A Study on the Influence of Sports Event Industry on Urban Competitiveness under Urban Competitiveness Theory—Taking the 19th Hangzhou Asian Games as an Example

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Abstract: Taking the 19th Asian Games held in Hangzhou, China in 2023 as an example, this study applied urban competitiveness theory to explore the impact of large-scale sports event industries on urban competitiveness. It was found that the Asian Games had positive impacts on Hangzhou in terms of the economy, society, culture and environment. At the economic level, not only did the Asian Games directly promote the development of the tourism, catering, accommodation and retail sectors, but it also helped improve Hangzhou's infrastructure. At the social level, the Asian Games not only enhanced the cohesion of the citizens and their sense of urban identity, but also promoted the social harmony and progress of Hangzhou through the improvement of public facilities and urban management. As for cultural impact, the Asian Games demonstrated Hangzhou's rich cultural heritage and strong cultural soft power, and stimulated the development of cultural industry, which both helped enhance Hangzhou's international image. At the environmental level, the event has enabled Hangzhou to vigorously promote urban greening projects, improve urban ecological environment, and promote the city's continuous advance on the path of ecological friendliness and sustainable development. This case study of the Hangzhou Asian Games demonstrated the positive role of the sports events industry in enhancing the competitiveness of cities and promoting sustainable urban development.

Keywords: Urban Competitiveness Theory, Sports Event Industry, Urban Competitiveness

1. Introduction

With the acceleration of globalization and increasingly fierce competition among cities, improving urban competitiveness has become an important strategic goal for major cities. Urban competitiveness is not only related to a city's status and role in the global economic system, but also affects the quality of life and sustainable development capabilities of its residents. In recent years, as one of the important means to enhance urban competitiveness, the hosting of large-scale sports events has attracted more and more attention from city managers. The sports event industry can directly drive economic growth and comprehensively enhance the city's competitiveness by improving infrastructure, enhancing the city's image, and promoting cultural exchanges. The successful holding of the 19th Asian Games is not only an important milestone in the history of Hangzhou, but an excellent case of studying the impact of large-scale sports events on urban competitiveness, providing valuable experience and reference for other cities.

Based on the theory of urban competitiveness, this study systematically analyzed the impact of the 2023 Hangzhou Asian Games on urban competitiveness from the four dimensions of economy, society, culture and environment. Specifically, this article first reviewed the research progress on theoretical content related to urban competitiveness and sports event industry, and then evaluated the impact of the Asian Games on the development of Hangzhou through case analysis methods. This study may provide new empirical support for theoretical research on urban competitiveness and useful inspiration for urban managers and policymakers, helping them make better use of large-scale sports events as an important means to comprehensively improve the competitiveness of cities. It is hoped that this research can help more cities stand out in global competition and achieve sustainable urban development and prosperity.
2. Urban Competitiveness Theory Research

2.1. Definitions of Urban Competitiveness

Urban competitiveness refers to a city’s ability to attract and gather resources, capital, and talents in the global or regional economic system and improve the quality of life and economic prosperity. Urban competitiveness is not only reflected in the level of economic development, but also in many other aspects including society, culture, environment as well as governance. A high level of urban competitiveness means that a city can stand out in the fierce international urban competition and become an essential destination for attracting investment, talents and tourists, thereby achieving sustainable economic growth and social development of the city. However, researchers currently have different opinions on the theory of urban competitiveness, as urban competitiveness itself is a concept with clear intuitive meaning that is difficult to truly grasp and define accurately. Among them, Zhu Xiangjun (2006) stated that urban competitiveness refers to a city’s ability to produce and sell better products than other cities. Its main purpose is to improve the living standards of urban residents. The key factors in his evaluation of urban competitiveness include economic structure, regional endowments, human resources and institutional environment. In addition, urban competitiveness is also affected by investment costs, market opportunities, government management, social security, ecological environment, culture, sports, education and other fields. Based on previous relevant research, it can be concluded that urban competitiveness refers to a city’s comprehensive competitiveness and sustainable development capabilities in economic, social, environmental and other aspects. This competitiveness determines a city’s status and attractiveness on a regional, national and even global scale. Improving a city’s competitiveness requires the joint efforts of the government, enterprises, and all sectors of society. Through various means such as optimizing policies, improving services, promoting innovation, and improving the environment, cities can prevail in the competition and attract more resources, talents, and capital in order to achieve sustainable development.

2.2. The Evolution of Urban Competitiveness Theory

The urban competitiveness theory is a theoretical tool and framework used to analyse and measure a city’s competitiveness in many aspects. However, different researchers and institutions may propose different models as urban competitiveness is a combination of national competitiveness and corporate competitiveness. It is a new branch derived from the research of urban competitiveness, so most of the early theoretical models on urban competitiveness were evolved based on the national competitiveness theory. Among the numerous theoretical models, the WEF-IDM national competitiveness theory is the most influential one. The national competitiveness theory, also known as Porter's Diamond Model, is a model proposed by Professor Michael E. Porter of Harvard Business School in 1990 to explain why certain countries or regions are internationally competitive in specific industries to form a system of national or regional competitive advantage.

