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# Resilience: Analyzing the Crisis Management of Ski Resorts in China

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**Abstract:** Resilience has become an important concept for the ski resorts of China, which have suffered heavy losses due to COVID-19. In order to help China's ski resort service industry successfully adapt to the crisis and achieve sustainable development, the goal of this paper is to develop the definition of resilience of the ski resort service industry through interviews based on the concept and general analysis framework of resilience. The ski resort resilience theory analysis framework is then constructed from the three basic elements (market, skiing, and stakeholders) and four system features (flexibility, adaptability, and collaborative learning ability). The results indicate several measures that can be taken to spread risk: enrich the product supply; eliminate risks and build a multi-agent networked industrial governance system; and establish a risk prevention and management mechanism based on a multi-organization alternative learning mechanism to overcome the difficulties encountered in the development of ski resorts.

**Key words:** ski resorts; service industry; resilience; risk management; China

## 1 Introduction

China has now entered the normal development stage of epidemic prevention and control. The different institutions in China have shifted to focus on minimizing the impact of the epidemic, and ski resorts are no exception. In 2020, the number of skiers in China was 12.88 million, decreased 38.37% compared with the 20.9 million in 2019 (Wu, 2021). The short-term loss to domestic ski resorts caused by the epidemic is about 6.68 thousand million yuan, and the overall economic loss will exceed 8 thousand million yuan (Wu, 2020). Specifically in Hebei Province, China, the total level of winter sports participation in 2020 was only 7.14 million, down 41.67% from 2019; and the total output value of the winter industry was 32.22 billion yuan, down 45.26% from 58.870 billion yuan and 20.69 billion yuan in 2019, respectively (Hebei Provincial Sports Bureau, 2021). Worldwide, ski resorts have been plunged into darkness (Vanat, 2020) as the global impact of the pandemic has led to an overall 18% drop in visitors to ski resorts around the world. The biggest impact was in the Asia-Pacific region, where the decline was 31%, while the rest of the region was affected by a decrease of around 15%. South Africa, located in the southern hemisphere, has closed all ski resorts so it will see a change of –100% in the 2020 snow season. The change was about –65% in Australia, where operating conditions are tightly restricted, leading some ski resorts to open for only a few days.

As an important tool for crisis management research in various fields of social ecological systems, resilience theory has been developed in economics, environmental science and other fields. In order to speed up the recovery of ski resorts in the post-crisis period, improving the industry's ability to prevent crisis risks, establishing a flexible and sustainable management mechanism, extending the risk

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management theory of ski resort service and improving the resilience of industry development have become the urgent problems to be solved in China's ski resort service industry.

The 2018–2019 snow season has been reported as the best of the century. However, after the outbreaks spread globally, the 2019–2020 snow season is shaping up to be the worst season in this century. Therefore, this article discusses the resilience theory through a general analysis framework, using the research method of interviews, which aims to determine how to use risk management as a way to achieve the sustainable development of the Chinese ski resorts.

## 2 Resilience of ski resorts

### 2.1 The definition of resilience

The theory of resilience first appeared in the 1970s in psychological research on children, and it has a good psychological adaptation in a high-risk environment (Zhu et al., 2014). Different disciplines might have different definitions of resilience. In social ecology, socio-ecological resilience refers to the ability of a system to maintain its function when disturbed or to renew and recombine the required elements (Walker et al., 2002). Organizational resilience refers to the adaptive response of an organization in a crisis situation, and it is a function of crisis perception and crisis response (Lengnick-Hall and Beck, 2003; Burnard and Bhamra, 2011). The definition of resilience in both areas focuses on the system's ability to respond to a crisis and does not emphasize the system's ability to grow and evolve during a crisis. In economic fields, resilience is defined as the ability of a region or local economy to recover its growth path after it withstands shocks (Martin et al., 2016). This definition emphasizes that recovery, in the face of a crisis, is achieved by reforming the economic structures and their social and institutional arrangements in order to maintain their previous development paths or to achieve new sustainable paths. In the tourism industry field, resilience can be regarded as an important feature for achieving sustainable development. It maintains that under the social ecological system, the definition of resilience of both the natural and social environments should be based on the industry development, which means that it should be dependent on the definition of ecological and economic resilience to emphasize the tourism system, destination or activities from the economic crisis, in addition to the ability to recover from political instability or natural disasters, and the ability to achieve sustainable development (Butler, 2017).

