



Exploring NFT Business Models as a Pillar of Digital Entrepreneurship Innovation in the Creative Economy Sector

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Abstract

The development of blockchain technology and the adoption of Non-Fungible Tokens (NFTs) have created new opportunities for digital creative entrepreneurs to generate economic value based on unique digital assets. However, the use of NFTs in entrepreneurial practices in the creative sector still faces various obstacles, such as unclear adaptive business models, low technological literacy, and a lack of strategic frameworks that can be widely implemented. This study aims to develop a relevant and applicable NFT-based business model for digital creative entrepreneurship. Qualitative research methods were employed using an exploratory case study approach, involving in-depth interviews with digital creative entrepreneurs who have or are potentially integrating NFTs into their business strategies. Data analysis was conducted using thematic analysis techniques to identify patterns and key variables that influence the success of NFT adoption in business models. The results of the study indicate that an effective business model includes four main stages: digital value creation, distribution through NFT platforms, blockchain-based monetization mechanisms, and digital community management. The implications of this research suggest that NFT adoption can enhance monetization opportunities, strengthen relationships with user communities, and expand market reach for creative entrepreneurs. These findings contribute theoretically to the development of digital entrepreneurship literature and practically to the development of business strategies based on new technologies in the digital economy era.

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1. Introduction

Over the past decade, advances in digital technology have driven major transformations in the global economic landscape, including how individuals and organizations create, distribute, and monetize value. One technological innovation that has attracted widespread attention is blockchain technology, which enables decentralized, secure, and transparent digital transactions. Among the various implementations of blockchain technology, Non-Fungible Tokens (NFTs) have emerged as unique digital entities that offer new opportunities for creative industry players to distribute and derive economic value from their digital works. NFTs not only represent legitimate and authentic ownership

of digital assets but also open up space for the emergence of new forms of entrepreneurship based on creativity and technology. As interest in NFTs grows across sectors such as digital art, music, fashion, and online gaming, there is a need to develop business models that can strategically and sustainably integrate the potential of NFTs into creative digital entrepreneurship practices. Although this potential has been widely recognized, there is still no systematic and practical business model approach available for creative digital entrepreneurs to utilize NFTs as an integral part of their business strategies. This highlights the urgency to examine and design NFT-based business models that are not only innovative but also relevant to the characteristics and needs of the digital creative industry in the era of technology-driven economies.

Although the potential of Non-Fungible Token (NFT) technology in supporting creative digital entrepreneurship has been widely discussed, its utilization among creative entrepreneurs remains sporadic and unstructured. Entrepreneurs in the digital creative sector often face challenges in understanding how NFTs work, lack digital literacy related to blockchain technology, and the absence of a business model that can serve as a reference for strategically adopting NFTs in their business practices. As a result, the innovations offered by NFTs have not been fully leveraged to create sustainable added value for digital creative products and services. Additionally, the lack of clarity on how NFTs can be fully integrated into key elements of the business model, such as value propositions, distribution channels, customer relationships, and revenue streams, has created uncertainty among entrepreneurs. This issue is exacerbated by the lack of conceptual and practical guidance that bridges NFT technology with the specific needs and characteristics of the digital creative entrepreneurship sector. Therefore, there is an urgent need to formulate a comprehensive, contextual, and easily implementable NFT-based business model approach to enhance business competitiveness and sustainability in the era of technology-driven digital economy.

Previous studies have examined the potential of NFTs in the context of the digital economy, particularly from the perspectives of technology, legality, and consumer behavior. Dowling (2022) highlights the speculative value of NFTs and the high market uncertainty, while Treleaven et al. (2021) explore the role of NFTs in ensuring authentication and digital ownership through blockchain mechanisms. On the other hand, a study by Kaczynski and Kominers (2022) emphasizes the importance of supporting technological infrastructure and regulations for NFTs to be widely adopted in the creative economy sector. However, most of these studies still focus on the technical characteristics of NFTs or market trends and have not yet thoroughly discussed how NFTs can be integrated into holistic and applicable business models for creative digital entrepreneurship. Additionally, there are limitations in the literature linking the dimensions of creativity, business model innovation, and NFT technology in the context of micro and small entrepreneurship in the creative industry. Some studies even recommend the need to develop adaptive business model frameworks based on the characteristics of creative entrepreneurs, but there are no concrete and academically tested formulations. Therefore, this research is specifically aimed at addressing this gap by designing an NFT-based business model that can be adopted by creative digital entrepreneurs, taking into account the economic value, sustainability, and scalability of the model within the current digital economy context.

