial risk awareness and adaptability to market changes. Through educational interventions, the prevalence of cryptocurrency-related scams may be mitigated, equipping students with stronger risk assessment and fraud prevention skills to safeguard their financial security.

Discussion

PI Coin was selected as the primary teaching asset due to its unique technical characteristics and its suitability for educating students on blockchain and cryptocurrency operations. Unlike traditional cryptocurrencies such as Bitcoin and Ethereum, which require compliance

with financial regulations and legal frameworks for fiat currency exchanges, PI Coin operates differently. Its mining process relies on a mobile application, eliminating the need for expensive hardware or high electricity consumption. This low-cost entry point allows students to engage with cryptocurrency operations while learning fundamental blockchain concepts.

Another advantage of PI Coin is its relatively low risk, which reduces the entry barrier for students entering the cryptocurrency market. Traditional cryptocurrencies require users to manage private keys, ensure transaction security, and navigate wallet transfers all of which can be technically challenging and risky for beginners. Mistakes such as losing a private key or executing incorrect transactions can result in irreversible financial losses. However, PI Coin allows users to manage their assets through a mobile application and employs a community verification mechanism to enhance security. Even if issues arise, the financial impact remains minimal, providing a safer environment for students to familiarize themselves with cryptocurrency operations.

While PI Coin has yet to be listed on major cryptocurrency exchanges, its value remains community-driven and subject to future development. In Taiwan, some merchants have already begun accepting PI Coin as a payment method, exploring its potential use as a decentralized payment tool. This trend is noteworthy for students, as it demonstrates real-world cryptocurrency applications beyond speculative trading. Observing PI Coin's adoption can help students understand decentralized finance (DeFi) and its distinctions from traditional financial systems (Aquilina, Frost, & Schrimpf, 2024), offering insights into potential technological transformations.

From an educational perspective, PI Coin's operational model helps instructors effectively explain blockchain principles such as decentralization, consensus mechanisms, and smart contracts. Unlike Bitcoin and Ethereum mining, which require significant financial investment (Huynh *et al.*, 2022), PI Coin's mobile mining approach provides a more accessible learning opportunity. By analyzing PI Coin's development trajectory and market acceptance, students can also learn how to evaluate the viability and potential value of a cryptocurrency.

PI Coin's community-driven model further distinguishes it from many decentralized projects that rely on large-scale mining operations or corporate participation. By emphasizing individual user engagement and community consensus, PI Coin aligns with blockchain's fundamental principles, allowing students to better understand community-driven economic systems and explore emerging business models.

For educators, using PI Coin as a teaching tool provides students with a low-risk, user-friendly, and practically applicable learning experience. By participating in the PI Coin ecosystem, students can intuitively grasp blockchain fundamentals while exploring the future of decentralized finance and digital asset management. This approach not only enhances students' understanding of the

cryptocurrency market but also broadens their knowledge of emerging technologies and digital economies, laying a foundation for future applications and innovations.

Limitations

PI Coin, still in its developmental phase, faces several limitations that hinder its immediate integration into educational settings. Its immature market dynamics, lack of liquidity, and unstable valuation pose risks for both instructors and students. Using PI Coin as a transactional tool requires addressing challenges such as fiat currency conversion, legal uncertainties, and financial planning. Students may also encounter difficulties with KYC verification, digital wallet setup, and exposure to cybersecurity threats like phishing or fraudulent apps. Moreover, technical issues such as blockchain efficiency, transaction delays, and private key security further complicate its educational use. Regulatory compliance remains a critical concern, as laws governing cryptocurrency vary across jurisdictions, and academic institutions may restrict its use. To safely adopt PI Coin in education, stable market mechanisms, robust security protocols, and regulatory clarity are necessary. Educators must balance innovation with caution, ensuring that any use of PI Coin supports a secure, transparent, and legally compliant learning environment.

