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Article

## From NFT to NFR: the Overview of Digital Collectibles in China

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**Abstract:** This paper sorts out the development trajectory of digital collectibles in China. After the introduction of NFT as a blockchain-based rights confirmation tool, in order to adapt to the regulatory environment in China, it has evolved localized into NFR (Non-fungible Rights), which emphasizes the "rights" attribute, relies on consortium chains and is subject to centralized supervision. Its product form is "digital collectibles". The development process can be divided into three stages: the initial exploration period, the disorderly expansion period and the compliant development period. Correspondingly, the market has gone through a process from explosive growth, decline to gradual rationality. The current research status shows that the overseas academic community's research on NFT collections has shifted from conceptual exploration to market reflection, industrial application, and consumer behavior analysis. Domestic research, on the other hand, started relatively late and mainly focused on macro aspects such as regulation and copyright. Empirical research from the perspective of consumers is still a blank. Therefore, this paper emphasizes exploring the purchasing motivation from the consumer demand side, which is of great significance for promoting the healthy development of the digital collectibles market.

**Keywords:** digital collectibles; non-fungible rights (NFR); localization evolution; consumer behavior

### 1. Introduction

Non-fungible token (NFT) is essentially a form (also understood as an asset) of a particular thing that has been authenticated using blockchain technology and uses blockchain's decentralized distributed ledger technology to make the authenticated fact uniquely identifiable and tamper-proof [1]. NFT is well known for its use in art and collectibles, but NFT is not limited to art collections. It is also widely used in gaming, virtual world assets, finance, and healthcare [2]. In short, tokenization is a technological tool, while NFT results from tokenization. NFT is a way to authenticate anything that requires clear ownership digitally. Blockchain technology was created at the same time as Bitcoin in 2008 by the still enigmatic Satoshi Nakamoto (a pseudonym). Blockchain technology was initially developed for Bitcoin to create a decentralized, secure and custodian-free account system on the internet and establish a new transaction model distinct from the modern monetary system. The Chinese government has been paying attention to and studying the development of bitcoin and blockchain technology since their introduction, and during exploration, has gradually formed a strategic idea of using the innovation and application of blockchain technology in industrial development to serve the development of the digital economy and cutting-edge science and technology

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fields. However, it has maintained a cautious attitude towards virtual currencies such as bitcoin and has implemented a series of regulatory measures in China [3]. For this paper, NFT is defined narrowly to include only digital assets in culture, art, collecting and related fields.

## 2. NFT Enters China

NFT is an "imported product" rather than an indigenous product of China. On the one hand, its core function is to confirm the rights of things, and on the other hand, due to its twin relationship with Bitcoin, it has financial attributes to a certain extent. In 1993, crypto trading cards were proposed to use digital signatures to describe and display digital works of art. In 2012, the emergence of a colored coin based on blockchain technology and its successful upload proved the feasibility of uploading assets to the chain. In 2014, the Counterparty on-chain trading platform was launched. The proposal of the Counterparty on-chain trading platform and the series of "NFT-like products" issued on the platform attracted widespread attention, laying the foundation for the formal proposal of NFT products. Since the end of 2017, artworks have been sought after in the NFT market. They became the leading category in developing the global NFT market, including Crypto Kittys, Crypto Punks, Bored Ape Yacht Club, and other artworks, which were very popular for a while. In the same year, the centralized launch of NFT trading platforms such as Open Sea, Open Bazaar, Rare Bits, OPSKINS, Makers Place, etc., provided vital platform support for the subsequent full-fledged explosion of the NFT industry. For some time after that, NFT remained a new product form in the virtual currency circle, and its social attention and influence were still limited. In March-April 2021, Christie's sold the NFT artwork *Every Day: The First 5,000 Days*, created by the artist Beeple, for \$69.34 million, and Sotheby's sold the crypto artwork *The Fungible* for \$16 million, becoming the first crypto artwork to be sold on the market. *The Fungible* became the "trigger" for collectors and capital markets to enter the NFT market in a frenzy [4,5]. The global hotspot triggered by the high price made domestic organizations react quickly and enter the market, which became a key point for NFT to enter China officially. Based on the above development, the primary motivation for NFT to enter China is its significant financial characteristics and broad market investment prospects.

