

Research on the Countermeasures for the High-quality Development of Ice-Snow Industry in Jilin Province

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Abstract: High-quality development is the top task of building China into a strong country in all respects. Driven by the Winter Olympics, China's ice-snow industry has shown a rapid development momentum. The ice-snow industry is a huge industry and a sunrise industry. The high-quality development of the ice-snow economy should not only focus on "quantity", but also on "quality". Based on the analysis of the advantages of the ice-snow industry in Jilin Province, this paper analyzes the current situation, and constructs the high-quality development path of the ice-snow industry in Jilin Province in view of the problems of imperfect industrial chain, weak awareness of technological innovation, and weak cultural influence, so as to put forward countermeasures to promote the high-quality development of the ice-snow industry in Jilin Province.

Keywords: Jilin Province; Ice-Snow Industry; Ice-Snow Culture; Ice-Snow Tourism; High-Quality Development

1. Introduction

Now the national government attaches great importance to the development of ice-snow industry in Jilin Province. In September 2018, when state leader inspected Jilin, he pointed out that "lucid waters and lush mountains, ice-snow are all invaluable assets", and "ecological protection and development of eco-tourism complement each other"^[1]. According to news media reports, the state leader has spoken five times that "ice-snow are also gold and silver mountains since 2016, two of which are in Jilin." In October 2021, the Jilin Provincial Government issued the "High-quality Development Plan for the ice-snow industry in Jilin Province (2021-2035)", which is the first provincial-level high-quality development plan for the ice-snow industry in the country, serving

as a blueprint to facilitate the high-quality development of the ice-snow industry in Jilin Province. Relying on the advantages of resource endowment and cultural accumulation, Jilin Province is of great significance for promoting the high-quality development of Jilin Province's ice-snow industry and building a world-class ice-snow brand^[2].

2. The Development Status of the Ice-Snow Industry in Jilin Province

2.1 Resource Advantages

Relying on the abundant ice-snow resources of Changbai Mountain, Jilin Province has built a development model of "one mountain, two cities, and three districts". The "skiing + hot spring" model of Changbai Mountain, the ice-snow sports conditions and equipment in Changchun and Jilin, and the ice-snow ecosystem in the peripheral areas of Baishan, Tonghua and Yanji form a solid foundation for the ice-snow industry^[3].

2.2 Policy Advantages

Since 2019, Jilin Province has adopted a series of policy plans, such as the Action Plan for the Development of ice-snow tourism and the Plan for the High-quality Development of ice-snow industry in Jilin Province, which have clarified the development goals and directions of the ice-snow industry. In particular, the frequent release of ice-snow policies in recent years has further promoted the rapid and high-quality development of the ice-snow industry^[4].

2.3 Transportation location Advantages

Jilin Province borders many countries in Northeast Asia, with a superior geographical location and a well-connected transportation network. Jilin Railway Station, Bohai

Expressway, Shenhai Expressway, Dalian Port International Port and Changchun Longjia International Airport together constitute a three-dimensional transportation network in Jilin Province, providing convenient conditions for the development of the ice-snow industry^[5].

3. Problems in the High-Quality Development of the Ice-Snow Industry of Jilin Province

At present, the ice-snow industry in Jilin Province has shown a good momentum of development, but the high-quality development of the ice-snow economy is also facing some problems.

3.1 The Industrial Infrastructure is Outdated and Aging, and the Relevant Supporting and Operating Mechanisms are not Perfect

At present, Jilin Province has built 75 ski resorts of various types, with a total area of 1256.8 hectares of ski slopes, a total length of 358.1 kilometers, 288 ice rinks and a provincial ice training center. The construction level of Chinese major sports centers is still in its infancy, but there is still a certain gap with the international advanced level. Among them, Jilin Province has fewer comprehensive venues, low comprehensive supporting facilities and reception levels, backward infrastructure, and slow upgrade speed, which makes it difficult to undertake large-scale, large-scale and important ice-snow sports events, which has become a "bottleneck" restricting the overall development of ice-snow sports event in Jilin Province.