Ski resorts are the basis of the development of the ski industry, while the skiing equipment and equipment manufacturing, skiing competition performance industry, skiing training industry, skiing construction industry and skiing tourism and other forms of business are based on the ski resorts for their development and extension. Unlike other sports venue services, ski resorts are more dependent on natural resources and social resources, and have a higher degree of integration with the tourism and leisure industries (Mckercher, 1993). Therefore, when defining the resilience of ski resorts, it might not only consider the ability of the system to respond in the face of crisis, but it should also consider the impact of natural factors, including the concept of sustainable development, as well as the renewal ability of the system (Duglio and Beltramo, 2016). In other words, the resilience of ski resorts might refer to the ability of ski resorts to achieve sustainable development through adaptive reform in the face of crisis.

### 2.2 Analysis framework of resilience theory

Holling (2001) first developed the Holling cycle model in 2001. According to this model, the systematic resilience is divided into four stages, namely, reconstitution (α), development (Γ), protection (K) and release (Ω), and these four stages circulate in a spiral "figure eight" shape. The starting point of the Holling cycle is generally considered to be the restructuring stage after the system encounters a crisis. When a new order is formed, the system enters the development stage, and the social, natural and financial system elements begin to achieve new promotion. After the completion of the development stage, the system will enter a long protection period to maintain the results of the system adjustment. This stable structure will inevitably make the system become more conservative. If there is no adaptive adjustment, the vulnerability of the system to risks will be significantly increased. Then when there is a sudden crisis, the old system breaks down and enters the release phase of its components so that it can be readjusted and start the restructuring phase again.

To enhance the Holling cycle and analyze the system from more dimensions, which is different from the resilience in ecosystems, Walker et al. (2004) described the resilience model as a basin with four dimensions: Latitude refers to the maximum range that a system can change before it loses its ability to recover, reflecting the system's ability to adapt; Resistance is how difficult it is to change the state of the system; Precariousness is the possibility that systems cannot be restored; and Anarchy regards the influences of related systems. With the development of resilience research, its application is expanding. For example, Cochrane (2010) proposed that the analysis of resilience in specific industries should focus more on the role of the market, and the construction of resilience should consider three components: the successful driving of the market, the cohesion and collaboration of stakeholders, and strong leadership. In order for the system to be flexible and effectively adaptable, all aspects which affect these three parts of resilience must be included in the analysis framework. The evolution of resilience analysis frameworks demonstrates the complexity of social ecosystems, which are not only dependent on natural resources, but also closely linked to

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economic, political, psychological, human and ecological domains. Cross-cultural, cross-disciplinaryand cross-sectoral analyses are also needed to build resilience in individual industries.

Based on the troubles which Chinese ski resorts are facing against the background of COVID-19, this research uses the resilience theory and general analysis framework, which are based on expert interviews and field research methods, and focuses on three main research questions:

- How does resilience work in ski resorts?
- What are the practical difficulties of resilience construction in China's ski resorts?
- How can the sustainable development of Chinese ski resorts against the background of epidemic normalization be maintained?

The answers to these questions should help Chinese ski resorts to better achieve their objectives and maintain sustainability under the challenges of COVID-19.

## 3 Research methods

The data collecting process involved interviews and a qualitative content to analysis was used, which was informed by the frameworks of resilience as shown in Fig. 1. The primary research data came from interviews by using non-probabilistic purposeful sampling. More precisely, the information and ideas were collected from the famous leaders of five different entities in the skiing field of China (Table 1). This entire article was written to respect the anonymity of the interviewees. Secondary data came from previous research findings and the official reports. Based on the perceptions of the key informants, and complemented with a literature review, this study investigated the three research questions stated above. These three research questions were discussed with respect to their analytical components.