## 3. Digital Collectibles: From NFT to NFR

### 3.1. *The Concept from NFT to NFR*

The concept of NFR (Non-Fungible Right) was proposed because of adapting to the local development context after the introduction of NFT in China and as a gradual solution for the Chinese government to explore ways to avoid the financial risks behind the rapid development of NFT [6]. First, the similarities and differences between the two sets of concepts must be clarified before sorting out the development of digital collectibles. Firstly, both NFT and NFR are constructed based on blockchain technology and have the resulting corroboration function, including the characteristics of blockchain technology such as traceability, openness and transparency, tamper-proof, and non-fungible tokens. However, compared with the "token" attribute based on the direct connection between NFT and the decentralized system of virtual currencies, NFR focuses on emphasizing its existence as an attribute of "rights and interests" by realizing the primary function of digital certificates, blocking the connection between NFR and the virtual currency system, and weakening the "token" attribute as much as possible. In addition, there is a fundamental difference between NFT and NFR regarding technical operation and regulation. NFT operates in a completely decentralized blockchain network system and is not subject to the supervision of centralized institutions.

In contrast, NFR operates under the protection of the legal, regulatory framework and authentication mechanism and is subject to the supervision of centralized institutions,

which is commonly known as the difference between the foreign "public chain" system and the Chinese "alliance chain" system [7]. Second, NFT and digital collectibles, it is worth mentioning that NFT and digital collectibles are concepts in the form of digital products. The two classification criteria in the form of products have been in dynamic change. Among them, NFT product classification has appeared as NFT Art and NFT Collectibles, reflected explicitly in the changes in market data statistical standards, and according to the above statistical standards, it can be roughly judged that NFT Art is a specific category in the NFT Collectibles product system; the establishment of the concept of Digital Collectibles products has gone through a similar process. After the concept of NFR was put forward, the concept of its product form appeared as "digital art", "digital cultural and creative", and other stages of the product concept, and finally "digital collectibles" has been established as the concept of NFR product form. Based on this, digital and NFT collectibles belong to the same level of product form concepts, and the scope of products covered by both is the same. It can be boldly guessed that establishing the product form concept of digital collectibles is, to a certain extent, a reference to the classification criteria of NFT collectibles [8]. At the same time, the reason for the shift between result form and product form is that the Chinese government, in combination with the development and characteristics of NFT abroad as well as the actual situation in China, needs to take a series of regulatory restrictive measures and localized exploration, to avoid the emergence of potential financial risks due to the lack of authentication mechanisms and regulatory systems, and hopes that NFR will be combined with industrial economic development strategies, to provide the digital economy and other related emerging fields with the Enabling. Therefore, the above analysis of the two groups of conceptual clarification and transformation reasons is an essential prerequisite for subsequent research on digital collectibles.

### 3.2. *The Development Path from NFT to NFR*

In terms of the overall development stage, the development of Digital Collectibles has gone through three stages, namely "initial exploration - disorderly expansion - compliant development":

#### 3.2.1. Initial Exploration Stage

Influenced by a series of events, such as the astronomical auction effect of NFT artworks created by Beeple and the skyrocketing sales of Gamefi's Axie Infinity project, the development of NFT entered a fast track, sweeping the global market, and Chinese cryptocurrency players (the Chinese participants in the virtual currency market) also started to introduce NFT in China [9]. In April 2021, China's first NFT trading platform, Metasteamlab, was officially launched, and thousands of NFT mystery boxes of artworks were successfully issued, marking the official start of China's NFT development. Within half a year, iBox, NFT China (Bigverse) and other professional institutions, cryptocurrency players as the background of the NFT platform was the first to go online in China; closely followed by Internet giants BAT (Baidu-Alibaba-Tencent) have entered the "game", the ant chain fan particles "Whale Exploration Tencent's "Phantom Core" and other platforms have gone online, and the NFT digital products launched by them have sold out in seconds; In September 2021, Hainan International Culture and Artwork Trading Centre, a mixed-ownership enterprise with a background of state-owned capital participation, launched the "NFT secondary trading platform", which is one of the first digital art products trading centers in China to be established by an art spot trading house and to offer digital RMB as the settlement currency [10]. At this point, the basic pattern of NFT's initial exploration phase in China was formed, in which private enterprises and social capital mainly dominate the exploration of the emerging market.