3.2 The Ice-Snow Industry Chain is not Perfect, and the Sustainability and Efficiency of Ice-Snow Consumption are not High

At present, Jilin Province is committed to establishing a sound ice-snow industry chain, making up for the shortcomings in the industrial chain, and driving the overall development of the ice-snow industry. However, at present, there are problems such as the small scale of enterprises, the low level of products, the unbalanced and insufficient supply of products, the high proportion of tourism and sports, and the small proportion of culture and manufacturing. As for the ice-snow sports themselves, their problems are also relatively obvious. For example, the supply of medium and high-end products is insufficient, and there is a surplus of low-end products.

Regarding ice and snow sports events, there is a need to further enhance both the quantity and quality of such events. From December 2023 to March 2024, Jilin Province will host more than 10 sports events. The current development status of ice-snow sports events in Jilin Province is as follows: firstly, there is a lack of localized ice-snow events. Secondly, there is a need to further strengthen the various components of the sports event industry chain, including copyright protection, sponsorship acquisition, live broadcasting, and overall broadcasting of sports events. Thirdly, both the construction and operational standards of ice-snow sports projects in China necessitate further enhancement, along with the need to elevate their impact on China's ice-snow activities. Fourthly, the consumption of ice-snow activities in Jilin Province lacks sustainability, and the industrial structure is not yet fully developed or optimized.

3.3 The Awareness of Technological Innovation in the Ice-Snow Industry is not Strong, and the Endogenous Power is Insufficient

The advancement of the ice-snow economy ought to be centered around scientific and technological innovation. For example, in the production process of ice-snow equipment, it has been subjected to double pressure at home and abroad: first, the ice-snow equipment has been monopolized by foreign brands for many years, and the price is high; Second, due to factors such as the absence of core technology and independent brands, domestic enterprises are reluctant to carry out large-scale manufacturing, resulting in a shortage of product supply. The ice-snow equipment industry in Jilin Province lags behind, with no nationally or globally renowned ice-snow product brands to date. The products offered by companies are primarily low-end, lacking in high-tech content and high value-added features, and the core competitiveness of the industry is relatively weak. In addition, a well-functioning industrial cluster has not yet been formed, and there is a lack of intrinsic motivation.

3.4 The Influence of Ice-Snow Culture Remains Weak, and the Marketing Impact

of Ice-Snow Related Activities is not Particularly Strong.

At present, the foundation of Chinese popular ice-snow culture is still relatively weak. Jilin Province has certain weaknesses in creating ice-snow culture brands and guiding ice-snow culture. First of all, the mass media do not fully realize the importance of ice-snow culture communication, the annual ice-snow promotion activities are carried out in the promotion stage before winter, the frequency and intensity are not high, and the focus of publicity is scenic spots, scenic spots and other physical objects, not fully explore the city's profound ice-snow cultural connotation and artistic conception and the promotion efforts are also insufficient, making the attraction to customers weaker and weaker. Secondly, the consciousness and self-confidence of the people of Jilin Province in ice-snow culture still need to be cultivated. Finally, the service level of ice-snow tourism requires further improvement.

3.5 The Contradiction between Talent Supply and Demand is Prominent

At present, Jilin Province has not established a complete set of talent training and protection mechanisms for the ice and snow industry. On the one hand, the number of universities and research institutes involved in the cultivation of ice and snow talents is relatively small, which cannot meet the market demand for ice and snow talents. On the other hand, the problem of changing careers and brain drain of ice and snow professionals is serious, and there is a shortage of senior management talents and compound talents, forming a vicious circle of "talent shortage - low economic efficiency - poor treatment - talent shortage", and due to the lack of talent protection mechanism, the development stamina is seriously insufficient.

4. Countermeasures and Suggestions for the high-Quality Development of Ice-Snow Industry in Jilin Province

According to the actual situation and existing problems in the development of ice and snow industry in Jilin Province, the "High-quality Development Plan for Ice and Snow Industry in Jilin Province (2021-2035)" clarifies the need to build a "4+X", organic and coordinated industrial structure. Focus on the development of ice and snow tourism, ice and snow sports, ice and snow culture, ice and snow equipment, ice

and snow technology, ice and snow talents, ice and snow business, ice and snow finance, ice and snow transportation and other industries. Among them, the relationship between the four core industries is: ice and snow tourism as the "general traction", ice and snow sports as the "important driving force", ice and snow culture as the "soul", and ice and snow equipment "strengthen"^[6].

