

# Evaluation of the Competitiveness of Exhibition Industry Cluster in Guangdong-Hong Kong-Macao Greater Bay Area based on GEM Model

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## Abstract

Improving the competitiveness of exhibition industry cluster is an important way to promote regional economic growth and the development of exhibition industry. This paper constructs 19 evaluation indexes such as the basic, enterprise and market competitiveness of exhibition industry cluster, and uses AHP-GEM model to measure and evaluate the cluster competitiveness quantitatively. The results showed that the competitiveness of the convention and exhibition industry cluster in GBA was 521.05, which had a competitive advantage in China. However, the exhibition industry cluster in GBA has some problems, such as low human resource level of exhibition enterprises, unsmooth cooperation and communication among exhibition enterprises, low level of exhibition technology and scientific research conditions, low demand level of local enterprises participating in the exhibition and low proportion of overseas exhibitors. This paper puts forward some suggestions, such as strengthening the local exhibition education and brand exhibition construction, strengthening the supply of local exhibition industry chain, deepening the economic and trade cooperation with countries along the Belt and Road to improve the demand for exhibition, etc., so as to provide references for the sustainable growth of local regional economy.

## Keywords

Exhibition industry cluster, Competitiveness, Guangdong-Hong Kong-Macao Greater Bay Area, GEM model.

## 1. Introduction

In recent years, China has made great efforts to develop the GBA strategy. The implementation of the Bay Area strategy can drive the development of local economy. As a typical phenomenon and an important driving force of regional economic development, the study of local industrial clusters can, to some extent, demonstrate the driving effect of bay Area policies on the economy [1]. Conference and exhibition industry is a tertiary industry with great industrial linkage. The research on this object can reflect the process of industrial cluster's influence on local economy. Foreign research on exhibition industry cluster has been quite mature, including theoretical basis and research paradigm. For example, Sergey Sosnovskikh's research on the innovation and productivity growth within the Clusters of the Russian special economic zone [2], Xin Jin, Karin Weber, Thomas Bauer's research on the influence of clusters on the attraction of exhibition destinations [3], and Xiaoming Liu's research on the basic principles of the interactive development between the exhibition industry and regional industrial agglomeration [4].

At present, China's industrial cluster construction mainly includes the following aspects, which are the construction of industrial clusters from the aspect of cultivating industrial clusters in urban agglomerations, the construction of industrial clusters from the perspective of the

formation mechanism of industrial clusters, constructing industrial clusters from the perspective of building industrial cluster brands, constructing clusters from the perspective of software and hardware conditions of clusters and building regional brands. Meanwhile, it has been put forward that there are risks in industrial cluster construction. When industrial cluster climbs to the high end of global value system, it may make regional industrial construction present low-end and homogeneous risks. And construction of the present convention and exhibition industry cluster, there are mainly the GEM model research of convention and exhibition industry cluster competitiveness, grey correlation method, the coefficient of Arc GIS, LQ, CAS theory research of conference and exhibition industry cluster formation, LQ coefficient used to study exhibition specialization level, and to study the convention and exhibition industry cluster from the perspective of industrial chain, and analyzing of the convention and exhibition industry chain of industry cluster innovation drive, etc. This paper aimed to study the current situation of convention and exhibition industry cluster construction in Guangdong, Hong Kong and Macao, discussed the competitiveness level of the convention and exhibition industry cluster, used GEM model to analyze, found out the existing problems of convention and exhibition industry cluster in the Greater Bay Area of Guangdong, Hong Kong and Macao, and put forward the direction of strengthening the construction.

