



The High-Quality Development of Guangzhou's Digital Cultural Industry

Jinhao Tan¹, Xinle Li², Linkai Wei³, Minjie Pan³, Wenxi Du³, Zhongyang Sun³,
Xiaojun Ke^{3*}

^{1,2,3}Guangzhou Institute of Science and Technology, Guangzhou, 510540.

^{3*}Email: drxjke@gzist.edu.cn(correspondence)

Abstract: As a product of the deep integration of culture and technology, the digital cultural industry has become the core driving force for promoting the economic transformation of cities and enhancing their cultural soft power. As a core city in the Guangdong-Hong Kong-Macao Greater Bay Area, Guangzhou has seen the rapid rise of its digital cultural industry, which has become an important force for economic growth, thanks to its cultural heritage, technological foundation and market environment. However, as Guangzhou's digital cultural industry moves towards high-quality development, it also faces challenges such as a structural shortage of high-end talents, intensified regional competition, and insufficient technological innovation and transformation capabilities. This article aims to analyze the current development status and internal logic of Guangzhou's digital cultural industry, provide references for the high-quality development of Guangzhou's digital cultural industry, and promote the overall level improvement of China's digital cultural industry.

Keywords: Digital Cultural Industry, High-quality Development, Industrial Ecology, Cultural Industry

1. Introduction

Against the backdrop of the vigorous development of the digital economy, the digital cultural industry, with its characteristics of high innovation, high integration and high penetration, has become a new engine for the development of the global cultural industry (Xiaojuan, 2023). According to the definition of UNESCO,

the digital cultural industry refers to an industrial form that creates, produces, disseminates and consumes cultural content through digital technology, covering multiple fields such as digital games, online audio-visual, and virtual experiences (Sun & Hong, 2023).

Globally, the digital cultural industry is experiencing an unprecedented rapid development. The

United States, some countries and regions in Europe and Asia are in the leading position in the field of digital cultural industry. The key to their success lies in their strong technological innovation capabilities and perfect market mechanisms (Acs, 2023). For instance, streaming platforms such as Netflix and Disney+ in the United States, as well as the music platform Spotify in Europe, all have huge user bases and significant market influence worldwide. These platforms have continuously met users' diverse cultural demands through technological and content innovation, promoting the prosperous development of the digital cultural industry (Peng, 2023).

In China, with the in-depth implementation of the "Internet Plus" strategy, the digital cultural industry has risen rapidly and become an important force driving economic transformation and upgrading (Liu et al., 2024). In recent years, the scale of China's digital cultural industry has continued to expand, and emerging business forms such as animation and games, digital music, and live streaming have flourished (Zhao, 2023). According to the "Report on the Development of China's Digital Cultural Industry", the market size of China's digital cultural industry has exceeded the one trillion yuan mark, and the growth rate remains at a high level. Meanwhile, the Chinese government has also introduced a series of supportive policies, providing a favorable policy environment for the development of the digital cultural industry.

As a core city in the Guangdong-Hong Kong-Macao Greater

Bay Area, Guangzhou has become an important growth pole of China's digital cultural industry, thanks to its profound cultural heritage, advanced technological foundation and active market environment. According to data from the Guangzhou Municipal Bureau of Statistics, in 2024, the legal entities of large-scale cultural and related industries in Guangzhou achieved operating income of 604.08 billion yuan. Among them, the 16 industry subcategories with distinct characteristics of new digital cultural business forms achieved operating income of 278.088 billion yuan, accounting for 46.0%, becoming the core driving force for industrial growth.

However, while the industrial scale is expanding rapidly, Guangzhou's digital cultural industry is also facing the key challenge of transforming from "scale growth" to "quality improvement". How to build a globally competitive digital cultural industry ecosystem in an environment where technological iteration is accelerating and market competition is intensifying has become a focus of common concern for both the academic and industrial communities. This article systematically analyzes the development history, current situation and challenges of Guangzhou's digital cultural industry, aiming to provide a systematic reference for the high-quality development of Guangzhou's digital cultural industry and enrich the regional development theory of the digital cultural industry at the same time.

2. The connotation and Characteristics of the Digital Cultural Industry

The connotation of the digital cultural industry is constantly evolving along with technological progress and industrial practice (Huang & Jia, 2022). Essentially, it is the product of the deep integration of cultural creativity and digital technology, reconstructing the production, dissemination and consumption chain of cultural content through digital means (Xi & Gao, 2023). The high-quality development of the digital cultural industry is a systematic project that covers the industry's main body, product services, ecosystem, operation environment and driving forces. Its core lies in activating cultural resources through technological innovation to achieve the unity of social and economic benefits (Nasta, 2025). The connotation logic of the digital cultural industry includes three dimensions: the mission of individualized development to meet people's cultural needs, the mission of interactive infiltration to enhance people's spiritual strength, and the mission of innovative unification of the two in practice (Hua & Wangb, 2024).

