

MICE Industry Clusters Using Location Quotient Estimation: a Case from of Guangzhou City of China

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Abstract: The study examined the meetings, incentives, conventions and exhibitions (MICE) industry clusters using the city of Guangzhou, China as a case. Both first and secondary data were collected and analyzed using location quotient (LQ) estimation. The results showed the current status of MICE industry cluster development in Guangzhou. Recommendations and suggestions were provided for Guangzhou in formulating appropriate and effective developing and management strategies.

Keywords: MICE; Industrial clusters; Location quotient analysis; Guangzhou

1 Introduction

The meetings, incentives, conventions and exhibitions (MICE) industry is an emerging industry and a catalyst for local economic development. With increasing government support, city after city in China are aggressively marketing selves to develop MICE businesses. It was believed that China will explode with new venues to meet the growing development of the MICE industry. The current rapid growth of the MICE industry has also inspired many cities including second tier cities to use MICE to promote local economic development. Guangzhou as one of the most developed cities in China, for example, specifically and for the first time included a MICE industry development plan the “Eleventh Five-Year Development Plan”. The MICE industry development in Guangzhou has brought about MICE industry clusters. The scope and size of the clusters have been growing rapidly in the city.

The effects of agglomeration or clusters on local economic growth and regional development have been recognized. Industrial agglomeration or cluster development can contribute to local economic development by increasing industrial productivity, performance and innovation. In tourism, industry clusters could also enhance destination competitiveness in domestic and international tourism markets^[1]. While the emergence and rapid growth of the MICE industry clusters have been noticed, the development status and extent need to be identified^[1].

Given the rapid growth of the MICE industry in China, it is important to identify the MICE industry clusters and how it contributes to local economic competitiveness. Thus, the study was to examine the MICE industry clusters using the city of Guangzhou of China as a case. Specifically, the objectives of the study were 1) to investigate the MICE industry clusters in Guangzhou of China using location quotient (LQ) estimation; and 2) to provide recommendations and suggestions for Guangzhou in formulating appropriate and effective developing and management strategies for its MICE industry development.

2 Literature Review

2.1 Definition of MICE industry clusters

MICE have been defined in various ways. For example, MICE was defined as conferences, exhibitions, and other congregational events in a particular geographical area for people to gather together, form relationships, exchange information, and enjoy social networking activities^[2]. MICE industry was defined as the various business units and agencies that provide MICE planning, venues, facilities and other services^[2].

Industry cluster refers to enterprise groups, such as suppliers, service providers, financial institutions, manufacturers, that have competitive or cooperative relations, and are geographically concentrated and interrelated in a particular region. Different industry has different depth and complexity of cluster development. Industrial clusters are a relatively new phenomenon in of economic development^[3].

Based on the concepts of the MICE industry and industrial clusters, MICE industry clusters could be defined as groups of closely related MICE companies in a particular geographical area. Broadly speaking, MICE industrial clusters could be defined as the complex interweaving of relationships among

all types of conferences, exhibitions, hotels, restaurants, travel agents, retailing, advertising and other businesses and organizations. A narrower definition of the MICE industry clusters would be the industrial groups that comprises of the MICE major parties (e.g., event organizers, exhibitors, venue services, conference hosts) and related MICE parties (e.g., transportation services, booth design and construction, advertising).

2.2 Research on the MICE industry

The major focus of international literature on the MICE industry has been on the status and development of the industry, and economic contribution of the MICE industry on local communities. Research on the MICE industry clusters is relatively scarce. The most recent work was by Cristina Bernini ^[1]. She developed a framework based on cluster theory and used the framework to empirically identify the current status of Italian MICE industry clusters and the local demand and supply of MICE infrastructure and products. The results provided Italian MICE industry with strategies to enhance the competitiveness of the MICE industry in Italy.

A number of researchers have examined the development of Chinese MICE industry and China MICE industry clusters. The first stream of the research focused on the relationship of the MICE industry and general development of local areas. For example, a study investigated the MICE industry in the four cities in the Yangtze River Delta (Shanghai, Hangzhou, Ningbo, Wenzhou) ^[4]. The study found that the MICE industry cluster development lies in the cluster development of other industries in manufacturing. Another study also proposed that the MICE industry development should take advantage of the strong industries in the local area in order to avoid unnecessary competition ^[5].

