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# DECENTRALIZED BLOCKCHAIN TECHNOLOGIES FOR CREATING NEW TYPES OF INVESTMENT ASSETS IN THE CREATIVE INDUSTRY

***Abstract.*** *This article examines the application of blockchain technology for creating and circulating new investment assets in the creative industry. The study analyzes the impact of decentralized technologies, particularly blockchain, on the formation of new types of investment assets in the creative sector of the economy and assesses their potential for industry development. The research employs a systematic approach, methods of analysis and synthesis, comparative and statistical analysis, and generalization of expert assessments. The current state and trends in the use of blockchain technologies in the creative industry have been investigated, with a focus on NFTs, intellectual property tokenization, and decentralized autonomous organizations (DAOs). The study concludes that blockchain technologies create fundamentally new opportunities for monetization and investment in creative assets, while also highlighting challenges such as regulatory uncertainty and technological limitations. Recommendations for maximizing the positive impact of blockchain on the creative economy are provided, along with suggestions for further research.*

***Keywords:*** *blockchain, creative industry, NFT, tokenization, decentralized autonomous organizations, digital assets, investments, intellectual property.*

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# ДЕЦЕНТРАЛІЗОВАНІ БЛОКЧЕЙН-ТЕХНОЛОГІЇ ДЛЯ СТВОРЕННЯ НОВИХ ВИДІВ ІНВЕСТИЦІЙНИХ АКТИВІВ У КРЕАТИВНІЙ ІНДУСТРІЇ

***Анотація.*** *Стаття присвячена застосуванню технології блокчейн для створення та обігу нових інвестиційних активів у креативній індустрії. Проаналізовано вплив децентралізованих технологій, зокрема блокчейну, на формування нових видів інвестиційних активів у креативному секторі економіки та оцінено їхній потенціал для розвитку індустрії. У дослідженні використано системний підхід, методи аналізу та синтезу, порівняльного та статистичного аналізу, узагальнення експертних оцінок. Досліджено сучасний стан і тенденції використання блокчейн-технологій у креативній індустрії з фокусом на NFT, токенізацію інтелектуальної власності та децентралізовані автономні організації (DAO). У дослідженні зроблено висновок, що блокчейн-технології створюють принципово нові можливості для монетизації та інвестування в креативні активи, водночас висвітлюючи такі виклики, як регуляторна невизначеність та технологічні обмеження. Надано рекомендації щодо максимізації позитивного впливу блокчейну на креативну економіку, а також пропозиції щодо подальших досліджень.*

***Ключові слова:*** *блокчейн, креативна індустрія, NFT, токенізація, децентралізовані автономні організації, цифрові активи, інвестиції, інтелектуальна власність.*

**Introduction.** The creative industry is one of the most dynamic sectors of the global economy, demonstrating stable growth and innovation potential. According to UNESCO, before the COVID-19 pandemic, the creative economy generated about 3% of global GDP and employed over 30 million people worldwide. However, traditional models of monetization and investment in creative projects often face problems of insufficient transparency, difficulty in valuing intangible assets, and limited access to financing for independent creators.

The emergence of blockchain technologies and related innovations, such as NFTs (non-fungible tokens) and smart contracts, opens new opportunities for transforming the creative economy. These technologies have the potential to solve a number of existing industry problems, in particular, ensuring transaction transparency, automating royalty payments, creating new project financing mechanisms, and enabling direct interaction between creators and consumers without intermediaries.

However, the implementation of blockchain technologies in the creative industry is at an initial stage and is accompanied by a number of challenges, including technological limitations, regulatory uncertainty, and the need to adapt existing business models. This determines the relevance of studying the potential and prospects of using decentralized technologies to create new types of investment assets in the creative sector.

**Literature review.** The issue of using blockchain technologies in the creative industry is attracting increasing attention from researchers and practitioners. Among the key works in this field, we can highlight the research of Wang et al. [1], who analyze the impact of NFTs on the

digital art market. The potential of intellectual property tokenization is considered in the works of Chen [2], while value creation is explored by Schwiderowski et al. [3]. The prospects of using DAOs for financing creative projects are investigated by Malik et al. [4].

