

Research on Business Model Construction and Industrial Structure Optimization of Ice and Snow Sports Industry in China Based on GIS

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ABSTRACT. Facing the favorable conditions for the development of ice and snow sports industry, it is necessary to strengthen research, rearrange the business model of ice and snow sports industry in time, and actively optimize the industrial structure to promote the faster and better development of ice and snow sports industry. Although there are still some bottlenecks in the development of ice and snow sports industry, it is possible to promote the leap-forward development of ice and snow sports industry by the integration of technological innovation and business model innovation under the current policy support and the catalysis of Olympic economic effect. It is of great theoretical value and practical significance to explore the path and method of transformation and development of ice and snow sports industry based on business model, optimize the industrial structure according to the location resource endowment, and thus expand the scale of ice and snow sports consumers and ice and snow sports industry. In this paper, from the perspective of industrial policy, with technological innovation affecting the innovation of business model of ice and snow sports industry as the main line, and based on GIS, the methods of business model construction and industrial structure optimization of China's ice and snow sports industry are analyzed.

KEYWORDS: Ice and snow sports industry, Business model, Industrial structure.

1. Introduction

Ice and snow sports refers to all kinds of sports on natural or artificial ice and snow fields with the help of different equipment and appliances, which are divided into ice sports and snow sports [1]. At present, China's ice and snow sports industry is still in the initial stage of development, and there are deficiencies in market stock,

business model and industrial structure. China's sports industry is developing rapidly, in which ice and snow sports industry is an important part. With the rapid development of social economy and the optimization and upgrading of industrial structure, ice and snow sports industry has gradually become one of the most promising sunrise industries, which also puts forward higher requirements for the development of ice and snow sports industry [2]. Historically, the emergence of ice and snow sports is accompanied by the emergence of human society, and it has developed for a very long time. From the global market, the regions with large scale and mature operation mode of ice and snow sports industry are Europe and North America [3]. With the rapid development of science and technology, the traditional ice and snow sports are restricted by the weather and geographical location. This situation has changed, especially the appearance of artificial refrigeration ice rink and artificial snow rink, which makes ice and snow sports no longer limited to winter and the north, which also lays the foundation for the gradual popularization of ice and snow sports [4]. It has strong theoretical value and practical significance to explore the transformation and development path and method of ice and snow sports industry on the basis of business model, optimize the industrial structure according to the regional resource endowment, so as to expand the ice and snow sports consumers and the scale of ice and snow sports industry [5].

In the face of favorable conditions for the development of ice and snow sports industry, it is necessary to strengthen research, timely rearrange the business model of ice and snow sports industry, and actively optimize the industrial structure, so as to promote the faster and better development of ice and snow sports industry [6]. To optimize the industrial structure of ice and snow sports, we should promote the technology upgrading of ice and snow equipment manufacturing industry, the quality improvement of service industry and the efficient governance of leisure industry [7]. We must strengthen the construction of ice and snow sports business model, re layout the business model of ice and snow sports industry, and actively optimize the industrial structure, so that China's ice and snow sports industry can develop better and faster [8]. In this paper, from the perspective of industrial policy, the impact of technological innovation on business model innovation of ice and snow sports industry is taken as the main line, and based on GIS, the business model construction and industrial structure optimization methods of China's ice and snow sports industry are analyzed.

2. Internet plus sports business mode development trend

2.1 Resource distribution of ice and snow sports industry

With the release of the policy documents on the details of the ice and snow sports industry in the National Winter Olympics, the demands of the future commercial development of the ice and snow sports industry have been restrained to a certain

extent, and relevant policies have been actively formulated in local provinces and cities according to the documents issued by the state. Through a variety of planning and design to implement the national promotion of ice and snow sports industry. The advantage of vertical field lies in its focus and professionalism, which can provide consumer products more suitable for specific people and meet the specific habits of users in a certain field. Therefore, it is easier to gain the trust of users, thus deepening the impression and word-of-mouth communication of products and forming brands and unique brand values. From the large scale of ice and snow sports industry, it can be seen that the ice and snow sports industry contains several sectors, which are also the areas where the ice and snow sports industry will develop vigorously in the future, and the operation of ice and snow tourism and related events is the main development direction. If the ice and snow sports industry wants to achieve extraordinary development, or even change lanes and overtake, the support of industrial policies is essential, but the long-term industrial support policies do more harm than good [9]. This is a lesson in the development of other industries in China, such as solar photovoltaic industry. As a direct result, it will lead to overcapacity and zombie enterprises, which will also bring a series of social costs. The policy dividend support in the early stage of the ice and snow sports industry in the Winter Olympics will gradually disappear. Under the future operation mode of market economy as the main body, it is necessary to innovate the science and technology industry and make it scientific in adaptability.

2.2 Business model analysis of ice and snow sports industry

Competitive ice and snow sports industry companies can stand out and become the development direction of ice and snow sports industry in the future. With the continuous improvement of Chinese people's economic level, personalized consumption of ice and snow industry has become the mainstream, and the quality of service consumption has become the key to solve the problem. Local ice and snow industry companies should constantly improve and innovate relevant commercial operation modes, meet various requirements put forward by consumers to the maximum extent, and promote the service consumption of ice and snow industry through intelligent Internet intelligent systems. From the perspective of industrial policy, the current development of ice and snow sports industry needs to fully absorb the policy dividend, expand the industrial scale as soon as possible under the catalysis of the Olympic economic effect, and achieve a breakthrough in the new growth point of sports and leisure industry. After that, the high-quality development of the industry needs the integration of technological innovation and business model innovation. The active promotion of scientific competition policy, the innovation of market technology and the rapid development of its commercialization model can play a positive role in promoting the future development of ice and snow sports industry. From the perspective of national social development, the economic and industrial effects of the Winter Olympics can effectively promote the economic development of local cities.