The second stream of the research is mainly on the relationship of the MICE industry and the existing clusters of other industries. For example, a study proposed the integration of the MICE industry into the manufacturing industry development in Helongjiang area ^[6]. In another study ^[7], it was indicated that different regions have different degree of relationship between the MICE industry and the clusters of other industries. Similarly, the integrated relationship between the MICE industry and the clusters of other industries in Shanghai was examined in another study ^[8]. Recently, a study suggested a win-win development model for the MICE industry and the clusters in other industries ^[9]. Further, a study developed a GEM model and empirically examined the competitiveness of the MICE industry in the city of Dalian ^[10]. Based on industrial cluster theory, another study investigated the current development of the MICE industry in Pudong area in Shanghai ^[11].

3 Methodology and Calculation

3.1 Clustering standards and characteristics

Early development of industrial clusters was found in Italy. Criteria for measuring industrial clusters were developed, including development of industrial cluster production system, relationships among industrial enterprises, policy formation for industrial clusters, as well as the clustered enterprises and their employee management. In 1999, Italy developed a new standard that focused on local production systems and industrial areas ^[12]. In 2002, in the Veneto region (Veneto), it was stated in Act No. 23 that industrial clusters should have the three major characteristics. These characteristics were treated as the standards to measure the MICE industry clusters in Guangzhou. First, Act No. 23 state that there should a clustering group of enterprises that have similar businesses or production system. According to 2007 Guangzhou Municipal Bureau of Statistics, it was shown that there were a total of 165 Guangzhou MICE enterprises across twelve different districts in Guangzhou in 2007. Most enterprises were located in four districts, Yuexiu District (65 enterprises), Tianhe District (54 enterprises), Haizhu District (23 enterprises) and the Baiyun District (11 enterprises). Second, Act No. 23 state that there should be an integrated group of enterprises and organizations in support of the development of local economy. According to 2007 Guangzhou Municipal Bureau of Statistics, the direct business revenue of Guangzhou MICE businesses was RMB 3.527 billion, accounting for 4.96%, RMB 71.092 billion of Guangzhou's GDP. The goal of Guangzhou MICE industry was to achieve revenue that accounts for 5% of GDP in Guangzhou by 2010. It is expected that the MICE industry would become a pillar industry for Guangzhou and make the city an international MICE destination. The third criterion is that the number of enterprises should be no less than 80 and all practitioners no less than 250 employees. According to the statistics of the MICE industry in Guangzhou, the number of MICE companies was 268 in 2007. There were 4903 employees in the industry. Overall, Guangzhou's MICE industry has met all these standards. The MICE industry clusters have emerged.

3.2 Calculation of clusters using location quotient (LQ)

There are two ways to measure the extent of cluster development using location quotient (LQ) coefficient method. The general LQ formula is

$$LQ = (E_{ij} / E_i) / (E_{kj} / E_k) \quad (1)$$

The first way is to use employment statistics to measure industrial cluster development. LQ coefficient represents the ratio of the level of employment at regional level over that at national level. E_{ij} represents the total employment in the industry j in the region j . E_i represents the total employment in region i . E_{kj} represents the total employment in the industry j in the country k .

When the LQ is equal to 1, it indicates that the degree of clustering in the industry employment at regional level is the same as that at the national level. When the LQ is greater than 1, it indicates that the degree of clustering in the industry employment at regional level is higher than that at the national level. When the LQ is greater than 1.5, it indicates that the area has a higher level of industrial clusters.

According to 2007 industrial statistics of Guangzhou, Guangzhou's MICE industry employed 0.49 million personnel. The total population of Guangzhou was 773,500. In addition, the total employment in the industry of Guangdong Province was 30 million and the total population of the province was 96.15 million. Therefore, the LQ of Guangzhou's MICE industry can be calculated as:

$$LQ = (0.49 \div 77.35) / (30 \div 9615) \approx 2.03 > 1.5 \quad (2)$$

The results confirmed that the MICE industry in Guangzhou has formed a cluster with a high degree of clustering in regional employment.