Compared with the traditional cultural industry, the digital cultural industry has distinct characteristics of The Times: First, technological dependence. Digital technologies represented by 5G, artificial intelligence, and virtual reality (VR/AR) have become the core support for industrial development (Jora et al., 2024). For instance, Tencent Interactive Entertainment's virtual idol concert developed based on game engine technology has achieved an innovative immersive experience of cultural content. Second, cross-border integration. The

boundaries of industries are becoming increasingly blurred, and culture is deeply integrated with technology, education, business and other fields, giving rise to new business forms such as digital cultural tourism and intelligent cultural creativity (Chen & Bao, 2024). The "Metaverse Zoo" created by Chimelong Group in Guangzhou by integrating AR technology with theme parks is a typical case. Third, data-driven. User behavior data has become a core production factor. Through big data analysis, precise content creation and personalized service push can be achieved (Ikegwu et al., 2022), such as the intelligent recommendation system built by NetEase Cloud Music based on users' listening habits. Fourth, global communicability. Digital technology breaks geographical limitations and promotes the global flow of cultural content (Kaur-Gill, 2023). In 2023, the export revenue of game enterprises in Guangzhou reached 20 billion yuan, accounting for approximately 15% of the national total. Some products, such as "Rules of Survival", have achieved significant influence in overseas markets.

3. Development Trends of the Digital Cultural Industry

Developed countries in Europe and America started earlier in the field of digital cultural industry and have formed a relatively mature industrial ecosystem. The United States maintains a global leading position in fields such as digital film and television and game development by combining the Hollywood film and television industry

with Silicon Valley technology (Mammadova & Abdullayev, 2025). For instance, Disney has achieved a digital transformation in content distribution through the Disney+ streaming platform. Europe, on the other hand, focuses on the digital development of cultural heritage. The VR online exhibition project at the Louvre in France has become a model for the digital utilization of cultural resources. Japan and South Korea have significant advantages in niche fields such as digital animation and e-sports (Kargas & Loumos, 2023). For instance, Japan's Nintendo Switch game console and South Korea's LCK e-sports league have both formed complete industrial chain systems.

In recent years, the global digital cultural industry has shown three major development trends: First, the integration of technologies is accelerating.

Artificial intelligence-generated content (AIGC) and blockchain technology are increasingly widely applied in digital copyright protection (Wang et al., 2024). For example, OpenAI's DALL-E 2 has achieved the automatic generation of text-to-image, providing a new paradigm for digital content production. Second, experience upgrade and iteration. The shift from 2D flat content to 3D immersive experiences, the rise of the metaverse concept has promoted the implementation of new scenarios such as virtual social interaction and virtual consumption (Allam et al., 2022), such as Meta's Horizon Workrooms virtual office platform. Third, the governance system is improved. Countries around the world are strengthening policy

guidance for the digital cultural industry (Bouquillion & Ithurbide, 2023). The EU's Digital Markets Act (DMA) regulates the behavior of platform enterprises, while the US National Artificial Intelligence Initiative Act (NAIIA) emphasizes the application of technological ethics in the cultural field.

China's digital cultural industry has developed rapidly under the dual drive of policy support and market demand. The 14th Five-Year Plan clearly states that "we should promote the deep integration of digital technology and the real economy, empower the transformation and upgrading of traditional industries, and give birth to new industries, new business forms and new models", providing policy guarantees for the development of the digital cultural industry. According to data from the China Cultural Industry Research Institute, the scale of China's digital cultural industry reached 7 trillion yuan in 2024, increasing by 11% year-on-year, which was higher than the GDP growth rate during the same period. Relying on the resource advantages of being the capital and an international metropolis, Beijing and Shanghai have focused on digital content creation and industrial services, such as the Digital Creative Industry Park in Zhongguancun, Beijing, and the Cultural and Technological Integration Demonstration Zone in Zhangjiang, Shanghai. Shenzhen and Guangzhou: Relying on their solid foundation in science and technology industries and the advantages of an open economy, they have performed outstandingly in the application of digital technology and product innovation. Companies like

Tencent and NetEase (Guangzhou) in Shenzhen have become leading forces in the national digital cultural industry. Hangzhou and Chengdu: Characterized by digital platform and scene innovation, Hangzhou's Alibaba Digital Entertainment ecosystem and Chengdu's Digital cultural and creative industrial park have formed regional competitive advantages.