Ukrainian scientists have also made significant contributions to the research of this topic. In particular, it is worth noting the works of:

1. Oleksandr Kud [5], who investigates the socio-economic aspects of blockchain technology implementation and its impact on various spheres, including the creative industry.

2. Liana Spytska [6], who analyze the prospects of using blockchain in copyright and intellectual property management.

4. Nataliia Turchyn and Artem Turchyn [7], who investigates the legal aspects of regulating blockchain technologies and cryptocurrencies in Ukraine, which directly affects the development of new forms of investment assets in the creative sector.

5. Volodymyr Korneev and colleagues [8, 9, 10], who have conducted extensive research on digital finance and its implications. Their work spans from exploring cryptocurrencies as a new era of financial innovations, to analyzing macroeconomic trends in the digitalization of financial markets, and examining the broader digital transformation of the financial space. Their research provides a comprehensive foundation for understanding how these technological and economic shifts could impact various sectors, including the creative industry. Their insights shed light on potential new funding mechanisms, monetization strategies, and the changing economic landscape in which creative industries operate.

6. Yuliia Kovalenko, Volodymyr Korneev, and Yaroslava Belinska [11], who investigate the features of investment activity among capital market participants, offering valuable insights into how new digital financial instruments might be leveraged for investment in creative projects.

However, a comprehensive analysis of the impact of various aspects of blockchain technologies on the formation of new investment assets in the creative industry remains insufficiently covered in the scientific literature, which necessitates further research in this direction.

**Methodology.** This research employs a mixed-method approach, combining quantitative and qualitative analysis. The study utilizes:

– Comparative analysis – in studying different models of blockchain application in creative industries.

– Economic and statistical analysis – to assess the dynamics of the NFT market and other digital assets.

– Forecasting – to determine the prospects for the implementation of blockchain technologies in the creative sector.

– Synthesis of expert opinions and industry reports to evaluate current trends and future projections.

**The main part.** NFTs as a New Class of Digital Assets in the Creative Industry. Non-fungible tokens (NFTs) have become one of the most notable manifestations of the impact of blockchain technologies on the creative industry. NFTs provide a mechanism for creating unique digital assets, allowing for the monetization of digital artworks, music, videos, and other forms of creative content.

According to a report by DappRadar [12], the total NFT sales volume in 2021 amounted to $24.9 billion, indicating rapid growth of this market compared to $94.9 million in 2020. Although 2022 was characterized by some cooling of the market amid the general correction of the cryptocurrency sector, analysts predict further growth of the NFT market with a compound annual growth rate (CAGR) of 34.2% until 2030.

NFTs are most actively used in the field of digital art. For example, the sale of digital collage by artist Beeple for $69.3 million at Christie's auction in March 2021 became a turning point that drew public attention to the potential of NFTs. According to the CryptoArt.io platform [13], the total sales volume of digital art in NFT format exceeded $3.5 billion as of the end of 2022.

In Ukraine, the NFT market is also actively developing, espesially during 2022. NFT was used for donation. One of this is Purr for Ukraine – NFT-cats – raise funds for the Foundation “Come Back Alive” that helps the Ukrainian Army.

Tokenization of Intellectual Property. Tokenization of intellectual property represents an innovative mechanism that allows converting rights to creative assets into digital tokens on the blockchain. This opens up new opportunities for monetization and investment in various forms of intellectual property, including musical works, literary rights, patents, and brands.

According to World Economic Forum [14] forecasts, by 2027, up to 10% of global GDP will be stored and transferred using blockchain technology, a significant part of which will be tokenized assets. In the context of the creative industry, this creates the potential for forming new models of financing and income distribution.

For example, the Royal platform allows musicians to tokenize rights to their songs and sell shares to fans. As of 2023, rights to musical works with a total value of over $16 million have been tokenized through Royal, allowing artists to receive direct funding and fans to earn royalties.

In the film production sphere, tokenization is also gaining momentum. The FF3 project, launched in 2022, allowed tokenizing the rights to the independent film “Fight Club in the Factory”, raising $2.5 million in investments from over 5,000 participants. This demonstrates the potential of blockchain for democratizing film project financing.