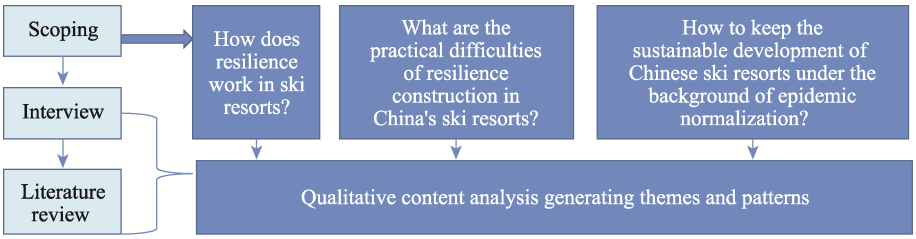



Fig. 1 Schematic representation of the methods

Table 1 Interview participant profiles

| No. | Interview date | Entity | Position |
|---|---|---|---|
| 1 | Januray 2020 | Wanlong Ski Resort | General Manager |
| 2 | March 2020 | Beijing Ski Association | Chairman |
| 3 | March 2020 | Beijing Sport University | Professor |
| 4 | July 2021 | Winter Sports Administrative Center of China | Vice Director |
| 5 | July 2021 | Xinjiang Silkroad Resort | General Manager |

## 4 Results

Compared with other service industries, ski resorts are closely related to the natural environment, the regional location, and the local social, cultural, political and economic space (Vles，2012). At present, there are few studies on the resilience of the ski resort service industry. Scholars in various countries have mainly expand the theory from the perspective of sustainable development, and most of the research objects are all just different aspects of ski resort service industry (Walker et al., 2004). There is no research on resilience from the perspective of a complete social ecosystem. This limited perspective cannot analyze the resilience of ski resorts from a holistic or global perspective, or realize the whole process of risk management before, during and after the industrial crisis.

Based on the tourism industry resilience framework developed by Cochrane (2010), the social ecosystem resilience attributes proposed by Walker et al. (2004) and the opinions of experts in the ski industry at home and abroad, this study constructs a theoretical analysis framework for the resilience of the ski resort service industry, which is composed of three basic elements (market, ski resorts and stakeholders) and four system characteristics (flexibility, adaptability, synergy and learning ability) (Fig. 2).

### 4.1 Basic elements

These basic elements are the basic components of the resilience of ski resorts, which can also be regarded as the core of risk management. It is the market, the ski resorts and the stakeholders who use it that make resilience possible. The market is the main distributor of social resources, with three functions: resource exchange, information feedback and system adjustment. The resilience of the ski resort service industry, i.e., ensuring that ski resorts can recover from risks, depends on a full understanding and utilization of these

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three functions of the market.

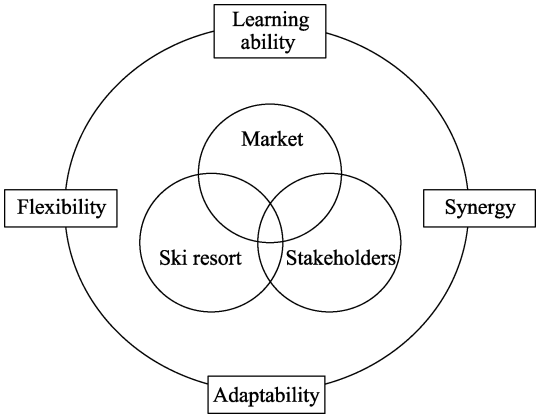



Fig. 2 The analysis framework for ski resort resilience

Meanwhile, the natural environment, social development and economic development are the three dimensions for analyzing the market-driven level, because both the demand side and the supply side of ski resorts are affected by the domestic and foreign economy, the price of related products, transportation conditions, policies, the leisure time of residents and climate change. These factors are determined by the environmental, social and economic development of the ski resorts.

Resilient organizations are required to have good adaptability and coordination, which cannot be achieved just through market regulation, because setting up to solve resource use conflicts, promoting change, inspiring the cohesion between stakeholders and deepening the implementation of market participation, all require that the ski resort itself has a good management mechanism and high-quality human resources. Ski resorts are the core element of ski area resilience. The main dimensions for measuring the effectiveness of ski resort management come from the operation effects, such as sufficient cash flow, stable rate of return and a reasonable debt ratio, and reasonable human resource allocations such as staff education level, number of core technical personnel and a human resources management system, etc.

The realization of stakeholder coordination is the prerequisite for allowing resilience to play its role. Only by arousing the enthusiasm of stakeholders, giving play to the role and advantages of the system where each stakeholder is involved, and making up for any system defects, can we ensure the smooth and stable resource flow among the systems (Jensen, 2002). The stakeholders involved in ski resorts can be divided into private, public and the third sector, including the government, local residents, ski associations, related service providers, banks, media and many others (Eydal, 2004).