## 2. The Development Status of Exhibition Industry Cluster in GBA

Guangdong, Hong Kong and Macao, as one of the regions with vigorous and rapid economic development in China, have relatively perfect and developed economic forms. Conference and exhibition industry, as a tertiary industry with many other industries, can drive the development of related industries, and its industrial cluster has formed a certain scale in the local area. The exhibition area and special exhibitions in Guangdong, Hong Kong and Macao are quite mature and have been recognized by the Global Exhibition Industry Association (UFI). The exhibition industry chain in Guangdong, Hong Kong and Macao starts with exhibition companies, and promotes the transfer of capital flow and information flow in the surrounding areas through featured exhibitions such as The Canton Fair, China Fair and Hi-tech Fair. Besides, transportation, hotels and catering facilities are complete in the vicinity. Regional large-scale exhibition industry, supporting facilities are perfect, can undertake large domestic and foreign exhibitions. It includes China Import and Export Fair Exhibition Hall, Shenzhen Convention and Exhibition Center, Hong Kong Convention and Exhibition Center, AsiaWorld-Expo, Macao Cultural Center, etc [5]. Its successful model has been replicated in cities such as Foshan and Zhuhai. Secondly, the GBA has a sound industrial foundation, which takes the exhibition industry chain as its radiation center and forms a large-scale industrial system that drives the development of surrounding areas [6]. The development time and speed of conference and exhibition industry in Guangdong have been among the best in China [7]. The number of exhibitions held in Guangdong province in 2016 has exceeded 10, and the total number of exhibitions held in these 10 pavilions is 490, with a total area of 15,816,500 square meters. Generally speaking, the exhibition area of Guangdong province is in direct proportion to its quantity. The government has formulated the Implementation Plan of Supporting the Development of exhibition Industry in Haizhu District, Guangzhou city, to increase the support for exhibition enterprises, large international conferences, and exhibition industry incubation base parks, and to stimulate the core talents of exhibition industry. In the same year, the Implementation Plan for Further Promoting the Reform and Development of the Exhibition Industry in Guangdong Province was formulated, proposing to further integrate and optimize the exhibition industry chain resources by 2020. Exhibition industry, as a green industry with great relevance and utility, has been dominated by Guangzhou, Dongguan, Shenzhen and Zhuhai. Not only that, the Hong Kong and Macao governments have also seen the role of the exhibition industry in all walks of life. Meanwhile, the number of exhibition students in

Guangzhou ranks the first in China. In short, the industrial clusters in Guangdong, Hong Kong and Macao have been relatively perfect. Embodied in exhibition venue, exhibition companies and exhibition industry group, and a series of exhibition of colleges and universities and research institutes in the area, and related supporting industries such as transportation, tourism, catering, advertising, media, financial support for the local convention and exhibition activities, as well as specialized exhibition, exhibition companies, conference and exhibition service for local convention and exhibition industry chain, such as enterprises and institutions to provide exhibition activities of the middle and lower reaches.

### 3. Sources and Methods

#### 3.1. Data Source

The data was obtained mainly through questionnaires, which were divided into two types, including questionnaires for experts and scholars and questionnaires for enterprises in the industry. The respondents include experts in the exhibition industry and management and practitioners of exhibition enterprises. This could improve the reliability, validity and authenticity of the questionnaire results. The questionnaire includes basic personal information and the score of the regional exhibition market and the development level of the exhibition industry. The score from high to low is 9 to 1. The specific influencing factors include the secondary indicators in Table 1. 300 questionnaires were sent, 280 were recovered and 10 were invalid. Reached a relatively high proportion, can basically meet the needs of this study. The weight of the index system was mainly obtained by expert scoring and Analytic hierarchy process. AHP is a method of quantitative analysis of events that are difficult to be quantified through the subjective judgment of professionals. Firstly, the complex events are decomposed into several levels, and then the relative importance of factors is obtained through pair comparison.

#### 3.2. Index System

The establishment of the index system is mainly based on the paper of Li Beilei from Shanghai Jiao Tong University [8]. Based on the actual situation of the development of the convention and exhibition industry cluster in GBA, the index system of this paper is finally formed. By using GEM model to analyze six factors affecting industrial cluster, the competitiveness score of industrial cluster can be obtained. Six major factors including "resource", "facilities", "suppliers and related auxiliary industry", "the company's structure, strategy and competition", "local market" and "external market", the six factors were divided into three pairs. Resources and facilities collectively known as "factors on I"-Groundings, suppliers and related auxiliary industry and the company structure, strategy and competition collectively known as "factors on II "- corporate Enterprises, the local market and external market "collectively known as" factors on III "- Markets. Two factors can complement each other. The weights in the table are obtained through questionnaire survey and expert scoring. See Table 1.