4. The Development Process and Current Situation of Guangzhou's Digital Cultural Industry

The development of the digital cultural industry in Guangzhou can be traced back to the end of the last century. With the popularization of Internet technology and the rapid development of computer technology, a number of enterprises in emerging industries such as digital entertainment and online literature have begun to emerge in Guangzhou. Since the beginning of the 21st century, especially in recent years, driven by both policy support and technological innovation, Guangzhou's digital cultural industry has achieved leapfrog development. The government has introduced a series of supportive policies to encourage enterprises to increase investment in research and development and promote technological innovation and industrial upgrading. Meanwhile, Guangzhou has also formed several digital cultural industry clusters, such as Tianhe District and Haizhu District. Enterprises in the upstream and downstream of the industry have closely cooperated, creating a favorable industrial ecosystem.

The Guangzhou Municipal government attaches great importance to

the development of the digital cultural industry and has introduced a series of supportive policies. These policies cover multiple aspects such as financial support, tax incentives, and talent introduction, providing all-round support for the development of the digital cultural industry. As the birthplace of Lingnan culture, Guangzhou is rich in cultural resources. These cultural resources provide a continuous stream of inspiration and materials for the content innovation of the digital cultural industry. For instance, the traditional cultural elements of Guangzhou have been widely applied in the product creation of fields such as animation and games, and digital music, forming digital cultural products with local characteristics. At present, Guangzhou has formed several digital cultural industry clusters, such as the Digital Creative Industry Park in Tianhe District and the Pazhou Digital Cultural Industry Cluster in Haizhu District. These clusters have attracted a large number of upstream and downstream enterprises to settle in, forming a complete industrial chain and ecosystem. The close cooperation and resource sharing among enterprises have promoted the rapid development of the digital cultural industry.

According to the data from the Guangzhou Municipal Bureau of Statistics, the scale of Guangzhou's digital cultural industry has continued to grow in recent years. Both the operating income and profit levels maintained a relatively high growth rate, becoming one of the important engines of economic growth in Guangzhou. Especially in fields such as animation

and games, digital music, and live streaming, a number of enterprises and brands with international influence have emerged in Guangzhou. The animation and game industry in Guangzhou is in a leading position nationwide, with many well-known animation and game enterprises and numerous popular IPs. In terms of digital music, a number of outstanding music producers and music platforms have emerged in Guangzhou. The field of online live streaming has also developed rapidly, attracting a large number of users and capital attention.

5. Challenges in the Development of Digital Cultural Industry in Guangzhou

Although the digital cultural industry in Guangzhou has achieved remarkable results in many aspects, it still faces a series of challenges that cannot be ignored on the road to high-quality development:

There is a structural shortage of high-end talents. As an emerging industry, the digital cultural industry has a strong demand for high-end compound talents who are proficient in both cultural creativity and digital technology. However, Guangzhou has deficiencies in the cultivation and introduction of high-end talents. There is a certain disconnection between the relevant professional settings of local colleges and universities and the actual demands of the industry, and the quality of talent cultivation is difficult to meet the requirements of industrial development for high-end talents. Meanwhile, due to factors such as high living costs and fierce competition for talents in first-tier cities, Guangzhou is under considerable

pressure in attracting outstanding and high-end digital cultural industry talents both at home and abroad. This has led to a prominent structural shortage of high-end talents, which has restricted the innovation capacity and core competitiveness of the industry.

Regional competition intensifies. Against the backdrop of the vigorous development of the digital cultural industry, major cities across the country have successively identified the digital cultural industry as a key development area, introduced a series of supportive policies, and increased investment in the industry. Cities such as Beijing, Shanghai and Shenzhen, relying on their unique resource advantages and policy support, have developed rapidly in the field of digital cultural industry, forming a fierce competitive situation with Guangzhou. These cities have strong advantages in the aggregation of high-end talents, the acquisition of innovative resources, and the construction of industrial ecosystems, which pose certain challenges to the development of Guangzhou's digital cultural industry. Guangzhou needs to constantly enhance its own competitiveness to stand out in the fierce market competition.

The ability of technological innovation and transformation needs to be improved. Although Guangzhou has a certain foundation for technological innovation in fields such as artificial intelligence, big data and virtual reality, the overall level of technological innovation still lags behind that of the world's leading regions. Some enterprises have insufficient investment in research and development, lack core

technologies and independent intellectual property rights, resulting in severe product homogeneity and weak market competitiveness. In addition, the mechanism for the transformation of scientific and technological achievements is not yet perfect, and the collaborative innovation among industry, academia, research institutions and users is not close enough. Many scientific research achievements are difficult to be quickly transformed into actual productive forces, which has affected the technological upgrading and product innovation of industries.

6. Summary and Outlook

This article conducts an in-depth exploration of the current development status, challenges and future development directions of the digital cultural industry in Guangzhou. Through research, it is found that Guangzhou's digital cultural industry, with its profound cultural heritage, advanced technological foundation and active market environment, has achieved remarkable results in terms of scale expansion, technological application and business model innovation, and has become an important force promoting Guangzhou's economic growth and enhancing its cultural soft power. However, in the journey towards high-quality development, Guangzhou's

digital cultural industry is also confronted with challenges such as a structural shortage of high-end talents, intensified regional competition, and the need to enhance technological innovation and transformation capabilities. These problems not only restrict the sustainable development of Guangzhou's digital cultural industry itself, but also affect its position in the global competition of the digital cultural industry.