### 4.2 System performance

An important feature of resilience is dynamic evolution, which cannot remain constant over time. In order to realize that the system can cope with risks through resilience, it is necessary to cultivate the four characteristics of flexibility, learning ability, coordination and adaptability. These four characteristics interact with each other to ensure that the basic elements of resilience can play a role, form resilience, and improve the accuracy and pertinence of risk management.

Flexibility means that the service structure of the ski resort should remain adaptable to changes in the surrounding environment in order to prevent the systems from becoming too rigid to adapt to the pressures of a changing environment, which can lead to system collapse in the face of risk. Ski resorts face three challenges in the natural environment, social environment and economic environment, so they must keep the flexibility of industrial structure and factor resource allocation in the face of more complex environmental changes.

Adaptability and flexibility complement each other, and flexibility provides the possibility for the system to adapt to environmental changes. Adaptability is the realization of the consequences of this flexibility. In order to achieve flexibility and effective adaptation in a ski resort, it is necessary to incorporate into the system and regulations all aspects of the system which are affected by environmental changes, such as changes in economic policy, scientific and technological progress, market trends or supply chain expansion. Only the internalization of environmental changes can effectively complete the coordination of market, ski resort and stakeholders.

Synergy refers to maintaining coordination among the systems that constitute the resilience during adaptive adjustment. The ski resort is not only a single system, its development is closely related to the economy, ecology, transportation, health and other fields. If the industry is disconnected from the development of these areas, it will lead to system instability and a lack of necessary resources and institutional support in the face of risks. Therefore, the construction of the resilience of ski resorts needs the cooperation of multiple fields and departments.

Learning ability is the basis of the dynamic evolution of resilience in ski resorts. The market and stakeholders are also constantly changing and adjusting. In the face of such changes, only with the learning ability, careful planning, evaluation and absorption, and a certain degree of learning, can the system ensure the correct and timely understanding of those changes, and realize the adaptability of the system itself and the coordination between systems.

## 5 Discussion

### 5.1 Difficulties in the resilience of ski resort service in China

China's ski resorts have developed rapidly after the successful bid for the 2014 Beijing Winter Olympic Games,

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with rapid expansion of the industrial scale and optimization of the industrial structure. However, risk management is different from normal management and the two should not be confused. Normal management is based on a stable environment and efficiency management is the core of operation. Correspondingly, risk management is based on a complex dynamic environment and takes survival as the core element (Vles, 2012). The impact of COVID-19 in early 2020 has shown that there are still some problems in the resilience of the ski resorts in China in the face of risks.

5.1.1 Market orientation is uncertain

The market driving ability of ski resort resilience depends on the natural environment, and the social and economic development level of the ski resorts, which reflects the value orientation of industrial development. The epidemic has shown that the Chinese market has a vague judgment on the development trend of the ski resort service industry.

From the perspective of ski resort resource factors, there were 742 ski resorts in China in 2018, among which those in the western and northeast regions have incomparable advantages in their natural environment, accounting for 29.78% and 27.63% of the total number of ski resorts, which is higher than the eastern and central regions. However, the GDP of these two regions only accounted for 20.88% and 6.48% of the total national GDP, while the number of health departments accounted for 31.22% and 8.07%, and the proportion of passenger capacity was 29.54% and 7.93%, which are lower than those of the eastern and central regions (Table 2). Therefore, in addition to the natural environment, the social and economic development levels of the western and northeastern regions of China cannot provide good support for the market driving ability, resulting in limited space for the function of the resilience characteristics of the ski resorts. Although the eastern and central regions are superior to the western and northeastern regions in terms of social and economic development, the natural environment does not have better support for the resilience of ski resorts. In recent years, both the eastern and western regions have developed their ski industries by building indoor ski resorts, but compared with outdoor ski resorts, their higher operating costs and energy dependence also bring more risks.

From the perspective of the policy environment, the western regions are mostly border areas. For national security and to prevent the spread of the overseas epidemic to China, stricter epidemic prevention measures are implemented in the border areas, which also makes the market lack confidence in the long-term development of the ski resorts in these areas. The eastern region has better resources compared with the western areas, but the alternative products of their ski resorts developed earlier, with a variety of products and high quality. According to the interviews, some investors are cautious about taking the ski venues as priority investment areas in the post-Olympic period.

