Research on Dynamic Mechanism and Management Mode of Sports Tourism Development in China

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Abstract

Sports tourism can stimulate the development of related industries, such as tourism, recreation, service, business industry, retail industry and so on. Therefore, it has been attracting attention from all over the world. With the Beijing Olympic Games, Guangzhou Asian Games and Shanghai World Expo held one after another, China has paid some attention to the development of Sports tourism. International convention and exhibition centers have been built in Shanghai, Shenzhen, and other first-tier cities in China, and activities are carried out regularly to attract domestic and foreign tourists. sports tourism has become a hot topic in domestic tourism development, but due to the late start of China's sports industry, relevant research is also lagging behind. In order to better develop China's Sports tourism, it is necessary to draw on the advanced experience of foreign countries in developing Sports tourism, construct a Sports tourism business model with Chinese characteristics and establish an MICE tourism business system in line with China's national conditions. Therefore, the core idea of this paper is to build a user-oriented personalized tourism information recommendation model on the existing big data of Sports tourism, combine data mining knowledge and recommendation system algorithm, and analyze the development power mechanism and management mode of Sports tourism. The research concludes that Sports tourism should be closely integrated with Sports industry, give full play to its industry advantages to serve Sports industry, promote Sports tourism at a deeper level and form an interactive win-win effect.

Keywords: Big Data, Data Mining, Sports Tourism, Personalized Recommendation, Development Power Mechanism, Management Model.

Introduction

The exhibition industry economy is an economic form that will inevitably emerge after the development of the tertiary industry in cities, and this emerging tourism model has gradually begun to become a new growth point for the national economies of many developed countries, and is therefore given the reputation of "bread of the city" and "touching the windows of the world". It is known as the "bread of the city" and the "window to the world" (Hasbi et al., 2021). Sports tourism is a hot spot in today's tourism development and an important part of the world's urban tourism. According to the estimation of international exhibition industry authorities, the average annual output value of international exhibition industry accounts for about 1 percent of the total GDP of all countries in the world, and the contribution of the exhibition industry to the world reaches 8% if the benefits gained by related industries from the exhibition are added. According to the statistics of International Conference Association (ICCA), the annual economic benefits directly created by international conferences are US$280 billion (Khafizova & Dehtjare, 2019; Lu, Zhu, & Wei, 2020). In recent decades, Sports tourism in China has experienced a development

process from scratch and from small to large. Especially in recent years, China's Sports industry has developed rapidly and become a newcomer in the global Sports industry, increasing at an average annual rate of nearly 20%, gradually forming a consumer industry chain integrating sightseeing, accommodation, catering, transportation, shopping and conference, effectively promoting the steady development of the national economy (Bari & Shaheen, 2020; Nyurenberger et al., 2019). With the deepening of reform and opening-up and the acceleration of internationalization, the exhibition tourism industry has become a new highlight of national economic development (Aburumman, 2020; Yuan, Gan, & Zhuo, 2022).

At present, China has formed a convention and exhibition city circle with Beijing, Shanghai, Shenzhen, Dalian and Guangzhou as the center, and has held such large-scale international conferences as World Architects Congress, World UPU Congress, Kunming World Horticultural Expo, Shanghai APEC Conference, Hainan Boao Forum for Asia, China International Import Expo (Uansa-ard & Binprathan, 2018), China International Consumer Electronics Expo and so on. However, among the US$288 billion revenue brought by the Sports industry to the world every year, China has not been able to take up its due

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market share, and Sports tourism in China is still in the primary stage, without industry scale and industrial characteristics, and is only a derivative product between tourism and conference and exhibition industry (Li & Ren, 2021; Zhang, 2022). Although the sensational effect brought by Sports tourism makes it quickly become the focus of attention, the development level of Sports tourism in China is relatively low, and how to promote China's MICE tourism on the road of sustainable and benign development has now become a hot topic of discussion between economists and tourism scientists. Sports tourism is a new form of tourism emerging in recent years, which has attracted extensive attention of scholars at home and abroad with its huge socio-economic value, and a large number of papers have been published in domestic and foreign newspapers and journals. At the same time, since the research and development of Sports tourism in China is still in the primary stage, therefore, the research of Sports tourism has great development space and huge development space (Feijó et al., 2022).