#### 3.3. Methods

GEM model is proposed by Tim Padmore on the basis of Porter brick model after improvement [9]. It has been mainly used to evaluate the regional industrial clusters to analyze the influencing factors of local industrial clusters, remove the secondary factors, and select the factors related to the foundation, enterprise and market competitiveness. Carry out index evaluation and calculate the index mean value and the weight of each factor. Finally, the total score of the industrial cluster was obtained. When assigning the weight of the indicator system, the analytic hierarchy process (AHP) of T.L. Saaty, was selected [8]. Qualitative research is indispensable in the study of industrial clusters, but it is impossible to measure the specific competitiveness of industrial clusters. The AHP is a method of quantitative analysis of events

that are difficult to be quantified through the subjective judgment of professionals. In this way, the research on cluster competitiveness will be more convincing. GEM model is as follows:

**Table 1.** The index evaluation system for the competitiveness of exhibition industry clusters in GBA

Index layer	Level indicators	The secondary indicators	Index weight	
Basic competitiveness	Resources	Exhibition enterprises are located in geographical location	0.1328	
		Human resource level of exhibition enterprises	0.3164	
		The brand influence of exhibition enterprises	0.3559	
		Information service level of exhibition enterprises	0.195	
		The state of exhibition infrastructure	0.2393	
	facilities	Facilities and conditions of exhibition venues	0.3235	
		Service level of exhibition venues	0.4372	
		The strength of exhibition enterprises	0.5045	
		Corporate structure, strategy and competition	Number of Exhibition enterprises	0.278
			Number of Exhibition service Providers	0.2175
Support industry capability and service level	0.2466			
Related ancillary industries	Cooperation and communication between exhibition enterprises		0.3858	
	Exhibition technology level and scientific research conditions		0.3677	
	Development prospect of local exhibition market	0.4249		
Market competitiveness	The domestic market	Development level of local exhibition industry	0.3256	
		The demand level of local enterprises participating in the exhibition	0.2495	
	The international market	Proportion of overseas professional visitors	0.2603	
		Proportion of overseas exhibitors	0.2855	
		Foreign enterprises in the local demand for participation	0.4541	

$$GEM = 2.5 * (\prod_{i=1 \sim 3} D_{2i-1} + D_{2i})^{2/3} \quad (1)$$

Where  $D_{2i-1}$  and the "factor pair" represented by  $D_{2i}$  are two factors that can be substituted for each other.

## 4. Results and Suggestions

### 4.1. Measurement of Index System

**Table 2.** Evaluation Table of competitiveness of Exhibition industry clusters in GBA

The evaluation factors	The secondary indicators	Index sample mean	Single factor score
Resources	Exhibition enterprises are located in geographical location	7.973	6.9695
	Human resource level of exhibition enterprises	6.5405	
	The brand influence of exhibition enterprises	6.9167	
Facilities	Information service level of exhibition enterprises	7.1111	8.1363
	The state of exhibition infrastructure	8.2973	
	Facilities and conditions of exhibition venues	8.0857	
	Service level of exhibition venues	8.0857	
Corporate structure, strategy and competition	The strength of exhibition enterprises	7.0286	6.9631
	Number of Exhibition enterprises	7.0286	
	Number of Exhibition service Providers	6.7273	
Related ancillary industries	Support industry capability and service level	7.3784	6.6908
	Cooperation and communication between exhibition enterprises	6.3784	
	Exhibition technology level and scientific research conditions	6.5556	
	Development prospect of local exhibition market	8.0541	
The domestic market	Development level of local exhibition industry	7.3243	7.4911
	The demand level of local enterprises participating in the exhibition	6.75	
The international market	Proportion of overseas professional visitors	7.2162	7.0962
	Proportion of overseas exhibitors	6.5833	
	Foreign enterprises in the local demand for participation	7.3514	

According to the questionnaire survey and expert rating, the analytic hierarchy process was used to integrate the data results, and the weight of each factor was obtained, and then the final score was calculated according to the final quantitative expression of the GEM model above. The index system scores of convention and Exhibition industry clusters in GBA are as follows.

The scores of basic competitiveness is 7.5564. The scores of enterprise competitiveness is 6.8270. The scores of market competitiveness is 7.2937. The scores of competitiveness of the convention and exhibition industry cluster in GBA was 521.05.