In Ukraine, projects aimed at tokenizing intellectual property are also emerging. For instance, the startup Amsets is developing a platform for tokenizing and selling intellectual rights. This opens up new opportunities for monetizing creativity and attracting investments in the Ukrainian Creativeindustry.

Decentralized Autonomous Organizations (DAOs) in the Creative Industry. DAOs represent a new form of organization that functions based on smart contracts on the blockchain. They create opportunities for collective management and financing of creative projects, eliminating the need for traditional centralized structures.

According to the analytical platform DeepDAO, as of mid-2023, there are over 4,800 active DAOs with a total value of assets under management of about $13 billion. Although most DAOs are focused on the field of decentralized finance (DeFi), the number of organizations oriented towards creative industries is growing.

A notable example is PleasrDAO, a collective of collectors and artists who purchased the unique Wu-Tang Clan album “Once Upon a Time in Shaolin” for $4 million

and tokenized the rights to it. This demonstrates the potential of DAOs for collective ownership and management of valuable creative assets.

Another example is Nouns DAO, which daily generates and sells a unique NFT, and directs the proceeds to finance creative community projects. In its first year of existence, Nouns DAO generated over $50 million and funded dozens of projects in the fields of art, technology, and education.

In Ukraine, DAOs focused on the creative industry are also emerging. For example, Ukraine DAO, created to support Ukrainian artists and creative projects, successfully raised funds through NFT sales to finance cultural initiatives under wartime conditions.

Challenges and Prospects of Implementing Blockchain Technologies in the Creative Industry. Despite significant potential, the implementation of blockchain technologies in the creative industry faces a number of challenges:

1. Regulatory uncertainty: The lack of a clear legal framework for NFTs and tokenized assets creates risks for investors and creators.

2. Technological limitations: High transaction costs and limited scalability of some blockchain networks complicate mass adoption.

3. Environmental issues: The energy intensity of some blockchain protocols raises concerns about the carbon footprint of digital transactions.

4. Educational barrier: Low levels of awareness and technical literacy among participants in the creative sector limit technology adaptation.

However, despite these challenges, the prospects for using blockchain in the creative industry remain significant. Gartner predicts that by 2025, blockchain will create added value for businesses amounting to $176 billion, and by 2030 – $3.1 trillion. A significant part of this value will be generated in the creative sector through new models of content monetization, transparent royalty distribution systems, and innovative forms of interaction between creators and the audience.

Ukrainian Context. In Ukraine, the development of blockchain technologies in the creative industry has its own peculiarities and prospects:

1. Legislative regulation: In 2021, Ukraine adopted the law "On Virtual Assets", which creates a legal framework for regulating cryptocurrencies and other digital assets. This is an important step for the development of blockchain technologies in the creative industry, as it provides greater legal certainty for creators and investors.

2. Innovative projects: Ukrainian startups are actively developing blockchain solutions for the creative industry. For example, the DMarket project created a platform for trading virtual items using blockchain, opening new opportunities for game developers and digital artists.

3. Educational initiatives: Educational programs aimed at raising awareness about blockchain technologies among representatives of creative industries are emerging in Ukraine. For instance, Kyiv-Mohyla Academy launched the course "Blockchain and Cryptoeconomics", which includes modules on the application of these technologies in the creative sector and in Web3-universtity "Learn to Earn Global" include different courses about Web3 and Crypto.

4. Government support: The Ministry of Digital Transformation of Ukraine actively supports the development of blockchain technologies, including in the creative industry. In 2021, the creation of a "Virtual Business Country" on the blockchain was announced, which could become a platform for developing new business models in the creative sector.

5. International cooperation: Ukrainian specialists and companies actively cooperate with international partners in the field of blockchain technologies. This contributes to the exchange of experience and integration of Ukrainian projects into the global ecosystem.

New Models of Creative Content Monetization. Blockchain technologies open new opportunities for monetizing creative content:

1. Micropayments: Blockchain allows for instant micropayments for content consumption, which is particularly relevant for musicians, writers, and journalists. For example, the Audius platform allows listeners to pay musicians directly for listening to tracks.

