Blockchain Frontier Technology (BFRONT)
Vol. 6, No. 1, July, 2026, pp. 86∼96
E-ISSN: 2808-0009 | P-ISSN: 2808-0831, DOI: 10.34306

Leveraging Blockchain Governance and Smart Contracts for Entrepreneurs in Social Media

Kanon Mommsen Wongkar[1*], Triananda Fajar Satriawan[2], Nuke Puji Lestari Santoso[3], Noah Rangi[4]
[1]Faculty of Business, Universitas Multimedia Nusantara, Indonesia
[2]Faculty of Art and Design, Universitas Multimedia Nusantara, Indonesia
[3]Faculty of Economics and Business, Universitas Raharja, Indonesia
[4]Department of Computer Science, Pandawan Incorporation, New Zealand
[1]kanon.wongkar@umn.ac.id, [2]fajar.satriawan@umn.ac.id, [3]nuke@raharja.info, [4]no.rangi3@pandawan.ac.nz
***Corresponding Author**

Article Info

Article history:

Submission, 11-02-2026
Revised, 25-02-2026
Accepted, 29-05-2026
Published, 02-06-2026

Keywords:

Entrepreneurs
Blockchain
Governance
Smart Contracts
Social Media

ABSTRACT

Social media entrepreneurship is shaped by centralized platforms controlling algorithms, monetization, and data, often limiting autonomy and bargaining power. Blockchain governance and smart contracts offer alternative arrangements to enhance transparency, trust, and value distribution. **This study aims to examine** the role of blockchain governance and smart contracts as alternative institutional mechanisms for entrepreneurs in social media ecosystems, with a focus on implementation conditions, strategic opportunities, and associated limitations. **This research adopts a qualitative** conceptual approach based on a systematic review of indexed academic literature published between 2022 and 2025, complemented by an analysis of documentation from blockchain based social media platforms, white papers, and relevant industry reports. The analysis maps key challenges faced by social media entrepreneurs onto blockchain governance mechanisms and smart contract functionalities. **The findings indicate** that blockchain governance and smart contracts can enhance entrepreneurial participation, improve transparency in revenue distribution, and strengthen the protection of digital assets. However, these benefits are context dependent and constrained by several factors, including technical complexity, unequal token distribution, and regulatory uncertainty. Therefore, **blockchain governance** and smart contracts should not be viewed as universal solutions, but as strategic instruments whose effectiveness depends on inclusive governance design, sufficient technical readiness, and adaptive policy frameworks to support sustainable social media entrepreneurship. **This article contributes** by proposing an evaluative framework to assess the implementation of blockchain governance and smart contracts in social media entrepreneurship, emphasizing alignment between technological design, governance inclusivity, and ecosystem readiness.

This is an open access article under the CC BY 4.0 license.

DOI: https://doi.org/10.34306/b-front.v6i1.1090
This is an open access article under the CC BY license (https://creativecommons.org/licenses/by/4.0/)
©Authors retain all copyrights

1. INTRODUCTION

The development of social media has created substantial opportunities for the emergence of digital entrepreneurs, particularly individuals and groups that utilize social media platforms to create, distribute, and

monetize content [1, 2]. Through social media, entrepreneurs are able to build brands, reach global audiences, and develop business models grounded in creativity and digital interaction [3]. Nevertheless, these opportunities remain closely tied to a high level of dependence on centralized social media platforms that control content distribution algorithms, monetization policies, and user data management [4].

Such dependence on centralized platforms generates a range of structural challenges for social media entrepreneurs, including power asymmetries, income uncertainty, and limited autonomy in business decision making [5]. Platforms retain the authority to unilaterally modify rules, restrict content visibility, or alter revenue sharing schemes without direct involvement from entrepreneurs [6]. This condition not only affects business sustainability but also contributes to a deficit of trust between platforms and digital entrepreneurs [7, 8].

Despite the growing body of literature on social media entrepreneurship and blockchain technology, prior studies have largely examined these domains in isolation, with limited attention to how blockchain governance design and smart contract mechanisms translate into measurable entrepreneurial outcomes such as autonomy, transparency, and sustainability. This gap indicates a lack of integrative and implementation-oriented frameworks linking governance structures with entrepreneurial impact.

This problem is also related to the sustainable development agenda, namely the Sustainable Development Goals (SDGs), particularly SDGs 8 concerning economic growth and decent work and SDGs 9 concerning innovation and infrastructure. The empowerment of digital entrepreneurs and creative business actors is viewed as one of the important strategies to encourage inclusive and sustainable economic growth. In line with this agenda, the Indonesian government places digital transformation as a national priority, emphasizing its role in improving competitiveness, economic inclusion, and the equitable distribution of business opportunities. This policy indicates that strengthening the digital entrepreneurship ecosystem is not only a technological issue, but also part of a national development strategy that is aligned with the achievement of the SDGs.

Blockchain, in the critique of centralized platforms, is seen as an alternative digital infrastructure as well as a programmable architecture [9, 10]. Blockchain-based social media consists of multiple layers, including a network layer for peer-to-peer communication, a consensus layer for transaction validation, a smart contract layer for automated rules and governance, and an application layer where user interaction and content distribution take place [11, 12].