Introduction of Related Theories

Convention and Exhibition Tourism Becomes the Core Driving Force of Urban Economic and Cultural Development

Sports tourism can pull the development of related industries, such as tourism, recreation and culture, service industry, business industry, retail industry and so on. Therefore, it has been attracting attention from all over the world. Sports tourism can bring the most direct economic income to the host city, thus promoting the country's economic development, and is therefore gradually developing into a new growth point for the city's economy. The development of Sports tourism in a country can show whether it has core competitiveness in the international arena (Tiecheng & Li, 2014). Nowadays, China also attaches some importance to the development of Sports tourism, and the first-tier cities in China such as Shanghai and Shenzhen have built international conference and exhibition centers and regularly carry out activities to attract domestic and foreign tourists (Alananzeh et al., 2019). Holding conventions and exhibitions is also crucial to the development of city culture. By holding convention and exhibition activities, we can simultaneously achieve the effect of promoting the beautiful image of the city, raising the visibility of the city and promoting the development of city tourism and culture. Convention and exhibition tourism has become the core driving force for the economic and cultural development of the city.

Convention and Exhibition Tourism Has Become an Integral Part of Tourism Development and a Hot Spot of Academic Research

Nowadays, tourism management agencies of some countries have set up specific departments related to Sports tourism, which shows that all countries in the world attach great importance to business tourism for the purpose of participating in exhibitions (Ratra & Ratra, 2018; Wu, 2020; Xie & Chen, 2024). According to the statistical data analysis of ICCA, it is concluded that there are great differences in the expenditures of international exhibitions carried out around the world, and only less than 10% of the annual expenditures are spent on the preparation of the venue, organization of personnel, on-site management and reception of guests, while 90 percent of the expenditures are spent on food, accommodation, transportation, tourism, shopping and entertainment (Disimulacion, 2021; Yi et al., 2020). And food, accommodation, transportation, travel, purchase and entertainment are the six key indicators of tourism industry. This fully illustrates that Sports tourism is gradually becoming an indispensable part of tourism development. According to the survey data of CCPIT, the average growth rate of China's exhibition industry, which is maintained at 15%-20% up and down every year, is expected to exceed 100 billion yuan in total revenue by 2020 (Cao, 2022; Zhenhua et al., 2015; Zhou, 2019). The data report of inbound tourism market of National Tourism Administration shows that the proportion of business and conference tourism accounts for 39.9% of all tourists (Kraas, Myint, & Häusler, 2020; Leandro, 2021). From this perspective, China is likely to develop into a major destination for Sports tourism in the world in the future. However, in this aspect of academic research, experts and scholars are still relatively superficial, but as the heat of Sports tourism is gradually rising, scholars are paying more and more attention to this issue, and it is believed that the research on Sports tourism will become a hot spot of academic research soon (Zheng, 2022).

Data Mining Theory

Data mining, also known as "knowledge discovery in databases", is a research hotspot in the field of artificial intelligence and big data. Data mining is to analyze and calculate the huge amount of data in the database, so as to reveal the unknown information hidden in the database. Data mining itself does not have a clear purpose, so the data obtained in the process of data mining has a certain degree of uncertainty, which will have a significant impact on the future development. Data mining is an emerging information processing technique in the business world. Data mining is such that through the analysis of a large

amount of data, hidden, unknowable or definite patterns are discovered to provide more advanced and effective models for the short- or long-term business goals of a company (Macauley & Robeva, 2020; Zhou, 2021).

Simply put, data mining is an advanced means of data analysis. Data analysis has been around for many years, and in the past, people only used data collection and analysis as a scientific tool. And in those days, computers were slow to compute, so the analysis and processing of complex data was inefficient. Today, as industries automate their operations, many potentially valuable data will emerge from the corporate sector. Now, for analytical purposes, this data has been collected and used for purely speculative business purposes.

Application Methodology Design

Application Architecture Overview

This research model mainly uses data mining technology as technical support to analyze the development mechanism and management mode of Sports tourism in China and proposes user personalized tourism recommendations based on the processing technology of data mining. Its architecture flow chart is shown in Figure 1.

1) User personalized recommendation is a recommendation algorithm based on collaborative filtering, which aims to predict the next possible attraction for users and give real-time recommendations.