2. Fractional ownership: Tokenization allows dividing rights to creative assets into small shares, making investment in art and other creative projects more accessible to a wide range of investors.

3. Automated royalties: Smart contracts ensure automatic distribution of royalties among all participants in content creation, increasing the transparency and efficiency of payments.

4. Blockchain-based crowdfunding: Blockchain-based platforms, such as Kickstarter on Celo, allow creators to raise funding for their projects with greater transparency and efficiency.

Integration with Other Technologies. The combination of blockchain with other advanced technologies opens new horizons for the creative industry:

1. Blockchain and artificial intelligence: AI can be used to create and curate content, while blockchain ensures transparency of ownership rights and income distribution. For example, the Alethea AI platform allows creating "intelligent NFTs" that can interact with users.

2. Blockchain and virtual reality: Blockchain technology can ensure ownership of virtual assets in the metaverse, creating new opportunities for artists, designers, and game developers.

3. Blockchain and Internet of Things (IoT): The combination of these technologies can create new forms of interactive art where physical objects interact with digital assets on the blockchain.

Ethical Aspects and Social Impact. The implementation of blockchain technologies in the creative industry raises a number of ethical issues:

1. Accessibility: While blockchain can democratize access to financing and markets, there is a risk of creating new forms of inequality due to the technological gap.

2. Copyright: Despite blockchain's potential for copyright protection, new challenges arise related to determining authorship in cases of collective creativity or AI use.

3. Environmental impact: The energy intensity of some blockchain networks raises concerns about their impact on the environment, which is particularly relevant for environmentally conscious artists.

4. Privacy: The balance between blockchain transparency and protecting the privacy of content creators and consumers remains an important issue.

Future Trends and Predictions. Based on current trends, several key directions for the development of blockchain technologies in the creative industry can be identified:

1. Metaverse development: Blockchain is expected to play a key role in creating the economy of virtual worlds, ensuring ownership of digital assets and identity management.

2. Tokenization of physical assets: The trend towards creating digital twins of physical artworks and other creative assets on the blockchain will grow.

3. Decentralized social networks: Blockchain could become the foundation for a new generation of social platforms where creators have greater control over their content and monetization.

4. Integration with traditional financial instruments: A convergence of crypto assets and traditional financial instruments is expected, which could open new opportunities for investing in creative projects.

5. Development of the regulatory environment: Further improvement of legislation regarding digital assets is predicted, which will contribute to the institutionalization of blockchain technologies in the creative industry.

**Conclusions.** Blockchain technologies demonstrate significant potential for transforming the creative industry, creating new types of investment assets and monetization models. NFTs, tokenization of intellectual property, and DAOs open unprecedented opportunities for creators, investors, and consumers of creative content.

To maximize the positive impact of blockchain technologies on the creative economy, it is necessary to:

1. Develop a balanced regulatory framework that protects the rights of investors and creators while stimulating innovation.

2. Invest in educational programs to raise awareness and technical literacy among participants in the creative sector.

3. Promote the development of environmentally sustainable blockchain solutions to minimize the carbon footprint of digital transactions.

4. Stimulate cross-industry cooperation to create innovative blockchain-based business models in the creative sphere.

5. Develop mechanisms to ensure inclusivity and equal access to the opportunities provided by blockchain technologies in the creative industry.

Further research should focus on the long-term economic and social consequences of the mass adoption of blockchain technologies in the creative industry, as well as on developing methodologies for assessing the effectiveness and risks of investments in new types of digital creative assets. Particular attention should be paid to studying the potential for integrating blockchain with other advanced technologies, such as artificial intelligence and virtual reality, to create new forms of creative expression and interaction with the audience.

In the context of Ukraine, an important direction of research is the analysis of the specifics of implementing blockchain technologies in the national creative industry, taking into account local market characteristics, legislative regulation, and cultural factors. This will help develop effective strategies for positioning Ukraine as an innovative hub in the field of blockchain technologies for the creative sector.

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