### 3.2.2. Disorderly Expansion Period

In October 2021, the concept of Non-Fungible Rights (NFR) was first proposed in the White Paper on Non-Fungible Rights (NFR) published by Beijing University of Aeronautics and Astronautics (BUAA) and China Mobile Communications Federation (CMF), which points out that NFR is the path and direction of the development of NFTs in China's social context, and that the formal proposal of the NFR concept also serves as an essential turning point for the entry of NFTs into China's development [11]. Three main threads run through the NFR development stage: the first is the market development thread; the success achieved in the initial exploration phase in the commercial greatly inspired various types of Chinese enterprises to enter this market in less than a year, a "national team" was formed with Shucang China, SHOWAPE represented, the Internet three giants (Alibaba, Tencent, Jingdong) led by the echelon of the head of Internet enterprises and NFT China, the TheOne art other art professional institutions emerging platform. At the same time, some small and medium-sized digital collectibles platforms were also established, and the development of the domestic digital collectibles market entered a "fast forward mode". iBox's market capitalization was close to \$10 billion in May 2022, becoming the time of digital collectibles market in China [12]. As of July 2022, the number of trading platforms operating in the Digital Collectibles category in China has exceeded 1,000 for the first time, with the emergence of small and medium-sized platforms and the feverish expansion of the market at its peak.

After NFR was introduced, Tencent's "HUANHE", Alibaba's "JING TAN", and iBox successively renamed NFT to NFR or Digital Collectibles. They gradually turned to exploring the application of NFR in related industrial development and consumption scenarios. They have gradually turned to exploring the application of NFR in related industries and consumption scenarios. The industries covered by exploring industrial applications include finance, media, publishing, music and manufacturing, etc. For example, CITIC AI Bank released the first bank's fourth-anniversary digital collectibles, "4 in Love", Xinhua News Agency released the first set of news digital collectibles, and the State Press and Publication Administration of the People's Republic of China released "Blockchain Digital Publishing and Distribution Trading" in collaboration with several institutions. Blockchain Digital Publishing and Distribution Trading Platform Matrix', NetEase Tianyin released China's first AI music digital collectibles. Coca-Cola launched the digital collectibles Coca-Cola Red Packet in cooperation with Tmall Online Mall, all of which have received a good market response. In addition, in February 2022, Shanghai set the goal of establishing the first domestic digital artwork industry ecosystem to promote the digital economy's development by establishing an industry ecological alliance, building platform scenarios, and formulating industry development standards.

The third is the policy and regulatory line. Because the market heat remains high and shows a crazy expansion trend, regulators are aware that the overheated market and crazy expansion will inevitably increase the possibility of triggering the risk of financial activities. For this reason, relevant government departments, in cooperation with industry associations, leading enterprises and other relevant organizations, have intensively issued policy guidelines such as the Self-Regulatory Convention on Digital Collectibles, the Initiative on Preventing Financial Risks Related to NFTs, the Self-Regulatory Requirements on Regulating NFTs, the Self-Regulatory Guidelines on Regulating NFTs, etc., the Self-Regulatory Requirements on Regulating the Healthy Development of the Digital Collectibles Industry, the Digital Collectibles Convention and the Second Self-Regulatory Requirements on Regulating the Healthy Development of NFT Collectibles, all of which help prevent the trend of financialization and securitization of digital collectibles. Collectibles' financialization and securitization tendencies advocate and encourage digital collectibles to serve the application of high-quality development scenarios of the digital economy and promote the development of the real economy [13]. Meanwhile, government regulators have also implemented standardization and

shutdown measures for platforms involved in virtual currency trading and speculation, effectively preventing the emergence of financial risks.

### 3.2.3. Compliance Development Stage

China's digital collectibles market "Great Leap Forward" development has also catalyzed the emergence of new industry problems. The iBox shocking decline led to many users losing money, and several well-known trading platforms have appeared in Digital Collectibles' stagnation. In August of 2022, Tencent's digital collectibles platform - HUANHE, officially announced to the public to stop the issuance of digital collectibles. At one time rumors of plans to abolish the project of PCG business group, a warning signal of the digital collectibles market reversal, from online to shut down, HUANHE platform lasted less than 400 days. Not only that, the digital asset uploader incident involving intellectual property infringement, the sudden termination of services by digital asset platforms, resulting in collectors not being able to keep their collections, and the financial risks caused by blind speculation are commonplace. In the current digital asset market environment, well-known organizations or individuals can often gain market attention and distribution opportunities more quickly, while those niche but valuable digital assets risk being marginalized. This market phenomenon exacerbates the uneven distribution of cultural elements. Influenced by various internal and external factors, China's digital asset market has experienced a "hot to cold" process, which has caused panic and anxiety among some consumers. Although the market is still developing, with small and medium-sized platforms coming online and shutting down, the tone of China's digital collectibles development has been set, and it is gradually moving towards rationality and standardization as it shifts from collecting and investing to serving the digital economy and industrial development under the guidance and supervision of policy.

