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Sustainable Development of Mountain Sports Leisure Towns in China: Challenges, Strategies, and Lessons from International Best Practices

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Abstract. The development of mountain sports leisure towns represents a significant intersection of sports industry development, tourism innovation, and rural revitalization in China. This study examines the current state of China's mountain sports leisure towns, with a particular focus on development patterns, challenges, and opportunities for sustainable growth. Using a comparative case study approach, this research analyzes the development model of Chamonix-Mont-Blanc, France, which has evolved from a modest alpine village into a world-renowned mountain sports destination over two centuries. Drawing on recent data from 2023-2024, this study reveals that China's sports industry reached 3.67 trillion yuan (USD 513 billion) in total scale, with the sports leisure town sector contributing approximately 2.2 trillion yuan. However, Chinese mountain sports leisure towns face significant challenges including spatial planning inconsistencies, insufficient integration of local culture with sports tourism products, and underdeveloped industrial ecosystems despite resource concentration. Through systematic analysis of development patterns, this research identifies three critical strategies for Chinese mountain sports leisure towns: optimizing spatial layout and service infrastructure, emphasizing distinctive local cultural characteristics, and fostering deep industrial integration through value chain thinking. The findings contribute to the theoretical understanding of sports tourism development and provide practical implications for policymakers and industry stakeholders engaged in mountain sports leisure town development in emerging economies.

Keywords. Mountain Sports Leisure Towns, Sports Tourism, Sustainable Development

1. Introduction

The transformation of China's economic structure and rapid urbanization have catalyzed a fundamental shift in consumption patterns, with increasing emphasis on health, leisure, and experiential consumption (Liu & Qi, 2024). Against this backdrop, mountain sports leisure towns have emerged as a novel development model integrating sports, tourism, culture, and health industries. According to the National Bureau of Statistics of China (2024), the sports industry achieved a total scale of 3.67 trillion yuan in 2023, with value added reaching 1.49 trillion yuan, representing 1.15% of GDP. The sports leisure town sector, as a critical component, reached a market size of 2.2 trillion yuan by 2022, demonstrating substantial growth momentum (Liu & Qi, 2024).

The Chinese government's strategic emphasis on sports industry development, manifested through the Notice on Promoting the Construction of Sports and Leisure Characteristic Towns (2017) and subsequent policy frameworks, has accelerated the proliferation of these specialized communities. However, as a relatively nascent phenomenon in China's development landscape, mountain sports leisure towns face multifaceted challenges including inadequate planning, cultural homogenization, and insufficient industrial integration. The outdoor sports industry is projected to exceed 3 trillion yuan by the end of 2025, creating substantial market opportunities yet demanding strategic development approaches.

International mountain resort destinations such as Chamonix-Mont-Blanc in France offer valuable insights into sustainable development pathways. Chamonix's evolution from an 18th-century alpine village to a premier international mountain sports destination demonstrates how strategic infrastructure development, cultural preservation, and adaptive management can create enduring competitive advantages. This research employs a comparative analysis framework to examine development patterns, identify challenges in Chinese mountain sports leisure towns, and derive actionable recommendations based on international best practices.

2. Literature Review

2.1 Sports Tourism and Leisure Town Development

Sports tourism represents a rapidly expanding sector within the global tourism industry, characterized by travel motivated by participation in or observation of sporting activities (Higham & Hinch, 2018). Recent research demonstrates positive coupling between sports and tourism industries, with significant implications for regional economic development (Hu et al., 2024). The integration of sports and tourism facilitates destination competitiveness enhancement, infrastructure development, and community engagement, particularly in rural and mountainous regions facing economic transformation pressures.

Empirical evidence from China indicates that sports and leisure characteristic towns contribute substantially to sustainable development outcomes. Research by Zhang et al. (2024) employing difference-in-differences methodology found that rural sports tourism development promotes overall sustainable development of destinations, with particularly significant effects in eastern regions. The sports town development model integrates multiple functions including leisure, culture, health, tourism, elderly care, and education, creating comprehensive development entities that address rural revitalization objectives (Liu & Qi, 2024).