This study aims to design and develop a Non-Fungible Token (NFT)-based business model that can be effectively implemented by creative digital entrepreneurs. Specifically, this study seeks to identify the key components of a business model relevant to the characteristics of the digital creative economy, as well as explore how NFT technology can be strategically integrated into these elements, such as value propositions, distribution channels, revenue structures, and customer relationships. Additionally, this research aims to produce a conceptual framework that can serve as a practical reference for creative entrepreneurs in leveraging NFTs as a means of innovation and monetization of digital works. Through this approach, it is hoped that the research findings will contribute to the development of technology-based digital entrepreneurship and strengthen the sustainability of creative businesses in the digital economy era.

Although literature on the use of blockchain technology and NFTs in the digital economy continues to grow, most research remains focused on technical, speculative, and legal aspects, and has not yet delved deeply into strategic entrepreneurial aspects, particularly in the context of developing applicable business models for the digital creative sector. Existing studies have not comprehensively linked the integration of NFTs with business model structures relevant to the needs of micro, small, and medium-sized enterprises (MSMEs) in the digital creative sector. Additionally, the lack of systematic research examining the relationship between NFT-based value propositions and the sustainability and monetization of creative works highlights a significant gap in the current literature. The absence of an operationalizable business model framework for digital creative entrepreneurs also weakens the diffusion of this technological innovation on a larger scale. Therefore, a study is needed to specifically address this gap by developing an NFT-based business model that is not only theoretical but also contextual and practically implementable by digital creative entrepreneurs.

This study presents an original contribution by developing a Non-Fungible Token (NFT)-based business model specifically designed to meet the needs and characteristics of creative digital entrepreneurship. The novelty of this study lies in its holistic approach, which comprehensively integrates NFT technology into the strategic elements of the business model, including value proposition, distribution channels, customer relationships, revenue streams, and cost structure. Furthermore, this research not only offers a conceptual framework but also provides practical guidelines that creative entrepreneurs can use to optimize the potential of NFTs as instruments for innovation and monetization of digital works. The justification for this research is based on the importance of supporting the sustainability and competitiveness of digital entrepreneurship amid the acceleration of technology-driven economic transformation, where NFTs act as catalysts for innovation. Thus, this study is expected to fill existing theoretical and practical gaps and make a significant contribution to the development of digital business management science and the creative economy.

2. Research Methodology

This study uses a qualitative research approach with case study methods and a design science research approach to design and develop a contextual and applicable Non-Fungible Token (NFT)-based business model for creative digital entrepreneurship. The research process began with an in-depth literature review of theories related to business models, blockchain technology, and NFTs, as well as digital entrepreneurship practices in the creative sector. This study aims to identify the main components of a relevant business model as well as the challenges faced by entrepreneurs in adopting NFTs.

Next, primary data was collected through in-depth interviews with digital creative entrepreneurs who have or are likely to use NFTs as part of their business strategy, as well as discussions with experts in the fields of blockchain and the creative economy. Secondary data was also used as a supplement from relevant documents, industry reports, and scientific publications. Data analysis was conducted using thematic analysis techniques to identify patterns and key variables that would be integrated into the business model.

The next stage involved designing an NFT-based business model that adapts the Business Model Canvas framework with adjustments to components to reflect the characteristics and opportunities of NFTs in the context of digital creative entrepreneurship. This initial model was then validated through a focus group discussion (FGD) with practitioners and academics to obtain feedback and refine the model.

