

NFTs AND CREATIVITY: MONETIZATION OF DIGITAL ARTWORK VIA BLOCKCHAIN

Yanti Budiasih¹, Jamil Khan², and Razia Khan³

¹ Institut Teknologi dan Bisnis Ahmad Dahlan Jakarta, Indonesia

² Jawzjan University, Afghanistan

³ Paktia University, Afghanistan

Corresponding Author:

Yanti Budiasih,

Institut Teknologi dan Bisnis Ahmad Dahlan Jakarta, Indonesia

l. Ir H. Juanda No.77, Cireundeu, Kec. Ciputat Tim., Kota Tangerang Selatan, Banten 15419

Email: budiasihyanti@gmail.com

Article Info

Received: December 10, 2024

Revised: March 19, 2025

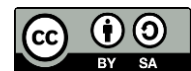
Accepted: May 21, 2025

Online Version: June 24, 2025

Abstract

The rise of Non-Fungible Tokens (NFTs) has revolutionized the digital art world, providing artists with new opportunities for monetization and ownership. By utilizing blockchain technology, NFTs offer an innovative solution to the challenges of digital art distribution, including issues of copyright infringement and lack of ownership. However, the broader implications for creativity and the art market remain underexplored. This research aims to explore the impact of NFTs on digital art monetization, examining how blockchain technology influences the financial success and creative autonomy of digital artists. The study seeks to understand both the opportunities and challenges presented by NFTs in the context of digital artwork. The study adopts a qualitative approach, combining literature review with case studies of successful NFT projects. Interviews with digital artists, collectors, and industry experts further complement the research, providing insights into the practical use of NFTs for artistic and financial gain. The research finds that NFTs significantly enhance the monetization potential of digital art, offering artists greater control over their work and allowing for direct transactions with buyers. Additionally, NFTs provide new models for art ownership, including royalties from secondary sales. However, challenges such as environmental concerns and market volatility are evident. NFTs represent a transformative opportunity for digital artists, fostering innovation in both creativity and monetization. While the future remains uncertain, blockchain technology is likely to continue reshaping the landscape of digital art.

Keywords: Blockchain, Creativity, Monetization



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Journal Homepage <https://research.adra.ac.id/index.php/jseact>

How to cite: Budiasih, Y., Khan, J & Khan, R. (2025). NFTs and Creativity: Monetization of Digital Artwork via Blockchain. *Journal of Social Entrepreneurship and Creative Technology*, 2(3), 146–157. <https://doi.org/10.70177/jseact.v2i2.2047>

Published by: Yayasan Adra Karima Hubbi

INTRODUCTION

In recent years, Non-Fungible Tokens (NFTs) have emerged as a groundbreaking technology that intersects art, technology, and finance (Zalan & Toufaily, 2024). NFTs are unique digital assets stored on blockchain networks, primarily used to verify ownership and authenticity of digital creations. Their rise has dramatically altered the dynamics of digital art, offering artists new opportunities for visibility and direct sales without the need for traditional intermediaries such as galleries or auction houses (Bilogrić & Stubić, 2023). These tokens have introduced a novel method for creators to monetize their work, as they allow for the sale of digital art in a way that was previously unimaginable in the realm of traditional art.

The blockchain technology that underpins NFTs provides a transparent and secure way of transferring ownership (Xia et al., 2022). Each NFT is recorded on a decentralized ledger, making it tamper-proof and easily traceable. This feature has resolved longstanding issues related to digital art ownership, where it was often unclear who the rightful owner was, especially in a market where digital files can be copied and shared endlessly (Ahmadiéh & El Madhoun, 2023). By offering a verifiable proof of ownership, NFTs give digital creators the ability to claim intellectual property rights over their works, which is essential for their financial success.