### 3.3. Summary of Current Situation

In summary, through the systematic combing of the development of digital collectibles so far, from the concept clarification, development stages, key nodes and significant events, etc., to discuss, NFT and NFR, NFT collectibles and digital collectibles and other concepts and terms of the differences and similarities of the analysis, and the introduction of NFT in the various stages of China to carry out a systematic study and categorization. It should be noted that along with the three stages of the overall development of digital collectibles, its market development also shows the characteristics of the three phases of "outbreak period - decline period - rational period". In 2023, the emergence and application of generative AI technology will make the market and capital focus from the digital collectibles market to the AI application field, which also means that the 1.0 era of rapid development of digital collectibles will come to an end for the time being.

In reviewing the 1.0 era of the rapid development of digital collectibles, this paper focuses on four aspects of analysis and summary. From the level of governance, the governance of the development of digital collectibles by government departments has gone through three periods, from the initial period of wait-and-see to the middle period of regulation to the later period of support, on the one hand, it is based on the government's anticipation of a series of problems that have emerged from the development of the emerging market, as well as the prevention of the risk of hidden dangers of financial activities brought about by virtual currencies; On the other hand, it also meets the basic requirements of China's innovation-driven digital technology formation. Moreover, it is also in line with China's essential requirements for new products driven by digital technology innovation, i.e. the new digital achievements must serve the economy, empower entities and realize the dual goals of social and economic value. In addition, the government's unified management of digital collectibles is also closely related to the strategy of cultural digital development, the construction of Digital

China and other macro-policy development directions. At the level of creation, the emergence of NFR and digital collectibles provide new development opportunities for creators. First, NFR can provide creators with more convenient, secure, effective and direct copyright protection, and the tamper-proof and traceability of blockchain technology is an essential safeguard for the rights and interests of creators; second, Digital Collectibles, to a certain extent, promotes the use of digital technology to create works by creators, and expands the forms and diversity of artistic creation; third, the new market ecology established by Digital Collectibles has changed the traditional art market's sales channel, significantly reducing the distribution cost and risk of art works, so that creators can directly obtain the economic benefits; In addition, creators can also use digital collections as a carrier for better and broader dissemination and sharing of their works on the Internet platform, which is conducive to enhancing the influence of the works and personal popularity; What's more, the digital collectibles system can also bring more opportunities about cross-border cooperation and derivative application of art creation to creators. From the industry level, the Digital Collectibles industry, from focusing on how to enhance the premium of Digital Collectibles body to how to apply in the industry and consumption scenarios, some of them with short-term economic gain or even malicious speculation purpose of the organization eclipsed the field, there is also part of the organization turned to the exploration of industrial applications and consumption scenarios, the overall development presents C to B oriented change. However, it should be noted that the service industry (to business) cannot fundamentally solve the problem of digital collectibles market development because the industry end of the final service is largely still the object of consumers. Therefore, how to optimize and solve the existing problems in the digital collectibles market is particularly important. From the consumer level, as far as the current situation is concerned, the digital collectibles consumer market is in a stage of decline, and consumers have returned to rationality from fanaticism. The dramatic fluctuation of the digital collectible's consumer market changes to a considerable proportion of consumers brought economic losses, making consumers lose confidence in digital collectibles. In the Digital Collectibles development 1.0 era, although consumers are the "protagonists", more often, consumers are the result of the acceptor and risk bearers. The governors, creators, and industrialists pay little attention to consumers, especially in understanding consumer demand for digital collectibles consumption and research. Based on this, this paper will start the research on digital collectibles from the perspective of consumers, which is also the author's initial intention to generate research motivation for this reality.