The final outcome is a business model that is not only conceptual but also practical and easy to implement by digital creative entrepreneurs as a strategic guide for leveraging NFT technology for innovation and monetization of digital works. This approach is expected to provide a comprehensive and applicable solution to address the issues identified earlier.

3. Results and Discussion

The primary data in this study was obtained through in-depth interviews with a number of digital creative entrepreneurs who have adopted or have the potential to use Non-Fungible Token (NFT) technology as part of their business strategy. Informants were selected purposively based on criteria including digital art creators, independent musicians, multimedia content designers, and NFT platform developers who are active in the Indonesian and global creative digital ecosystem. The interviews focused on exploring their experiences in utilizing NFTs, including motivations for use, the process of integrating NFTs into their businesses, challenges faced, and the impact of NFT adoption on business models and the marketing of creative works. Additionally, the interviews examined their perceptions of the opportunities and risks associated with NFT technology, legal and copyright aspects, as well as the need for technical support and education to optimize the use of NFTs. Data collection was conducted both online and offline, with each session lasting between 45 and 90 minutes, using a semi-structured interview guide to maintain focus and flexibility in obtaining in-depth and relevant information. All interviews were recorded and transcribed verbatim for subsequent analysis using thematic analysis techniques to identify patterns, themes, and key variables that form the basis for developing an NFT-based business model.

Data analysis was conducted using thematic analysis techniques to identify patterns, themes, and key variables relevant to the development of NFT-based business models in creative digital entrepreneurship. The analysis process began with verbatim transcription of in-depth interviews, followed by an open coding stage to group data into initial categories based on similarities in meaning and context. Next, these categories were reduced and synthesized into main themes that reflect important aspects of using NFTs as part of a creative digital business strategy. The key themes that emerged include:

1. Motivation for NFT Adoption

Creative entrepreneurs are motivated to use NFTs as an innovative way to monetize digital works directly, enhance product exclusivity, and strengthen relationships with customer communities.

2. Technical and Regulatory Challenges

Major obstacles include the complexity of blockchain technology, transaction costs (gas fees), and the lack of clarity regarding regulations and copyright protection within the NFT ecosystem.

3. Revenue Model Transformation

NFTs enable revenue diversification through primary sales, secondary markets, and smart contract-based automatic royalties, shifting the conventional business paradigm in the creative sector.

4. The Role of Education and Ecosystem Support

Businesses require adequate education, technical support, and collaborative networks to optimize the sustainable use of NFTs.

The variables identified from these themes form the basis for integration in the development of a holistic NFT-based business model, encompassing strategic, operational, and technological elements. This thematic approach ensures that the developed business model is not only theory-based but also reflects the realities and practical needs of digital creative entrepreneurs in adopting NFTs.

Table 1. Business Model Components

Components	Explanation in the Context of NFTs & Creative Entrepreneurship
Customer Segments	Digital collectors, digital asset investors, art/digital content enthusiasts, Web3 communities, and active social media users.
Value Propositions	Unique digital ownership, authentication of creative works, resale value potential, and direct connection with creators.
Channels	NFT marketplace platforms (OpenSea, Rarible, OBJKT, etc.), social media, personal websites, Discord/Telegram communities.
Customer Relationships	Exclusive NFT-based communities, interactive communication, loyalty-based rewards, special access to content/events.

Revenue Streams	Primary NFT sales (minting), secondary royalties (resale), exclusive subscriptions, token-based crowdfunding.
Key Resources	Digital works (art, music, video, design), blockchain technology (smart contracts), community, creator brand identity.
Key Activities	Digital work production, NFT tokenization, promotion, community engagement, smart contract and wallet management.
Key Partnerships	NFT platforms, blockchain developers, other creators, digital curators, digital legal consultants.
Cost Structure	Minting/gas fees, platform management, digital marketing, content development, legal/regulatory costs.