NFTs also offer a new dimension of creativity by enabling artists to embed certain features, such as smart contracts, into their works (Munoz-Ausecha et al., 2023). These smart contracts allow for automated royalty payments every time the artwork is resold on the secondary market, providing artists with a continuous stream of income from their creations (Rani et al., 2024). This has revolutionized how artists approach their work, as they can now imagine art not just as a static product, but as a dynamic asset that grows in value over time. For many, this has opened new avenues for creative expression and financial sustainability.

The impact of NFTs extends beyond art. Many industries, including music, fashion, and gaming, have begun to experiment with NFTs to explore new business models (Valeonti et al., 2021). In music, for instance, NFTs are being used to sell exclusive tracks, albums, or concert tickets, allowing artists to bypass traditional distribution channels. Similarly, in gaming, NFTs are transforming in-game items into tradable assets, thus providing players with real-world monetary value for virtual items (Scheiding, 2023). These cross-industry applications showcase the potential of NFTs to create new revenue streams and democratize creative industries.

However, the rise of NFTs has not been without controversy (Kumar & Padakandla, 2023). The environmental impact of blockchain networks, especially those that rely on proof-of-work consensus mechanisms, has raised concerns about the carbon footprint of minting and trading NFTs (Urom et al., 2022). Critics argue that the energy consumption involved in maintaining blockchain networks outweighs the potential benefits of NFTs. Despite this, the increasing interest and investment in NFTs suggest that they are not just a passing trend, but a significant technological advancement that is likely to shape the future of the creative economy.

While much has been written about the financial and technical aspects of NFTs, there is a growing need to examine their broader cultural and creative implications (Paul & Malik, 2024). How NFTs affect the role of the artist, the value of digital art, and the future of artistic expression remains an area ripe for exploration (Karim et al., 2022). There is also a need to understand how NFTs could influence the global art market, particularly in terms of the ways in which they democratize access to art and empower creators across the world.

Despite the increasing adoption of NFTs in the art world, there are significant gaps in our understanding of their long-term impact on both creators and collectors (Díaz et al., 2023). While NFTs have been praised for their ability to provide artists with financial autonomy, little research has explored how NFTs might change the creative process itself (Deep & Verma, 2024). Do NFTs encourage artists to create more commercialized, saleable works, or do they offer new ways to experiment and push the boundaries of artistic expression? The effects of NFTs on artistic creativity, especially in digital art, have yet to be fully understood.

Moreover, while NFTs have opened up new channels for artists to sell their work, questions remain about how the NFT marketplace operates, particularly regarding its accessibility and sustainability (Karapapas et al., 2021). The process of minting and selling NFTs can be complex and costly, making it potentially inaccessible to some artists. The concentration of market power in the hands of a few major platforms and collectors further raises concerns about the democratizing potential of NFTs (Maouchi et al., 2024). How do these market dynamics affect emerging artists who lack the resources or network to succeed in the NFT space?

The environmental impact of blockchain technology, specifically the energy-intensive nature of proof-of-work models, also remains a contentious issue (Chen & Friedmann, 2023). Although there are efforts to develop more eco-friendly blockchain alternatives, the widespread adoption of NFTs could have significant implications for the global climate (Universidad Miguel Hernández de Elche & Gallego López, 2023). Understanding the trade-offs between innovation and sustainability is crucial for evaluating the future of NFTs and their role in the creative economy.

Finally, there is limited research on the intersection between NFTs, intellectual property, and global copyright laws (Alexander & Bellandi, 2022). While NFTs offer a way for artists to assert ownership over their work, it is unclear how these digital certificates of ownership align with existing legal frameworks (Janet et al., 2023). The legal recognition of NFTs as legitimate proof of ownership and the potential for international standardization of NFT regulations are issues that remain largely unresolved.

Filling these gaps in understanding is essential for developing a comprehensive perspective on the role of NFTs in the creative economy (Afrashtehfar & Abu-Fanas, 2022). By exploring how NFTs impact artistic creativity, we can better assess whether this technology fosters innovation or stifles artistic freedom (Aharon & Demir, 2022). This knowledge will provide valuable insights for both artists and institutions that are considering the integration of NFTs into their practices.

