

# Realization Pathways for Collaborative Innovation in the Tourism Market of the Northeast Region's Culture, Sports, and Tourism Industry Chain

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**Abstract:** The integration of culture, sports, and tourism constitutes a core strategy for the high-quality development of the cultural and tourism industry. Synergistic innovation across the cultural, sports, and tourism industry chain is particularly crucial in the tourism market. Northeast China possesses unique assets such as ice and snow culture, revolutionary heritage, industrial heritage, ethnic culture, and sports resources, forming a solid foundation for deepening the integration of culture, sports, and tourism. However, the current cultural, sports, and tourism industry chain in the region suffers from insufficient coordination and weak innovation, hindering the full realization of industrial efficiency. This paper aims to identify the primary obstacles hindering collaborative innovation within the cultural, sports, and tourism industry chain in Northeast China. Drawing upon theories of collaborative innovation and industrial chains, it systematically proposes pathways to achieve such innovation across multiple dimensions—including institutional mechanisms, factor integration, business model cultivation, and brand marketing. By stimulating tourism market consumption, this research provides theoretical references and practical guidance for the transformation and upgrading of Northeast China's cultural, sports, and tourism industries, as well as for regional revitalization and development.

**Keywords:** Northeast China; Integration of Culture, Sports, and Tourism; Industrial Chain; Collaborative Innovation; Tourism Market

## 1. Introduction

The deep integration of culture and tourism has become a prominent trend in global tourism development. As a vehicle for vitality, health,

and competitive spirit, sports has also generated new growth points through its convergence with the cultural and tourism industries. The integration of culture, sports, and tourism is not only a process of expanding industrial boundaries and reshaping value but also a vital engine for meeting the people's growing needs for a better life and driving the optimization and upgrading of regional economic structures. National documents such as the "14th Five-Year Plan for Tourism Development" and the "Guiding Opinions on Promoting the Deep Integration of Culture and Tourism" have placed the task of advancing the deep integration of culture and tourism with sports, technology, and other fields at the forefront.

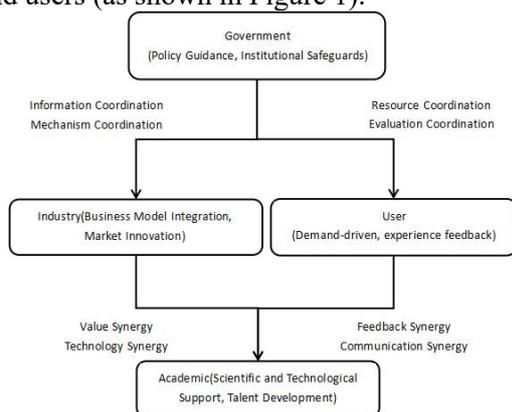
As a vital old industrial base, grain production hub, and ecological functional zone in China, the Northeast region is currently at a critical juncture for comprehensive and all-round revitalization. The region possesses unique tourism resources: unrivaled winter snow and ice resources nationwide, profound industrial heritage with rich industrial legacies and model worker spirit, abundant red cultural resources, vibrant folk cultures shaped by multi-ethnic communities, and vast ecological resources including forests, wetlands, and grasslands. These assets lay a solid foundation for building an integrated industrial system where "culture is the soul, sports serve as the medium, and tourism forms the body." [1]

However, resource advantages have not been translated into industrial or economic strengths. The cultural, sports, and tourism industries in Northeast China generally suffer from short industrial chains, low interconnectivity, weak synergistic effects, and insufficient innovation drivers. The phenomenon of "everyone fighting their own battles" is particularly prominent, and a systemic synergy where "1+1+1>3" has yet to be achieved. Therefore, overcoming coordination barriers, stimulating innovation

vitality, and building an efficient, closely integrated cultural, sports, and tourism industrial chain represent pressing practical challenges for Northeast China. Grounded in a collaborative innovation perspective, this study delves into the real-world dilemmas hindering the coordinated development of the region's cultural, sports, and tourism industrial chain. It actively explores scientific and feasible pathways for its realization, holding significant theoretical value and practical significance.