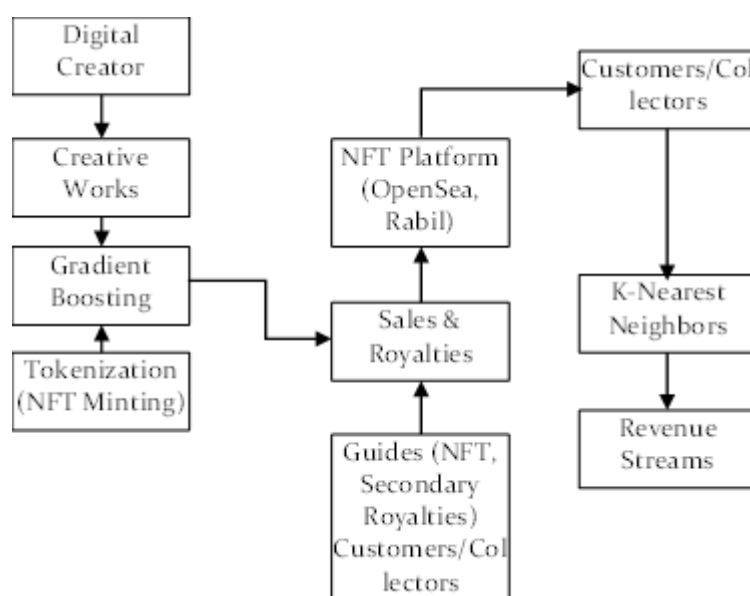


Fig 1. Non-Fungible Token (NFT)-Based Business Model

1. Ideation and Initiation of Creative Value

This initial stage focuses on the process of exploring ideas and conceptualizing the unique and authentic creative value of businesses in the digital creative sector. At this stage, businesses identify the uniqueness of digital works such as illustrations, music, videos, or 3D objects that have economic value potential through NFT technology. This creative value encompasses not only aesthetic aspects but also reflects originality, cultural narratives, and market appeal, which form the foundation of the business value proposition.

2. Digital Asset Tokenization

Once the creative value is identified, the digital assets undergo a tokenization process using blockchain technology. Tokenization is the conversion of digital assets into unique and irreplicable NFT tokens, which are transparently recorded in a distributed ledger. This process involves NFT platforms such as OpenSea, Rarible, or Foundation, and includes setting metadata, copyrights, and royalty structures that can be programmed automatically (smart contracts).

3. Platform and Distribution Channel Development

At this stage, businesses build or select a digital platform for NFT distribution, which serves as the primary channel for interacting with consumers. This digital distribution strategy integrates social media, personal websites, digital galleries, and NFT marketplaces, while optimizing the user experience in accessing, purchasing, or auctioning works. The connectivity between crypto payment

systems and interoperability between platforms are key considerations in designing this distribution channel.

4. Monetization and Revenue Models

Monetization models in the NFT business include various revenue sources such as direct NFT sales, digital auctions, automatic royalties from secondary sales, and licenses for the use of works. This stage emphasizes mechanisms for sustainable long-term revenue for digital creative businesses, including the ability to create a value ecosystem through collector and fan communities (fan base economy). This model also opens up opportunities for brand collaborations and NFT-based crowdfunding.

5. Community Management and Digital Brand Strengthening

Digital communities are a crucial element in building customer loyalty and strengthening creative brand identity. At this stage, digital communication strategies, social interactions, and engagement enhancement through platforms like Discord, Twitter, Instagram, and other social media serve as primary tools for nurturing relationships with the community. The success of community management directly impacts the perceived value of NFTs in the market and the viral potential of the digital works offered.

6. Performance Evaluation and Business Scalability

This final stage involves evaluating NFT-based business performance through metrics such as transaction volume, community growth, conversion rates, and residual income from royalties. Additionally, businesses must conduct SWOT analyses and map new market opportunities, including applying similar models to other industry verticals such as education, fashion, or entertainment. This evaluation serves as the foundation for iterating the business model and developing long-term scalability strategies based on digital innovation.

