

Research on Innovation Pathways for Zhejiang's Cultural and Creative Industries: A Symbolic Knowledge Perspective

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ABSTRACT

Focusing on the cultural and creative industries in Zhejiang Province, this study explores innovation pathways driven by symbolic knowledge. Research indicates that despite rapid industrial development, multiple challenges, such as weak innovation commercialization capabilities, insufficient regional coordination, and an underdeveloped ecosystem, persist. To this end, the study proposes an integrated development framework: leveraging digital technology to empower knowledge transformation, refining industrial chains and talent mechanisms, and implementing a global brand strategy. This initiative aims to promote Zhejiang's transformation from a "major province for cultural creativity" to a "strong province for cultural innovation."

KEYWORDS

Symbolic knowledge; Cultural and creative industries

1 Introduction

As the global economy accelerates its transition from an industrial focus to a knowledge-based one, knowledge is increasingly becoming the most fundamental factor of production and competitive advantage (Powell&Snellman, 2004; Foray, 2004). Against this backdrop, the cultural and creative industries (CCIs), as a vital component of the knowledge economy, are increasingly becoming a key driver of regional transformation and innovation. This is due to their unique capacity to integrate cultural symbols, artistic expression and economic value (Flew, 2021). Symbolic knowledge, as a distinct type of knowledge encompassing aesthetic styles, narrative expressions and cultural symbols (Asheim & Gertler, 2005), plays an irreplaceable role within the cultural and creative industries.

China, particularly Zhejiang Province, has demonstrated significant advantages in developing the cultural and creative industries. Zhejiang not only possesses abundant historical and cultural resources, but has also developed distinctive strengths in the development of the digital economy and industrial clusters. For instance, Hangzhou demonstrates outstanding competitiveness in digital content and internet culture; Ningbo highlights its regional characteristics within the fashion and design industries; while Shaoxing has made significant strides in the innovative transformation of traditional crafts and intangible cultural heritage industries. These conditions provide a unique real-world setting for studying how symbolic knowledge influences innovation pathways. However, despite the gradual increase in relevant research, there remains a lack of in-depth and systematic academic exploration concerning the operational mechanisms of symbolic knowledge within specific industrial innovation pathways.

Specifically, existing research has primarily focused on four directions: Firstly, knowledge base theory reveals the central role of symbolic knowledge within the cultural and creative industries (Asheim & Gertler, 2005; Lazzeretti et al., 2008). Secondly, industrial cluster effects have been demonstrated to facilitate knowledge spillovers and cross-boundary innovation (Cooke & Lazzeretti, 2008; Scott, 2014); thirdly, digitalization and the platform economy have reshaped the mechanisms for generating and disseminating symbolic knowledge (Pratt & Jeffcutt, 2009; Flew, 2021); fourthly, policy and institutional support are regarded as key conditions for mitigating industrial risks and driving innovation (UNCTAD, 2018). However, these studies still exhibit significant limitations. In terms of case studies, they predominantly focus on Europe and America, with insufficient attention paid to indigenous practices in China, particularly in Zhejiang. Methodologically, they lean heavily towards qualitative descriptions, lacking interdisciplinary approaches and data-driven analysis.

It is precisely these research gaps that prevent existing literature from systematically explaining how symbolic knowledge specifically influences industrial innovation pathways across diverse regional cultures and digital environments. Therefore, this study aims to examine the practical mechanisms of symbolic knowledge within regional creative clusters, digital platforms, and policy frameworks by analyzing Zhejiang's unique case study. This will be achieved by tracing the entire process from the generation and diffusion of symbolic knowledge to its transformation into innovation. This study endeavours to address shortcomings in existing research concerning theoretical applicability and regional experience, deepening the theoretical understanding of symbolic knowledge while also providing practical reference for the development strategy of China's cultural and creative industries.

2 The Development Status and Innovation Capabilities of Zhejiang Province's Cultural and Creative Industries

2.1 Current State of Industrial Development

In recent years, Zhejiang Province's cultural and creative industries (CCIs) have demonstrated rapid development in both scale and structure. According to the findings of the Fifth National Economic Census released by the Zhejiang Provincial Bureau of Statistics, by the end of 2023, the province had approximately 224,000 legal entities operating in the cultural and related industries, employing around 1.682 million people. This represents increases of 44.9% and 19.9% respectively compared to 2018. Their operating revenue reached approximately 2 trillion yuan, marking a year-on-year growth of 63.5% (Zhejiang Provincial Bureau of Statistics, 2025). The value added of the cultural industries has exceeded 514.5 billion yuan, accounting for 6.95% of the province's GDP, fully demonstrating its strategic position within Zhejiang's economic structure (China Economic Weekly, 2023).