Blockchain governance and smart contracts in social media entrepreneurship are not universal solutions, as technical complexity, limited adoption, and regulatory uncertainty require critical and contextual analysis [13]. This study positions them as alternative institutional mechanisms and proposes an integrated evaluative framework that links governance design, smart contract infrastructure, and entrepreneurial impact within a unified socio-technical system. By mapping governance structures, automation functions, and outcomes such as autonomy, transparency, and sustainability, the framework offers a practical model to assess how blockchain configurations shape entrepreneurial conditions, providing a more concrete basis for designing and evaluating blockchain-based social media platforms [14].

2. LITERATURE REVIEW

2.1. Social Media Entrepreneurship

Social media entrepreneurship refers to economic value creation activities that utilize social media platforms as the primary means of production, distribution, and interaction with the market [15, 16]. Business models that have developed in this context include content monetization through advertising, brand partnerships, subscriptions, as well as the sale of digital products and services [17, 18]. Social media enables entrepreneurs to build audiences directly and establish more personal relationships with consumers, thereby expanding opportunities for entrepreneurship based on creativity and the digital economy [19, 20].

Nevertheless, the literature also highlights the high level of entrepreneurs' dependence on social media platforms as a major challenge [21]. This dependence is reflected in revenue sharing mechanisms that are unilaterally determined by platforms, limited transparency in content distribution algorithms, and the risk of platform lock-in that makes it difficult for entrepreneurs to migrate to alternative ecosystems [22, 23, 24]. In addition, the trust relationship between entrepreneurs and platforms is often asymmetric, with platforms exercising dominant control over rules and user data [25]. These conditions indicate that although social media creates entrepreneurial opportunities, centralized platform structures have the potential to constrain entrepreneurs' autonomy and business sustainability [26]. This issue is also closely related to global development priorities, particularly SDGs 8 (Decent Work and Economic Growth) and SDGs 9 (Industry, Innovation and

Infrastructure), which emphasize inclusive digital entrepreneurship, innovation, and the development of sustainable digital ecosystems.

2.2. Blockchain Governance

In the literature, blockchain governance is understood as a set of mechanisms that regulate decision making, rule enforcement, and incentive distribution within blockchain based systems [27]. This form of governance is generally distinguished into on chain governance and off chain governance. On-chain governance relies on rules and decision making processes that are directly encoded within the blockchain protocol, such as token based voting mechanisms [28, 29]. In contrast, off chain governance involves discussion, negotiation, and agreement conducted outside the technical blockchain system, which are subsequently implemented through protocol updates or community policies [30, 31].

The concept of Decentralized Autonomous Organization (DAO), represents one of the most widely discussed implementations of blockchain governance in the literature. DAO enables collective participation of stakeholders in decision making through voting mechanisms and token based incentives [32, 33]. In the context of entrepreneurship, blockchain governance is viewed as having the potential to create incentive alignment among platform developers, entrepreneurs, and users [34]. However, several studies also criticize that token based governance mechanisms are not entirely free from inequality, as the distribution of token ownership can generate new concentrations of power and pose legitimacy challenges in decision making [35, 36].

2.3. Smart Contracts in Digital Platforms

Smart contracts are defined as computer programs that operate on a blockchain and automatically execute agreements when predefined conditions are fulfilled [37]. In the context of digital platforms, smart contracts are viewed as mechanisms capable of automating transactions, reducing the need for intermediaries, and enhancing efficiency and transparency [38, 39]. The literature indicates that smart contracts have the potential to support a wide range of digital economic activities, including automated payments, revenue distribution, and the protection of intellectual property rights [40, 41].

Despite these advantages, the implementation of smart contracts also faces several limitations. The immutability characteristic of blockchain makes errors in code difficult to correct, thereby increasing technical risk [42, 43]. In addition, smart contracts are not always able to fully represent the complexity of social and business relationships [44]. Issues of legal ambiguity are also a major concern, as the legal status and recognition of smart contracts vary across jurisdictions. The literature emphasizes that the effectiveness of smart contracts is highly dependent on the context of use, contract design, and their integration with existing legal and institutional frameworks [45, 46, 47].

2.4. Research Gap

Based on the literature review, it can be concluded that research on social media entrepreneurship, blockchain governance, and smart contracts has largely been discussed in isolation. While prior studies have identified important institutional and technical dimensions, the linkage between theoretical constructs and practical implementation remains predominantly conceptual and insufficiently operationalized. In particular, limited attention has been given to how blockchain governance mechanisms and smart contract functionalities can be translated into actionable system designs and measurable entrepreneurial outcomes.

To address this gap, this study formulates the following research question: How can blockchain governance and smart contracts be operationalized as institutional mechanisms in social media platforms to enhance entrepreneurial outcomes?.