Table 2 Resilience market drivers for ski resorts by region in China (Unit: %)

| Region | Proportion of ski resorts | Proportion of GDP | Proportion of health departments | Proportion of passenger capacity |
|---|---|---|---|---|
| Eastern | 26.95 | 50.64 | 33.40 | 35.30 |
| Middle | 15.63 | 22.00 | 27.31 | 27.24 |
| Western | 29.78 | 20.88 | 31.22 | 29.54 |
| Northeast | 27.63 | 6.48 | 8.07 | 7.93 |

5.1.2 The rough ski resort management system

China's ski resort operators might not have a clear idea of enterprise development. There is an obvious phenomenon of the idle waste of resources, such as the implementation of rough management and low-level operations. For example, the ski resorts only operate in winter, so for the remaining three quarters of the year the sites are abandoned. Although some large ski resorts have begun to try to operate in four seasons, they do not take the development of all-season tourism as the focus of their ski resort operation, but employ more infrastructure construction in spring and summer. According to the interviews, only large ski resorts in Hebei Province had already invested thousands of millions of yuan in site infrastructure construction before the 2019–2020 snow season. Meanwhile, during the epidemic, more than 100 million yuan was needed to pay employees' salaries and bank loan interest. Therefore, it is difficult for ski resorts to maintain adequate cash flow, stable profitability and a reasonable debt ratio.

In addition, only 42.5% of the ski resort management personnel in China have a bachelor's degree or above, and there is a shortage of management personnel who know both management and ski resort operation. Meanwhile, only 50% of ski instructors have a high school education or a vocational and technical school education, which represents a low level of education, and most of them lack medical first aid knowledge, so it is difficult for them to help tourists when sports risks occur (Kan, 2009).

5.1.3 The dispersion of stakeholders

The distribution of stakeholders in China's ski resorts is relatively dispersed, involving the government, ski associations, upstream and downstream enterprises of the industrial chain, etc. During the outbreak of Covid-19, the management departments of skiing and the upstream and downstream enterprises in China have shown strong cohesion. For example, in Beijing, Hebei, Jilin, Shanxi and Zhejiang, departments across all levels of government have issued specific policies to support the ski resorts, such as adopting reductions in rent,

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one-time subsidies and fund declaration support policy, etc. The Bank of China, China Construction Bank and other financial institutions cooperated with local governments to lower financial service fees, provide green approval channels, give priority to business authorizations and provide financial support of credit resources for the ski resorts which faced financial pressure during the epidemic (Table 3).

Media platforms such as *Caijing Magazine*, *China Sports Newspaper*, *Sohu Sports* and *Snow & Ice Toutiao* provide timely releases of the trends of ski resorts and collect industrial support policies to help consumers understand the timely ski trends. Video platforms such as Youku, Sina Sports and Bilibili have kept the ski resorts in the spotlight during the pandemic by helping ski resorts open live channels and conduct online ski instruction. However, due to the absence of ski industry associations in the industrial development, it was difficult for the mutual aid alliance between ski resorts and other industries to play a good role as a platform to assist with each other's needs. China's ski resort self-help depends on the individuals, which leads to the loosening of the alliance, so the scope of action is difficult to expand and deepen.