The GEM of the industrial cluster can be divided into 250, each factor gets 5 points, then, the industrial cluster in the domestic average level. When GEM total score 490, each factor gets 7 points, so, the industrial cluster has a competitive advantage in the domestic. By this calculation, a score of 640 would be uniquely competitive in China. If the score is 1000 points, it will be in a world leading position [10]. The results showed that Guangdong's exhibition industry cluster was competitive in China, but there was still a gap between 521 and the unique places in China. The final score of the three factors was a little bit different but not much. Among them, the basic competitiveness was the largest, followed by the market competitiveness and the enterprise competitiveness. It showed that in Guangdong's exhibition industry cluster, the construction of infrastructure should be put in the most important position, followed by the attention to the exhibition market, and then the construction of enterprises themselves.

## 4.2. Results in Different Factors

### 4.2.1. Resource Competitiveness

In terms of the resource factor of basic competitiveness, the geographic location of exhibition enterprises and the information level of exhibition enterprises exceeded 7 points. This indicated that these two factors have competitive advantages in China. The other two, such as the exhibition's brand influence and human resources level, were slightly behind. This is closely related to the fact that the bay area is located along the "One Belt And One Road" road, adjacent to the sea, and has developed commerce and trade since ancient times. Good location conditions, and the level of the city in the forefront of the country. The flow of information is also faster. Relying on this geographical advantage, exhibition industry cluster can give play to economies of scale, enhance market competitiveness, realize industrial complementation and resource symbiosis. So this score is high. But there is also room for improvement. If we can make good use of the economic and trade exchanges and contacts with countries along the Belt and Road, and make good use of the opportunity of the national development of the Bay area economy, we can better develop the local exhibition industry cluster. It also needs to improve the brand awareness of the region and the human resource service level of exhibition enterprises. Although there are some well-known exhibitions at home and abroad, such as The Canton Fair and The Zhuhai Airshow, there are not many world-famous exhibition activities, and the influence at home and abroad can be stronger. Therefore, it is urgent for the local people to invest manpower, material resources and financial resources to develop characteristic exhibition activities and improve the visibility of the exhibition industry in Guangdong, Hong Kong and Macao. Moreover, there are more small exhibition companies in the area, and there are not many well-known exhibition companies in particular. Moreover, most of the dongpu area around China Import and Export Fair Exhibition Hall is also a small advertising industry and other supporting enterprises. The score of resource factor in exhibition industry cluster is 6.9695, which is the fourth among the six factors, indicating that there is room for improvement of resource factor.

### 4.2.2. Facility Competitiveness

From the point of view of the supply of production factors, the exhibition infrastructure and venue facilities provide space carrier for the development of exhibition industry cluster. Good transportation, communication, logistics, electric power and other infrastructure construction is bound to accelerate the exhibition industry cluster and the external resources flow. The influencing factors of facilities ranked the first among the total factors, which indicated that the facilities have been relatively improved among the competitive factors affecting the exhibition industry cluster in the Greater Bay Area of Guangdong, Hong Kong and Macao. This is closely

related to the increasing improvement of exhibition facilities in Guangdong province, and the number and area of the venues occupy a relatively high position in the whole country. It is also closely related to the local government's support for the exhibition industry. The number of exhibitions held in Guangdong province in 2016 has exceeded 10, and the total number of exhibitions held in these 10 pavilions is 490, with a total area of 15,816,500 square meters. Generally speaking, the exhibition area of Guangdong province is in direct proportion to its quantity. From the results, the score of the exhibition infrastructure, facilities and service level of the exhibition venues in the Greater Bay Area of Guangdong, Hong Kong and Macao exceeded 8, which has reached a relatively high level in the whole country. But there are areas for improvement. The most important hardware facilities of the exhibition industry have basically been able to meet the needs of large exhibitions at home and abroad. But the utilization rate of the venues is still low. The current situation is that the construction of pavilions in Guangdong, Hong Kong and Macao has been able to meet the needs of large, medium and small exhibitions at home and abroad, but the utilization rate of pavilions is generally not more than 30%. Yet venues are still being built. Unreasonable planning, and there is no certain scale and level of exhibition support, resulting in the waste of venue resources. In addition to professional exhibition halls, there are also museums and gymnasiums in the Greater Bay Area of Guangdong, Hong Kong and Macao, which can be used as architectural facilities for exhibition activities, intensifying competition in the exhibition industry [6]. So there is a waste of venue resources. At the same time, many large pavilions have single functions, incomplete facilities and lack of overall planning for pavilion utilization. Moreover, the modern and intelligent level of the stadium construction is insufficient. Operations and maintenance are also an issue. With good exhibition facilities and infrastructure, the region can improve the utilization rate of exhibition venues by promoting the promotion of well-known exhibitions in the region, carrying out new festival activities, introducing well-known foreign exhibitions, and offering discounts on venue rental in off-season. So as to improve the competitiveness of exhibition industry clusters in Guangdong, Hong Kong and Macao.