To guide the analysis, this study proposes three analytical propositions. First, blockchain governance mechanisms, particularly DAO-based and token-based models, may enhance entrepreneurial participation and decision-making autonomy. Second, smart contracts, as automated protocol layers, may improve transparency and efficiency in revenue distribution and digital asset management. Third, the effectiveness of these mechanisms is contingent upon system design factors, including scalability, usability, and regulatory compatibility.

3. RESEARCH METHODS

3.1. Research Design

This study adopts a qualitative conceptual approach with an analytical design aimed at theory building. Although it does not involve direct empirical validation, it incorporates an implementation-oriented perspective

by grounding the analysis in documented blockchain platforms, white papers, and existing system architectures. This enables a preliminary assessment of feasibility by linking conceptual constructs with observable design practices in real-world blockchain-based social media systems [48]. The approach is chosen because blockchain-based social media entrepreneurship is still at an early stage, with limited availability of mature and standardized quantitative data, and because it seeks to capture governance dynamics, power relations, and trust mechanisms that are difficult to quantify.

Furthermore, this study emphasizes an implementation-oriented perspective by connecting theoretical constructs with emerging blockchain engineering practices and case-based platforms. It highlights that governance and smart contracts should be understood not only as conceptual institutional frameworks but also as integral components of real-world socio-technical systems that require careful architectural design, protocol specification, and interdisciplinary integration.

3.2. Conceptual Modeling Procedure

As depicted in Figure 1, the analysis begins with the identification of key structural challenges faced by social media entrepreneurs, including dependence on centralized platforms, uncertainty in monetization, and limited decision-making autonomy. These challenges serve as the analytical entry point of the study.

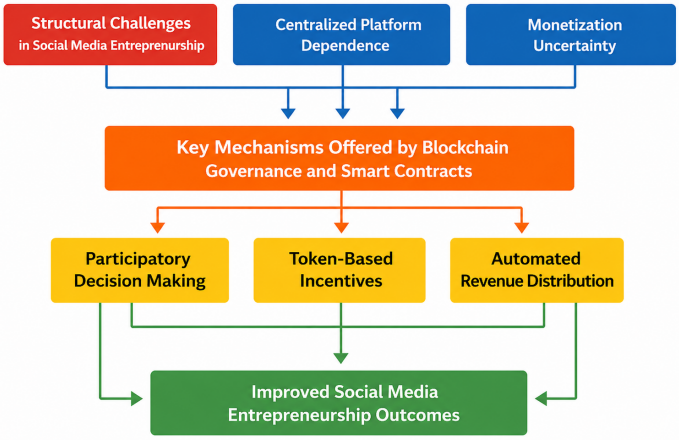


Figure 1. Conceptual Framework of The Study

Figure 1 illustrates the sequential stages of the conceptual analysis, showing how the study progresses from problem identification to mechanism extraction and impact mapping within the social media entrepreneurship ecosystem. The first stage identifies key challenges including dependence on centralized platforms, monetization uncertainty, and limited decision making autonomy based on a synthesis of digital entrepreneurship literature and platform studies. The second stage extracts core mechanisms of blockchain governance and smart contracts such as participatory decision making, token based incentive systems, and automated contract execution and value distribution, which are analyzed as institutional instruments to address these challenges.

To enhance analytical rigor, this study operationalizes the mapping process through explicit evaluation criteria. Governance mechanisms are assessed in terms of participation structure, incentive alignment, and transparency, while smart contract mechanisms are evaluated based on automation capability, reliability, and interoperability. In addition, the impact on social media entrepreneurs is analyzed through autonomy, transparency, and sustainability. These criteria provide a structured basis for evaluating the feasibility and implications of blockchain governance and smart contracts, thereby strengthening the methodological robustness of the study despite its conceptual nature.

3.3. Data Sources

The data sources in this study consist of three main categories. First, indexed academic articles relevant to the topics of social media entrepreneurship, blockchain governance, and smart contracts, particularly publications released between 2022 and 2025. Second, official documentation from blockchain based social media platforms, which is used to illustrate practical applications of governance mechanisms and smart

contracts. Third, white papers and industry reports that provide technical and strategic insights into the development of blockchain ecosystems and the digital economy. All sources are critically analyzed to ensure their relevance and consistency with the research focus.

3.4. Analytical Framework

The analytical framework in this study integrates comparative analysis and institutional analysis. Comparative analysis is employed to examine different models of blockchain governance within the context of social media platforms, highlighting variations in decision making mechanisms, incentive distribution, and levels of entrepreneurial participation. Meanwhile, the evaluation of the role of smart contracts is conducted by positioning them as institutional instruments that influence how rules are enforced and how economic value is distributed within digital ecosystems. Through this analytical framework, the study seeks to provide a coherent understanding of the roles and limitations of blockchain governance and smart contracts in social media entrepreneurship.

4. RESULTS AND DISCUSSION

This section analyzes the role of blockchain governance and smart contracts in shaping alternative institutional mechanisms for entrepreneurs within social media ecosystems. The analysis focuses on how different blockchain based governance models and contractual mechanisms influence entrepreneurs' positions, autonomy, and business sustainability. The discussion is conducted critically by considering not only the potential benefits, but also the accompanying limitations and risks, thereby providing a balanced perspective on the relevance of this approach in the context of social media entrepreneurship.