#### **4. Research Status of Digital Collectibles**

##### *4.1. Current Research Status of Overseas*

With "NFT Collectibles" as the keyword in foreign well-known academic platform searches, through the search results of several academic platforms for comparative analysis found that the overall foreign scholars on the NFT Collectibles research interest and enthusiasm have not receded, the relevant research journals are still in the trend of growth, but the rate of increase tends to flatten out. For example, Google Scholar search results data on "NFT Collectibles" and the number of academic papers with a high degree of relevance, according to the chronological orders of 53 articles (2020), 388 articles (2021), 1260 articles (2022), 1340 articles (2023) and 502 articles (2024Q1, Q2). Moreover, the total number of academic papers in this research field will be 3,543 articles by June 2024. From 2020 to 2021, foreign scholars' research in the field of NFT collectibles mainly involves the study of issues related to copyright, art market, finance, law, creative industry, artistic creation and taxation, among which copyright, art market, finance, law and creative industry has the highest degree, The research on copyright, art market, finance, law and creative industry has the highest degree of concern, focusing on the practical application of NFT and the impact and challenges of NFT on the development of other industries, the

opinions and attitudes of scholars towards it show a polarized trend, and the overall research focuses on "what is NFT". The number of academic papers published in 2022 is almost three times the total of the previous two years, and the focus of research on NFT collectibles is still on copyright, the art market, financial investment and other aspects, with further segmentation. The most significant difference from the previous two years is that researchers have started to pay attention to several issues arising from the rapid development of the market, such as asset security, market speculation phenomenon, price rationality and financial risks. At the same time, creators' rights, digital marketing of brands and creative industries such as fashion, games, publishing, sports and music, which are greatly affected by the development of NFT collectibles, have attracted the attention of researchers and the overall research mindset has changed from "what" to "why", with research on how NFT is integrated into the industry. With the sharp decline of the global NFT collectibles market in June 2022, the research direction of Digital Collectibles in 2023-2024 has significantly changed.

On the one hand, the research on the NFT art market mainly focuses on reviewing and reflecting on the rapid changes in the market, analyzing the internal reasons for the formation and bursting of market bubbles, and launching a critique of market behavior. On the other hand, how to promote the development of creative industries and the application of NFT industrialization has become a research hotspot. It is worth mentioning that scholars began to pay attention to the field of NFT collectibles consumer behavior research, including purchase decision, purchase motivation, loyalty, perceived value, etc., and the overall research trend from "why" to "how to do" began to change. The latest foreign research on NFT collectibles includes market development stage review, industrial application and consumer behavior.

#### *4.2. Current Research Status of China*

Compared with the status quo of overseas scientific research, Chinese research on NFT Collectibles and Digital Collectibles is insufficient regarding the number of papers, research breadth, research depth, etc., and research in this field is still early. According to the search results of CNKI, from the point of view of the number of academic articles published in recent years, the total number of academic articles on digital collectibles research included in CNKI is 784 articles, of which the core journal articles (SCI, SSCI, Peking University Chinese core journals, AMI and other core journal catalogue included) are 275 articles; According to the year of classification statistics, a total of 60 articles were published in 2021 (of which 14 core journal articles), 346 articles were published in 2022 (of which 118 core journal articles), 314 papers were published in 2023 (of which 124 core journal articles), 64 articles were published in 2024 to June (of which 19 core journal articles); In addition, in 2020, there is no article related to digital collectibles published in China for the time being. Comparison with the overseas situation can be seen; China's research on Digital Collectibles total published papers is about 22% of the total number of foreign articles published, with a large gap, to some extent, also reflects the domestic scholars in the field of research started late, the development of research is relatively slow. From the point of view of research breadth, the research in recent years has mainly focused on five aspects, such as regulatory governance, copyright, law, original industrial impact and industrialization path, among which the legal issues arising from the application of digital collectibles and NFR, the protection of intellectual property rights in the digital environment, and the regulatory standards of government departments in this field have become the focus of research. Moreover, how Digital Collectibles can strengthen publishing, media, sports, and other cultural industries is also a research topic that scholars are concerned about. The scope of research is also relatively fixed, with no significant changes. From the perspective of research depth, most Chinese scholars carry out overall research on digital collectibles from a relatively macroscopic point of view, focusing on the overall development of the pulse and market changes to sort out and

analyses, and theoretical research accounts for the majority. Especially in digital collectibles, there is very little development of stakeholders in the research, such as the study of art creators, consumer research, platform research, etc., as the future has a comprehensive research space.