The second way is to use professional production level to measure industry clustering. The same formula can be used for the calculation. LQ coefficient represents the ratio of the industry's revenue at regional level over gross national product. E_{ij} represents the total revenue in the industry j in the region j . E_i represents the total revenue in the region i . E_{kj} represents the total revenue in the industry j in the country k .

If the LQ is equal to 1, it indicates that degree of clustering in the revenue of the industry at regional level is the same as that at the national level. If the LQ is greater than 1, it indicates that the industry is in a large scale, and has form clusters.

According to the statistics of Guangdong Province in 2007, Guangzhou MICE Industry generated a total of RMB3.527 billion. The GDP of Guangdong was RMB3.067371 trillion. The total revenue of the National MICE industry was RMB 140 billion. The GDP of the country was RMB24.6619 trillion. Therefore, the LQ of Guangzhou MICE industry can be calculated as:

$$LQ = (3.527 \div 3067.371) / (140 \div 246619) \approx 2.03 > 1 \quad (3)$$

The results showed that the LQ coefficient was greater than 1. It confirmed that Guangzhou MICE industry had clusters in a larger scale.

4 Discussion

4.1 MICE industry clusters and local development in Guangzhou

First, Guangzhou has good infrastructure and it has fostered the MICE industry clusters. The MICE clusters have contributed to the development of the MICE industry in Guangzhou. With the Pazhou Complex and the opening of other exhibition halls, a ribbon of MICE facilities appeared. The total exhibition space of Pazhou was 586,500 square meters. Guangzhou Baiyun International will also have a conference center. Liuhua Complex and Jin Han Convention and Exhibition Center and other venues, provide venues for all scaled and all kinds of international conventions and exhibitions. A modern transportation network has been built up, including Baiyun International Airport in Guangzhou, one of the three major aviation hubs in China, Guangzhou Port, a world top ten port, a first-class hub for communication, as well as railways, expressways and rapid rail network, etc. This has improved the urban ecological environment and provided comprehensive services for cluster development of the MICE industry in Guangzhou.

Second, Guangzhou Import and Export Trade Fair, a well-known MICE brand, has contributed to the MICE clustering in Guangzhou. Guangzhou Import and Export Trade Fair is the oldest, largest and all types of trading products inclusive fair. The trade fair has high attendance every year and facilitated trades effectively. Because of it, Guangzhou was named as the "City of MICE". With the other event facilities, Guangzhou is among the top three MICE cities in the nation, in terms of number of MICE held, number of space occupied and long-term effect of previous events. Overall, the development of

Guangzhou Import and Export Trade Fair has facilitated the development of MICE businesses in the region. It also facilitated the MICE cluster development in Guangzhou.

Third, the development of other strong industries has facilitated the MICE clustering in Guangzhou. Guangzhou has strong economic development, developed urban infrastructure, transportation facilities, advantageous geographic location, and many other industrial clusters. Guangdong Province had 123 industrial clusters. They were mainly in the Pearl River Delta region. Among the clusters, 91 had revenue of over RMB10 billion. Forty-five clusters had revenue over RMB 50 billion. The clusters were mainly in the industries of electronic information, electric machinery and equipment, textiles and clothing, food and beverages, building materials, metal products. The clusters are the potential MICE attractiveness for potential attendees. The clusters also could facilitate the cluster development in the MICE industry.

4.2 MICE industry clusters and the development of the MICE industry in Guangzhou

First, the clusters could help to save cost. The close contacts among MICE enterprises within a cluster could help with cost saving in production, services and sales. Because of geographical proximity among the enterprises, it is easier for enterprises to negotiate, sign contract, and communicate with each other, etc. Many other costs associated with transaction can also be reduced. MICE industry cluster brought in a large number of professional and technical personnel. Local and foreign entrepreneurs or outside vendors are able to easily access information in various areas. Thus the clusters could also minimize the transaction costs for accessing quality human resources and acquiring raw materials. Overall, the MICE clusters of a large number of related businesses and industries with high correlation could reduce costs in many ways.

Second, MICE cluster development could facilitate resource sharing. The MICE industry involves various sectors. The MICE industry development could facilitate the use of other facilities, such as transportation facilities, postal and telecommunications facilities, education and training facilities, cultural and recreational facilities. The effective use of these facilities in turn could improve the development of services for MICE businesses.