4.1. Blockchain Governance Models for Social Media Entrepreneurs

Blockchain governance models offer an alternative approach to the governance of social media platforms, which have traditionally been centralized in nature. One of the most widely discussed forms is DAO based governance, in which decision making is conducted collectively by community members through voting mechanisms. In the context of social media entrepreneurship, DAOs have the potential to provide greater participatory space for entrepreneurs in determining monetization rules, content moderation policies, and the strategic direction of platform development. In this way, entrepreneurs do not merely function as users, but also as stakeholders within the platform ecosystem.

Beyond DAOs, token-based participation mechanisms constitute a key element of blockchain governance [49]. Tokens function as both incentive instruments and participation rights in decision-making processes, reflecting entrepreneurs' economic and social contributions. However, unequal token distribution may create new concentrations of power, leading to hidden centralization risks. In addition, blockchain-based community moderation enables more transparent and accountable content regulation compared to centralized models, potentially reducing uncertainty for entrepreneurs. Nevertheless, its effectiveness depends on governance design and user participation, and may not always ensure fair or efficient outcomes.

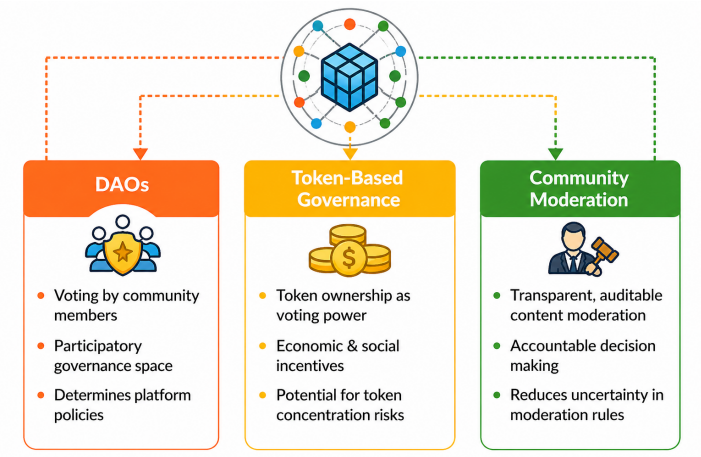


Figure 2. Blockchain Governance Models for Social Media Entrepreneurs

Figure 2 illustrates the key governance models enabled by blockchain technology in the context of social media entrepreneurship. The framework highlights three primary mechanisms DAOs, token-based governance, and blockchain-based community moderation. DAOs enable participatory decision-making processes in which community members collectively determine platform policies, monetization strategies, and development directions through voting mechanisms. This model expands entrepreneurial autonomy by allowing users to act not only as participants but also as stakeholders in platform governance. Token-based governance introduces economic and social incentives by linking decision-making power to token ownership. While this mechanism can enhance engagement and align stakeholder interests, it also presents potential risks related to unequal token distribution, which may lead to new forms of centralized influence within decentralized systems. Blockchain-based community moderation provides transparent and auditable mechanisms for content regulation. Compared to centralized moderation models, this approach increases accountability and reduces uncertainty in rule enforcement. However, its effectiveness depends on governance design and active community participation, which may not always guarantee optimal or fair outcomes.

4.2. Smart Contracts as Entrepreneurial Infrastructure

Smart contracts can be understood as executable modules within a layered blockchain architecture that operationalize entrepreneurial workflows in social media ecosystems [50]. At the system level, they operate across application and protocol layers, interacting with user interfaces, off-chain storage, and on-chain transaction logic to enable end-to-end automation of processes from content publication to revenue realization.

Operationally, when creators upload content through decentralized applications, metadata is stored off-chain while ownership and access rules are recorded on-chain. User interactions such as purchases or subscriptions trigger predefined contract conditions, enabling automated and transparent revenue distribution among stakeholders. This reduces reliance on centralized intermediaries while enhancing auditability.

Implementation examples from platforms such as Steemit and Lens Protocol demonstrate how smart contracts support programmable monetization, token-based incentives, and verifiable content ownership. To provide a structured comparison, Table 1 summarizes key differences in governance models, smart contract functions, and their implications for entrepreneurs across selected platforms.

As shown in Table 1, while these mechanisms enhance transparency and automation, their effectiveness varies depending on governance design, technical accessibility, and platform maturity. Despite these advantages, smart contracts remain limited in representing complex business relationships, and coding errors may introduce significant operational risks.

