

Research on the Development Path of Cultural Industry in the Era of Digital Economy

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Abstract

In recent years, a series of new digital concepts and technologies such as cloud computing, Internet of things, block chain, big data, 5g and artificial intelligence have emerged in an endless stream. Driven by digital technology, a new round of industrial revolution is in full swing. The development of digital economy is in the ascendant, which injects powerful power into the rapid development of cultural industry. In the era of digital economy, the development of cultural industry should make breakthroughs in technology, market and policy. At the same time, we should avoid the problems of digital infringement, digital divide and cooperation security, and seize the opportunities in the era of digital economy to develop in an all-round way.

Keywords

Digital economy, Cultural industry, Development path, Block chain, Digitization.

1. Introduction

At present, digital technology is integrating with various industries of the national economy, bringing many new industries, new formats and new business models. In the era of digital economy, the effective integration of cultural industry and digital technology can greatly promote the rapid development of new economy including digital culture industry. It plays an important role in stabilizing economic growth, promoting the transformation and upgrading of economic structure, changing lifestyle and improving the quality of life.

2. The Connotation and Characteristics of Digital Economy

The concept of digital economy can be traced back to 'economics in the data age: Rethinking opportunities and risks in the age of network intelligence' published by Canadian scholar Don Tapscott (1995) and 'digital survival' published by American scholar Nicholas Negroponte (1996), and two scholars prospectively explored the impact of the emergence of the Internet on economic society, which not only opens the door of people's cognition of digital economy, but has laid a foundation for the continuous development and extension of digital economy.

In the 21st century, with the network technology developing continuously, the proportion of digital economy in the total national economy is increasing in various countries. Countries pay more and more attention to the importance of digital economy, thus having issued strategic plans to revitalize the digital economy. Digital economy gradually has a new connotation with the continuous rise of cloud computing, Internet of things, block chain, artificial intelligence, 5g and other technologies. Digital economy is a new form of development of economy and society after agricultural economy and industrial economy., which exerts a profound impact on the future economic and social development. The future economic and social development will be based on digital infrastructure, and the traditional infrastructure will also be fully digitized under the support of Internet of things technology. The development of digital economy will inevitably reshape the whole economy and society. Data will become the most important factor of production, and the business model and profit-making mode of various industries will be

reconstructed. In the future, all industries will be digital industries, and all enterprises will be digital enterprises, and the digital economy has new characteristics endowed by the times as it follows:

1. Digitization

Digital economy is to represent and process information in the form of binary, which transforms many information including text, picture, video, sound into binary code that can be read, processed and transmitted by computer. Although most of the information can be expressed in digital form, the process of information digitization is still far from over. In order to promote the comprehensive development of cultural industry in the era of digital economy, the traditional field of cultural industry must be transformed to digital, so as to promote the integration and innovation by using digital technology, and to promote the deep development of cultural economy while broadening the application field.

2. Networking

The basis of digital economy is to realize the real-time connection between people, people and things, and things and things through network communication technology. In 2018, the number of global Internet users reached 4.388 billion, an increase of 9.13% compared with that in 2017. With the rapid growth of Internet users, the global Internet penetration rate increased from 42% in 2014 to 57% in 2018. In addition to the Internet, the Internet of things is also growing at a high speed, promoting the in-depth change of the existing economy and society. The future economic and social development needs to take the digital economy as the driving force to promote the opening, cooperation, exchange and sharing of Internet technology, so that the Internet can better help economic development and social progress.

3. Intellectualization

Since the beginning of the 21st century, the research of artificial intelligence has achieved breakthroughs in many fields, and the digital economy has entered the development stage with intelligence as the core. At present, the business model of artificial intelligence application is mainly concentrated on single application, including voice recognition, automatic driving, robot manuscript writing, image recognition, medical assistance and many other fields. In the future, the development of intelligent technology will have a qualitative change effect on the development of digital economy and promote the new changes of human production and life style.

4. Commercialization

In the era of digital economy, the "shared value" of digital resources exceeds the "exchange value", and win-win cooperation will surpass competition. Under this premise, the traditional business model can no longer meet the needs, and the new business model with sharing and exchange as the core will gradually appear. Therefore, the business model must be rebuilt in the future. At that time, based on big data, block chain and artificial intelligence, digital economy will be redesigned on the foundation of traditional business model and rely on digital technology to drive cross industry, cross regional business model.

5. Sharing

In the era of digital economy, digital resources are highly shared. The focus of development is to continuously expand digital information resources and develop the integration, storage, analysis and trading business of digital technology. By sharing and exchanging, the new value of digital technology resources will be released to realize mutual benefit and win-win situation.