Looking to the future, the digital cultural industry in Guangzhou has broad prospects for development. By actively responding to challenges and implementing various development suggestions, Guangzhou is expected to build a globally competitive digital cultural industry ecosystem, achieve a key transformation from "scale growth" to "quality improvement", secure a place in the global digital cultural industry competition, and make greater contributions to the economic transformation and upgrading as well as the cultural prosperity and development of Guangzhou. Meanwhile, this research also provides useful references and lessons for the high-quality development of the digital cultural industry in other regions, which is conducive to promoting the overall improvement of the level of China's digital cultural industry.

Acknowledgment

This research was funded by the Guangzhou Institute of Science and Technology.

References

- Acs, Z. J. (2023). The global digital platform economy and the region. *The Annals of Regional Science*, 70(1), 101-133.
- Allam, Z., Sharifi, A., Bibri, S. E., Jones, D. S., & Krogstie, J. (2022). The metaverse as a virtual form of smart cities: Opportunities and challenges for environmental, economic, and social sustainability in urban futures. *Smart Cities*, 5(3), 771-801.
- Bouquillion, P., & Ithurbide, C. (2023). Policy for cultural and creative industries in India: the issue of regulation through digital policy. *Contemporary South Asia*, 31(2), 326-340.
- Chen, G., & Bao, B. (2024). The coexistence and integration of regional culture and digital globalization: Challenges and opportunities. *Geographical Research Bulletin*, 3, 589-605.
- Hua, M., & Wangb, Y. (2024). The Impact and Driving Mechanism of Digital Technology on the Interactive Development of Cultural Tourism and Cultural Creative Industries and Urban Renewal. *Academic Journal of Humanities & Social Sciences*, 7(11), 98-104.
- Huang, L., & Jia, Y. (2022). Innovation and development of cultural and creative industries based on big data for industry 5.0. *Scientific Programming*, 2022(1), 2490033.
- Ikegwu, A. C., Nweke, H. F., Anikwe, C. V., Alo, U. R., & Okonkwo, O. R. (2022). Big data analytics for data-driven industry: a review of data sources, tools, challenges, solutions, and research directions. *Cluster Computing*, 25(5), 3343-3387.
- Jora, O. D., Iacob, M., Rosca, V. I., Nedelcu, M. R., Preda, A. F., & Nedef, M. S. (2024). Artificial intelligence and artistic imagination: Revisiting the cultural economy of industrial revolutions. *Amfiteatru Economic*, 26(66), 613-632.
- Kargas, A., & Loumos, G. (2023). Cultural industry's strategic development: Reaching international audience by using virtual reality and augmented reality technologies. *Heritage*, 6(6), 4640-4652.
- Kaur-Gill, S. (2023). The cultural customization of TikTok: Subaltern migrant workers and their digital cultures. *Media International Australia*, 186(1), 29-47.
- Liu, H., Tan, Z., & Xia, Z. (2024). The Coupling Coordination Relationship and Driving Factors of the Digital Economy and High-Quality Development of Rural Tourism: Insights from Chinese Experience Data. *Land*, 13(11), 1734.
- Mammadova, E., & Abdullayev, A. (2025). Cultural Industries and National Economic Competitiveness: A Global Perspective. *Porta Universorum*, 1(3), 322-344.
- Nasta, L. (2025). Understanding Digital Transformation in Creative and Cultural Industries: A Review. *Navigating the Paradoxes of Digital Transformation in the*

- Creative and Cultural Industries: Embracing Innovation, 7-22.
- Peng, X. (2023). Digital Cultural Industry's Innovative Development Research. *Media and Communication Research*, 45(5), 39-45.
- Sun, X., & Hong, C. K. (2023). Research on the impact of digital media art on tourism cultural communication. *International Journal of Internet, Broadcasting and Communication*, 15(1), 70-78.
- Wang, X., Hong, Y., & He, X. (2024). Exploring artificial intelligence generated content (AIGC) applications in the metaverse: Challenges, solutions, and future directions. *IET Blockchain*, 4(4), 365-378.
- Xi, M., & Gao, F. (2023). Decoding art communication studies in the age of digital technology: Toward the redefining and reshaping of the medium. *Arts & Communication*, 1(1), 254-254.
- Xiaojuan, J. (2023). Technology and culture in the digital era. *Social Sciences in China*, 44(1), 4-24.
- Zhao, Y., Li, Q., & Lin, Z. (2023). Toward cultural and creative industry: Chinese eSports through a business ecosystem lens. *Journal of Cultural Economy*, 16(2), 260-276.