2.2 Mountain Sports Leisure Town Characteristics

Mountain sports leisure towns exhibit distinctive characteristics that differentiate them from conventional tourist destinations. These specialized communities leverage natural topographical advantages to develop adventure sports, mountaineering, skiing, and other mountain-based recreational activities. Research categorizes sports towns into four primary types: event-oriented, industry-oriented, leisure-oriented, and health-oriented, with outdoor sports constituting the dominant focus (Liu & Qi, 2024). The spatial configuration of mountain sports leisure towns typically encompasses high-altitude sports experience zones, education and training areas, cultural entertainment districts, and comprehensive service regions.

The development trajectory of successful international mountain sports destinations demonstrates the importance of infrastructure investment, professional service systems, and cultural authenticity. Chamonix-Mont-Blanc's transformation illustrates how strategic cable car construction, guide service professionalization, and preservation of mountaineering heritage

create sustainable competitive advantages. The resort attracts 650,000 visitors annually to just two of its five ski areas, demonstrating substantial market viability.

2.3 Challenges in Emerging Market Contexts

Despite rapid expansion, China's sports leisure towns face systematic challenges that impede sustainable development. Research identifies spatial planning inadequacies, insufficient cultural integration, and weak industrial linkages as primary constraints (Yang et al., 2023). The phenomenon of homogenization, whereby towns replicate successful models without adapting to local contexts, results in diminished competitiveness and suboptimal resource utilization. Additionally, the relatively brief cultivation period of China's sports leisure towns creates challenges in cultural foundation development and long-term brand establishment.

3. Methodology

3.1 Research Design

This study employs a comparative case study approach to examine mountain sports leisure town development. The research combines documentary analysis of policy documents, industry reports, and statistical data with systematic comparison of development patterns between Chinese mountain sports leisure towns and the international benchmark case of Chamonix-Mont-Blanc. This methodological approach enables identification of success factors, challenges, and transferable practices across different institutional and cultural contexts.

3.2 Data Collection

Data collection encompassed multiple sources including: (1) official statistical reports from the National Bureau of Statistics of China and General Administration of Sport; (2) government policy documents including the Notice on Promoting the Construction of Sports and Leisure Characteristic Towns and related implementation guidelines; (3) academic literature on sports tourism, leisure town development, and sustainable tourism; and (4) industry reports and market analysis from 2022-2024. Secondary data on Chamonix development history, infrastructure, and visitor statistics were obtained from Olympic records, municipal reports, and tourism statistics.

3.3 Analytical Framework

The analytical framework examines five dimensions: (1) development trajectory and historical evolution; (2) spatial planning and infrastructure configuration; (3) cultural integration and destination branding; (4) industrial ecosystem and value chain development; and (5) sustainability practices and environmental management. These dimensions facilitate systematic comparison of development models and identification of critical success factors applicable to Chinese contexts.

4. Results and Analysis

4.1 China's Sports Industry and Leisure Town Sector Growth

China's sports industry has demonstrated robust growth trajectory, achieving significant scale expansion and GDP contribution increases. Table 1 presents recent sports industry development indicators demonstrating sustained growth momentum.

Table 1. China Sports Industry Development Statistics (2020-2023)

Year	Total Scale (Trillion Yuan)	GDP Contribution (%)
2020	3.00	1.06
2021	3.12	1.08
2022	3.30	1.08
2023	3.67	1.15

Source: National Bureau of Statistics of China & General Administration of Sport (2024)

The sports service industry dominates value creation, contributing 72.7% of total sports industry value added in 2023, demonstrating the sector's shift toward experiential and service-oriented models. Sports equipment manufacturing accounts for 25.7%, while facilities construction represents 1.6%. This structural composition indicates mature market development favoring service delivery over manufacturing, aligning with advanced economy patterns.

Sports leisure towns constitute a significant subset within this expanding industry. By 2022, the market size of China's sports town industry reached 2.2 trillion yuan, representing 23.3% growth over 2018 (Liu & Qi, 2024). Government infrastructure targets established in the 14th Five-Year Plan (2021-2025) for sports venue coverage were achieved ahead of schedule, with total floor area reaching 4.23 billion square meters by 2024. The outdoor sports industry, which mountain sports leisure towns primarily serve, is projected to exceed 3 trillion yuan by end-2025, driven by urbanization, rising disposable incomes, and health consciousness expansion.