2) Data mining of exhibition tourism information is mainly used to define set mining of data set by data mining technology, and then data analysis is carried out according to the feedback results, this time mainly on the analysis of exhibition tourism development power mechanism and management mode.
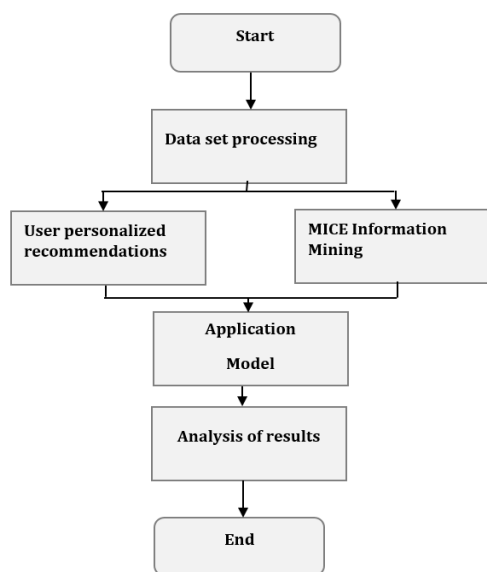

Figure 1: Algorithm Processing Framework Diagram.

User Personalized Recommendation

The personalized recommendation algorithm in Sports travel uses collaborative filtering based recommendations, which are widely used in many websites.

Collaborative filtering simply uses the preferences of a group of people with similar interests and common experiences to recommend information of interest to users, and individuals give a significant degree of response (e.g., rating) to the information through a cooperative mechanism and record it to achieve the purpose of filtering and help others to filter the information. Responses are not necessarily limited to those of particular interest, but the recording of information of particular disinterest is also important. The diagram is shown in Figure 2.
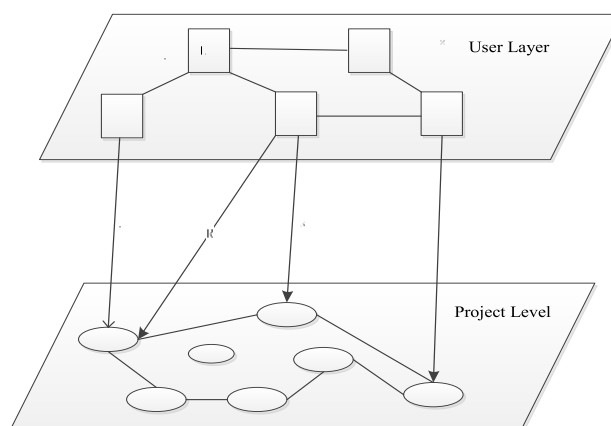

Figure 2: Principle Diagram of Collaborative Filtering Recommendation.

Figure 2 shows an example of the illustration. The basic idea of the method is to first find the set of nearest neighbors of the target user and then recommend features with specific characteristics that have better user preferences to the target user. The computational procedure is as follows. (1) Find the neighboring sets with similar interests for the target user; in this step, it is very important to calculate the similarity of interests of two users. (2) Finding the candidate features of the object that the object user does not have the behavior and that the user likes in the neighboring set. (3) Ranking said candidate features in reverse order according to the degree of interest. Specifically, the degree of interest is calculated as follows.

$$p(u, i) = \sum_{v \in S(u,k) \cap N(i)} w_{uv}\, v_{vi} \qquad (1)$$

The formula indicates the interest of the target user u for item i. $s(u, k)$ denotes the M users with the closest interest to user u, $N(i)$ denotes the number of users interested in item i, v denotes the similarity between the near-neighbor users, , v_{vi} denotes the interest of user v for item i. In the case of increasing user size, the inadequacy of the user collaborative filtering algorithm requires the maintenance of a large number of user resources, which leads to the

consumption of network resources. An example of collaborative user-based filtering is shown in Figure 3.
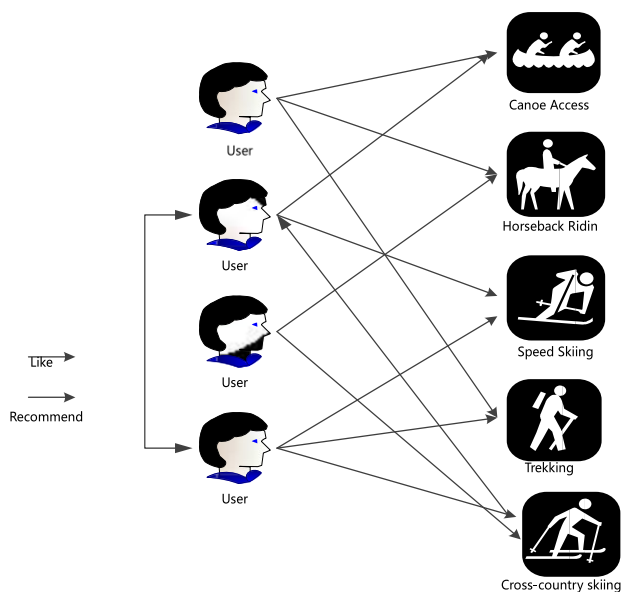