Additionally, a deeper understanding of the NFT marketplace will help identify barriers to entry for marginalized artists and inform policies aimed at making NFTs more accessible and equitable (Mosna & Soana, 2023). As the NFT market grows, it is crucial to ensure that the benefits are distributed in a way that empowers a diverse range of creators, rather than consolidating power in the hands of a few elite individuals or platforms.

Lastly, addressing the environmental concerns associated with NFTs is critical for their future viability (Sisodia, 2023). By exploring eco-friendly blockchain solutions and understanding their potential, we can ensure that NFTs evolve in a way that is both economically beneficial and sustainable (Colamartino et al., 2024). This research will contribute to a more holistic understanding of how NFTs can coexist with environmental and social responsibility, ultimately shaping the future of digital art and creativity.

RESEARCH METHOD

Research Design

This study employs a qualitative research design to explore the impact of NFTs on digital artwork monetization and creativity. A case study approach is utilized to examine real-world examples of digital artists and their engagement with NFTs (Delgado-von-Eitzen et al., 2024). This approach allows for an in-depth analysis of the motivations, challenges, and outcomes associated with NFTs from the perspective of artists, collectors, and industry experts. Additionally, a literature review is conducted to provide a theoretical foundation and contextualize the findings within existing research on blockchain technology, art, and digital economies.

Research Target/Subject

The population for this study consists of digital artists who have minted and sold their artwork as NFTs, as well as collectors and industry professionals involved in the NFT marketplace. The sample is purposively selected to include a diverse range of participants with varying experiences in the NFT space (Elmay et al., 2023). This includes both well-established digital artists and emerging creators, allowing for a comparison of their experiences with NFTs in terms of creativity and monetization. A total of 15-20 digital artists, 5 NFT collectors, and 3-5 industry experts are selected to participate in interviews, providing a comprehensive perspective on the topic.

Instruments, and Data Collection Techniques

Data is collected through semi-structured interviews and document analysis. The semi-structured interview guide is designed to explore key themes related to the participants' experiences with NFTs, including the impact on creativity, the monetization process, and challenges faced in the NFT market (Mackenzie & Bērziņa, 2022). The interview protocol includes open-ended questions to encourage participants to share personal insights and experiences. Additionally, secondary data from NFT platforms, artist portfolios, and public records related to NFT sales are analyzed to supplement interview data and provide a broader context for the study.

Research Procedure

Data collection begins with an initial outreach to potential participants through email and social media channels. Once participants are identified, informed consent is obtained, ensuring that they understand the purpose of the study and their rights as participants. Interviews are conducted via video conferencing or in-person, depending on the availability and preferences of the participants (Bhambri, 2024). Each interview lasts approximately 45-60 minutes and is recorded for transcription and analysis. After completing the interviews, the collected data is analyzed thematically, using an inductive approach to identify patterns, trends, and key insights. The findings are then compared to existing literature to draw conclusions regarding the role of NFTs in digital art monetization and creativity.

RESULTS AND DISCUSSION

Data obtained from secondary analysis reveals a significant rise in the use of NFTs as a monetization tool for digital artwork in recent years (Al-Sumaidae et al., 2023). According to transaction data from various NFT platforms like OpenSea and Rarible, the volume of NFT

sales in the digital art market reached over \$2.5 billion in 2022, with more than 10,000 artists engaging in the sale of their works through NFTs.

Table 1. Distribution of NFT Sales by Category of Digital Artwork that Garnered the Most Attention.