Table 3 Summary of major supporting policies of China during the COVID-19

| Area | Main measures |
|---|---|
| Beijing | 1. Beijing Municipal Bureau of Sports has provided appropriate electricity and water subsidies to skating rinks and ski resorts affected by COVID-19. A total of 18.279 million yuan of subsidy funds has been approved for 30 skating rinks and 21 ski resorts that meet the subsidy requirements<br>2. Yanqing District has provided a certain cost subsidy for ski resorts that have a large initial cost investment, are seriously affected by COVID-19 and still need personnel management during the current period. The subsidy standard is 50% of the difference between the main business income of the ski resort in the snow seasons of 2019–2020 and 2018–2019 |
| Jilin | The Jilin Province Department of Culture and Tourism has granted financial subsidies to ski resorts operating in the 2019-2020 snow season according to the number of skiers received as of 23 January 2020. For ski resorts which receive more than 300000 skiers, it is a one-time subsidy of 2 million yuan; for those that receive more than 100000 skiers, a one-time subsidy of 1 million yuan; for those that receive more than 50000 skiers, a one-time subsidy of 300 000 yuan; and those that receive more than 10000 skiers, a one-time subsidy of 150000 yuan |
| Hebei | 1. The Sports Bureau of Hebei Province and Bank of China Shijiazhuang Branch actively cooperated to win support for their policies and jointly formulated ten Measures to Support the Development of Sports Industry under the Influence of the Epidemic<br>2. Chongli District of Zhangjiakou has introduced seven measures, including tax reductions and exemptions on urban and township land use tax and property tax, extending the loss carryover period for enterprises, extension of declaration and tax payments, intensifying the electricity and water subsidies, delaying payment of social insurance premiums, implementing a policy of subsidies for stabilizing jobs with unemployment insurance, organizing the bank-enterprise connecting activities, etc., to help tide the ski resort enterprises over during their difficulties |
| Zhejiang | Winter sports have been listed as the key projects of the Zhejiang Sports Industry Development Fund Project Library in 2020 |
| Shanxi | The Sports Bureau of Shanxi Province issued the Notice of Fully Supporting Shanxi Sports Enterprises in Defeating the Virus and Stabilizing the Development, and together with China Construction Bank Shanxi Branch jointly issued the Notice of Several Measures of Encouraging the Growth of Sports Enterprises under the Influence of the COVID-19 Outbreak, to promote the resumption of work and the production and stable development of sports enterprises during the COVID-19 outbreak by reducing rent, providing services, supporting credit, etc. |
| Hubei | 1. The Sports Bureau of Hubei Province has set up electricity and water subsidies of 1.2 million yuan for ski resorts<br>2. According to the fiscal supporting policies introduced by the Sports Bureau of Hubei Province, such as issuing the electricity subsidies for ski resorts, allotting sports project relief funds and granting sports industry guidance funds, Shennongjia Forestry District has obtained the excess input VAT credits of 2.93 million yuan from the Tax Service. The property tax has been reduced by more than 400000 yuan. The Human Resources and Social Security Bureau has been subsidized 29000 yuan for stabilizing jobs and the Labor and Employment Bureau 12000 yuan. The bureau also tried to reduce the electricity price of the power companies by 5%<br>3. Yichang formulated and released technical guidelines for epidemic prevention and control in sports venues for ski resorts and stadiums that were heavily affected by the epidemic, with the goals of standardizing epidemic prevention and control and resuming work and production in terms of technical and safety standards, and helping two ski resorts to apply for 1.79 million yuan of electricity and water subsidies during the snow season |
| Sichuan | A series of measures such as tax subsidies, rent reduction and fee deduction have been introduced, and the ice and snow stadiums enjoy the same corresponding measures. They are also actively connected with the finance, strive to issue "sports consumption vouchers" as soon as possible, and will launch "sports loans" to stimulate the ice and snow consumption and provide high-quality financial services for sports enterprises |
| Liaoning | The Sports Bureau of Liaoning Province, together with the Provincial Development and Reform Commission and the Provincial Department of Culture and Tourism, have made use of the provincial cultural tourism special funds to give special support funds to 42 ice and snow enterprises in the province. Among them, the ski resorts received a subsidy of 0.3 to 3 million yuan, and the Winter Carnival operators received 50 to 900 thousand yuan |

5.1.4 Passivity and hysteresis of resilience elements

There is a certain passivity to the flexibility, adaptability, coordination and learning ability required by the resilience of ski resorts in China. A relevant journal which was published in early 2005 had already mentioned that the China services sector management system is not efficient, with "a season to raise three quarters" over-reliance on winter operation and industry development problems such as an unreasonable talent structure (Luo and Lu, 2005; Tian, 2006). However, the ski resort service industry in China is still

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facing those similar problems at present. During the development of the international economy over nearly 20 years, Chinese ski resorts have not maintained systematic flexibility or actively adapted to change.

From the perspective of collaboration, the ski resorts and coordinated development of other industries might also be characterized by hysteresis. Ski resort operators pay more attention to the communication within the industry, in which the industry's latest policies and trends is not keep up with the times. This kind of hysteresis might lead to an inability to effectively realize the whole system, thus affecting the ability to resolve the crisis.

In addition, the risk management concept of stakeholders in the industry, especially social organizations, in collaboration with the government and ski resorts, has not been formed. Social organizations, like ski resorts and governments, are important participants in the risk governance dilemma of the ski resorts. To improve the performance of risk governance of the ski resort service industry, it is necessary to give full play to the synergistic and pivotal role of social organizations.