***Figure 3**: Example of Collaborative Filtering Based on Users.*

With the above description, the user-based collaborative filtering recommendation algorithm can be summarized in two steps.

(1) Construct a set of users with similar preferences to the target user. (2) Recommend to the user a Sports product that has never been seen before and that other users like. The first step focuses on the analysis of preference similarity between users, given users u and v. Then let $N(u)$ denote the user's favorite Sports tourism item and $N(v)$ denote the same meaning as above. The similarity of preferences between user u and user v is then calculated according to the cosine similarity formula.

$$w_{uv} = \frac{|N(u) \cap N(v)|}{\sqrt{N(u)||N(v)}} \tag{2}$$

In the following, we use as an example the behavioral records of the four users in Figure 4, where User M has behaved with respect to Sports tourism items $\{a, b, d$ and User N has behaved with respect to Sports tourism items $\{a, c\}$, and using the cosine similarity formula above, we can calculate the similarity of preferences between User M and User N as follows

$$W_{MN} = \frac{|\{a,b,d\} \cap \{a,c\}|}{\sqrt{|\{a,b,d\} \cap \{a,c\}|}} = \frac{1}{\sqrt{6}} \tag{3}$$
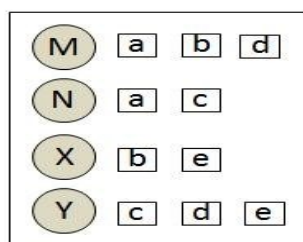

***Figure 4:** Behavioral Records of The Four Users.*

Similarly, the similarity of preferences between user M and user X can be calculated as follows.

$$W_{MX} = \frac{|\{a,b,d\} \cap \{b,e\}|}{\sqrt{|\{a,b,d\} \cap \{b,e\}|}} = \frac{1}{\sqrt{6}} \tag{4}$$

Similarity of preferences between user M and user Y.

$$W_{MY} = \frac{|\{a,b,d\} \cap \{c,d,e\}|}{\sqrt{|\{a,b,d\} \cap \{c,d,e\}|}} = \frac{1}{3} \tag{5}$$

The Sports items preferred by users similar to the target user are constructed as a set, and then the algorithm will recommend the top K Sports items in the set to the target user based on the reference value of similarity in preference between users. The formula for the preference of user u for Sports item i calculated by the User based collaborative filtering recommendation algorithm is as follows.

$$p(u, i) = \sum_{v \in s(u,k) \cap N(i)} w_{uv} v_{vi} \tag{6}$$

$s(u, k)$ represents k users who share behavioural habits and preferences with the target user u, w_{uv} represents the similarity of preferences between user u and user v, $N(i)$ represents a set of users where each user in the set has behaved towards Sports item i and rvi represents how much user v likes Sports item i, while making all $v_{vi} = 1$.
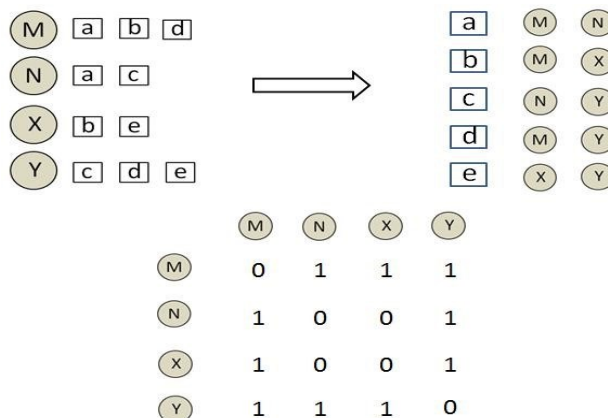