From a regional perspective, significant disparities also exist among cities within the province. As the provincial capital and a core cultural innovation hub, Hangzhou's cultural industry added value reached 321.1 billion yuan in 2023, marking an 11.3% year-on-year increase and accounting for a substantial 16% of its municipal GDP (Sohu Finance, 2024). Among which the cultural industries in Binjiang District generated an added value of 77.78 billion yuan, accounting for 31% of the district's GDP, with the industrial clustering effect being particularly pronounced. Moreover, Zhejiang now hosts 5,915 cultural enterprises above designated size and 45 listed cultural enterprises, indicating a continuous rise in the level of industrial capitalisation (Zhejiang Provincial Department of Economy and Information Technology, 2023).

From the perspective of the industry's internal structure, the digital cultural sector has emerged as the core driver of growth. In 2023, digital cultural enterprises of a certain scale within Zhejiang Province achieved revenues of approximately 806.4 billion yuan, representing an 18% year-on-year increase. The output value of the animation and gaming industry has surpassed 50 billion yuan, with the number of enterprises reaching 267. This reflects the increasingly significant role digital creative industries play within the cultural sector as a whole (Sohu Finance, 2024).

2.2 Industrial Innovation Capacity

To ensure the high-quality development of its industries, Zhejiang has also been making sustained efforts in building innovation capabilities. The provincial government has continually strengthened policy guidance by issuing a series of documents, including the "Implementation Opinions of the Zhejiang Provincial Department of Culture and Tourism on Accelerating the High-Quality Development of the Digital Cultural Industry". These aim to promote the deep integration of culture and technology while encouraging original content development and the extension of industrial chains (Zhejiang Provincial Department of Culture and Tourism, 2022). Hangzhou and other cities have established dedicated funds to support original literature, animation, gaming and new media dissemination, thereby facilitating the market transformation of innovative achievements. Meanwhile, Zhejiang has been steadily advancing the development of cultural industry clusters and industrial parks. For instance, Hangzhou has established 50 new municipal-level cultural industry parks and 20 cultural and creative districts, while also recognising a cohort of exemplary digital cultural enterprises. This has fostered an innovation network anchored by these parks and districts (China Youth Daily, 2023). Such measures have significantly enhanced the innovative atmosphere and resource integration capabilities within enterprises.

3 Issues and Challenges Facing the Development of the Cultural and Creative Industries in Zhejiang Province

Despite the significant progress achieved recently, Zhejiang's cultural and creative industries continue to face numerous systemic challenges in areas such as the structure of innovation capabilities, regional coordination mechanisms, and the transformation of knowledge resources. These issues not only constrain the full potential of symbolic knowledge bases within industrial innovation pathways, but also undermine Zhejiang's leading position within the national cultural innovation system. Five main problems are as following.

(1) First, the primary challenge lies in insufficient innovation-driven momentum and weak symbolic knowledge transformation capabilities.

At present, the primary drivers of innovation within Zhejiang's cultural and creative industries are concentrated in fields such as design, film and television, animation, and arts and crafts. However, there remains a notable shortfall in both "knowledge-driven innovation" and "cultural-technological convergence innovation". Many enterprises' innovation activities rely excessively on empirical creation and market imitation, lacking systematic symbolic knowledge management and innovation model support (Lazzeretti & Capone, 2022). Cultural symbols, regional narratives, intangible cultural heritage imagery and other symbolic knowledge resources, in the course of their digitisation and

commercialisation, frequently become mired in superficial symbol reproduction, failing to achieve the reinvention of their deeper cultural significance. For instance, certain traditional crafts have been subjected to 'commercial replication' rather than 'cultural regeneration', resulting in homogenised cultural expression and limited brand premium. Moreover, the vast majority of small and medium-sized cultural and creative enterprises generally lack systematic mechanisms for identifying, archiving and reusing knowledge resources, as well as innovative tools based on knowledge graphs and semantic networks. This directly results in valuable tacit knowledge failing to be effectively converted into sustained innovative momentum.

(2) Secondly, the issues of industrial structure homogenisation and insufficient regional innovation coordination are becoming increasingly prominent.

This deficiency in internal innovation capacity is further exacerbated by external structural issues. As a hub for the digital economy and creative industries, Hangzhou has attracted a high concentration of creative enterprises and talent. In contrast, cities such as Ningbo, Shaoxing, and Wenzhou lag behind in creative design, brand strategy, and technological integration capabilities, resulting in suboptimal coordination between upstream and downstream segments of the industrial chain (Zhao & Sun, 2021). More importantly, the lack of effective coordination between cities in terms of cultural resources, symbolic knowledge and innovation activities has resulted in a fragmented innovation landscape characterised by multiple isolated pockets. This not only diminishes knowledge spillover effects between regions but also hampers the development of cross-sectoral integrated innovation. For instance, Hangzhou's digital creative industries have failed to fully integrate with Shaoxing's textile design or Wenzhou's craft manufacturing, resulting in the overall synergy of industrial clusters remaining underutilised.