Table 1. Comparative Overview of Blockchain-Based Social Media Platforms

Platform	**Governance Model**	**Smart Contract Function**	**Benefit**	**Risk**
Steemit	Token-based voting	Content reward distribution	Direct monetization for creators	Token concentration and manipulation
Lens Protocol	Decentralized social graph	Ownership and programmable monetization	Full ownership of content and identity	UX complexity and early adoption issues
Minds	Hybrid (centralized + token)	Token rewards and content boosting	Easy onboarding with familiar interface	Partial centralization and limited transparency
Mirror.xyz	DAO-based publishing	Crowdfunding and NFT monetization	Alternative funding and revenue models	Regulatory uncertainty and legal ambiguity

As shown in Table 1, differences in governance models and smart contract configurations lead to distinct entrepreneurial outcomes. Platforms such as Steemit emphasize token-based participation, which can enhance monetization opportunities but also introduce risks of power concentration. In contrast, Lens Proto-

col prioritizes content ownership and interoperability, offering greater control over digital assets while facing usability and adoption challenges. Hybrid models like Minds provide easier onboarding but retain elements of centralization, limiting transparency. These variations indicate that the effectiveness of blockchain-based platforms is contingent upon the alignment between governance design, technical accessibility, and the specific needs of entrepreneurs, rather than representing a universally superior alternative.

4.3. Opportunities and Limitations

The implementation of blockchain governance and smart contracts offers opportunities for social media entrepreneurs, including enhanced autonomy through participatory governance, improved transparency in value distribution, and expanded market reach without reliance on centralized intermediaries. Under certain conditions, these mechanisms may also support business sustainability and strengthen trust within digital ecosystems.

However, these benefits are accompanied by significant limitations. Scalability constraints, regulatory uncertainty, and technical complexity may hinder adoption, particularly for small-scale entrepreneurs. High implementation costs, usability barriers, and security vulnerabilities in smart contract code further increase operational and financial risks.

As a counter argument, not all social media entrepreneurs require decentralization. In some contexts, centralized platforms provide greater efficiency, usability, and legal certainty. Moreover, token-based mechanisms and technical requirements may create new inequalities, favoring those with greater resources and digital literacy. Therefore, blockchain governance and smart contracts should be viewed as contextual alternatives rather than universal solutions.

To enhance practical relevance, this study complements Table 2 with illustrative implementation scenarios from blockchain-based platforms. Examples such as Steemit and Lens Protocol demonstrate how governance participation, token incentives, and automated revenue distribution can be operationalized, linking conceptual mechanisms to real-world applications.

Table 2. Blockchain-Based Mechanisms for Social Media Entrepreneurs

Mechanism	**Core Function**	**Impact on Entrepreneurs**	**Opportunities**	**Limitations**
DAO-based governance	Collective decision-making	Enhances participation and entrepreneurial autonomy	Transparency and shared ownership	Risk of dominance by large token holders
Token-based participation	Incentive provision and voting rights	Alignment of stakeholder interests	Encourages active contribution	Unequal token distribution
Community-based moderation	Rule-based and transparent moderation	Greater policy predictability for content creators	Accountability and perceived fairness	Decision-making processes may lack efficiency
Smart contracts (revenue distribution)	Automated revenue allocation	Transparency and certainty in income flows	Reduced dependence on centralized platforms	Code errors are difficult to amend
Smart contracts (IP and licensing)	Copyright protection and royalty management	Safeguarding digital entrepreneurial assets	Sustainable content monetization	Legal enforceability remains uncertain

As summarized in Table 2, blockchain governance and smart contracts provide an alternative institutional framework that can strengthen entrepreneurs' positions through increased transparency and autonomy. However, these benefits are uneven and highly dependent on governance design, technical accessibility, and regulatory conditions. Risks such as token concentration, system complexity, and legal uncertainty suggest

that decentralization is not universally advantageous. Therefore, the adoption of these mechanisms should be understood as a contextual strategic choice, requiring inclusive design to prevent new forms of inequality in social media entrepreneurship.

These patterns indicate that while governance and smart contract mechanisms can enhance transparency, participation, and asset control, they simultaneously introduce trade-offs related to power concentration, technical complexity, and legal uncertainty. As a result, their effectiveness is contingent upon how well these mechanisms are aligned with platform design, user capabilities, and the broader regulatory environment.

5. MANAGERIAL IMPLICATIONS

5.1. Theoretical Implications

The findings and discussion of this study provide theoretical implications for the understanding of entrepreneurship within the platform economy. First, social media entrepreneurship can no longer be understood solely as an individual economic activity that depends on centralized platform infrastructure, but rather as a practice that is directly shaped by the design of governance structures and digital institutional mechanisms. In this context, blockchain governance repositions governance as an entrepreneurial resource, in which access to decision making processes, value distribution rules, and incentive mechanisms contributes to shaping entrepreneurs' capacity and autonomy. Accordingly, this study extends the platform entrepreneurship literature by emphasizing the role of governance and smart contracts as structural factors that mediate the relationship between entrepreneurs and platforms.

5.2. Practical Implications

From a practical perspective, this study proposes several measurable technical recommendations for social media entrepreneurs and platform developers. First, platform architectures should incorporate DAO-based governance modules with defined participation thresholds (e.g., minimum token holdings or reputation scores) to ensure inclusive yet controlled decision-making. Second, smart contract systems should implement verifiable revenue distribution schemes with transparent audit trails, where transaction records can be publicly accessed and validated. Third, usability benchmarks such as transaction latency, user onboarding time, and interface simplicity should be optimized to reduce technical barriers for non-expert users.