## 2. Major Obstacles to Collaborative Innovation in the Northeast Region's Culture-Sports-Tourism Industry Chain

The integrated development of culture, sports, and tourism in the Northeast has achieved initial success. Branded projects such as the Harbin International Ice and Snow Festival, the Changchun Jingyuetan Vasa International Ski Festival, and the Shenyang “China National Museum of Industry” tourism initiative have gained significant influence. However, measured against the standards of collaborative innovation within the industry chain, the region still faces a series of deep-seated structural contradictions and bottlenecks. This paper analyzes the situation based on a four-dimensional collaborative innovation model for the cultural, sports, and tourism industry chain, encompassing government, industry, academia, and users (as shown in Figure 1).



**Figure 1. Four-Dimensional Collaborative Innovation Model**

### 2.1 The Industrial Chain is Fragmented, with a Lack of Coordination Mechanisms among Key Players.

The cultural, sports, and tourism industry chain encompasses multiple segments including cultural creativity, sporting events, tourism services, catering and accommodation,

transportation and logistics, goods manufacturing, and marketing media, each falling under the jurisdiction of different administrative departments. However, the fragmented administrative management system in Northeast China remains largely unchanged. There is a lack of stable, efficient, and regular coordination platforms and interest-sharing mechanisms among departments such as culture, sports, tourism, development and reform, and natural resources. This results in difficulties in aligning planning, inconsistent policy standards, and redundant or disjointed project development. Market entities and innovation drivers—including enterprises, associations, academic institutions, and research organizations—also lack deep collaborative ties. Significant information barriers hinder the formation of industrial innovation synergies around shared objectives, constraining both vertical extension and horizontal expansion of the industrial chain.[2]

### 2.2 Insufficient Resource Conversion Capacity, Lagging Product Innovation and Business Model Upgrades

Most of Northeast China's abundant cultural, sports, and tourism resources remain in the initial development stage or static exhibition phase. The development of ice and snow resources suffers from severe homogenization, primarily focused on sightseeing and skiing, with insufficient integration of local culture, arts, and technology. The cultivation of derivative industries such as high-end ice and snow event training, ice and snow equipment manufacturing, and ice and snow-themed performances is progressing slowly. [3] Industrial heritage resources are largely confined to museum displays, with insufficient development of immersive, experiential, or educational industrial tourism products. They have not been effectively integrated with modern cultural creativity, theatrical performances, or sports competitions. The exploration of revolutionary and ethnic cultures lacks depth, failing to leverage technological means like VR/AR to transform them into compelling tourism experiences or culturally rich sporting events. Product structures remain monotonous with pronounced seasonal limitations, and a year-round, all-hour, and region-wide industrial framework has yet to materialize.

### **2.3 Weak Supporting Systems and Insufficient Innovation Drivers**

First, talent shortages continue to be a persistent challenge in this sector. There is a severe lack of high-level, multidisciplinary professionals who are proficient across the fields of cultural creativity, sports operations, and tourism management. Similarly, specialized talent in project planning and operational execution remains insufficient. Moreover, the professional competence and integrated service capabilities of frontline service personnel also require further enhancement through systematic training and skill development.

Second, technological empowerment remains notably inadequate. The application breadth and depth of key digital technologies—such as big data, artificial intelligence, the Internet of Things, and virtual reality—remain limited across several critical areas, including resource management, visitor experience enhancement, precision marketing, and safety oversight. Consequently, the development of integrated smart platforms for culture, tourism, and sports continues to lag behind industry needs and technological potential.

Third, capital investment channels remain narrow and undiversified. The sector still relies heavily on government funding, while social and financial capital show relatively low enthusiasm for investing in integrated cultural-sports-tourism projects. This is particularly evident in early-stage innovative projects, which are often perceived as high-risk, highlighting the pressing need to establish more robust and diversified financing mechanisms to stimulate broader investment participation.

Fourth, infrastructure coordination requires strengthening to support integrated development. The planning, spatial layout, and functional integration of transportation networks, visitor service centers, sports facilities, and cultural venues must be further optimized. Such improvements are essential to effectively meet the evolving demands of contemporary consumers, who increasingly seek seamless and multi-faceted experiential consumption.