***Figure 5**: Sports Tourism Project - User Reverse Schedule.*

Create the inverted table of Sports tour items-users in the example in Figure 4, as shown in Figure 5. The above algorithm can now be used to make recommendations to the user M in Figure 5. Let $k = 3$ for Sports tourism item c and Sports tourism item e. The target user M has Figit can be calculated that the liking of user M for the two Sports tourism items c and e is

$$p(M, c) = W_{MN} + W_{MY} = 0.7416 \tag{7}$$

$$p(M, e) = W_{MX} + W_{MY} = 0.7416 \tag{8}$$

Data Mining for Sports Tourism

Data mining for this Sports tour is a very complex process that includes a series of tasks through which we can discover useful information that was previously unknown, and then use the data mined for data support or to supplement previous data. The basic process of data mining is shown in Figure 6.
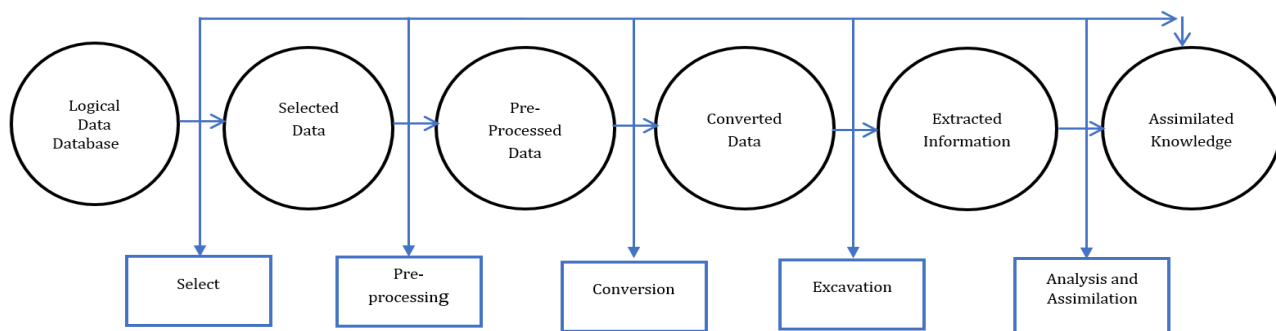
Figure 6: The Basic Process of Data Mining.

The main steps of its data mining are.

(1) Determine the business object: Although the result of data mining is unpredictable, the problem it involves is very clear, and the final result will not be very good if you go to mining blindly.

(2) Data preparation: 1) Data selection: Based on the business objectives of the company, we collect internal and external information related to it, and select the appropriate information from it. 2) Data pre-processing: To ensure the quality of data mining, it is necessary to prepare for the next stage by analyzing the quality of the data itself. Then, the mining method to be performed is decided according to the objectives of mining. 3) Transformation of data: Transformation of data into analytical models for mining algorithms. The success of data mining depends on the availability of suitable analytical models.

(3) Data mining: With the right mining algorithm, everything else can be automated.

(4) Result Analysis: For data mining, there must be an interpretation and evaluation. The analysis method used is usually determined by data mining operations, while visualization techniques are now commonly used.

(5) Assimilation of knowledge: Integration of the knowledge obtained from the analysis into the organizational structure of the enterprise information system

This data mining algorithm uses the Apriori algorithm, the core essence of which is association rules. The pseudo code of the Apriori algorithm is as follows.

(1) L1= {frequent 1-item set.

(2) for (k=2; Lk-1φ; k++) do begin

(3) Ck=apriori-gen (Lk-1); //generate a new set of candidate items

(4) for all transactions t ∈ D do begin

(5) Ct = subset (Ck, t); // the set of candidate k items contained in t

(6) for all candidates c ∈ Ct do

(7) c.count++.

(8) end

(9) Lk = {c∈Ck | c.count≥minsup}

(10) end

(11) result = ∪k Lk.

The most frequent 1-item set is obtained by first performing an initial traversal of the support of each item set. The next k-traversal consists of two stages. First, a candidate set Ck is generated using the Lk-1 and Apriori-gen functions found in the sub-traversal (k-1). where the Apriori-gen function consists of two steps: concatenation and pruning. Next, the database is scanned and the candidate items in C k are supported. The Hash tree allows to efficiently determine whether a candidate item in Ck is included in transaction t. The generation of the marquee is the key to the whole algorithm, which consists of two steps, namely succession and pruning by the Apriori-gen function. The Apriori candidate set generates a function Lk-1, which is the set of all k-1 item sets. It returns a superset for the set of all frequent k-items. First, in the concatenation step, Lk-1 is self-connected to Lk-1 to obtain the set of k-order candidates Ck that is guaranteed not to have the same expansion items. its concatenation proceeds as follows.