#### 4.3. Current Research Status of Market

The market analysis of digital collectibles (NFT collectibles) comprises three types of institutions. The first type is the digital collectibles trading platform, overseas well-known NFT trading platforms such as Open Sea, Rarible, SuperRare, etc., the second type is the digital collectibles trading platform, the third type is the digital collectibles trading platform, the fourth type is the digital collectibles trading platform, the fifth type is the digital collectibles trading platform. The data disclosure of Chinese digital collectible platforms still needs to be clarified. The market data of Chinese digital collectibles platforms are obtained through industry analysis reports issued by third-party organizations or data sources published by the media, and it is difficult to find them by using Internet search engines. The second category is the annual market research report published by professional management consulting and data analysis companies, including internationally renowned management consulting companies such as International Data Corporation (IDC), Gartner Consulting (Gartner), Ai Rui Consulting, etc., and well-known Chinese market research companies such as QIANZHAN Industry Research Institute, Ai Media Consulting, Market Monitor, QYResearch, etc. Among them, the "Emerging Technology Maturity Curve Report," published annually by Gartner Consulting, is a unique analysis of emerging technologies from the perspective of technology maturity as an entry point for commercial research. The last category is the third-party data analysis service institutions; these kinds of professional institutions are different from the business consulting company; they focus on the research and analysis of NFT, Digital Collectibles, such as Non-fungible, Dappradar, CoinMarketcap and NFT Go and other data analysis service platforms. These institutions are relatively few in the country, mainly small and medium-sized.

The data and research reports provided by the above industry analysis institutions provide essential market data references for this study, including necessary case support for determining and changing NFT product classification standards. Not only that, but the research direction of this study, which was to determine the scope of the research object, also benefited from the relevant Chinese market research institution's report on Digital Collectibles user profile analysis. Along with the Digital Collectibles market attention continuing to decline, it also affects the market research organisations on the Digital Collectibles' sustained research interest. Because of the global NFT Collectibles market contraction, Non-fungible.com officially stopped updating the relevant market information and research contents in early 2023.

The current status of research in digital collectibles represents the scientific research direction of taking the development cycle as the clue, taking copyright, collection market and industry integration as the central research axis, and from overall research to segmentation research as the trend. Existing research results in China and overseas have laid a critical research foundation for the research of this study, including the analysis of the similarities and differences between the underlying technologies of NFT and digital collectibles, the development of China and overseas market changes, the development and optimization of policies and laws, and so on. It is worth mentioning that overseas scholars have been paying attention to the research on the consumer behavior of NFT collectibles since 2023. Relevant empirical research has been conducted from the aspects of purchase decision, perceived value, loyalty, etc... These results have proved to a certain extent that the research direction of this study has been chosen as the necessity, feasibility and foresight, while in China, there are no scholars conducting researches in the field of Digital Collectibles Consumer Behavior. Therefore, this field has excellent research space

and prospects. Given the above Chinese and international scientific research status, this paper proposes researching Chinese digital collectibles consumers' purchase expectation motivation based on expectation theory. It uses Chinese Pearl River Delta consumers as the research object.

## 5. Conclusion

The overseas NFT collectibles market and the Chinese digital collectibles market, which had experienced substantial growth and decline in the previous period, experienced dramatic market shocks that made consumers lose confidence in this emerging market. Between June and July of 2022, the overseas and Chinese markets contracted significantly, causing enormous financial losses for many consumers, and there was much speculation about the future development prospects of NFT collectibles or digital collectibles. Much speculation exists about the future development prospects of NFT collectibles or digital collectibles. Behind the vast market bubble phenomenon, it may not help but let someone think: Why are consumers interested in NFT Collectibles or Digital Collectibles, and why did consumers lose almost "overnight" on this emerging product confidence? What motivates consumers to buy NFT Collectibles or Digital Collectibles? Although the ups and downs of the market have been widely discussed, systematic research on the factors behind it is still limited, which is an essential motivation for this paper. China's digital collectibles have gradually moved from barbaric growth to a stage of development in China's development context. Despite the improvement of policies, continuous optimisation of technology and attention to consumer rights, the market has stumbled, and consumers' enthusiasm for buying digital collectibles seems to have disappeared. Existing Chinese research results in this field are basically from the macro and supply-side perspective but ignored from the consumer demand side of digital collectibles research. Digital collectibles are a new type of digital product. If the lack of research on consumer purchasing behaviour, the supply of digital collectibles products will not be able to meet the consumer demand for purchasing, and the mismatch between the supply and demand of digital collectibles will affect the sustainability of the development of the digital collectibles market. Therefore, studying the consumer behaviour of digital collectibles is of great importance.

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