### **2.4 Low Brand Marketing Integration, Limited Regional Coordination and Market Influence**

In the development of the cultural, sports, and tourism industries, the three northeastern provinces and one region (Heilongjiang, Jilin,

Liaoning, and eastern Inner Mongolia) exhibit a certain degree of internal resource homogeneity and market competition. The root cause lies in the absence of a comprehensive regional coordination plan spanning these provinces and regions, as well as unified marketing and brand promotion strategies. Specifically, provinces and cities typically operate independently in their promotional efforts, separately promoting their own winter tourism festivals, scenic spots, and other resources. They have failed to establish effective mechanisms for systematically integrating the region's rich thematic elements—including red cultural heritage, industrial heritage, ecological resources, and folk traditions. This situation hinders the establishment of a cohesive “Greater Northeast” cultural, sports, and tourism brand system with unified influence and obstructs the collaborative development of cross-regional premium tourism routes. Furthermore, the region remains heavily reliant on traditional marketing channels and methods, underutilizing modern communication tools such as new media platforms, in-depth content marketing, and large-scale event marketing. Consequently, in expanding both international and domestic markets, the Northeast's overall image and product offerings still need to enhance their appeal to younger consumer groups and high-potential spending demographics.

## **3. Implementation Pathways for Collaborative Innovation in the Northeast Region's Culture, Sports, and Tourism Industry Chain**

To address the aforementioned challenges, the Northeast region should embrace the principles of “integration, collaboration, innovation, and sharing.” Guided by institutional reforms, market demand, and driven by technology and talent, it should focus on building a collaborative innovation ecosystem for the culture, sports, and tourism industries that deeply integrates government, industry, academia, research, finance, services, and end-users.

### **3.1 Strengthen Collaborative Governance Mechanisms and Optimize Institutional Support**

First, enhance top-level design and organizational safeguards. It is recommended to establish a provincial-level “Leadership Group for the Integrated Development of Culture,

Sports, and Tourism” headed by principal leaders, along with a permanent office, to coordinate planning, policies, standards, supervision, and major project coordination. Promote the establishment of corresponding coordination mechanisms at the municipal and county levels to form a working pattern of vertical linkage and horizontal synergy. [4]Formulate and issue the “Northeast Region Plan for the Deep Integration of Culture, Sports, and Tourism” and supporting implementation measures, clearly defining the timetable, roadmap, and division of responsibilities for collaborative development.

Second, innovate benefit linkage and evaluation mechanisms. Explore establishing cross-regional, cross-departmental joint development and profit-sharing mechanisms for cultural, sports, and tourism projects. Encourage participation from diverse entities through models such as shareholding systems, franchising, and PPP. Establish a scientific statistical monitoring and performance evaluation system for integrated development, incorporating collaborative innovation outcomes into the assessment criteria of relevant departments.

### **3.2 Deepen Resource Integration to Strengthen Collaborative Innovation Foundations**

First, drive innovation through dual engines of “Culture+” and “Sports+” to create new product formats. Deeply mine Northeast China's distinctive cultural IPs—such as the “Pioneering the Northeast” narrative, the “Iron Man Spirit,” forest culture, and fishing-hunting traditions—and integrate them into sporting events. Develop culturally rich marathons, cycling races, and winter sports competitions; Develop tourism products, create themed itineraries, live performances, and cultural merchandise, and expand the “winter tourism+” model into a full industrial chain encompassing “winter sports+winter culture+winter gear+winter training.” Repurpose industrial heritage sites like old factories and mining areas into integrated complexes combining sports fitness, cultural creativity, and tourism experiences. Develop eco-sports tourism products such as forest hiking, wetland bird watching, grassland cycling, and water sports. [5]

Second, promote deep technological integration to cultivate new smart cultural, sports, and

tourism scenarios. Establish the “Northeast Smart Cultural, Sports, and Tourism Cloud Platform” to integrate resource data, visitor flow data, and consumption data, achieving “one-network management and seamless travel.” Employ VR/AR, holographic projection, and digital twin technologies to animate historical scenes and provide immersive experiences at revolutionary sites, museums, and industrial heritage locations. Develop applications like smart guides, interactive event livestreaming, and virtual training, while leveraging big data for visitor profiling and precision marketing. [6] Third, establish a multi-tiered talent support system. Support universities and vocational colleges in adding integrated arts-sports-tourism majors and courses, implement “order-based” training programs, establish practical training bases for integrated talent, attract high-level multidisciplinary professionals and teams from home and abroad, and conduct regular cross-disciplinary training for practitioners to enhance comprehensive service capabilities. [7] Fourth, diversify investment and financing channels. Establish a provincial-level fund for the integrated development of culture, sports, and tourism industries to channel financial and social capital. Encourage financial institutions to develop credit products tailored for cultural, sports, and tourism projects, and support qualified integrated enterprises in pursuing IPO financing or bond issuance.