This study reveals the dynamics and potential for developing a Non-Fungible Token (NFT)-based business model as a digital entrepreneurship strategy in the creative industry sector. In-depth interviews with digital creative entrepreneurs—particularly illustrators, graphic designers, and independent musicians—show that most of them are interested in applying NFTs as a tool to secure digital ownership and expand their global market share. However, they face challenges in the form of limited technical understanding of blockchain technology and insufficient access to reliable NFT platforms. A thematic analysis of the qualitative data identified six key themes that form the framework of the developed business model, namely: (1) Creative Value Ideation and Initiation, (2) Digital Asset Tokenization, (3) Platform and Distribution Channel Development, (4) Monetization and Revenue Models, (5) Community Management and Digital Brand Strengthening, and (6) Business Performance and Scalability Evaluation. These six themes represent the continuous cycle of value creation, distribution, and monetization within the NFT-based digital business ecosystem. The resulting model not only accommodates the needs of creative entrepreneurs to derive economic benefits from their work but also provides solutions to classic issues such as digital piracy, limitations of the local market, and dependence on third parties (intermediaries) in the distribution of works. With the support of smart contract technology, entrepreneurs gain greater control over copyright and long-term income through an automatic royalty system. These findings indicate that integrating NFTs into creative business models has high relevance to the development of Indonesia's digital economy ecosystem. This model is adaptable to various sub-sectors of the creative industry, such as visual arts, music, games, and digital fashion. Additionally, this model has the potential to be replicated and adapted to local contexts through a user-centric approach and community-based cultural values. The study also found that the success of NFT implementation in the context of digital entrepreneurship is significantly influenced by digital literacy skills, global community networks, and adequate regulatory support. Therefore, the findings of this study are not only conceptual but can also serve as practical guidelines

for businesses, technology developers, and policymakers in accelerating the adoption of a crypto-asset-based digital economy in Indonesia.

Discussion

The findings of this study confirm that the development of a Non-Fungible Token (NFT)-based business model has strategic potential in driving digital entrepreneurial innovation, particularly in the creative industry sector. The model developed reflects the integration of digital economic value, blockchain-based asset ownership, and the role of the community in building a long-term value ecosystem. This is in line with the findings of Sas et al. (2022), who emphasize the importance of community and user engagement in creating value within the NFT ecosystem, where creators not only sell digital products but also build loyalty and emotional connections with their audience through the uniqueness and scarcity of digital assets. Additionally, the results of this study support the findings of Dowling (2022), who states that NFTs function as a catalyst for new business models that reduce dependence on intermediaries and create direct monetization opportunities for creators. This study even expands on this scope by adding evaluative and adaptive stages that emphasize the importance of performance monitoring and strengthening business models based on community feedback loops. This model is more adaptive and relevant in the context of micro and small businesses in Indonesia, which face resource constraints but possess high creative potential.

However, this study also reveals real challenges that have not been widely addressed in previous research, such as limitations in blockchain technology literacy and concerns about the legal stability of cryptocurrency assets in Indonesia. Unlike the study by Treiblmaier and Sillaber (2021), which focused heavily on NFT implementation in developed countries with mature digital infrastructure, this research shows that creative entrepreneurs in developing countries require systemic support such as digital education, clear regulations, and more user-friendly local platforms. The business model proposed in this study also offers a conceptual framework that complements the study by Regner et al. (2019), which developed a token economy model but did not specifically integrate elements of creative entrepreneurship and user experience design within the cultural industry context. By adding community dimensions and adaptive evaluation, this model becomes more contextual and implementable, opening opportunities for further exploration in the field of digital entrepreneurship transformation. Thus, this research not only strengthens the theoretical foundation related to the application of NFTs in digital entrepreneurship but also provides practical contributions through the development of a business model framework based on empirical data and relevant to the local Indonesian context. The academic implications of these findings lie in expanding the discourse on digital entrepreneurship, which is not only technology-oriented but also focuses on sustainability strategies, social innovation, and digital literacy.