5.3. Policy and Regulatory Implications

From a policy perspective, more specific and operational regulatory recommendations are required to support responsible adoption. Regulators should establish clear legal recognition frameworks for smart contracts, including enforceability standards and dispute resolution mechanisms. In addition, policy guidelines should define measurable compliance indicators, such as transparency requirements for token distribution, minimum disclosure standards for governance rules, and security auditing obligations for smart contract deployment. Regulatory sandboxes may also be implemented to test blockchain-based social media platforms under controlled conditions before large-scale adoption.

6. CONCLUSION

While blockchain governance and smart contracts offer strategic value, their applicability depends on specific contextual and operational conditions. To enhance practical utility, this study proposes a decision-oriented framework for evaluating when smart contracts are preferable to centralized contractual mechanisms. Key decision criteria include trust minimization, transaction transparency, automation complexity, cost sensitivity, scalability requirements, and regulatory certainty. These considerations align with global development priorities, particularly SDGs 8, 9, and 16.

From this perspective, smart contracts are most suitable in environments characterized by multi-party coordination, low trust among actors, and a high demand for transparent and automated execution. In contrast, centralized mechanisms may be more appropriate in contexts requiring high throughput, low transaction costs, strong legal enforceability, and centralized control over data and dispute resolution. To operationalize this evaluation, a governance typology is introduced, distinguishing between fully decentralized, hybrid, and centralized models, each presenting trade-offs in terms of control, efficiency, transparency, and adaptability.

This study is subject to several limitations. As a conceptual analysis, it lacks empirical validation and relies on secondary data, which may not fully capture real-world implementation dynamics. Future research

is encouraged to conduct empirical and case-based studies to validate the proposed framework across diverse platform contexts. These findings contribute to sustainable digital ecosystem development in line with SDGs 8 (Decent Work and Economic Growth), SDGs 9 (Industry, Innovation and Infrastructure), and SDGs 16 (Peace, Justice and Strong Institutions).

7. DECLARATIONS

7.1. About Authors

Kanon Mommsen Wongkar (KM) https://orcid.org/0000-0002-5594-5541
Triananda Fajar Satriawan (TF) https://orcid.org/0009-0005-3720-1353
Nuke Puji Lestari Santoso (NP) https://orcid.org/0000-0002-4414-2102
Noah Rangi (NR) https://orcid.org/0009-0004-6616-956X

7.2. Author Contributions

Conceptualization: KM, TF, and NP; Methodology: NP; Software: NR; Validation: KM and TF; Formal Analysis: NP and KM; Investigation: NR; Resources: NR; Data Curation: KM; Writing Original Draft Preparation: KM and TF; Writing Review and Editing: NP; Visualization: NR; All authors, KM, TF, NP, and NR, 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.

7.4. Funding

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.

REFERENCES

[1] I. A. G. Saputra, L. F. Panduwinata, S. Susanti, and S. S. Wulandari, "The role of social media in digital entrepreneurship growth: Trends and future directions," *International Journal of Economics, Commerce and Management*, vol. 2, no. 1, pp. 124–140, 2024.
[2] C. Fernandes, R. Pires, and M.-C. Gaspar Alves, "Digital entrepreneurship and sustainability: The state of the art and research agenda," *Economies*, vol. 11, no. 1, p. 3, 2022.
[3] E. Arif, S. Suherman, and A. P. Widodo, "Analyzing public sentiment on digital banks in indonesia via social media x," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 8, no. 1, pp. 253–267, 2026.
[4] R. F. Ciriello, J. Marx, M. Cheong, C. Mueller-Bloch, and L. Mathiassen, "Decentralized social media: Rf ciriello et al," *Business & Information Systems Engineering*, vol. 68, no. 1, pp. 219–234, 2026.
[5] T. Hödl and T. Myrach, "Content creators between platform control and user autonomy: T. hödl, t. myrach," *Business & Information Systems Engineering*, vol. 65, no. 5, pp. 497–519, 2023.
[6] O. A. D. Wulandari, D. Apriani *et al.*, "Sustainable institutional entrepreneurial culture and innovation for economic growth," *APTISI Transactions on Management*, vol. 7, no. 3, pp. 221–230, 2023.
[7] T. D. Oesterreich, E. Anton, F. M. Hettler, and F. Teuteberg, "What drives individuals' trusting intention in digital platforms? an exploratory meta-analysis," *Management Review Quarterly*, vol. 75, no. 4, pp. 3615–3667, 2025.
[8] H. Hastuti, H. F. Maulana, H. Lawelai, and A. Suherman, "Algorithmic influence and media legitimacy: a systematic review of social media's impact on news production," *Frontiers in Communication*, vol. 10, p. 1667471, 2025.
[9] M. Pineda, D. Jabba, and W. Nieto-Bernal, "Blockchain architectures for the digital economy: trends and opportunities," *Sustainability*, vol. 16, no. 1, p. 442, 2024.