Third, MICE cluster development could facilitate technology innovation. Companies could easily communicate with customers and detect customers' needs. Enterprises could more quickly acquire updated technology and enhance their competitiveness in innovation and product differentiation. Further, innovative products could easily find a place for marketing and sale. In so doing, it enhances the productivity of the entire MICE industry. In addition, the development of MICE industrial clusters could attract all kinds of exhibition-related experts and professionals to Guangzhou. It could facilitate the interactions among MICE intelligent and among local universities, research institutions and businesses. It could in turn greatly increase the cluster development of the MICE industry.

4.3 Problems of MICE clustering in Guangzhou

Although the MICE cluster development in Guangzhou has brought about a lot of advantages, there are still some urgent issues that need to be dealt with. The development of the MICE industry could lead to the development of other industries. The Guangzhou Import and Export Trade Fair, for example, facilitate a business of over US\$15 billion every year. It could generate direct revenue of RMB60 billion. The input and output ratio was about one to ten. With this strong economic effect that MICE could generate, MICE organizers and hosts have not given much attention to trades and business facilitation at events. The work that could have done include market need analysis, visitor registration services, assessment reporting, etc. MICE organizers and hosts have devoted too much time and energy into the issues, such as food and beverage catering, accommodation assistance, etc. Thus, it has affected the efficiency and effectiveness of events, hindering the development of MICE clusters^[13].

Second, most MICE companies have not integrated new technologies into their businesses. The lack of technology has affected the development of innovation in MICE branding. The survey of the current study showed that 97% of the MICE companies have their own websites. But most companies have not used the websites effectively. There were more than 300 MICE companies in Guangzhou. Many MICE companies in Guangzhou are small-scaled enterprises. The small-scaled enterprises lacked of professionalism and innovation, resulting in repeat and similar events and poor event management. Guangzhou's MICE industry development lies heavily in a singular MICE brand, Guangzhou International Conference Exhibition Fair. Many other events seem to be in the brand halo of this fair, relying on the reputation and influences.

Third, the MICE association in Guangzhou has not helped with the MICE companies effectively. According to the survey in the current study, the ratio of close relationship between the MICE Companies and Guangzhou MICE industry association was only .13. Only half of the investigated

companies reported that they had connection with the MICE association. More than 30% of the companies indicated that they did not have close relationship with the association. About 3% of the respondents reported no relation with the association at all.

Forth, MICE cluster development has not had enough support from the government. The government support in Guangzhou is different from that in Shanghai and Hong Kong. Guangzhou only gave some support for international brand events. Little government incentives and programs were developed for local events. In addition, some events in Guangzhou are organized and hosted by the government. Therefore, the events were not professionally managed. Concerning industry assistance, the government needs to review every MICE proposal. The proposals have to go through a time-consuming procedure with heavy paper work. It hindered the development of the MICE industry in Guangzhou^[14].

Fifth, there was a lack of MICE professionals to support the further development of the MICE industry in Guangzhou. MICE management talents are the intellectual support for the cluster development. According to a survey in 2007, the ratio between MICE professional demand and supply in Shanghai, Beijing and Guangzhou were 10:1, 8:1 and 8: 1 respectively. Most of the employees in the MICE industry did not receive a degree in event management. The turnover rate was high in the industry. Guangzhou, as the 3rd largest convention destination, is in an urgent need for creative, management, and technical type of MICE personnel.

5 Recommendations and Conclusion

In conclusion, this paper examined MICE industry clusters using the city of Guangzhou, China as a case. Through Location Quotient (LQ) estimation, it was found that Guangzhou's MICE industry clusters emerged. The MICE industry in Guangzhou still has many aspects that need to be improved, including MICE collaboration, information technology and brand innovation. The current study suggests that Guangzhou needs to develop more online conferences, marketing and managing MICE businesses using new technology, and facilitating collaboration among MICE companies and between MICE companies and the companies in other industries. In addition, it is important to develop integrated and innovative MICE brands in order to increase attendance and maximize the economic effectiveness and efficiency of events. Further, local government needs to adjust their role in order to give full support for the MICE industry and create a positive marketing environment for the MICE cluster development. MICE associations need to improve their services for the MICE industry. Moreover, it is important for Guangzhou to attract MICE professionals. It will benefit the long-term development of the MICE industry in Guangzhou.

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