#### **4.2.3. Competitiveness of Suppliers and Related Auxiliary Industries**

The competitiveness of suppliers and related auxiliary factors in the Mice industry cluster in the Greater Bay Area of Guangdong, Hong Kong and Macao was 6.6908. At the bottom of the list. Its evaluation index includes the ability and service level of supporting industries, the cooperation and communication between exhibition enterprises, the level of exhibition technology and scientific research conditions. These indexes can be replaced by the supply situation of the exhibition industry chain, the support situation of related auxiliary industries and the innovation situation of the exhibition industry. The reason for this low competitiveness may lie in the fact that although the convention and exhibition industry in Guangdong, Hong Kong and Macao develops rapidly, there are many exhibition activities such as major exhibitions, festival activities and incentive tourism. However, due to the strong integration of exhibition activities, the entry threshold of exhibition in this region is relatively low. Many exhibition activities are organized by one company, including exhibition planning, exhibition organizing, exhibition recruiting and exhibition arrangement. The division of labor is not clear, and there is a lack of investigation between exhibitors and visitors, such as exhibition market demand and data analysis. And although the development of venues promotes the development of surrounding transportation, catering, finance, advertising, legal business, exhibition training and other industries, the downstream services of the exhibition industry chain are relatively lagging behind, unable to keep pace with the leaping development of the upper and middle reaches of the industry chain. The lack of self-development and market innovation ability in the downstream of the industrial chain leads to the backwardness of supporting service facilities and related supporting activities. This also reflects the lack of coordination and unified management of the industrial chain in Guangdong, Hong Kong and Macao. In terms of scientific

and technological innovation and scientific research level, it can be measured by the talent training level of the exhibition industry. Although some colleges and universities in Guangdong, Hong Kong and Macao carry out exhibition education, the talents cultivated are far from the industry requirements. Meanwhile, most of the existing exhibition practitioners are amateurs, with low professional quality and strong practical operation ability, but their professional knowledge system has not been formed. At present, the exhibition industry is most short of exhibition marketing and planning talents, exhibition students trained by colleges and universities lack of practical planning opportunities, and the company's training of project managers is not in place. Guangdong, Hong Kong and Macao exhibition industry in the market operation of non-standard. Therefore, the competitiveness of suppliers in Guangdong, Hong Kong and Macao is relatively low. In this regard, some measures can be taken to make up, such as in the case of market development, tax incentives or financial subsidies. At the same time equipped with simultaneous translation system, network exhibition system. Optimize the local environment and residents' services to create a good environment for exhibition development industry. We can improve the level of local exhibition talents by introducing foreign high-quality exhibition talents and training local exhibition practitioners with the help of these talents. At the same time, through the cooperation with international well-known exhibition enterprises, to provide an overseas platform for the training of exhibition talents in Guangdong, Hong Kong and Macao regions. The government can also continue to increase policy support, do a good job in intermediary role of industry associations, give play to the creativity of exhibition practitioners, create more regional exhibition brands, and build a good exhibition industry chain. It can also strengthen the supporting role of the system to the industrial chain, so that the labor market, innovation and enterprise relations and other generated transactions smoothly. At the same time, the government can also guarantee the establishment of trade associations, business associations and other organizations to provide institutional guarantee for the development of enterprises.

