

Strategies for Digital Economy in Supporting the Transformation of the Cultural and Tourism Industry

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ABSTRACT

The former Ministry of Culture clearly stated in the "Guiding Opinions on Promoting the Innovative Development of the Digital Cultural Industry" that the tourism industry should move towards digitalization. Against this backdrop, this paper aims to explore feasible strategies for the digital economy to assist in the transformation of the cultural and tourism industry. The study adopts literature research, theoretical analysis, and practical investigation methods. It first briefly explains the relevant concepts of the digital economy and the transformation of the cultural and tourism industry, then analyzes the internal mechanisms of how the digital economy supports the transformation of the cultural and tourism industry under the current situation, and finally discusses the strategies in detail.

KEYWORDS

Digital Economy; Cultural and Tourism Industry; Transformation Strategies

1. INTRODUCTION

The digital economy plays a crucial role in modern society. It is not only an important engine driving high-quality social and economic development, but also provides support for the transformation and upgrading of various industries. In this context, leveraging the digital economy to develop the cultural and tourism industries has become a major trend. The government attaches great importance to the role of the digital economy in the development of the cultural and tourism industries, issuing policy documents such as the "Smart Tourism Innovation Development Action Plan," "Opinions on Promoting the High-Quality Development of the Digital Cultural Industry," and the "14th Five-Year Plan for the Development of the Tourism Industry." This paper conducts a study on the strategies for the digital economy to support the transformation of the cultural and tourism industries, which has important practical significance and value.

2. OVERVIEW OF THE DIGITAL ECONOMY AND THE TRANSFORMATION OF THE CULTURAL AND TOURISM INDUSTRY

The digital economy, also known as the information economy, is an economic form that drives the development of productivity through data. From a technological perspective, commonly used technologies in the digital economy include big data, cloud computing, the Internet of Things (IoT), blockchain, and others. Today, the development of the digital economy has gained global consensus. The reason for this is that data has become an important production factor, capable of creating value for societal development, making the advancement of the digital economy essential.

Cultural and tourism integration refers to the penetration and reorganization of the cultural, tourism, and related elements, forming a new symbiotic entity. Culture is the soul of tourism, while tourism is the carrier of culture. Culture and tourism are closely connected, and in the transformation and development of the cultural and tourism industries, they can generate an effect where "1+1 > 2," leading to the creation of a new cultural and tourism industrial system. From the tourism perspective, the transformation of the cultural and tourism industry can enrich the connotation of the tourism sector and enhance its level. From the cultural perspective, this transformation can use tourism to inherit and promote traditional culture, drive the development of the cultural industry, and form a new pattern of cultural prosperity.

3. THE INTERNAL MECHANISM OF THE DIGITAL ECONOMY SUPPORTING THE TRANSFORMATION OF THE CULTURAL AND TOURISM INDUSTRY

The development of the digital economy has driven the transformation of China's cultural and tourism industries. Its internal mechanism mainly includes the following three aspects:

Providing Relevant Mechanisms for Transformation: Digital technologies have driven the continuous upgrading of the cultural and tourism industries, breaking the constraints of traditional industry boundaries and enabling the deep integration of these sectors. At the same time, digital technology provides motivation for the coexistence of multiple mechanisms within the cultural and tourism industries.

Creating New Pathways for Transformation: The application of digital technology has promoted the transformation of the cultural and tourism industries, such as through digital immersion, interactive virtual experiences, and collaborative experiences. This has enriched the connotation of the cultural and tourism industries and formed more diverse behavioral systems.

Adding Value and Benefits to Transformation: The digital economy can add significant value to the transformation of the cultural and tourism industries, including production value, ecological value, and other forms of benefit.

4. FEASIBLE STRATEGIES FOR THE DIGITAL ECONOMY TO SUPPORT THE TRANSFORMATION

The development of the digital economy has driven the transformation of China's cultural and tourism industries. Its internal mechanism mainly includes the following three aspects: Feasible Strategies for the Digital Economy to Support the Transformation of the Cultural and Tourism Industry

4.1. Emphasizing Planning and Guidance

For the digital economy to assist in the transformation of the cultural and tourism industries, it is crucial for the cultural and tourism departments to make reasonable plans based on practical conditions and play a leading role in the process. At the same time, it is important to clearly define the current digital development goals of the cultural and tourism industries, providing clear direction for their transformation.

Improving the Efficiency of Industry Development: The essence of the digital economy assisting in the transformation of the cultural and tourism industries lies in optimizing management and service processes through digital means, minimizing waste, and making the operation of the cultural and tourism sectors more efficient.

Optimizing the Structure of the Cultural and Tourism Industry: Through the application of digital technologies, the internal structure of the existing cultural and tourism industries can be reorganized and adjusted, better aligning with market development needs and improving the efficiency of resource allocation in the sector.