## 5.2 The relief path of Chinese ski resort resilience

5.2.1 Spread risks and enrich product supply

The problems of Chinese resorts lacking in system flexibility, adaptability and learning ability, and providing relatively singular products are obvious. Therefore, in order to better prevent the risks that may occur in the future, resorts should speed up the implementation of the whole season operation plan and increase the activities in summer. On the basis of the existing skiing sports consumption, it is also necessary to expand the product chains and enrich the product categories to disperse the problem of risk concentration caused by a single product. Taiwu Town Ski Resort of Zhangjiakou Chongli can be regarded as a good example, which actively operates in summer through conference receptions, summer vacations and summer camps. Last summer in 2020, it received 200000 tourists and earned about 60 million yuan.

The digital upgrade of the ski resort is an important means to enrich product supply and improve the efficiency of risk management. At this stage, the digitalization of China's ski resorts is relatively low, mostly limited to realizing the digitalization of the lifts and tickets, the interconnections of equipment operation detection, weather monitoring, site safety, etc., while the use of VR, AR and other technical means is low, so the unexpected events cannot be predicted in advance with timely processing. It is very important to complete the digital upgrade of ski resort management as soon as possible to spread the risk and improve the operation efficiency.

5.2.2 Eliminate risks and build a multi-agent networked industrial governance system

Risk is not isolated, so in the face of risk, China's ski resorts should establish a proper concept of risk management, which plays to the right role of each system. The risk management of local non-governmental organizations, enterprises and other social groups should participate in the networked governance system, which will work together to deal with the risk.

To eliminate the risks, the cohesion of stakeholders should be improved, and the roles of risk management of governments, associations and related organizations should be expanded. More precisely, governments, associations and related organizations could establish a risk response fund, support insurance companies in developing insurance products for the operation or credit risk of ski resort enterprises, develop digital operation plans and cooperate with superior enterprises to improve the degree of symbiosis and mutual promotion. For ski resorts, risk management manuals and all kinds of risk response manuals should be prepared. To relieve part of the pressure, enterprises can try partnership management systems which aim to improve the human resource management mode.

5.2.3 Prevent risks and establish multi-organizational alternative learning mechanisms

The existing risks make the errors and contradictions more prominent, which makes the parts that need to be improved clearer. Therefore, it should provide a key model for alternative learning for many similar industrial systems. In addition, we should fully strengthen the learning experience of getting out of the crisis, and internalize the new norms of the industry system to prevent similar risks in the future (Blackman and Bhamra, 2008).

The mutual learning among industrial systems can form a diffusion effect of learning and the resultant force of learning, especially regarding the substitution learning mechanism among similar industries. For the ski resort service industry, alternative learning with tourism and the accommodation industry is an important way to form a joint force and prevent risks. These industries are all service industries, and they are all tested by a series of crises, such as the natural environment, transportation, terrorist attacks, economic crises and health security.

Since each service industry will be tested by a series of crises, the ski resorts can form a joint force with tourism and the accommodation industry to resist these risks together and increase their resilience. For example, the management of WINSPORT, the operator of the Winter Olympics in Calgary, Canada, is a team of experienced professionals in real estate, investment, retail, legal, public relations, sports and other fields. In the face of the negative impact of COVID-19, they resolutely proposed the "NEXT 30" project, which promptly adjusted the original operating strategy of focusing on the international market, focusing on the local market and deepening the cooperation with Canadian national teams and youth organizations. The Chinese ski resorts can learn from that experience, and establish multi-organization learning mechanisms to prevent risks.

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## 6 Conclusions

Chinese ski resorts are struggling to recover from the COVID-19 epidemic with the help of the government and relevant organizations, although the effects might be sporadic and devastating. Resilience theory is important for preventing industrial risks and achieving sustainable development. Based on the three basic elements of market, ski resorts and stakeholders, and four system characteristics of flexibility, adaptability, coordination and learning ability, this paper analyzes the theoretical framework of the resilience of ski resorts. This framework can help Chinese ski resorts to establish a risk management system covering the whole subject, the whole risk, the whole factor and the whole process, and form a sustainable dynamic management mechanism through alternative learning among the different industrial systems.