#### **4.2.4. Competitiveness in Enterprise Structure and Strategy**

In GBA, the score of enterprise structure, strategy and competition influencing factors is 6.9631, which is the fifth in six influential factors. This is related to the fact that the local exhibition industry is dominated by small and medium-sized enterprises and private enterprises. Quite a few local exhibition companies have not found their own development strategy, and the exhibition held is relatively single and repetitive. In the current situation of the development of the exhibition industry is not sound, many small exhibition companies blindly hold exhibitions, repeated holding the same type of exhibition, serious homogenization phenomenon. The violation of intellectual property rights also happens from time to time. The exhibition activities are more comprehensive, but the entry threshold is low, so many local exhibition activities are held by a company to complete all the activities of exhibition planning, exhibition organizing, exhibition recruiting and exhibition arrangement, and the division of labor is not clear, causing a difference in competition with international well-known exhibition enterprises. In terms of improvement measures, the government can provide tax incentives and financial subsidies to these enterprises. Reduce the burden of their development. At the same time, by the introduction of senior talents, they bring innovative ideas that can also make the development of the local exhibition industry further, forming more regional development brands. The development of exhibition industry in this region should also strengthen innovation, protect intellectual property rights, make good use of the good opportunity for the development of small and medium-sized enterprises for the construction of the GBA, make good use of the government's support for enterprise development and enterprise financing, and develop and strengthen their own competitiveness. Since the exhibition industry's service providers include advertising, media, booth design, exhibit transportation, security and cleaning, etc., a successful exhibition cannot be held without the support and cooperation of relevant service providers.

Therefore, the construction of industrial clusters also requires these relevant enterprises to strengthen their service ability and improve their service awareness. Related service industries of the exhibition industry include tourism, catering, accommodation, transportation, transportation, etc. The level of support in these supporting industries affects the exhibitor and visitor experience and determines what level of exhibition a region can host. Both domestic brand exhibitions and international exhibitions need a strong exhibition industry support chain to support the complete exhibition activities. Therefore, it is very necessary to strengthen the construction of related industries in Guangdong, Hong Kong and Macao.

#### **4.2.5. Competitiveness in the Domestic Market**

The score of domestic market influencing factors in industrial cluster competitiveness is 7.4911, ranking second. Due to the special purchase mode of exhibition products and services, exhibitors and visitors must go to the exhibition venue to purchase products. The development of exhibition industry has expanded the local exhibition market and promoted the expansion of exhibition demand in the local market. The advantages of convention and exhibition industry clusters in GBA have been formed. The e Canton Fair, China Fair, Hi-tech Fair and other featured exhibitions can drive the flow of capital and information flow around the transfer, and the nearby transportation, hotel, catering facilities are relatively complete. Guangdong, Hong Kong and Macao area of large-scale exhibition industry, complete supporting facilities, can undertake large domestic and foreign exhibitions. It includes China Import and Export Fair Exhibition Hall, Shenzhen Convention and Exhibition Center, Hong Kong Convention and Exhibition Center, AsiaWorld-Expo, Macao Cultural Center, etc[5]. Its successful model has been replicated in cities such as Foshan and Zhuhai. Secondly, the GBA has a sound industrial foundation, which takes the exhibition industry chain as its radiation center and forms a large-scale industrial system that drives the development of surrounding areas[6]. The development time and speed of conference and exhibition industry in Guangdong have been among the best in China[7]. The number of exhibitions held in Guangdong province in 2016 has exceeded 10, and the total number of exhibitions held in these 10 pavilions is 490, with a total area of 15,816,500 square meters. Generally speaking, the exhibition area of Guangdong province is in direct proportion to its quantity. Local exhibition market development level and development prospects are relatively good. For example, there are already westin, Langham Place, Shangri-La and other five-star hotels around the Canton Fair exhibition hall. There are also a number of strong local exhibition groups such as Guangzhou Poly Real Estate, Guangzhou Yiwu International Exhibition Co., LTD. In addition, it also gathered zhongzhou International Exhibition Center, Guangzhou Poly World Trade Expo, Nanfeng International Convention and Exhibition Center and other exhibition halls. In the nearby Dongpu area and Pazhou village is gathered a large number of exhibition services and advertising, media, decoration companies[6]. All these indicate the strong and developed domestic demand market of the exhibition industry in this region. However, there are also some obstacles to the development prospects of the exhibition industry in this region, such as the absence, inadequacies and offside of the government's management of the exhibition industry, and the multiple management of the exhibition approval, but the government has not attached importance to and supported the development of the industry association. Did not play the role of the industry association, etc. Although a large number of cities have sprung up in the development of exhibition industry in Guangdong, Hong Kong and Macao, such as Shenzhen, Foshan, Nanhai, Dongguan and Zhuhai, etc., the development of exhibition industry in each city is not clear about the division of labor. These are all points that need to be considered and improved by the government and the local exhibition industry.