Mainnet Transition and Exchange Selection

From an educational perspective, once PI Coin transitions to its mainnet, educators must make early preparations to ensure that students learn and operate cryptocurrency transactions in a safe and structured environment. Regarding exchange selection, educators should conduct thorough market research to assess the credibility and security of existing exchanges, avoiding platforms with high risks. This precaution not only protects students from potential financial losses and cybersecurity risks but also cultivates their understanding of exchange risk management, enabling them to make more informed decisions in the future digital finance landscape.

Beyond exchange selection, educators should focus on enhancing students' comprehension of blockchain technology and its applications. Without a solid grasp of blockchain fundamentals, students may make errors during transactions, such as misentering addresses leading to irreversible asset loss or neglecting transaction fees, resulting in failed transactions. To address these issues, course design should incorporate foundational blockchain concepts, including decentralization, consensus mechanisms, and the immutability of transaction records, supplemented with case studies to help students fully understand how transactions operate.

Furthermore, educators should personally test the registration process, identity verification mechanisms, cryptocurrency wallet creation, and fund transfers of various exchanges before integrating them into the curriculum. This hands-on evaluation ensures that students experience optimal usability and security during

their operations. Wallet management is another crucial aspect, and educators should emphasize the importance of securely storing private keys and mnemonic phrases, highlighting the irreversible consequences of losing private keys. Through these preparatory measures, educators can minimize the likelihood of students encountering technical or security issues in real-world applications.

To reinforce cryptocurrency trading education, educators should design a series of experimental activities, allowing students to conduct simulated trades in a controlled environment. This can be achieved through testnets or small-value transactions, enabling students to experience real market conditions without significant financial risks. Throughout this process, educators should guide students on market data analysis, transaction fee calculations, and various trading strategies, including limit orders, market orders, and stop-loss mechanisms, thereby strengthening their market analysis and risk management capabilities.

Given the rapid evolution of cryptocurrency markets, exchange security and policies are subject to frequent changes. Educators should establish a rolling review mechanism to regularly reassess exchange security and ensure that students continue using safe and reliable platforms. Maintaining close communication with students is also essential; encouraging student feedback on operational challenges allows educators to adapt teaching content and instructional guidelines accordingly, ensuring students remain up to date with the latest technological developments and trading environments.

In addition to technical aspects, legal and ethical considerations should also be integrated into the curriculum. Cryptocurrency trading involves asset management and regulatory compliance issues. Educators should familiarize students with local cryptocurrency regulations, such as Know Your Customer (KYC) and Anti-Money Laundering (AML) requirements, as well as exchange policies on fund verification (Longa, 2025). This knowledge not only helps students avoid legal repercussions but also fosters an ethical understanding of digital finance.

Once PI Coin is fully integrated into its mainnet, educators need to comprehensively evaluate exchange security, blockchain literacy, hands-on trading exercises, and regulatory compliance. Through meticulous curriculum planning and thorough preparation, educators can ensure that students learn and apply cryptocurrency technology in a safe environment, equipping them with practical skills and risk awareness for the evolving fintech landscape.

Implications of Pi Coin's Mainnet Launch

For students to maintain interest and engagement with cryptocurrency, a crucial factor is whether the cryptocurrency's value can establish a stable and predictable link with fiat currency. When a cryptocurrency transitions to its mainnet, its market value becomes increasingly influenced by supply and demand fluctuations and investor sentiment, affecting student enthusiasm for cryptocurrency participation. While this valuation

mechanism enhances the cryptocurrency's attractiveness, it simultaneously introduces risks, particularly for students who may lack financial literacy and market insight, making them vulnerable to unnecessary financial losses due to extreme market volatility.

Taking PI Coin as an example, after its mainnet launch, market expectations and investor behavior will drive its value fluctuations, which may manifest as short-term price volatility or long-term trend shifts. Such movements influence not only investor psychology but also broader market behaviors, such as speculative buying due to price surges or panic selling following price declines. For students, these market dynamics impact their trust in cryptocurrency and their willingness to continue participation. Without a clear understanding of market mechanisms, students may misinterpret short-term price changes as reflections of intrinsic value, leading to irrational investment decisions driven by emotions.