(1) insert into Ck

(2) select p [1], p [2], …, p[k-1], q[k-1]

(3) from p,q∈Lk-1

(4) where p [1] =q[1],…,p[k-2]=q[k-2],p[k-1]<q[k-1]

Next, in the pruning step, the item c is removed if some item (k-1)-subset of the item set c ϵ Ck is not in Lk-1. The pruning step requires testing whether a subset of a newly generated candidate k-item set is in Lk-1. To make this test faster, the frequent item set can be stored in a hash table using the Subset function.

Application Experimental Analysis

Data Set Introduction

The data crawled from Ctrip.com was used as the dataset for this chapter. 12,991 users and 319,110 records of Sports

attractions were crawled, with user attributes including user identification (uId), gender ($uS\,ex$), age ($uAge$), location ($uLocati\,on$), check-in time ($uTime$), attraction attributes with attraction identification (aId), belonging user (uId), attraction description ($aContent$), convention location ($aLocati\,on$), attraction tag ($aTag$), number of check-ins ($aTimes$), then $< aI\,d,\,uId,\,aContent,\,aLocati\,on,\,aTag,\,aTimes >$ denote a convention attraction record.

4.2 Analysis of user personalized recommendation model. After completing the data required for the experiment, the data collection was used for data mining of tourists' individualized tourist attractions. Based on this, this study used different numbers of neighboring users to compare PARBN with the tourist attraction recommendation algorithm based on collaborative user filtering, and measured the effectiveness of the method in terms of mean absolute error (MAE), as shown in Figure 7.
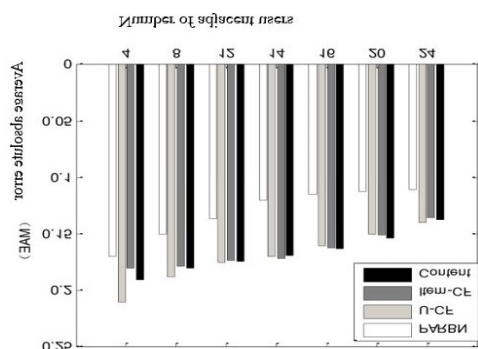

Figure 7: Effect of The Number of Adjacent Users on The Mean Absolute Error.

As can be seen from Figure 5, the average MAE value of the proposed method is lower than other methods due to the difference in the number of neighboring users, and the number of neighboring user groups selected in the experiment and the corresponding MAE values also differ, and the MAE values gradually stabilize as the number of users increases. The experimental results show that there are also differences in the correctness and recall rates of the method in the case of the number of tourist attractions provided to the tourists. The effect of the number of recommendations on the accuracy rate is shown in Figure 8.
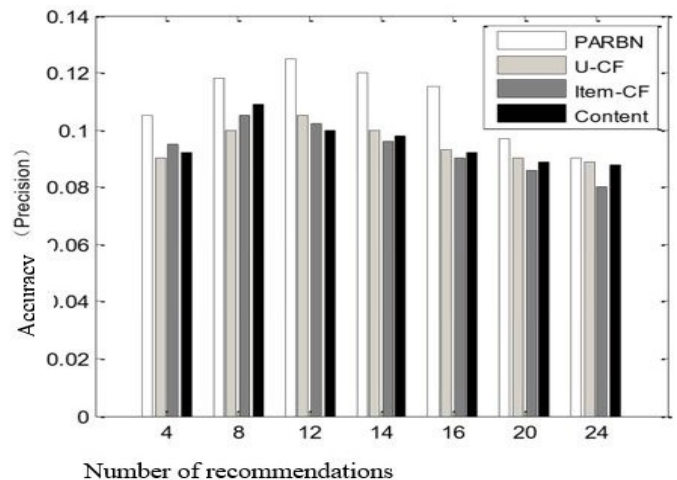

Figure 8: Effect of Number of Recommendations on Accuracy.