[10] E. Erika, R. T. H. Safariningsih, D. Cahyono, and N. Rangi, "Strategic integration of cloud cybersecurity for resilient digital business transformation," *ADI Journal on Recent Innovation*, vol. 7, no. 1, pp. 112–124, 2025.

[11] F. Alzhrani, K. Saeedi, and L. Zhao, "Architectural patterns for blockchain systems and application design," *Applied Sciences*, vol. 13, no. 20, p. 11533, 2023.

[12] B. Shrimali and H. B. Patel, "Blockchain state-of-the-art: architecture, use cases, consensus, challenges and opportunities," *Journal of King Saud University-Computer and Information Sciences*, vol. 34, no. 9, pp. 6793–6807, 2022.

[13] F. A. Ogedengbe and M. O. Adelowotan, "Revolutionising corporate governance: blockchain's transformative impact and potential," *Frontiers in Blockchain*, vol. 8, p. 1654633, 2025.

[14] A. Seira, J. Allen, C. Watsky, and R. Alley, "Governance of permissionless blockchain networks: Implications for digital platforms and creator economies," Board of Governors of the Federal Reserve System (Federal Reserve), Washington, D.C., USA, FEDS Notes 2024-02-09, 2024. [Online]. Available: https://www.federalreserve.gov/econres/notes/feds-notes/governance-of-permissionless-blockchain-networks-20240209.html

[15] M. Satiadharma, S. Suryana, A. Rahayu, and L. A. Wibowo, "A bibliometric analysis of social media and entrepreneurship research," in *8th Global Conference on Business, Management, and Entrepreneurship (GCBME 2023)*. Atlantis Press, 2024, pp. 1231–1238.

[16] J. Chen and L. Liu, "Social media usage and entrepreneurial investment: An information-based view," *Journal of Business Research*, vol. 155, p. 113423, 2023.

[17] E. Dollan, B. D. K. Ramadhan *et al.*, "Assessing the outcomes of circular economy and waste management partnerships between indonesia and denmark," *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, vol. 5, no. 1, pp. 76–83, 2023.

[18] J. Park, S. Eom, E. Choi, J. Park, and S. Kim, "Rethinking commerciality: How content commerciality contributes to youtube beauty content performance," *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 21, no. 4, p. 118, 2026.

[19] M. Q. Mei and C. Genet, "Social media entrepreneurship: A study on follower response to social media monetization," *European Management Journal*, vol. 42, no. 1, pp. 23–32, 2024.

[20] L. Barratt-Pugh, F. Zhao, Y. Suseno, J. Redmond, and P. Standen, "Capitalising on the social interactional nature of digital entrepreneurship: An agenda for digital entrepreneurs," *The Journal of Entrepreneurship*, 2026.

[21] S. Yu and T. Sekiguchi, "Platform-dependent entrepreneurship: A systematic review," *Administrative Sciences*, vol. 14, no. 12, p. 326, 2024.

[22] A. Suherman, "The algorithmic trap: how social media monetization undermines investigative journalism in local media," *Frontiers in Communication*, vol. 10, p. 1619367, 2025.

[23] S. Lewandowsky, R. E. Robertson, and R. DiResta, "Challenges in understanding human-algorithm entanglement during online information consumption," *Perspectives on Psychological Science*, vol. 19, no. 5, pp. 758–766, 2024.

[24] F. A. Burnat and B. I. Davidson, "The accountability paradox: How platform api restrictions undermine ai transparency mandates," *arXiv preprint arXiv:2505.11577*, 2025.

[25] S. Pratama and L. A. M. Nelloh, "Leveraging influencer marketing in higher education: Key roles, sectors, platforms, and influencer types for institutional branding," *Startupreneur Business Digital (SABDA Journal)*, vol. 4, no. 2, pp. 134–145, 2025.

[26] H. Purwanto, H. I. S. Adi, H. S. Astuty, S. Suwarno, R. Rohmat, and S. A. Sair, "Synergy of digitalization and sustainability: A green business model for msmes in the era of industry 5.0," *JPEKA: Jurnal Pendidikan Ekonomi, Manajemen dan Keuangan*, vol. 9, no. 2, pp. 129–144, 2025.

[27] C. D. Morar, D. E. Popescu, O. C. Novac, and D. Ghiurău, "Rethinking blockchain governance with ai: The voppa framework." *Computers (2073-431X)*, vol. 14, no. 10, 2025.

[28] C. A. Lee, K. Chow, H. A. Chan, and D. P.-K. Lun, "Decentralized governance and artificial intelligence policy with blockchain-based voting in federated learning," *Frontiers in Research Metrics and Analytics*, vol. 8, p. 1035123, 2023.

[29] C. S. B. Bangun, D. P. Riskhandini, and N. Lyraa, "Blockchain governance models for enhancing e-commerce user satisfaction," *Blockchain Frontier Technology*, vol. 4, no. 2, pp. 72–83, 2025.