Enhancing the Driving Force for Industry Development: With the background of the digital economy facilitating the transformation of the cultural and tourism industries, innovations in technology and development models within these sectors will undoubtedly strengthen the sustainable development momentum of the industry, meeting the growing demand for a better life among the people.

4.2. Implementing Top-Level Design and Grasping the Digital Development Direction

For the digital economy to assist in the transformation of the cultural and tourism industries, it is not only important to emphasize top-level design but also to accurately grasp the direction of digital development in these sectors.

Top-Level Design: Relevant personnel in the cultural and tourism departments should base their efforts on documents such as the Overall Layout Plan for Building a Digital China and the Opinions on Promoting High-Quality Development of the Digital Cultural Industry from the Ministry of Culture and Tourism. These documents should serve as a foundation for constructing a new system that is goal-oriented. This system must design the "two sides and four ends" of digital development in the cultural and tourism industries: the supply side, demand side, resource end, production end, consumption end, and cloud end.

Grasping the Digital Development Direction: The digital development direction of the cultural and tourism industries mainly includes the following four aspects:

Digital Protection: This refers to the use of advanced scientific and technological methods to convert tangible cultural heritage into digital form, ensuring its protection and transmission.

Digital Management: This involves utilizing advanced digital technologies to improve management practices, enhancing the efficiency of information sharing.

Digital Services: This entails leveraging digital technologies to upgrade services, promoting integration within the cultural and tourism industries and deepening supply-side structural reforms.

Digital Marketing: This involves utilizing digital means for marketing and promotion, which not only helps in accurately targeting specific customer groups but also harnesses social media for interactive marketing. This strategy injects continuous vitality into the development of the cultural and tourism industries and stimulates their overall growth.

4.3. Adhering to Innovative Concepts and Optimizing the Digital Development Environment

For the digital economy to effectively support the transformation of the cultural and tourism industries, a more complete development environment is needed. This environment should focus on three key aspects: personnel, legal policies, and funding.

Personnel Competence: As digital technology continues to penetrate the cultural and tourism industry system, relevant personnel in these departments should adopt innovative concepts and avoid "consciousness constraints" and the "digital divide." Additionally, it is crucial for these individuals to enhance their professional skills, actively keeping up-to-date with trends and key issues related to the digital economy and the transformation of the cultural and tourism industries.

Legal and Policy Framework: There is a need to improve the legal and policy system that supports the integration, coordination, and innovative development of the digital cultural and tourism

industries. Policies must be further promoted and implemented to ensure the effective facilitation of this transformation.

Funding: Expanding funding sources is vital. Governments should consider offering dedicated funds, policy support, and other financial mechanisms to support the transformation process. By establishing a more comprehensive environment for the transformation of the cultural and tourism industries, more ideal development outcomes can be achieved.

4.4. Optimizing Path Selection and Expanding the Digital Application Scenarios

4.4.1. Achieving Immersive Experiences

In the process of digital economic support for the transformation of the cultural and tourism industries, creating immersive experiences for tourists is crucial. In the digital economy era, digital technologies enable tourists to experience more vivid, immersive, and virtual tourism experiences. Visitors can explore historical relics and natural landscapes around the world in a virtual environment, as if they were physically present. For example, the "Splendid and Diverse - Cave Art Immersive Experience" exhibition, opened at the National Museum of China on December 9, 2023, effectively utilized digital drawing, 3D mapping, and other technologies to present scenes from the Kizil Caves, Dunhuang Mogao Caves, and Maiji Mountain Caves. The exhibition also created an "Art Time and Space Experience Area" to offer visitors a rich and engaging experience. Furthermore, the concept of the "Cultural and Tourism Metaverse" gained widespread attention in 2021, with the Zhangjiajie Scenic Area in Hunan taking the lead in establishing a "Metaverse Research Center." This initiative has encouraged many well-known scenic areas in China to explore the Metaverse concept further, laying the foundation for expanding digital application scenarios in the cultural and tourism industries.

4.4.2. Utilizing Extended Reality (XR) Technology

Extended Reality (XR) refers to a digital environment created through modern high-tech methods, where real and virtual worlds combine, providing a seamless connection between the two. XR technologies include augmented reality (AR), virtual reality (VR), and mixed reality (MR), and their defining features include virtual-real integration, real-time interaction, situational awareness, and reality editing. These technologies help break the boundaries between the virtual and real worlds and are a core technology supporting the transformation of the cultural and tourism industries in the digital economy. For example, the VR-themed park in Nanchang, Jiangxi, fully utilizes VR technology and combines it with culture, tourism, education, entertainment, and immersive experiences. The park offers high-quality VR equipment for visitors, allowing them to experience projects such as "Time Travel," "Nanchang Imprint," and "Digital China VR Nanchang," gaining both novelty and an understanding of the local cultural essence. Additionally, the Zhou Enlai Memorial Hall in Huai'an, Jiangsu, has enhanced its offerings with a "3D Digital Display Tour System," allowing visitors to better understand the exhibition content with the support of VR headsets and AR glasses. Another example is the "SoReal" project developed by the Hong Kong Qi Tian Group, which uses XR technology alongside 5G, edge computing, holographic imaging, and 3D projection to innovate cultural tourism services and achieve digital development. In conclusion, by focusing on visitor needs and exploring the integration points of digital technologies, XR technologies can recreate local historical scenes and cultural heritage, thus boosting the transformation of the cultural and tourism industries and injecting new vitality into the "XR + cultural tourism" model.