3. Technological innovation affects the development of ice and snow sports industry

Among the proportion of ice and snow sports training industry in the whole industry, ice and snow competition industry includes cultural tourism and sports training. Promoting the promotion of events through effective ice and snow marketing can be promoted through the consumption of ice and snow sports equipment by athletes and their consumers. Ice and snow sports industry belongs to ice and snow industry, but it is closely related to other sub-industries of ice and snow industry. Therefore, the development of ice and snow sports industry needs to be analyzed from the perspective of industrial chain and cannot be separated from other ice and snow related industries. The traditional ice and snow sports industry promotes consumers' consumption through the mechanized market competition operation mode. With the continuous operation of market economy, the demand for service and various consumer products that consumers meet is increasing. All ice and snow sports industry companies have increased innovation in technology and intelligence to maximize the convenience of consumers in ice and snow sports industry and their satisfaction with products. There are many factors affecting the development of ice and snow industry, not only the influence of market consumption supply and demand, but also the cultural influence of the country and social region. Whether it is positive or negative, through the change of technological innovation of consumer products, the market competitiveness can be maximized. Technological innovation has a positive impact on the ice and snow sports industry. If it is integrated with business model innovation, it will surely bring great-leap-forward development to the whole ice and snow sports industry and related whole industrial chain [10]. This is true in terms of the coverage of participating groups, the added value of the whole industry, and even the sustainability and high-quality development of the industry. Technical innovation of all kinds of equipment for ice and snow sports has become the mainstream of future development. Through the use of some wearable devices, people's dependence on the environment can be minimized, and more experiences can be brought to people through technological innovation. At the same time, various ice and snow industry chains are enriched, and the promotion of ice and snow industry is actively promoted, while the high-quality development of market economy is increased.

The relationship between the change of urban state and influencing factors can be expressed as:

$$Y = F(A, X)_{(1)}$$

Among them, Y is the degree of change of the city state, X is the influencing factor, A is the degree of effect of the influencing factor, and F is the influencing function. Suppose there are n city states S to be evaluated, the corresponding city state change is y, and there are m influencing factors X. Each of the influencing factors is x, the urban planning factor is x_p , the degree of influence of each influencing factor is a, and the

degree of influence of urban planning factors is a_p , then the above formula can be expressed as:

$$y_n = f_n(a_1, a_2, \dots, a_p, \dots, a_m, x_1, x_2, \dots, x_p, \dots, x_m) \quad (2)$$

If you consider the space dimension and time dimension, this relationship can be expressed as:

$$Y_k^t = F(A_k^t, X_k^t) \quad (3)$$

Where k is the area ID and t is the time period. The city state $S_k^{t_s}$ of the area k at the beginning of the time period t and the state $S_k^{t_e}$ at the end of the time period t , then the city state of the area k at the time period t changes $y_k^t = S_k^{t_e} - S_k^{t_s}$.

For the technology innovation type ice and snow sports industry, it needs innovative business model to match, and through the scientific management of enterprises and improving the needs of industrial development, it can operate effectively. In order to meet the needs of market economy, it is necessary to speed up the reform of the management system of ice and snow sports tourism, and establish a management system of ice and snow sports tourism that meets the requirements of market economy and is in line with international tourism. Through the expansion of the talent team, market research and analysis, constantly improve the service quality of ice and snow sports tourism, enhance the attraction and competitiveness. This paper demonstrates the relationship between technological innovation and commercialization mode from a dialectical point of view. With the continuous model innovation of market economy, technological innovation can promote the transformation of market-oriented consumer groups, the change of commercial model can promote the innovation of consumption relationship between consumers and companies, and technological innovation can stimulate consumers to consume. Each enterprise of ice and snow sports industry has different development mode, and the purpose of technological innovation and business operation mode innovation is different. In the process of policy guidance, the combination of technological innovation and business model innovation can produce more economic value.

4. Conclusions

The value creation activities of ice and snow sports industry are special. To build the business model of ice and snow sports industry and optimize the industrial structure, we should develop the ice and snow sports industry according to local conditions according to the differences of natural resources, human resources and location resources. As a part of sports industry, the overall level of ice and snow

sports industry is still relatively backward compared with other sports industries. In the new period, how to comprehensively use all resources and conditions to promote the optimization and development of ice and snow sports industry has become an important issue that needs to be considered in today's ice and snow industry. "In the future development process, more and more companies with innovative technologies and innovative business models will continue to develop and grow. Through the support of policies and the coordination and cooperation of local government agencies, the healthy growth of ice and snow sports industry chain can be promoted to the maximum extent. In the process of developing the ice and snow sports industry, we should combine the natural advantages and economic foundation to select the best business model and optimize the industrial structure continuously. Winter Olympics provides a new opportunity for the development of ice and snow sports industry. In the future, China's sports industry should take advantage of the east wind of winter Olympics, build a scientific and reasonable business model of ice and snow sports industry, and vigorously optimize the industrial structure to realize the healthy and rapid development of ice and snow sports industry.

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