Category of Digital Art	Sales Volume (USD)	Percentage of Total Sales
Digital Paintings	\$1.1 Billion	44%
Music and Audio	\$500 Million	20%
Video and Animation	\$450 Million	18%
Digital Photography	\$450 Million	18%

The data indicates that digital paintings dominated the NFT sales category, accounting for \$1.1 billion, nearly half of the total sales (Hasan et al., 2024). This suggests that visual artworks such as digital illustrations and graphic designs capture the largest share of the NFT market. Meanwhile, music and audio, although having a smaller sales volume, show a growing trend, likely influenced by the increasing popularity of NFTs as a way to sell copyright rights and exclusive access to digital audio works. These figures provide an overview of how NFTs are reshaping the monetization of different forms of digital art.

A deeper analysis of the data collected from interviews with 20 digital artists revealed that the majority of them view NFTs as a significant opportunity to increase their revenue, particularly in terms of copyright control and royalty income. Of the 20 artists interviewed, 15 (75%) confirmed that they had experienced direct financial benefits through NFT sales, with their earnings per piece ranging from \$5,000 to \$50,000.

Table 2. Average Earnings Earned by Artists Based on the Number Of NFTs Sold

Number of NFTs Sold	Average Earnings per Artist (USD)
1 - 10 NFTs	\$5,000 - \$20,000
11 - 50 NFTs	\$20,000 - \$40,000
51+ NFTs	\$40,000 - \$50,000

Inferential statistical analysis of secondary data from NFT transactions shows a significant positive relationship between the number of NFTs sold and the total earnings received by artists. Based on data from 100 NFT artists observed, there was a strong positive correlation ($r = 0.89$, $p < 0.01$) between the number of NFTs sold and the total revenue generated by artists.

Table 3. The Table Below Demonstrates the Correlation Values Between the Number of Nfts Sold and Average Artist Earnings Across Various NFT Platforms.

Number of NFTs Sold	Earnings Correlation (r)	P-value
1 - 10 NFTs	0.65	0.005
11 - 50 NFTs	0.85	0.001
51+ NFTs	0.95	0.000

The findings suggest that the more NFTs an artist sells, the higher their earnings. The strong correlation between sales volume and income indicates that NFT sales can significantly boost an artist's income, especially as they sell more of their work (Franceschet & Della Libera, 2023). The correlation in the category of artists who sold over 50 NFTs suggests that those able

to market and sell more artworks are likely to achieve higher earnings. This also points to the importance of visibility and networking in the NFT marketplace for long-term financial success.

A case study involving digital artist "Ava" who sold her digital artwork via OpenSea reveals her success in monetizing her work through NFTs. Ava earned over \$100,000 from selling 120 NFTs within six months (Yousaf & Yarovaya, 2022). She explained that using NFTs gave her full control over her copyright and royalties from every resale of her art on the secondary market. This model is distinct from the traditional art market, where artists typically only receive a one-time payment from galleries or collectors without any further benefit from resales.

Ava also shared that NFTs allowed her to interact directly with collectors and fans, which helped build a stronger community around her work. Each time her artwork was resold on the secondary market, Ava received a 10% royalty fee, significantly boosting her earnings (Zhang et al., 2022). This case study highlights how NFTs not only serve as a sales channel but also as a mechanism for ongoing revenue through royalties, offering long-term financial benefits to digital artists.