Analysis of Management Mode

This article uses data mining technology to analyze the operation mode of China's exhibition and convention, focusing on the data of exhibition and convention activities in the Pearl River Delta region, and taking the cities with lower scores as examples. The article analyzes the conference and exhibition competitiveness of the three cities from four aspects, including economic strength, tertiary industry development level, industrial policy orientation, conference and exhibition hardware facilities, geographical location, traffic condition, natural climate, tourism resources and cultural heritage. The results are shown in Table 1.

Table 1

Competitiveness Scores of Conventions and Exhibitions in Some Major Cities in The Pearl River Delta Region

City		Guangzhou		Shenzhen		Zhuhai	
Indicator	Weighting	Score	Weighted value	Score	Weighted value	Score	Weighted value
Economic Strength	0.15	4	0.60	3	0.45	1	0.15
Tertiary Industry	0.15	4	0.60	4	0.60	2	0.30
Industrial Policy Direction	0.20	3	0.60	3	0.60	3	0.60
Hardware Facilities	0.10	3	0.30	3	0.30	2	0.20
Location And Transportation	0.10	4	0.40	4	0.40	3	0.30
Natural Climate	0.05	3	0.15	3	0.15	4	0.20
Tourism Resources	0.15	4	0.60	4	0.60	3	0.45
Cultural Heritage	0.10	4	0.40	3	0.30	3	0.30
Total	1.00		3.65		3.40		2.50

1) Lack of a competent body responsible for conference tourism: Under the traditional planned economy system, the management mode of industrial operation is "block management", i.e. "management under the responsibility of the government". However, due to the relationship between conference and exhibition industry and tourism industry, conference and exhibition industry and tourism industry are completely isolated under the government's "subordination management". The management and operation of our exhibition industry belong to economic and trade departments, such as relevant departments of the State Council and its subordinate industry and trade companies, foreign trade companies, associations, chambers of commerce, China Chamber of Commerce and its industry branches, local governments, provincial foreign trade authorities, exhibition venues, overseas exhibition institutions, etc. This multi-level and multi-channel operation, because of too loose and lack of communication and coordination between departments, has caused low level of conferences and exhibitions and diversion of exhibitors; at the same time, all places compete to build exhibition venues and want to develop into exhibition tourism destinations regardless of local conditions, which has caused a confusing market situation.

In addition, whether it is a team organized abroad or an exhibition in China, it takes about two years to go through layers of submissions. However, due to its cumbersome and time-consuming nature, it makes some exhibitions with strong economic and social benefits lose the opportunity to develop, making many tourism companies reluctant to participate in the exhibitions, making it impossible to have an effective connection between Sports and tourism in many fields.

The successful holding of Sports events includes the marketing before the exhibition, the reception during the exhibition, and the cooperation between the tourism and entertainment departments after the exhibition.

However, at present, the intervention of China's tourism authorities in the exhibition industry is still relatively small, and a professional management organization for the exhibition industry has not been established in China. If an exhibition is encountered, some personnel are drawn from relevant departments to form a temporary team beforehand and return to their original posts after the work is finished. As the auxiliary service of conference and exhibition, the role played by tourism industry in the development does not fully play, thus limiting the development of its scale economy.

Table 2

Some Local Exhibition Industry Associations That Have Been Established

Establishment Time	Name of Industry Association	Establishment Time	Name of Industry Association	Establishment Time	Name of Industry Association
1998.6	Beijing International Convention and Exhibition Conference and Exhibition Industry Association	2003.7	Hangzhou Exhibition Association	2004.7	Shenzhen Exhibition Industry Association
2002.4	Shanghai Exhibition Industry Association	2003.9	Chongqing Exhibition Industry Association	2004.7	Tianjin Exhibition Industry Association
2002.9	Hunan Exhibition Association	2003.12	Jinan Exhibition Industry Association	2005.1	Chengdu Exhibition Industry Association
2003.2	Ningbo Exhibition Industry Association	2004.3	Kunming Exhibition Industry Association	2005.4	Dongguan Convention and Exhibition Industry Association
2003.5	Xi'an Exhibition Industry Association	2004.6	Shenzhen Exhibition Industry Association	2005.4	Guangzhou Exhibition Industry Association