4.2 Chamonix-Mont-Blanc: An International Benchmark

Chamonix-Mont-Blanc exemplifies successful long-term mountain sports leisure town development, evolved over more than two centuries from initial mountaineering tourism to comprehensive four-season destination. Located at the base of Mont Blanc (4,810 meters), Western Europe's highest peak, Chamonix occupies a strategic position at the intersection of France, Switzerland, and Italy. The town's development trajectory demonstrates critical success factors applicable to emerging mountain sports destinations.

The Compagnie des Guides de Chamonix, established in 1821, represents one of the world's oldest professional mountain guide associations, institutionalizing safety standards and service quality. This early professionalization created sustainable competitive advantages in expertise and reputation. The 1924 Winter Olympics catalyzed transformational infrastructure investment including specialized sports facilities, accommodation expansion, and transportation improvements, establishing Chamonix's international recognition and stimulating subsequent development phases.

Strategic cable car investments fundamentally expanded access and activity options. The Aiguille du Midi cable car, completed in 1955 and ascending to 3,842 meters, remains among the world's highest vertical ascent cable cars, enabling access to the iconic Vallée Blanche off-piste descent and providing panoramic viewing experiences for non-skiers. These infrastructure investments created year-round tourism viability, diversifying revenue streams beyond traditional winter skiing. Currently, Chamonix's five ski areas encompass

approximately 150 kilometers of pistes served by 65 ski lifts, attracting over 650,000 annual visitors to just two areas alone.

Table 2. Chamonix-Mont-Blanc Development Timeline and Key Milestones

Period	Key Developments
1786	First ascent of Mont Blanc by Jacques Balmat and Michel-Gabriel Paccard, initiating mountaineering tourism
1821	Establishment of Compagnie des Guides de Chamonix, professionalizing mountain guiding services
1901	Railway connection established, enabling mass tourism and winter sports development
1924	First Winter Olympic Games hosted, catalyzing infrastructure investment and international recognition
1955	Aiguille du Midi cable car completed (3,842m), expanding access to high-altitude terrain
2009-Present	Implementation of Climate and Energy Plan, sustainable tourism initiatives, free public transport system

Chamonix demonstrates sophisticated service ecosystem development. Professional guide services, specialized mountain rescue operations, medical facilities including high-altitude research centers, diverse accommodation options, and comprehensive retail offerings create integrated destination experience. The town has implemented progressive environmental management including free public transportation (operational since 2005), hybrid bus fleet conversion, cycling infrastructure expansion, and climate action planning. These sustainability initiatives balance economic vitality with environmental preservation, addressing climate change impacts on mountain environments.

4.3 Comparative Analysis: Strengths and Challenges

Comparative analysis reveals both opportunities and challenges in Chinese mountain sports leisure town development. Table 3 synthesizes key comparative dimensions.

Table 3. Comparative Analysis of Chamonix and Chinese Towns

Dimension	Chamonix Model	Chinese Towns
Development History	200+ years organic evolution	5-10 years rapid development
Core Activity	Single sport origin (mountaineering) expanded to multi-activity	Often multi-activity from inception, risk of dilution

Dimension	Chamonix Model	Chinese Towns
Professional Services	Established guide associations, training centers, rescue systems	Developing professional service systems, variable quality
Cultural Integration	Deep mountaineering heritage, alpine museum, cultural festivals	Insufficient cultural excavation, homogenization tendencies
Infrastructure	Strategic, phased investment over decades	Rapid construction, potential planning gaps
Sustainability	Climate action plans, free public transport, environmental protection	Emerging focus, variable implementation
Market Advantages	Established reputation, international tourism	Enormous domestic market (1.4 billion), government support

4.4 Critical Challenges in Chinese Mountain Sports Leisure Towns

4.4.1 Spatial Planning Inconsistencies and Homogenization

Spatial planning deficiencies constitute a fundamental challenge in Chinese mountain sports leisure town development. Research indicates widespread issues including imbalanced allocation between sports facilities and supporting infrastructure, insufficient public amenities, dispersed layouts, inadequate internal road networks, and chaotic facility placement (Yang et al., 2023). These planning inadequacies stem partially from accelerated development timelines driven by government targets to establish 100 sports characteristic towns by 2020, potentially fostering quantity-over-quality approaches.

The homogenization phenomenon represents a critical competitive concern. Many towns exhibit similar architectural styles, activity offerings, and service configurations regardless of distinct regional characteristics, resulting in undifferentiated destinations competing primarily on price rather than unique value propositions. This standardization undermines the fundamental principle that characteristic towns should leverage specific local advantages to create distinctive identities and experiences.