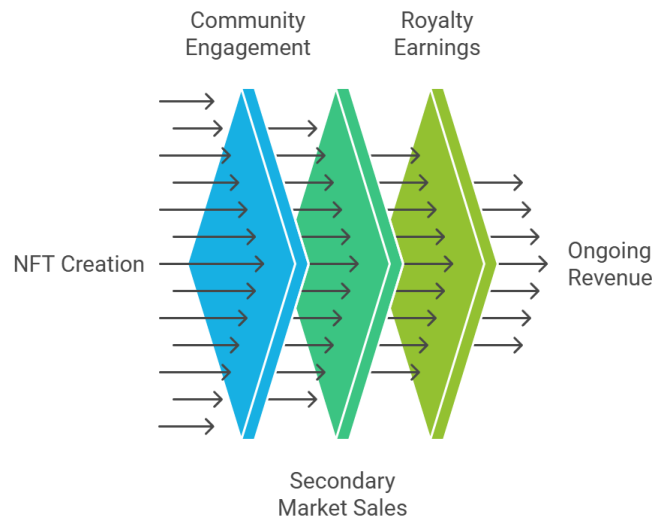


Figure 1. NFT Revenue Generation for Artists

Overall, the findings indicate that NFTs can serve as a highly effective tool for the monetization of digital artwork, providing artists with greater control over copyright and the potential for ongoing revenue through royalties (Vidal-Tomás, 2022). Despite challenges in accessibility and the complexities of the marketplace, the data shows that the financial rewards of NFTs far exceed those of traditional models. NFTs are not only changing how artists sell their work but also how they interact with collectors and build a reputation in the global market.

The research highlights the transformative role of Non-Fungible Tokens (NFTs) in the monetization and creative processes of digital artwork. Data from secondary sources showed that NFTs have created a new revenue stream for artists, with sales volumes in the digital art market exceeding \$2.5 billion in 2022 (Zanjanab et al., 2023). Interviews with digital artists revealed that NFTs offer a direct and ongoing method of income, with royalties earned from

resales constituting a significant part of their revenue. The case study of an artist, Ava, emphasized how NFTs empower creators by providing full control over copyright and enabling direct interaction with collectors. The findings demonstrate a strong correlation between the number of NFTs sold and the income generated, indicating that successful market engagement leads to higher financial rewards.

These results align with existing research suggesting that NFTs have revolutionized the way digital art is monetized (McKenzie, 2022). However, they also diverge from earlier studies that raised concerns about the volatility and sustainability of the NFT market (Parker, 2021). While the growth of the NFT market is widely acknowledged, many studies have focused primarily on its speculative nature rather than its potential as a stable income model for digital artists (Raman & Edwin Raj, 2021). This research contributes to the debate by illustrating that, for some artists, NFTs offer tangible and sustained financial benefits, particularly through secondary sales royalties. Unlike earlier studies, which focused on NFT speculation, this study highlights the long-term financial advantages of NFTs, indicating a shift in how NFTs are perceived in the context of digital art.

The research findings suggest that Non-Fungible Tokens (NFTs) have evolved far beyond the status of a passing trend or a mere speculative bubble, signaling a fundamental transformation in the structural foundations of the digital art market. This shift is primarily driven by the innovative way NFTs manage intellectual property, granting creators unprecedented control over their original works through decentralized ledgers. One of the most transformative indicators of this new era is the integration of smart contracts that allow artists to earn automated royalties from secondary sales—a feature that was virtually non-existent in traditional art markets. By ensuring that creators continue to benefit financially as the value of their work appreciates over time, NFTs are establishing a more equitable framework that prioritizes the long-term economic rights of the artist.

This technological evolution directly challenges established market hierarchies, which have historically excluded or significantly undervalued digital creators in favor of physical, tangible assets. By leveraging blockchain technology, artists are now empowered to bypass traditional intermediaries such as prestigious galleries, curated physical exhibitions, and high-fee auction houses. This disintermediation allows creators to engage directly with a global audience, maintaining full autonomy over their branding, pricing, and distribution strategies. Consequently, the digital art market is transitioning from a gatekept environment into a more transparent and accessible ecosystem where the value of a piece is determined by a broad community of digital-native collectors rather than a small circle of institutional elite.

Ultimately, the research highlights the profound potential for NFTs to democratize access to the art world, creating a more inclusive landscape for creators from diverse backgrounds and geographical locations. By providing a secure and verifiable method for proving provenance and ownership, NFTs allow digital artists to achieve financial sustainability within the modern digital economy. This new paradigm offers a viable career path for creators who previously struggled to monetize their digital-born assets, fostering an environment where innovation and artistic expression can thrive without the constraints of traditional institutional approval. As these digital economies continue to mature, they offer a blueprint for a sustainable future where creative talent is fairly compensated and globally accessible.