2) Inadequate and hindered development of industrial organization: Beijing International Convention and Exhibition Association, Shanghai Convention and Exhibition Industry Association, Guangzhou Convention and Exhibition Industry Association and Guangzhou Exhibition Industry Association have established relevant

industry associations in some provinces and cities (see Table 2). Although China Convention and Exhibition Association is a national group, its members mainly focus on exhibitions, and it has not yet formed a national exhibition tourism industry association. This paper analyzes the reasons for the insufficient development of

exhibition tourism associations and the existing problems. The government holds a self-contradictory attitude toward the development of industry associations. While encouraging the development of industry associations, the government also pays more attention to their support to the government and safeguarding the interests of state-owned enterprises. If formed under such a contradictory mentality, it will certainly lead to the ambiguous positioning of industry associations and limited space for them to play. The current trade associations have to be approved by the industry authorities and a grassroots party organization has to be established within the trade association. Such a management system easily allows the government to maintain its administrative monopoly through the trade association, thus causing distrust of the members towards the trade association.

Analysis of Development Dynamic Mechanism

This paper uses data mining technology to analyze the dynamic mechanism of Sports tourism development in China, which has different dynamic mechanisms as follows:

1) Driving force of market demand: People's demand for inter-city tourism is the most basic driving force for the development of Sports tourism, while the promotion of tourism consumption and Sports activities is the analysis of market demand structure, demand volume and future development trend, so as to provide the basis for the development and marketing strategy of Sports tourism.

2) Promoting role of stakeholders: At present, the development of conference and exhibition tourism in China is relatively lagging behind, and the connection between conference and exhibition industry and tourism industry is relatively loose, therefore, the cooperation and joint efforts of all relevant parties are necessary. With the continuous development of international exhibition industry and increasingly fierce competition, a mature exhibition tourism is no longer a mere superposition of exhibiting, visiting and sightseeing, it should also play the role of exhibition industry, tourism industry and government functions, supported by high-quality and high-efficiency tourism services, and combine exhibition and tourism activities organically to achieve a win-win situation.

3) Micro interaction of exhibition industry and tourism industry: Whether Sports tourism can be further developed in depth directly affects whether Sports industry and tourism industry can maintain a good cooperative relationship. The professional division of labor between tourism companies and exhibition companies enables exhibitors, tourists and local residents to feel convenience and satisfaction, thus more participants and long-term support, and finally forms a development pattern of driving tourism by exhibition, promoting exhibition by tourism, promoting tourism by exhibition, promoting

tourism by exhibition and promoting mutually beneficial and win-win development by exhibition.

4) Driving force of government behavior: With the development of conference and exhibition industry, the development of conference and exhibition tourism requires more and more government management agencies to find suitable entry points, actively carry out various activities and formulate corresponding regulations to create favorable policy and legal environment for its development. On the best mode of the development of exhibition tourism: 1) Coordinated development of exhibition industry and tourism industry. 2)Development of the economic belt of conference and exhibition tourism by way of point leading surface. 3)Refine the division of labor so that the interests among stakeholders can be balanced. 4)Give full play to the government's macro-control function. 5)Strengthen the organization construction of self-management of exhibition tourism enterprises.

Conclusion

At present, Sports tourism has become an important part of tourism development and is receiving more and more attention from more and more cities. As a whole, both the exhibition industry and tourism industry tend to be mature, but how to combine them well, fully develop their advantages and improve the attractiveness of exhibition tourism is still a question worth exploring. Therefore, while formulating development strategies based on the characteristics of Sports tourists' own consumption behaviors, we can also draw on the successful development experiences of other cities to discover our own shortcomings through comparison and propose countermeasures against them.

This paper uses data mining technology to explore the dynamic mechanism and business model of the development of China's Sports industry, and uses the mining technology to provide personalized and customized recommendation services for consumers. Finally, this paper collects historical information of 12,991 tourists and 319,110 tourist attractions using Ctrip as a sample, and analyzes these records in depth to discover the shortcomings of the management system of Sports tourism in China and the main aspects of its development dynamic mechanism. Although the definition of Sports tourism and the quantitative evaluation of the competitiveness of urban Sports tourism are discussed in this paper, there are still some shortcomings because of the limitations of time, experience, information and personal level and other conditions. Firstly, because of the limitation of reference materials, some representative evaluation indexes cannot be included, and there are shortcomings in the link of index selection; secondly, the in-depth analysis on the path of improving the competitiveness of Sports tourism in

Chongqing needs further improvement. Of course, this paper is an attempt of scientific research, and we hope we can get the advice from experts and scholars who study the development of Sports tourism.

Data Availability

The experimental data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declared that they have no conflicts of interest regarding this work.

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