4.4.3. Introducing Panoramic Display and AI Technologies

Panoramic display technology offers many features such as all-around presentations, realistic scene restoration, 360-degree panoramic effects, accessible playback terminals, and interactive experiences. These characteristics contribute to the transformation and innovation of the cultural and tourism industries in the new era. For example, the Nianhua Bay Scenic Area in Wuxi, Jiangsu, has used innovative and technological expressions to create a full-scenery model of the Luming Valley

Ecological Area. It has also produced various virtual scenes and launched the short video "Dream of Tang Cherry Blossoms," allowing visitors to appreciate the Zen-style atmosphere of the Tang and Song Dynasties and experience the infinite charm of traditional culture. Artificial Intelligence (AI) technology, which features autonomous learning, adaptability, human-machine interaction, and natural language processing capabilities, has become an important development direction in the global technology field. More and more scenic areas are promoting the integration of digital technology and cultural creativity. With the assistance of AI digital humans, these scenic areas are upgrading the visitor experience. For instance, the Tengwang Pavilion tourist area in 2023 employed AI technology to create a digital virtual human version of the Tang Dynasty poet Wang Bo. This AI version of Wang Bo evaluates visitors who recite the Preface to the Tengwang Pavilion, allowing for intimate interaction while providing historical and cultural knowledge and offering an immersive experience of the Tang Dynasty's prosperity. Similarly, the Guangzhou National Edition Museum uses AI technology to create a digital human named "Qin Qin," who interacts with visitors, answers questions about the museum's collections, and helps introduce the unique charm of the museum to a wider audience. These technological innovations not only enhance visitor experiences but also contribute to the continuous development of the digital transformation of the cultural and tourism industries.

4.5. Promoting Traditional Culture and Strengthening Digital Cultural and Tourism Creative Output

In the transformation process of the cultural and tourism industries, the digital economy plays a crucial role. If we view the digital economy as the "form," then the content IP is the "spirit." In advancing the digital transformation of cultural and tourism industries, new technologies can be used to deeply explore and analyze the core culture of various cities, thus developing more digital cultural creative products that promote the inheritance and enhancement of local cultural characteristics. For example, we can refer to the cultural creative products of the Palace Museum, where efforts are made to uncover the most representative and memorable elements of the traditional cultural system of a given region. This includes promoting artistic images, personal stories, cultural scenes, and thematic content with local characteristics to create digital cultural IP. It is essential to actively combine technologies such as big data and cloud computing with cultural creative outputs in this process. This approach not only creates products such as digital animation, digital games, and digital films, but also fosters new cultural and creative industries based on digital technology.

4.6. Sustained Efforts to Enhance the Digital Governance of the Cultural and Tourism Industry

To further promote the transformation of the cultural and tourism industries with continuous support from the digital economy and solidify the transformation effects, it is necessary to improve the digital governance of the industry. With the emergence of new business forms and models in the cultural and tourism sectors, existing management models need optimization. On one hand, due to the high traffic of digital cultural and tourism products, there is a risk of duplication and illegal sales. Therefore, relevant departments should strengthen institutional management and create a clearer and more transparent digital cultural and tourism product market environment. On the other hand, the development of the digital economy may bring about data security issues. In response, cultural and tourism departments and enterprises should work together to improve related standards and regulatory policies to promote the standardized creation of digital cultural and tourism platforms. In the practice of digital governance in the cultural and tourism industry, big data and blockchain technologies can be used to enhance regulation, predict risks, and establish appropriate industry management regulations.

5. CONCLUSION

In conclusion, the digital economy has brought new opportunities for the transformation and development of the cultural and tourism industries. Under the new circumstances, the transformation of these industries holds great significance. With the support of the digital economy, the following transformation strategies can be implemented: prioritize planning and leadership, define clear goals for the digital development of the cultural and tourism industries; implement top-level design to grasp the digital development direction; embrace innovative concepts to optimize the digital development environment; optimize path selection and expand digital application scenarios; promote traditional culture and strengthen the digital cultural and tourism creative output; and maintain sustained efforts to enhance the digital governance level of the cultural and tourism industry.

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