To sum up, the characteristics of digital economy, such as digitization, networking, intelligence, commercialization and sharing, reveal the inevitability of the development of digital economy, and provide a clear development direction for the cultural industry with good digital foundation. The "digital gene" in the cultural industry will be fully developed in the era of digital

economy. Therefore, in the era of digital economy, the digital transformation of cultural industry is imperative.

3. The Inevitability of the Development of Cultural Industry in the Era of Digital Economy

In the era of digital economy, cultural industry not only maintains the original development track and trend, but also presents many new characteristics. The concept of digital cultural industry emerges as the times require, which shows the necessity of the close combination of cultural industry development and digital economy. In 2016, digital culture industry was included in China's strategic emerging industry development plan for the first time. The report points out: "the digital cultural industry is the most core part of the digital creative industry. It takes the cultural and creative content as the core and relies on digital technology for creation, production, dissemination and service. It is characterized by rapid technological change, digitization of production, networking of communication and individualization of consumption, for which it is conducive to cultivate new supply and promote new consumption. And it has become the focus of the development of cultural industry Domain and an important component of the digital economy."

At present, the main consumption areas of digital culture industry focus more on the consumption of Internet, but are also expanding in more other areas. In particular, cultural tourism, video games, sports and other fields will usher in an important opportunity to promote the development of digital culture industry. Furthermore, technologies such as big data and artificial intelligence play an increasingly important role in the development of digital culture industry. With the comprehensive promotion of 5g technology commercialization, big data, cloud computing, artificial intelligence and block chain technology will accelerate the development of digital culture industry. With the integration of industrial Internet and consumer Internet, the leading role of cultural industry as a producer service industry, especially the digital culture industry, will be brought into full play. Therefore, in order to achieve rapid and sustainable development of cultural industry, we must seize the opportunities of the digital economy era and meet the challenges of the times to the development of cultural industry.

4. The Development Path of Cultural Industry in the Era of Digital Economy

1. Technical level: pay attention to the technology frontier and make effective integration.

Digital economy development, in the new technology system, mainly includes the five technologies of big data, cloud computing, Internet of things, artificial intelligence, block chain. Among them, big data and cloud computing technology lay the foundation for the acquisition, analysis and output of digital resources; Internet of things technology provides path for digital content transmission; artificial intelligence technology provides intelligent support for the reference of digital economy; and block chain technology provides technical support for the development of digital economy.

Nowadays, the application of the new technology system represented by the five digital technologies in the field of cultural industry has begun to take shape, and even has made great progress in some fields. For example, the Internet of things technology has been initially applied in the environmental monitoring of collection of cultural relics, remote control and regulation, batch management of the flow direction of art collections and so forth; digital technology represented by cloud computing and big data has been fully applied in various fields of digital culture industry such as online games and short video industry; and digital technology

represented by block chain technology has also been applied in digital games , music industry and art market. In the future, with the continuous extension of digital technology, the application field of digital technology in cultural industry will continue to expand, and more integration between technology and industry should be done. The five technologies should be based on the requirements of production, dissemination and consumption of digital culture industry, and technologies should cooperate with each other and effectively integrate with cultural industry to promote the high-speed and high-quality development of digital culture industry.

2. Market level: cultivate consumption market and guide consumption habits

As an internal driving force for the development of cultural industry, cultural consumption has been growing in recent years, and its proportion in economic expenditure has increased year by year. In 2018, the scale of China's digital economy reached 31.3 trillion yuan, accounting for 34.8% of GDP, in which the proportion of digital culture industry increased year by year. Digital culture industry has made remarkable achievements in promoting economic growth and expanding employment. However, the digital divide and consumption differentiation also affect the promotion of digital economy. Therefore, the development of cultural industry should try to avoid the negative effect and Matthew effect caused by the uneven distribution of digital resources.

Therefore, we should do a good job in the construction of digital infrastructure and popularize digital application terminals to alleviate the imbalance of digital resources distribution and eliminate the "congenital deficiencies" brought by the digital divide. At the same time, we should actively cultivate digital culture industry and consumption market, cultivate and guide consumers' consumption content and consumption habits. According to the cultural consumption habits and patterns in different regions, we provide corresponding cultural products. According to the individual characteristics of different consumer groups, it provides targeted and popular digital cultural products and services. We should continue to cultivate consumer demand, realize the digitization of product content, networking of communication channels, and individualization of consumption habits, release the kinetic energy of digital economy in the cultural field, and cultivate new growth points of cultural consumption.

3. Policy level: introduce security policies and improve the regulatory mechanism

In the era of digital economy, the development of cultural industry will enter a fast track, but the sustainable development must have supporting measures and perfect supervision mechanism in order to better guide the development direction of cultural industry, enhance the existing competitiveness and development level of the industry. Therefore, the government needs to formulate and improve the policies conducive to the development of national or regional digital cultural industry on the basis of investigating the current development situation of digital cultural industry, and strengthen the guidance and cultivation of industrialization according to the national and regional industrial development strategy and development plan. At the same time, it is necessary to build and improve the information public service platform to facilitate the participants of digital culture industry to understand the relevant preferential policies and supporting measures of the government, so as to reduce the cost of enterprises and improve the overall competitiveness of regional enterprises.