[30] T. D. Monteiro, O. P. Sanchez, and G. H. S. M. d. Moraes, "Exploring off-chain voting and blockchain

in decentralized autonomous organizations," *RAUSP Management Journal*, vol. 59, no. 4, pp. 335–349, 2024.

[31] S. Kosasi, U. Rahardja, I. D. A. E. Yuliani, R. Laipaka, B. Susilo, and H. Kikin, "It governance: Performance assessment of maturity levels of rural banking industry," in *2022 4th International Conference on Cybernetics and Intelligent System (ICORIS)*. IEEE, 2022, pp. 1–6.

[32] J. Saesen, B. Kindermann, D. Abel, and S. Strese, "The power of governance: A study on the relationship between on-chain dao governance and token performance," *Journal of Information Technology*, vol. 41, no. 1, pp. 15–36, 2026.

[33] M. M. Piyarisi and T. Shalpegin, "Incentives in decentralised autonomous organisations," *International Journal of Production Economics*, vol. 280, p. 109472, 2025.

[34] R. Wahdiniwaty, S. Pranata, and N. Komara, "Entrepreneurial technology resilience mediates entrepreneurial marketing on business performance in batik msmes," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 7, no. 3, pp. 835–847, 2025.

[35] J. Messias, V. Pahari, B. Chandrasekaran, K. P. Gummadi, and P. Loiseau, "Understanding blockchain governance: Analyzing decentralized voting to amend defi smart contracts," *arXiv preprint arXiv:2305.17655*, 2023.

[36] R. Fritsch, M. Müller, and R. Wattenhofer, "Analyzing voting power in decentralized governance: Who controls daos?" *Blockchain: Research and Applications*, vol. 5, no. 3, p. 100208, 2024.

[37] H. Taherdoost, "Smart contracts in blockchain technology: A critical review," *Information*, vol. 14, no. 2, p. 117, 2023.

[38] N. Ayadi, S. A. Hussain, A. Deen, A. Ullah, D. N. Hakro, M. Babar, M. A. Jariko, A. Al Farsi, and A. Hussain, "A blockchain-enabled smart contract architecture for enhancing transparency, traceability, and trust in global supply chain management," *Computers*, vol. 15, no. 3, p. 198, 2026.

[39] H. Guo and X. Liu, "Exploring trust dynamics in finance: The impact of blockchain technology and smart contracts," *Humanities and Social Sciences Communications*, vol. 12, no. 1, pp. 1–10, 2025.

[40] T. Pujiati, M. Kamil, N. Silawati, and R. S. Ikhsan, "Integrating ai-driven predictive analytics and smart contracts for data-driven supply chain risk management," *ADI Journal on Recent Innovation*, vol. 7, no. 1, pp. 50–61, 2025.

[41] V. P. Fidalgo, "Blockchain (s), smart contracts and intellectual property," in *International Conference on Autonomous Systems and the Law*. Springer, 2022, pp. 295–319.

[42] I. Qasse, I. M. Ali, N. Ahmed, M. Hamdaqa, and B. . Jónsson, "The myth of immutability: A multivocal review on smart contract upgradeability," *arXiv preprint arXiv:2504.02719*, 2025.

[43] H. Chu, P. Zhang, H. Dong, Y. Xiao, S. Ji, and W. Li, "A survey on smart contract vulnerabilities: Data sources, detection and repair," *Information and Software Technology*, vol. 159, p. 107221, 2023.

[44] S. Pranata, F. Fanani, D. Hidayati, R. Lesmana, and Z. Ndlovu, "Implementation of smart contracts in tiktok influencer marketing," *Blockchain Frontier Technology*, vol. 4, no. 2, pp. 84–97, 2025.

[45] O. F. Al Mashhour, A. S. Abd Aziz, and N. A. M. Noor, "Legal and regulatory aspects of smart contracts: A systematic review," *Eurasian Journal of Management & Social Sciences*, vol. 4, no. 2, pp. 156–172, 2023.

[46] A. S. Khalifa and N. S. Samad, "Smart contracts and the challenges of conflict of laws in digital space," *Indonesian Journal of Law and Economics Review*, vol. 20, no. 4, pp. 10–21 070, 2025.

[47] F. Baso, D. U. Yusuf, A. N. M. Djaoe, I. Iswandi, and A. Ramadhany, "The overview of smart contract: Legality and enforceability," *Dialogia Iuridica*, vol. 16, no. 1, pp. 096–111, 2024.

[48] U. Rahardja, Q. Aini, D. Manongga, I. Sembiring, and I. D. Girinzio, "Implementation of tensor flow in air quality monitoring based on artificial intelligence," *International Journal of Artificial Intelligence Research*, vol. 6, no. 1, 2023.

[49] M. Esposito, T. Tse, and D. Goh, "Decentralizing governance: exploring the dynamics and challenges of digital commons and daos," *Frontiers in Blockchain*, vol. 8, p. 1538227, 2025.

[50] Z. Liu, W. Feng, Y. Zhang, and C. Zhu, "Research on the architecture of transactional smart contracts based on blockchains," *Electronics*, vol. 12, no. 18, p. 3923, 2023.