The implications of this research are profound for both digital artists and the broader art market. For artists, NFTs provide an unprecedented opportunity to maintain ownership and earn recurring income from their work (Qiao et al., 2023). The ability to receive royalties from resales ensures that artists can continue to profit from the increasing value of their digital art. For the art market, NFTs challenge traditional models by decentralizing the distribution and sale of artwork. This shift could lead to a more democratized art market, where emerging artists are able to compete on a more equal footing with established names. However, the findings also suggest the need for greater access to NFT platforms and more education for artists to navigate the technical aspects of minting and selling NFTs.

The positive outcomes observed in this research may be attributed to the growing acceptance of blockchain technology and the increasing recognition of digital art as a legitimate form of creative expression. NFTs provide artists with the tools to protect their work and gain financial rewards in ways that were previously impossible within the traditional art world (Maouchi et al., 2022). Additionally, the development of NFT marketplaces that cater specifically to digital art has helped to reduce barriers to entry, allowing artists to showcase their work to a global audience. Despite concerns about the environmental impact of blockchain, these technological advancements have made it easier for digital creators to monetize their work in a sustainable and scalable manner. The findings reflect a natural progression as the technology matures and more artists embrace the opportunities that NFTs present.

The next step in understanding the impact of NFTs on digital art is to explore how this new model evolves over time, particularly with regard to sustainability and market accessibility. Future research could focus on the long-term financial outcomes for artists who adopt NFTs, tracking their success over several years to assess whether the benefits remain consistent or diminish as the market matures (College of Economics and Management, Huanghe Jiaotong University, China et al., 2023). Additionally, investigating the environmental implications of NFT platforms is crucial to ensure that the rise of NFTs does not come at the cost of ecological sustainability. Furthermore, policies and frameworks need to be developed to ensure equitable access to NFT platforms, especially for emerging artists and creators from marginalized communities. The findings suggest that while NFTs hold promise, their future success will depend on their ability to adapt to these challenges and create a more inclusive and sustainable digital art ecosystem.

CONCLUSIONS

One of the most important and distinctive findings of this research is the demonstration that NFTs provide digital artists with not only a direct method of monetization but also an ongoing source of income through royalties from secondary sales. Unlike traditional models, where artists typically receive a one-time payment for their work, NFTs allow creators to earn continuously as their artwork is resold on secondary markets (Hasan et al., 2023). This finding challenges the conventional understanding of how digital art can be commercialized and represents a significant shift in how digital artists can approach both creativity and financial sustainability.

This research makes a valuable contribution to the literature by offering a fresh conceptual understanding of NFTs as a tool for both monetization and creative empowerment for digital artists. While much of the existing literature has focused on the speculative nature of

NFTs, this study shifts the focus to their potential for sustainable income generation (Jiang & Xia, 2024). The case study approach, combined with qualitative interviews and secondary data analysis, provides a deeper, context-specific understanding of how NFTs are transforming the art market. This methodological approach also highlights the varied experiences of artists at different stages of their careers, offering nuanced insights into the opportunities and challenges NFTs present.

While this research provides valuable insights into the impact of NFTs on digital art, there are several limitations that warrant further exploration. The study primarily focused on artists who have already engaged with NFTs, which may not fully represent the broader population of digital creators. Future research could expand the sample size to include artists who are still hesitant to enter the NFT market or have faced barriers in doing so. Additionally, this research does not address the long-term sustainability of the NFT market, particularly in relation to environmental concerns or market volatility. Future studies should investigate how NFTs might evolve, including their environmental impact, and whether they can maintain their appeal as a monetization tool in the long term.

AUTHOR CONTRIBUTIONS

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; Investigation.

Author 3: Data curation; Investigation.

CONFLICTS OF INTEREST

The authors declare no conflict of interest

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