(3) Thirdly, the disconnect between talent supply and innovation mechanisms has emerged as another bottleneck constraining development.

Whilst Zhejiang holds an advantage in terms of the overall number of cultural and creative talents, a structural shortage remains distinctly evident. Wang (2023) observes that while the cultural innovation sector is well-stocked with professionals in creative design and content production, there is a significant shortage of interdisciplinary talent capable of bridging the gaps between culture and technology, or design and data. Higher education retains a heavy bias toward traditional arts and media instruction, resulting in a scarcity of interdisciplinary programs that encompass innovation economics, digital tools, and cultural management. Moreover, limitations in talent mobility mechanisms and the disconnect between innovation outcomes and career advancement systems have resulted in insufficient motivation among young creative professionals to pursue original content creation and applied innovation. In the corporate sphere, the absence of structured innovation incentives and defined professional development pathways fosters an environment characterized by transient creativity and suboptimal returns on innovation.

(4) Fourthly, the full realization of the industry's potential is impeded by an insufficient support system within the wider innovation ecosystem.

The cultural and creative innovation ecosystem in Zhejiang has yet to establish a systematic closed-loop at the policy and financial levels. Although the government has introduced a series of supportive policies, most of these favour project subsidies rather than systematic support for the innovation ecosystem (Fan & Liu, 2024). Specifically, this manifests as inadequate development of innovation incubation platforms and intermediary service systems, resulting in cultural and creative enterprises lacking systematic support in critical areas such as intellectual property (IP) rights confirmation, technology transfer, and cross-sector collaboration. Simultaneously, the commercialization of innovative outputs remains inefficient, plagued by protracted development timelines for original IP and a scarcity of viable market channels. Compounding these structural issues are persistent financing difficulties and high operational risks. Cultural investment institutions remain largely cautious, directing capital toward short-term, traffic-driven sectors—such as the influencer and live-streaming economies—rather than supporting original R&D or knowledge accumulation, which demand long-term patience.

(5) Finally, these cumulative internal challenges precipitate a critical external dilemma: a distinct deficiency in internationalization and global brand competitiveness.

Despite its dominant status within the domestic market, Zhejiang continues to occupy the middle-to-low tier of the global cultural value chain. In the international market, Zhejiang's cultural brands suffer from limited recognition, with a marked disconnect between original intellectual property and global dissemination. Even against the backdrop of national strategies like the Belt and Road Initiative, local cultural firms face significant operational hurdles. Specifically, there is a general deficiency in mature experience regarding international copyright trade, cross-cultural branding, and global communication. With exports still heavily dominated by the OEM model, products lack the cultural storytelling and symbolic knowledge required for high-value branding. This structural limitation results in a decoupling of cultural soft power from economic hard power (Kong & O'Connor, 2022).

4 Policy Recommendations and Future Development Pathways

To systematically resolve these identified constraints and harness the generative power of symbolic knowledge, this study presents a comprehensive five-tiered policy framework.

Firstly, addressing the core issues of insufficient innovation-driven development and weak knowledge transformation capabilities, it is imperative to strengthen the systematic conversion and digital application of symbolic knowledge resources. For the upcoming five-year period, the strategic priority for Zhejiang Province must be the systematic extraction, consolidation, and digitization of its symbolic knowledge resources. On the one hand, it is recommended to leverage large language models (LLMs) and AIGC technologies to systematically organise and semantically annotate traditional cultural symbols, intangible cultural heritage resources, and local cultural narratives. This would facilitate the establishment of an open platform for the "Zhejiang Symbolic Knowledge Repository," enabling knowledge sharing and re-creation. On the other hand, enterprises should be encouraged to utilise technologies such as digital twins and AR/VR immersive experiences to transform local cultural symbols into visualised, interactive creative content. This approach will enhance the originality and international dissemination potential of cultural products. Within five years, through policy guidance and technological empowerment, Zhejiang is expected to establish multiple digital IP clusters centred on local culture.