Furthermore, as the cryptocurrency market expands, associated risks also escalate, including market manipulation, fraudulent activities, and asset crashes. The decentralized nature of cryptocurrencies makes regulatory intervention challenging, creating opportunities for fraudulent schemes. Without awareness of market fraud tactics, students may suffer financial losses due to uninformed investment decisions, potentially shaping misguided investment habits. The post-mainnet period for PI Coin and similar cryptocurrencies presents an increased risk of being targeted by speculators and scammers due to its unstable valuation. This poses risks not only for general investors but also for students, who, compared to experienced investors, often lack sufficient market analysis skills and risk assessment capabilities.

Many emerging cryptocurrencies are categorized as meme coins due to their lack of long-term market foundations and trust mechanisms. Such cryptocurrencies rely heavily on community hype and market sentiment rather than intrinsic technical or application value. If students fail to distinguish between different types of cryptocurrencies, they may mistakenly assume that short-term price surges in meme coins are representative of cryptocurrency market norms, leading to unrealistic investment expectations (Nani, 2022). Without proper educational guidance, students engaging with cryptocurrency markets may lack the necessary knowledge base, potentially developing flawed financial perspectives and making reckless investment decisions.

Given these considerations, if the goal is to encourage students to participate rationally in the cryptocurrency market while mitigating risks, educators must emphasize market characteristics, including factors driving volatility, supply-demand relationships, and how market psychology influences price changes. Educators should guide students in developing sound investment principles, distinguishing between long-term investment and short-term speculation, understanding fundamental risk management strategies, and leveraging market information for informed decision-making.

Additionally, regarding meme coins, students should be made aware of their inherently high-risk nature and understand the distinction between technological value and speculative hype. This knowledge can help prevent students from making impulsive financial decisions based on short-term market fluctuations.

For students, whether a cryptocurrency maintains a stable link with fiat currency is a key factor influencing long-term engagement. However, this linkage also introduces heightened market risks, especially post-mainnet, when price volatility may intensify (Noda, 2021). Without adequate education and guidance, students become more susceptible to emotional decision-making influenced by market sentiment, increasing their risk of financial instability.

Therefore, cryptocurrency education should emphasize market mechanisms and risk management to ensure that students possess the necessary knowledge to navigate market fluctuations and avoid financial pitfalls due to shortsighted or speculative investments. Through a well-structured educational framework, students can develop a rational approach to cryptocurrency markets, gaining a true understanding of market operations rather than being swayed by volatility. This approach ultimately safeguards their long-term financial well-being and fosters stable market participation.

CONCLUSION

Following the successful transition of PI Coin to its mainnet, its development has provided a reference model for other mobile mining cryptocurrencies, particularly those that have yet to achieve mainnet integration. While PI Coin has established a certain level of market recognition, its operational model and supported applications remain distinct from most other cryptocurrencies, especially meme coins or tokens with limited functionalities. These characteristics grant PI Coin certain competitive advantages, particularly in exploring decentralized applications. However, significant challenges remain if it is to be compared with more established cryptocurrencies such as Bitcoin and Ethereum, which have broader application ecosystems. These challenges are not only technical such as blockchain security and scalability but also extend to market acceptance, regulatory frameworks, and user trust in the PI Coin ecosystem. From this perspective, if PI Coin aims to develop into a more stable digital currency in the market, it must continue to diversify its applications and expand its real-world use cases to strengthen its position within the cryptocurrency ecosystem. At the same time, this evolving landscape presents both challenges and opportunities for academia, particularly in education. Educators must continuously assess the overall cryptocurrency market environment and conduct periodic curriculum reviews to ensure that teaching content remains relevant and up to date. This approach will help students develop a comprehensive and accurate understanding of blockchain technology and cryptocurrencies.