#### 4.2.6. Competitiveness in the International Market

The score of international market influencing factors in industrial cluster competitiveness is 7.0962, ranking third. Guangdong, Hong Kong and Macao area of large-scale exhibition industry, complete supporting facilities, can undertake large domestic and foreign exhibitions. Meet the needs of exhibitors and professional visitors in the international market. It includes China Import and Export Fair Exhibition Hall, Shenzhen Convention and Exhibition Center, Hong Kong Convention and Exhibition Center, AsiaWorld-Expo, Macao Cultural Center, etc[5]. At the same time, there are also a number of internationally renowned exhibitions and events. Such as the Canton Fair, China Fair, China Hi-tech Fair, Zhuhai Air Show and so on. But generally speaking, it still has some gap with foreign developed countries. Some measures can be taken to promote the international influence of local exhibition industry clusters and improve their competitiveness. For example, through the establishment of an authoritative trade association in Guangdong, Hong Kong and Macao, to learn about the development of the international and local exhibition industry, and establish a good relationship with international exhibition organizations. At the same time, it actively participates in the international exhibition market, learns the advanced experience of foreign countries in building industrial clusters, participates in the international competition and develops the exhibition industrial clusters in Guangdong, Hong Kong and Macao. The national One Belt And One Road policy can also be used to build a transport system linking China and overseas, while strengthening links with inland cities. Make the influence of the exhibition increase. At the same time, it also pays attention to the support and assistance of catering, advertising, legal and exhibition services, exhibition construction and other supporting industries and companies around the venues in Guangdong, Hong Kong and Macao. It can also cooperate with internationally renowned exhibition enterprises, so as to provide a better overseas platform for the training of exhibition talents in Guangdong, Hong Kong and Macao regions.

### 5. Conclusion

Through questionnaire survey, expert rating, analytic hierarchy process and GEM model, this paper studies the exhibition industry cluster in the Greater Bay Area of Guangdong, Hong Kong and Macao, and draws a conclusion. GEM model studies exhibition industry cluster in Guangdong, Hong Kong and Macao, and concludes that the competitiveness of exhibition industry cluster in this region includes three criteria, namely, basic competitiveness, market competitiveness and enterprise competitiveness. Six factors, namely resources, facilities, enterprise structure, strategy and competition, related auxiliary industries, domestic and international markets. There are 19 factor level indicators, including the facilities conditions of the exhibition venues, the service level of the exhibition venues, the strength of the exhibition enterprises, the ability and service level of auxiliary industries, the level of the exhibition technology and scientific research conditions, the development prospect of the local exhibition market, the proportion of overseas professional visitors, etc. Indexes of all levels have certain influence on the construction of convention and exhibition industry clusters in Guangdong, Hong Kong and Macao. Among them, the basic competitiveness is the largest, followed by the market competitiveness and the enterprise competitiveness. It shows that in Guangdong's exhibition industry cluster, the construction of infrastructure should be put in the most important position, followed by the attention to the exhibition market, and then the construction of enterprises themselves. In particular, it is necessary to improve some indexes that score less than 7 points, such as brand influence, human resources level, structure and strategy of local exhibition enterprises. Domestic and international markets are just over 7. The score above 8 is for the hardware facilities of the exhibition. This indicates that the region

should enhance the brand influence and strengthen the market demand for the exhibition industry in the future.

Compared with previous studies on the construction of exhibition industry cluster, this paper has some novel aspects, but there are also some deficiencies. The index system of this paper is mainly based on the foundation, market and enterprise competitiveness of the exhibition industry, and the historical and external factors that affect the development and construction of the exhibition industry cluster, such as geographical embeddability, scale utility and so on, are not fully studied. It also fails to take into account the knowledge spillover effect brought by the agglomeration and development of the formed industrial clusters. It is one-sided, incomplete and subjective to study industrial cluster construction only from the aspects of exhibition enterprises, exhibition hardware facilities, exhibition industry chain and exhibition market. The resulting data may differ from the real situation. If more indicators can be included and more comprehensive indicators can be selected, the authenticity of the conclusion will be greatly improved.

## Acknowledgements

This research was funded in part by Natural Science Foundation of Guangdong Province, China: Grant Number 2017A030313240, and Philosophy and Social Science Research Program of Guangzhou city, Guangdong Province, China: Grant Number 2020GZGJ183.

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