4.4.2 Insufficient Cultural Integration and Innovation

Sustainable competitive advantage in sports leisure towns requires authentic cultural foundation and continuous innovation. However, Chinese mountain sports leisure towns often exhibit superficial cultural engagement, failing to deeply integrate local traditions, historical narratives, and indigenous knowledge systems into destination experiences. The brief cultivation period of these towns constrains cultural foundation development, brand establishment, and community identification with sports tourism activities.

Research identifies tension between modernization and cultural preservation during town development. Introduction of contemporary construction techniques, materials, and design aesthetics can disrupt traditional settlement patterns and alienate local communities from

development processes. Additionally, underdeveloped cultural creativity results in activity homogenization across towns, with similar adventure sports, recreational offerings, and experiential programs lacking distinctive regional character or innovative interpretation of local cultural assets.

4.4.3 Industrial Ecosystem Limitations Despite Resource Concentration

While sports leisure towns concentrate diverse industry resources, many exhibit insufficient industrial integration and weak consumption potential. Effective sports leisure towns require comprehensive ecosystem development encompassing sports activities, tourism services, health and wellness offerings, cultural experiences, education and training programs, and complementary commercial functions. However, shallow integration between these elements limits value creation and visitor engagement depth.

The tension between material and experiential consumption presents strategic challenges. Towns focused predominantly on satisfying basic material needs through accommodation, dining, and retail may fail to address evolving consumer preferences for experiential, spiritual, and self-actualization benefits. Research indicates Chinese consumers increasingly prioritize psychological satisfaction, personal growth, and authentic experiences over purely material consumption, requiring sports leisure towns to develop sophisticated programming addressing these multidimensional needs.

5. Discussion

5.1 Strategic Recommendations for Chinese Mountain Sports Leisure Towns

5.1.1 Optimize Spatial Layout and Service Infrastructure

Mountain sports leisure towns should prioritize spatial quality over quantitative expansion, pursuing refined, human-centered planning that creates hierarchical, well-integrated public spaces. Strategic spatial organization should employ a point-and-network model wherein sports activity zones serve as nodes connected through comprehensive service networks encompassing transportation, accommodation, dining, retail, medical facilities, and cultural venues. This configuration ensures visitor convenience while maintaining compact, walkable urban form that enhances destination experience quality.

Infrastructure quality assurance requires rigorous construction standards and ongoing maintenance protocols. Learning from Chamonix's phased infrastructure development approach, Chinese towns should implement strategic, long-term investment planning rather than rushed construction. Priority should address transportation accessibility, professional service facilities (guide stations, training centers, equipment rental), emergency response capabilities (rescue services, medical facilities), and environmental infrastructure (waste management, water treatment) ensuring operational excellence and safety.

5.1.2 Emphasize Distinctive Local Cultural Characteristics

Sustainable competitive differentiation requires authentic cultural foundation development. Towns should systematically excavate local historical narratives, traditional practices, indigenous knowledge, and regional characteristics, creatively integrating these elements into sports tourism experiences. This integration transcends superficial cultural decoration, demanding substantive engagement with local communities, preservation of cultural heritage sites, and innovative interpretation of traditional activities for contemporary audiences.

Cultural policy should demonstrate inclusive approaches welcoming diverse perspectives while maintaining coherent destination identity. Following international examples, towns can establish cultural institutions (museums, exhibition centers), organize cultural festivals and events, support local artisan communities, and create immersive cultural experiences. Integration of educational institutions into town planning provides continuous innovation capacity and cultural vitality, as universities can contribute research capabilities, talent development, and creative programming.

Signature sporting events provide powerful brand-building mechanisms while celebrating local character. Strategic event development should balance international competitions attracting global attention with grassroots community events fostering local participation. Chamonix's hosting of the 1924 Winter Olympics catalyzed destination transformation; similarly, Chinese towns can leverage major competitions to drive infrastructure investment, raise international profiles, and establish professional standards while developing complementary event portfolios serving diverse market segments.