With the rapid development of digital culture industry, the infringement phenomenon in many fields, such as games, movies and music, is becoming more and more severe. With more and more participants entering the field of digital culture industry, the decentralized infringement is increasing day by day. Because of the low cost and the small cost of infringement, the mentality of 'the law is not responsible for the public' makes many people have fluke psychology. Therefore, it is necessary to strengthen and improve the market supervision mechanism to better reduce copyright disputes such as infringement and plagiarism.

5. Problems in the Development of Cultural Industry in the Era of Digital Economy

In the era of digital economy, the development of cultural industry should not only pay attention to the effective development of the above three levels, but also pay attention to such issues as data right confirmation, digital divide and cooperation security. If these problems are ignored, it will seriously restrict the development of digital culture industry.

1. Data right confirmation

Data right confirmation refers to the ownership, collection right, storage right, possession right, privacy right and use right of data. Data confirmation right is the basic condition and legal basis for the healthy, safe and smooth development of digital economy. Nowadays, the problem of data right confirmation mainly exists in the ownership, possession, domination and privacy of data. In the final analysis, the problems of data label and data replication abuse are not solved. The specific phenomenon in the field of cultural industry is a large number of infringement and piracy.

In the era of digital economy, the orderly development of cultural industry and the clear ownership of data are the basis and guarantee for the development of digital cultural industry. Therefore, we should improve the existing copyright related laws and regulatory mechanisms, and at the same time, fully introduce block chain technology, and use the distributed trust system of block chain technology to provide basic framework guarantee for the realization of data right confirmation. Using the unforgeability of block chain to increase the cost of infringement and violation of law. Using the characteristics of decentralized storage of block chain to realize the security and trust of data content.

2. Digital divide

Digital divide refers to the information gap and the further polarization between the rich and the poor caused by the differences in the ownership, application and innovation ability of information and network technology among different countries, regions and communities in the global digital process. Although the development of China's digital economy has entered a period of rapid development and the speed of digital cultural industry is changing with each passing day, there are still some problems such as underdeveloped digital resources and low Internet penetration. The digital divide still exists in today's Internet environment in China. The development of today's cultural industry highly depends on the popularity of the Internet. If the digital cultural industry wants to obtain greater development possibilities, it needs to constantly bridge the digital gap in the field of digital culture.

At present, 'new infrastructure', with a new generation of information technology as the core, has become a new driving force for China's economic development. In the government work report on May 22, 2020, it is also pointed out that it is necessary to 'strengthen the construction of new infrastructure, develop a new generation of information network, expand the application of 5g, build charging piles, promote new energy vehicles, stimulate new consumer demand and help industrial upgrading.' The promotion of 'new infrastructure' has undoubtedly provided benefits for bridging the digital divide. However, in the design of system, terminal and human-computer interface, we must pay attention to and meet the needs of special groups, so that we can guard against the possible new digital divide and new poverty.

3. Cooperative security

The sudden outbreak of coronavirus disease at the end of 2019 greatly affected people's lives all over the world, which has seriously affected the global cultural industry, especially the cultural institutions and enterprises represented by cinemas and performing arts. The cultural industries in various countries have suffered heavy losses and the coronavirus disease continues to persist in the global culture institutions, and people must turn their attention and

attention to online. The discussion about whether the global cultural industry will usher in the transformation from "on-site culture" to "online culture" has been continuously fermenting.

At the same time, the consumption of foreign cultural products has also fallen into a deadlock, although many countries have introduced many policies to revitalize their own cultural industry. But after the economic restart, the choice between domestic cultural products and foreign cultural products will become a specific problem faced by consumers. The rise of cultural protectionism and populism will make people re-examine the issue of global cooperation and globalization. Therefore, in the post-epidemic period, under the premise of ensuring the safe development of domestic cultural industry, how to deal with the issues of security and cooperation will become the key to the development of cultural industry in the era of digital economy.

To sum up, the proportion of digital cultural products in international cultural service trade is increasing year by year. All countries regard the development of digital content industry as an important strategy, and China's digital cultural industry still needs to develop in a wider range. With the gradual commercialization of 5g technology, the impact of new technologies is growing. It will become an important force to support the digital culture industry, and other major technologies such as cloud computing, big data, artificial intelligence and block chain are equally important to the development of digital culture industry. Therefore, we should pay attention to the comprehensive development of technology, market and policy, and avoid the emergence of digital infringement, digital divide and cooperation security to accelerate the integration of cultural industry and new Internet technology, to accelerate economic transformation and upgrading, and to help the development of cultural industry.

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