## References


Blackman D, Ritchie B W. 2008. Tourism crisis management and organizational learning: The role of reflection in developing effective DMO crisis strategies. *Journal of Travel & Tourism Marketing*, 23(2–4): 45–57.

Burnard K, Bhamra R. 2011. Organizational resilience: Development of a conceptual framework for organizational responses. *International Journal of Production Research*, 49(18): 5581–5599.

Butler R W. 2017. Tourism and resilience. Oxfordshire, UK: Center for Agriculture and Bioscience International.

Cochrane J. 2010. The sphere of tourism resilience. *Tourism Recreation Research*, 35(2): 173–185.

Duglio S, Beltramo R. 2016. Environmental management and sustainable labels in the ski industry: A critical review. *Sustainability*, 8(9): 851. DOI: 10.3390/su8090851.

Eydal G. 2004. The development of a sustainability management system for ski areas. Diss., Vancouver, Canada: Simon Fraser University.

Holling C S. 2001. Understanding the complexity of economic, ecological, and social systems. *Ecosystems*, 4(5): 390–405.

Jensen M C. 2002. Value maximization, stakeholder theory, and the corporate objective function. *European Financial Management*, 12(2): 235–256.

Kan J C. 2009. Current status and development of the human resources of ski resorts in Heilongjiang Province. *China Winter Sports*, 31(1): 88–92. (in Chinese)

Lengnick-Hall C A, Beck T E. 2003. Beyond bouncing back: The concept of organizational resilience. Democracy in a knowledge economy. Proceedings of the symposium at the 63rd meeting of the Academy of Management, 2003 Aug 1-6, Seattle, WA, USA: Academy of Management.

Luo B Q, Lu F. 2005. Research on development of skiing market in Beijing. *China Sport Science*, 25(2): 35–37. (in Chinese)

Martin R, Sunley P, *G*ardiner B, et al. 2016. How regions react to recessions: Resilience and the role of economic structure. *Regional Studies*, 50(4): 561–585.

McKercher B. 1993. Some fundamental truths about tourism: Understanding tourism's social and environmental impacts. *Journal of Sustainable Tourism*, 1(1): 6–16.

Tian Y N. 2006. Situation and development trend of Chinese skiing industry. *Journal of Shenyang Sport University*, 25(2): 37–39. (in Chinese)

Vanat L. 2020. 2020 International report on snow & mountain tourism. Geneva, Switzerland: Laurent Vanat Consulting SARL.

Vles V. 2012. Ski resorts in crisis and territorial construction in French Catalonia. *Journal of Alpine Research*, 100(1–4): 225–238.

Walker B, Carpenter S R, Anderies J M, et al. 2002. Resilience management in social-ecological systems: A working hypothesis for a participatory approach. *Conservation Ecology*, 6(1): 14. http://www.consecol.org/vol6/iss1/art14/.

Walker B, Holling C S, Carpenter S R, et al. 2004. Resilience, adaptability and transformability in social-ecological systems. *Ecology and Society*, 9(2): 5. http://www.ecologyandsociety.org/vol9/iss2/art5/.

Wu B. 2020. China ski industry white book (2019). Beijing, China: Beijing Xuebang Snow Industry Enterprise Management Co., Ltd. (in Chinese).

Wu B. 2021. China ski industry white book (2020). Beijing, China: Beijing Xuebang Snow Industry Enterprise Management Co., Ltd. (in Chinese)

Zhu Y, Wang X F, Sun N, et al. 2014. Applying strategic human resources management in the study of organizational resilience. *Management Review*, 26(12): 78–90. (in Chinese)


# 复原力视域下我国滑雪场地服务业风险治理研究


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**摘　要：**我国滑雪场地服务业在新冠疫情中损失惨重。为更好地帮助我国滑雪场地服务业面对危机，进行适应性变革，并实现产业可持续发展，本文从讨论复原力概念与一般分析框架入手，通过文献资料法和访谈法，完成了对滑雪场地服务业复原力的内涵界定，并构建了由三个基本要素（市场、滑雪场地和利益相关者）和四种系统特性（灵活性、适应性、协同性和学习能力）组成的滑雪场地服务业复原力理论分析框架；针对在构建我国滑雪场地服务业复原力的实践中遭遇诸多困境，本文提出了分散风险，丰富产品供给；消解风险，构建多主体网络化产业治理体系；预防风险，建立多组织替代学习机制的风险管理机制。



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