4.1 Strengthen Infrastructure Construction and Improve Safeguard Mechanisms

Jilin Province should make the most of its favorable conditions of land links with Europe in Asia and the Pacific Ocean and the shortest route between China and North America, and build it into a comprehensive transportation center in Northeast Asia. Within the scope of urban areas, it is necessary to speed up the connection between national and provincial highways and county and township expressways with scenic spots, especially rural areas, and build an integrated transportation and travel network of "fast forward and slow travel". In terms of ice and snow sports venues, according to the requirements of the Asian Winter Olympics, the completed venues will be renovated and upgraded, and a large-scale ice and snow sports complex will be built into a large-scale ice and snow sports complex that meets the international level. Strive to make Jilin Province the first choice for international large-scale comprehensive ice-snow events.

In order to achieve a high level of ice-snow economic development, policy support is also needed. In order to promote the high-speed and high-level development of ice and snow tourism in Jilin, stimulate the vitality of China's ice and snow tourism market, and promote the development of ice and snow tourism in our province. On November 10, 2023, the Jilin Provincial Department of Culture and Tourism formulated and issued a total of 11 preferential policies in three aspects for market entities such as tourists, travel agents, and related investment enterprises, including the issuance of consumption vouchers, project investment, and loan interest discounts. We should take a variety of measures to give these enterprises a feasible financial policy guarantee, give

them more preferential treatment in terms of investment, and at the same time establish a special platform for them to raise funds for the ice and snow industry, so that their business environment can be improved to the best extent, and at the same time, it is also a need to improve the level of oversight, so that they can truly get out of their predicament.

4.2 Establish an Operation Mode of the Whole Industry Chain and Optimize the ice-snow Industry System

Based on the requirements of supply-side structural reform and optimization of the ice-snow industrial structure, a new pattern of coordinated development of the whole industrial chain of ice-snow economy should be constructed, including ice-snow sports, ice-snow culture, ice-snow equipment manufacturing, and ice-snow tourism.

4.2.1 To do an excellent ice-snow sports industry

Jilin Province has a total of 302 national characteristic schools for ice and snow sports, 15 Olympic education demonstration schools, more than 400 ice rinks every year, nearly 8 million people participate in nearly 300 series of ice and snow activities, and cultivate a number of Olympic champions such as Zhou Yang, Li Jianrou and Wu Dajing. By hosting more international ice and snow events, Jilin Province can significantly enhance the international influence and competitiveness of its ice and snow industry. These events not only attract the attention of snow lovers and professionals from all over the world, but also provide an excellent platform for the creation of local ice and snow sports brands. Carry out diversified mass sports activities and special outdoor activities for ice and snow, carry out in-depth "national fitness actions", and support the transition of ice and snow activities from business to industry.

4.2.2 To be a fine ice-snow cultural industry

Jilin Province not only has Changbai Mountain, Chagan Lake, not only Songhua River, Yalu River, but also has "poetry and distance" ice and snow. For example, Tonghua, the "origin of skiing in New China", the first professional ski resort in New China was established in Tonghua, and the first National Ski Conference was also held in Tonghua. Jilin Province will promote the construction of the core area of ice-snow Silk Road culture, deeply explore the connotation of "ice and snow", form a number of "snow" theme

brands, and spread the "snow" story of Jilin Province. Strengthen the publicity and publicity of the ice-snow festival, promote the branding of ice-snow products in our province, form an ice-snow culture marketing team with strong competitiveness, and create ice-snow cultural artworks with domestic influence. Strengthen the school's ice-snow activities through regular campus ice-snow games, ice-snow cultural festivals and other activities, and promote the history, culture, rules and other knowledge of ice-snow sports through campus radio, billboards, online platforms and other channels. Strive to achieve full coverage of ice-snow performance projects and ice-snow commodity stores in key ski resorts and key scenic spots^[7].