### **3.3 Building Collaborative Development Platforms to Stimulate Market Entity Vitality**

First, cultivate and strengthen integrated market entities. Encourage cultural, sports, and tourism enterprises to form industry alliances or conglomerates through mergers, acquisitions, and cross-shareholding arrangements. Support specialized, refined, distinctive, and innovative small and medium-sized enterprises in developing specialized, professionalized cultural-sports-tourism integration sectors.[8] Second, establish public innovation service platforms. Leveraging key parks, universities, or leading enterprises, establish cultural-sports-tourism innovation centers and incubators to provide services including R&D, technology transfer, business incubation, intellectual property transactions, and information consulting. Regularly host integration innovation competitions, forums, and exhibitions.

Third, deepen intra-regional coordination and external cooperation. [9] The three northeastern provinces and Inner Mongolia should dismantle administrative barriers, jointly develop cross-regional premium itineraries, implement initiatives like tourism passports and event combo tickets, and unify service standards and market oversight. Simultaneously, strengthen cooperation with key domestic source markets like Beijing-Tianjin-Hebei and the Yangtze River Delta, while deepening cultural, sports, and tourism exchanges with Northeast Asian nations such as Russia, Japan, and South Korea to jointly develop cross-border tourism products and international events.

### **3.4 Implement Integrated Brand Marketing to Enhance Overall Competitiveness**

Craft a unified regional brand image for Northeast China's cultural, sports, and tourism sector, such as “Thrilling Ice & Snow · Rich Guandong · Ecological Northern Frontier,” accompanied by a standardized logo system; Integrate diverse media resources, particularly leveraging new media platforms like short videos, social media, and live streaming, to execute systematic and interactive integrated marketing campaigns. Additionally, meticulously plan and promote a series of iconic integrated festival and event activities. For instance, elevate the international influence of the “Harbin International Ice and Snow Festival,” transforming it into a world-class event integrating ice and snow art, sports, trade, and culture. Coordinate promotions for distinctive projects like Changbai Mountain climbing, Chagan Lake winter fishing, and the Dalian Sailing Regatta to effectively convey the Northeast's integrated cultural, sports, and tourism narrative, highlighting its unique historical depth, spiritual elevation, and human warmth.[10]

### **4. Conclusion**

Promoting collaborative innovation across the cultural, sports, and tourism industry chain represents a strategic imperative for Northeast China to transform resource advantages into developmental strengths, cultivate new drivers of economic growth, and achieve industrial upgrading alongside comprehensive regional revitalization. This constitutes a systematic endeavor that cannot be accomplished overnight. Presently, the region must urgently address core

challenges within its collaborative industry chain, including rigid institutional mechanisms, outdated product formats, weak factor support, and fragmented brand marketing.

The key to resolving these challenges lies in establishing an open, dynamic, and efficient collaborative innovation ecosystem. This requires the Northeast to: - Prioritize reform-driven approaches by dismantling administrative and sectoral barriers while refining top-level design and interest coordination mechanisms; - Embrace innovation-driven strategies by deepening the comprehensive integration of culture, sports, and tourism across content, formats, technology, and scenarios to create uniquely compelling product systems; - Ensure coordinated resource allocation by strengthening support and optimizing the distribution of critical elements such as talent, technology, capital, and data; It must combine market-driven forces with government guidance to stimulate the endogenous motivation and innovative vitality of various market entities; it must pursue regional integration and brand consolidation to shape a new image of integrated cultural, sports, and tourism development for the Greater Northeast. Looking ahead, as the path of collaborative innovation deepens, the Northeast region is poised to establish a modern integrated cultural, sports, and tourism industry system characterized by rational layout, optimized structure, comprehensive functionality, and strong competitiveness. This will not only significantly enrich the spiritual and cultural lives of the people and effectively promote consumption upgrades, but also inject vigorous “culture + sports + tourism” composite momentum into the comprehensive revitalization of the Northeast's old industrial base, writing a new chapter of high-quality development for the region in the new era. Subsequent research could further focus on micro-level aspects such as performance evaluation of collaborative innovation, business models for specific industries, and industrial chain restructuring in the context of the digital economy, providing more refined guidance for practical implementation.

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