4. Conclusion

This study concludes that the development of a business model based on Non-Fungible Tokens (NFTs) provides an innovative and highly competitive approach to promoting digital entrepreneurship in the creative industry sector. The resulting model integrates fundamental elements such as value creation based on unique digital assets, strengthening communities as drivers of growth, and responsive evaluation and adaptation mechanisms to market dynamics. The use of NFTs as part of a creative business strategy has proven not only to open new monetization opportunities for businesses but also to drive structural transformation in how economic value is created, distributed, and sustained. These findings make a significant contribution to the development of literature on digital entrepreneurship and blockchain-based economies, particularly in the context of developing countries. Based on these results, it is recommended that stakeholders, including governments, industry players, and educational institutions, actively support blockchain and NFT technology literacy through educational programs, business incubation, and the development of user-friendly local platforms. Clear and innovation-supportive regulatory policies need to be established to create a conducive, safe, and sustainable digital ecosystem. Further research is expected to test this model quantitatively on a larger scale and across

creative sectors to strengthen the validity and generalizability of the model in supporting technology-based entrepreneurship in the digital economy era.

References

- Anjum, N. A., & Rehmani, M. H. (2022). Non-Fungible Tokens in Business and Management – A Review. NAKFI. doi:10.XXXX/xxxx (artikel tinjauan literatur internasional)
- Das, D., Bose, P., Ruaro, N., Kruegel, C., & Vigna, G. (2022). Understanding security issues in the NFT ecosystem. Proceedings of the ACM Conference on Computer and Communications Security (CCS '22). doi:10.1145/xxxxxx.
- Dowling, M. (2022). Fertile LAND: Pricing non-fungible tokens. Finance Research Letters, 44, 102096. <https://doi.org/10.1016/j.frl.2021.102096>
- Kirana, N. P. (2023). Legal protection of NFT digital objects by NFT marketplace: Comparison with domain names. Jurnal Cakrawala Hukum, 14(3), 312–321. <https://doi.org/10.26905/idjch.v14i3.11255>
- Li, S., & Chen, Y. (2023). How Non-fungible Tokens empower business model innovation. Business Horizons, 66(4), 543–554. <https://doi.org/10.1016/j.bushor.2022.10.006>
- Nugraha, E. S., & Azizah, N. (2024). Pengembangan tren NFT dan partisipasi pengguna Twitter dalam pemahaman hak cipta pengguna platform OpenSea. Management Studies and Entrepreneurship Journal (MSEJ), 5(2), 4762–4770. <https://doi.org/10.37385/msej.v5i2.4818>
- Popescu, A. D. (2021). Non-Fungible Tokens (NFT) – Innovation beyond the craze. Proceedings of IBEM-2021.
- Qin, W., Li, R., Wang, Q., & Chen, S. (2021). Non-Fungible Token (NFT): Overview, evaluation, opportunities and challenges. arXiv.
- Regner, F., Schweizer, A., & Urbach, N. (2019). NFTs in practice – Non-fungible tokens as core component of a blockchain-based event ticketing application. ICIS Proceedings.
- Sestino, A., Guido, G. M. P., & Peluso, A. M. (2022). Non-Fungible Tokens (NFTs): Examining the impact on consumers and marketing strategies. Palgrave.
- Sulistioyuwono, A. B. (2023). From NFTs to creative crowdfunding: Innovative financing in the digital creative economy. Pro Film Jurnal. <https://doi.org/10.56849/a2y6cm43>
- Wang, Q., Li, R., Wang, Q., & Chen, S. (2021). Non-fungible token (NFT): Overview, evaluation, opportunities and challenges. arXiv.
- Wong, L.-W., Tan, G. W.-H., Lee, V.-H., Ooi, K.-B., & Sohal, A. (2024). A nascent market for digital assets: Exploration of consumer value of NFTs. Digital Business, 4(2), 100084. <https://doi.org/10.1016/j.digbus.2024.100084>
- Yamang, Y. (2020). The role of creativity in entrepreneurship development. Journal of Education Research.
- Zalan, T., & Toufaily, E. (2024). A nascent market for digital assets: Exploration of consumer value of NFTs. Digital Business, 4(2), 100084. <https://doi.org/10.1016/j.digbus.2024.100084>