REFERENCES

- Aquilina, M., Frost, J., & Schrimpf, A. (2024). Decentralized finance (DeFi): a functional approach. *Journal of Financial Regulation*, 10(1), 1-27.
- Anaza, N. A., Upadhyaya, B., Bennett, D., & Ruvalcaba, C. (2024). Is it FOMO or is it ME? The influence of personality traits on cryptocurrency consumption. *Psychology & Marketing*, 41(1), 184-202.
- Böhme, R., Christin, N., Edelman, B., & Moore, T. (2015). Bitcoin: Economics, technology, and governance. *Journal of Economic Perspectives*, 29(2), 213-238.
- Brasse, A., & Hyun, S. (2023). Cryptocurrency exchanges and the future of cryptoassets. In *The Emerald Handbook on Cryptoassets: Investment Opportunities and Challenges* (pp. 341-353). Emerald Publishing Limited.
- Chowdhury, E. K., & Abdullah, M. N. (2024). Gauging demand for cryptocurrency over the economic policy uncertainty and stock market volatility. *Computational Economics*, 64(1), 37-55.
- Elhoseny, M., Darwiesh, A., El-Baz, A. H., & Rodrigues, J. J. (2023). Enhancing cryptocurrency security using AI risk management model. *IEEE Consumer Electronics Magazine*, 13(1), 48-53.
- Hadan, H., Zhang-Kennedy, L., Nacke, L., & Mäkelä, V. (2024). Comprehending the crypto-curious: How investors and inexperienced potential investors perceive and practice cryptocurrency trading. *International Journal of Human-Computer Interaction*, 40(19), 5675-5696.
- Harrast, S. A., McGilsky, D., & Sun, Y. T. (2022). Determining the inherent risks of cryptocurrency: A survey analysis. *Current Issues in Auditing*, 16(2), A10-A17.
- Huynh, A. N. Q., Duong, D., Burggraf, T., Luong, H. T. T., & Bui, N. H. (2022). Energy consumption and Bitcoin market. *Asia-Pacific Financial Markets*, 29(1), 79-93.
- Kaur, M., Jain, J., & Sood, K. (2024). "All are investing in Crypto, I fear of being missed out": Examining the influence of herding, loss aversion, and overconfidence in the cryptocurrency market with the mediating effect of FOMO. *Quality & Quantity*, 58(3), 2237-2263.
- Khalil, I., Aziz, O., Farooq, M. S., & Abid, A. (2021). A tutorial on creating a blockchain and cryptocurrency with consensus protocol in Python. *VEAST Transactions on Software Engineering*, 9(4), 25-35.
- Kim, K. T., & Fan, L. (2025). Beyond the hashtags: Social media usage and cryptocurrency investment. *International Journal of Bank Marketing*, 43(3), 569-590.
- Knežević, A., Babić, T., & Musa, Z. (2020, September). Cryptocurrency as the currency of the future: A case study among Algebra University College students. In *2020 43rd International Convention on Information, Communication and Electronic Technology (MIPRO)* (pp. 782-787). IEEE.
- Longa, F. E. A. (2025). Cryptocurrency and money laundering. *American Journal of Industrial and Business Management*, 15(2), 362-371.

- Luo, J., Cao, Q., & Zhang, S. (2024). How do personality traits affect investors' decision on crypto market including cryptocurrencies and NFTs? *Review of Behavioral Finance*, 16(4), 600-619.
- Nani, A. (2022). The doge worth 88 billion dollars: A case study of Dogecoin. *Convergence*, 28(6), 1719-1736.
- Noda, A. (2021). On the evolution of cryptocurrency market efficiency. *Applied Economics Letters*, 28(6), 433-439.
- Rijanto, B. P., & Utami, N. (2024). Financial technology, social media influencers, and experience of cryptocurrency investment decisions: Financial literacy's role. *Jurnal Manajemen Maranatha*, 23(2), 201-216.
- Schilling, L., & Uhlig, H. (2019). Some simple bitcoin economics. *Journal of Monetary Economics*, 106, 16-26.
- Ward, O., & Rochemont, S. (2019). Understanding central bank digital currencies (CBDC). *Institute and Faculty of Actuaries*, 13(2), 263-268.
- Zarrin, J., Wen Phang, H., Babu Saheer, L., & Zarrin, B. (2021). Blockchain for decentralization of internet: Prospects, trends, and challenges. *Cluster Computing*, 24(4), 2841-2866.