5.1.3 Foster Deep Industrial Integration Through Value Chain Thinking

Sustainable economic viability requires comprehensive industrial ecosystem development extending beyond isolated sports activities. Towns should adopt value chain perspectives identifying and strengthening linkages between sports participation, tourism services, health and wellness programming, cultural experiences, education and training, equipment retail, media and marketing services, and related sectors. This integration creates multiple revenue streams, extends visitor stays, deepens engagement, and builds resilience against seasonal demand fluctuations.

Government policy should facilitate cross-sector collaboration through coordinated planning, financial incentives for industrial integration projects, regulatory frameworks supporting innovative business models, and platforms for stakeholder coordination. Investment in professional talent development, particularly in sports instruction, destination management, outdoor recreation leadership, and hospitality services, builds human capital essential for quality service delivery and continuous innovation.

Product development should address evolving consumer sophistication, moving beyond basic material consumption toward experiential programming delivering psychological satisfaction, personal growth, and authentic experiences. This requires sophisticated understanding of visitor motivations, careful activity design, storytelling capabilities, and service excellence throughout the visitor journey. Towns serving primarily adventure sports enthusiasts without accommodating broader market segments risk limited appeal; conversely, destinations lacking core sports identity fail to differentiate. Strategic positioning balances sports authenticity with inclusive programming accessible to varied skill levels and interests.

5.2 Policy Implications and Future Directions

The rapid proliferation of mountain sports leisure towns in China presents both opportunities and risks. While government support and substantial domestic market demand create favorable conditions, quality-focused development requires patience, strategic planning, and learning from international experience. Policymakers should prioritize quality over quantity, supporting fewer towns with comprehensive development assistance rather than diffusing resources across excessive projects.

Sustainability considerations must be embedded from project inception. Climate change poses existential threats to mountain tourism through snow reliability reduction, glacier

retreat, altered ecosystems, and increased natural hazard frequency. Following Chamonix's climate action model, Chinese mountain sports leisure towns should implement comprehensive environmental management including renewable energy adoption, sustainable transportation systems, ecosystem protection, waste reduction, and climate adaptation strategies. These measures ensure long-term viability while demonstrating environmental leadership.

Future research should examine long-term development trajectories of Chinese mountain sports leisure towns, assess sustainability initiative effectiveness, analyze community impact and social equity dimensions, and evaluate cross-cultural transferability of international best practices. Longitudinal studies tracking towns over multiple development phases will provide valuable insights into success factors, common pitfalls, and adaptive strategies. Comparative research examining diverse international examples beyond European models can broaden understanding of contextual factors shaping development outcomes.

6. Conclusion

This research has examined the development of mountain sports leisure towns in China through comparative analysis with Chamonix-Mont-Blanc, identifying critical challenges and deriving strategic recommendations for sustainable development. China's sports industry demonstrates robust growth with the sports leisure town sector reaching 2.2 trillion yuan by 2022, indicating substantial market opportunity. However, rapid expansion has generated systematic challenges including spatial planning inadequacies, cultural homogenization, and insufficient industrial integration that threaten long-term sustainability and competitive differentiation.

Chamonix's two-century development trajectory offers valuable lessons in strategic infrastructure investment, professional service system development, cultural heritage preservation, and environmental stewardship. The town's evolution demonstrates that sustainable mountain sports destinations require patient, long-term perspective; authentic cultural foundation; comprehensive service ecosystems; and adaptive management balancing economic vitality with environmental protection. Chinese mountain sports leisure towns can adapt these principles to local contexts while leveraging distinct advantages including enormous domestic market scale and robust government support.

The three strategic recommendations developed through this analysis provide actionable guidance for stakeholders engaged in mountain sports leisure town development. These recommendations include optimizing spatial layout and service infrastructure, emphasizing distinctive local cultural characteristics, and fostering deep industrial integration. Implementation requires coordinated effort across government agencies, private sector developers, local communities, and visitors, with shared commitment to quality, sustainability, and authentic destination identity.

As China continues urbanization and economic transformation, mountain sports leisure towns represent promising vehicles for rural revitalization, sports industry expansion, and enhanced quality of life. Success depends on learning from international experience while adapting to Chinese contexts, prioritizing sustainable development over short-term gains, and maintaining focus on creating distinctive, high-quality destinations that serve diverse stakeholder interests. With thoughtful planning and execution, Chinese mountain sports leisure towns can achieve sustainable competitive positions in the global mountain tourism market while contributing to broader social and economic development objectives.

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Conflicts of Interest

The authors declare no conflicts of interest.

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