Secondly, building upon a fortified foundation of source innovation, the focus must shift to optimizing the cultural industry value chain and regional collaborative systems. This is essential to rectify structural homogenization and foster greater synergy among stakeholders. To address the issue of an incomplete industrial chain, it is imperative to promote cross-sectoral and cross-regional resource coordination. It is proposed to establish the "Zhejiang Cultural and Creative Industries Innovation Alliance", involving government bodies, higher education institutions, leading enterprises, and small-to-medium cultural and creative enterprises. This alliance would form a closed-loop system integrating creative design, production manufacturing, brand promotion, and market sales. Concurrently, a "multi-polar co-creation" strategy should be implemented to construct a regional innovation network centred on Hangzhou, with Ningbo and Shaoxing serving as secondary hubs. This framework would achieve functional complementarity across digital culture, fashion design, and cultural tourism creativity. By establishing regional creative industry funds and implementing an innovation voucher scheme, targeted financing and technical support can be provided to small and medium-sized enterprises. These measures are expected to significantly enhance the concentration and collaborative innovation capabilities of the cultural and creative industries within five years.

Thirdly, talent constitutes the fundamental guarantee for achieving the aforementioned transformation. Consequently, there is an urgent need to establish a multi-tiered, multidisciplinary talent development system. To address the talent bottleneck, the province should reinforce the 'Industry-Academia-Research-Application' alliance. Specifically, we recommend the founding of a provincial cross-disciplinary innovation institute designed to foster a new generation of professionals skilled in the intersection of design, management, and data science. At the same time, Zhejiang should enhance its vocational education system for cultural and creative professions, supporting higher education institutions in establishing emerging interdisciplinary programmes such as digital arts, cultural technology management, and creative industry economics. Additionally, the government should implement a 'Youth Cultural Innovation Talent Support Scheme.' By providing dedicated funding, this initiative aims to incentivize young creatives to launch entrepreneurial ventures and participate in international exchange programs. By 2030, it is anticipated that a cohort of culturally innovative professionals possessing a global outlook and proficiency in the application of symbolic knowledge will emerge, providing robust intellectual support for sustained industrial innovation.

Moreover, to stimulate the innovative vitality of both talent and enterprises, Zhejiang must optimise its innovation mechanisms and intellectual property protection environment. To address the issues of insufficient originality and inadequate innovation mechanisms, future efforts should focus on strengthening institutional frameworks for innovation incentives and intellectual property protection. Specifically, this involves enhancing IP trading platforms through novel mechanisms like 'copyright banks' and 'cultural patent pools' to improve resource allocation. Concurrently, the government should introduce a provincial cultural innovation index—tracking brand influence and IP commercialization—as a key criterion in administrative performance evaluations. Furthermore, reinforcing digital rights management via blockchain technology is essential to minimize infringement risks. Ultimately, this simultaneous application of institutional and technological remedies will cultivate a robust ecosystem for converting creative concepts into economic value.

Finally, capitalizing on its robust domestic market foundation, Zhejiang must aggressively advance a branding strategy designed to surmount internationalization bottlenecks. To counter the dual pressures of global competition and limited cultural dissemination, the province should implement a 'Global Cultural and Creative Brand Initiative.' This strategy should centre on a 'cultural export plus digital empowerment' model, facilitating the deep integration of local intellectual property with international markets. Specifically, by leveraging unique symbolic assets—such as the Liangzhu Culture and the legacy of the Hangzhou Asian Games—Zhejiang can cultivate globally recognizable cultural brands. Concurrently,

policy should encourage enterprises to forge strategic partnerships with leading international agencies and art institutions to co-incubate culturally impactful products. Through the reinforcement of international exhibitions, copyright trading platforms, and global cooperation frameworks, Zhejiang is poised to establish exemplary leadership within the Asian and global cultural industries.

5 Conclusion

In conclusion, the analysis presented herein establishes that the high-quality development of Zhejiang's cultural and creative industries is contingent upon an integrated ecosystem. This framework is anchored by symbolic knowledge resources, propelled by technological innovation, sustained by robust talent mechanisms, and oriented towards a global strategic vision. By seamlessly connecting problem diagnosis with future pathways, this study demonstrates that the synergistic application of institutional reform and digital empowerment can elevate Zhejiang from a significant cultural hub to a premier powerhouse of innovation within five years. Ultimately, this transformation offers a scalable, replicable paradigm for the advancement of China's cultural industries within the broader context of Chinese-style modernization.

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References

- [1] Asheim, B. T., & Gertler, M. S. (2005). The geography of innovation: Regional innovation systems. In J. Fagerberg, D. C. Mowery, & R. R. Nelson, *The Oxford Handbook of Innovation* (pp. 291-317). Oxford University Press.
- [2] Cooke, P., & Lazzeretti, L. (2008). *Creative cities, cultural clusters and local economic development*. Edward Elgar Publishing.
- [3] Flew, T. (2021). *Creative industries, culture and policy*. SAGE Publications.