4.2.3 Strengthen the ice-snow equipment industry

The successful delivery of domestic snowmobiles is indeed a major milestone for China's ice and snow equipment industry. The cooperation between China FAW and China Aerospace Science and Technology Corporation not only broke the foreign monopoly, but also brought more choices to ice and snow sports enthusiasts. Jinlun Ski Simulator, Zhongying Zhihe Wide Temperature NiMH Battery, and Baining Shield's Ice Blade Technology have all demonstrated the strength of China's ice and snow equipment in their respective fields. In the future, the ice and snow equipment industry will form a strong manufacturing and service base in Northeast Asia, which will be more conducive to the promotion and development of ice and snow sports in China^[8].

4.2.4 Strengthen the ice-snow tourism industry

The industrial structure of "West Ice and East Snow" in Jilin Province has injected new vitality into the ice-snow tourism industry. The ice-snow tourism clusters in Changchun-Jilin city clusters and the Greater Changbai Mountain area, as well as the emergence of the ice economic effect of Chagan Lake, all indicate the prosperity of the ice-snow tourism industry in Jilin Province. In the future, with the construction of international ice-snow tourism consumption centers, high-quality and intensive ski resort complexes and ice-snow towns will continue to emerge,

providing tourists with more diversified choices. Simultaneously, tapping into off-season tourism resources and fostering four-season tourism will enable the year-round utilization of ice-snow sports facilities, thereby giving a robust boost to the sustainable development of Jilin Province's ice-snow tourism industry.^[9]

4.3 Intensify Scientific and Technological Innovation and Actively Implement Brand Strategy

Adapt to the situation and accelerate the digitalization process of developing the ice-snow economy. Firstly, actively promote "Internet + ice and snow", and develop digital and intelligent development models such as smart transportation, smart scenic spots, and smart tourism. Secondly, build a technology transfer and information sharing platform for the ice and snow industry at the national level. On this basis, the application scenarios of digital research and development in multiple regions for the ice-snow industry are developed, and the role of platform economy connection and information sharing is played. Third, use technological innovation to promote the brand building of enterprises, strengthen the research of universities and research institutions in ice - snow equipment, strengthen the innovation of enterprises in product innovation, let the old enterprises "regain their lives", and together with the start-up enterprises, jointly shape the brand of "ice and snow".

4.4 Strengthen the Charm of Ice-snow Culture and Deepen the Ice-snow Marketing Strategy

Jilin Province ought to strive to enhance the depth and refinement of ice-snow culture, while also reinforcing its cultural influence, attractiveness and demonstration effect, which is the key to demonstrating the city's "soft power". On the one hand, through the connotation of ice-snow culture in Jilin Province and diversified popular ice and snow cultural activities, it will enhance its academic and research strength in ice and snow culture, industry, economy and trade, and open up a new path for the development of the world's ice and snow economy. On the other hand, it is necessary to give full play to the huge potential of ice and snow tourism, combine traditional media and new media platforms, such as Douyin, Xiaohongshu, etc, to build an all-round and

multi-level marketing network, with tourists as the core communication force, actively respond to online public opinion, and create a positive brand image^[10].

4.5 Optimize the Talent Training System and Accurately Meet the Needs of the Industry

Jilin Province needs to deepen the further excavation and utilization of talents, and build an efficient talent training and introduction mechanism. On the one hand, relying on universities and training institutions in the province, we will establish a training mechanism for specialized technical personnel in ice and snow sports and ice sculpture art to ensure the sustainability of talent supply. On the other hand, targeted measures should be formulated to introduce and retain high-level technical personnel in the ice and snow industry, accelerate the marketization of scientific and technological achievements, and create conditions for the transformation of scientific and technological workers.

5. Conclusion

To sum up, Jilin Province should firmly grasp the unique opportunity of the integrated development of tourism and culture, rely on its own resource advantages and cultural heritage, take advantage of international events such as the Asian Winter Games, tap new potential, stimulate new kinetic energy, build a diversified ice and snow economic system, improve the ice and snow industry chain, strengthen policy guarantees, further consolidate the status of "China's ice and snow sports leader" and "cradle of Olympic champions", polish the golden signboard of "China's famous ice and snow city". I firmly believe that in the near future, the ice -snow industry in Jilin Province will usher in a more prosperous and brilliant tomorrow.

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