Porter believes that a country's competitive advantage depends on four major factors in a country's economic environment including factor conditions, demand conditions, related and supporting industries as well as firm strategy, structure and rivalry. (1)Factor Conditions. This includes production factors, such as human resources, natural resources, knowledge resources, capital resources and infrastructure. The quality and availability of these factors determine a country or region's competitiveness in certain industries. (2)Demand Conditions. The nature and scale of domestic market demand will affect the development of enterprises in a country or region. If consumers in the domestic market are strict and demanding, then companies will be forced to improve quality and innovation capabilities to meet this high standard of demand and thus be competitive in the international market. (3)Related and Supporting Industries. When a country or region has a group of related and supporting industries that are also internationally competitive, the synergy between these industries can enhance the overall competitiveness. For example, strong suppliers and supporting industries can provide high-quality inputs and innovation support. (4)Firm Strategy, Structure, and Rivalry. This factor refers to the enterprise's management style, organizational form, strategic choices, and competition in the domestic market. A highly competitive domestic market can force companies to continuously innovate and improve efficiency, thereby enhancing international competitiveness. In addition, Porter also pointed out two auxiliary factors that can affect and support these four main factors. (1)Government. Through policies, regulations and support measures, the government can have a positive or negative impact on the above four factors. (2)Chance. Unpredictable events (such as technological breakthroughs, major external events, etc.) may also have a significant impact on the competitive advantage of a country or
The national competitiveness theory explains why a country or region can form a competitive advantage in a specific industry through the interaction of these four main factors and two auxiliary factors. Through analysis of these factors, businesses and policymakers can better understand the international competitiveness of local industries and enhance its level.

The city competitiveness theory is highly similar to the national competitiveness theory in theoretical basis and analytical framework. They are both tools used to understand and improve the competitiveness of a specific region (country, region or city). Therefore, the constituent elements of the national competitiveness theory can be used to systematically analyse the advantages and disadvantages of cities in terms of economy, society, and industry, thereby formulating more effective development strategies and policy measures. At the same time, Porter also claimed that the research results on national industrial competitiveness are also applicable to the research on the competitiveness of secondary economies (regions and cities). Therefore, based on relevant preliminary research, the evaluation factors affecting urban competitiveness were concluded in four aspects including economic factors, social factors, cultural factors as well as environmental factors in order to explore the impact of the 19th Asian Games on Hangzhou's urban competitiveness. The following urban competitiveness theory was then accordingly designed as can be shown in Figure 1.

![Figure 1: Urban Competitiveness Theory.](image)

3. Impact of the 19th Asian Games on Hangzhou's Urban Competitiveness

3.1. Basic Information of Hangzhou City

Hangzhou, the capital of Zhejiang Province, is located on the southeast coast of China and enjoys a unique geographical location as the intersection of China's eastern coastal economic belt and the Yangtze River Economic Belt. It is also an important transportation hub in East China with a convenient transportation network including railways, highways, aviation and waterways. For example, Hangzhou Xiaoshan International Airport, a major aviation hub in East China, is closely connected with surrounding cities through the high-speed railway and highway network. The hosting of the 2023 Hangzhou Asian Games will further enhance the city’s international image and comprehensive competitiveness, and inject new impetus into the city's sustainable development. Thus, Hangzhou is one of the most politically, economically, and culturally active cities as well as the most popular cities in China. The specific development status of Hangzhou is shown in Table 1.

3.2. Basic Information Concerning the 19th Hangzhou Asian Games

The 19th Asian Games was held in Hangzhou, China from September 23rd to October 8th, 2023. Hangzhou is the third city in China to host the Asian Games after the 1990 Beijing Asian Games and the 2010 Guangzhou Asian Games. The 19th Hangzhou Asian Games is not only a sports event, but also an important platform to demonstrate the city's image and comprehensive strength. The Asian Games not only raised Hangzhou's international profile and promoted the overall development of Hangzhou's economy and society, but also showed the world its elegance as a modern international metropolis with enhanced international visibility and reputation. The Asian Games also promoted the development of Hangzhou's sports industry, injecting new momentum into the city's long-term development and internationalization process. The details of the Hangzhou Asian Games are shown in Table 2.
Table 1: Overview of Urban Development in Hangzhou.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Contents</th>
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<tbody>
<tr>
<td>Economic development</td>
<td>In 2023, Hangzhou's total GDP reached 2.0059 trillion yuan, maintaining a steady growth trend with an annual growth rate of 5.6%, which ranks among the top cities in China.</td>
</tr>
<tr>
<td>Transportation conditions</td>
<td>Hangzhou transportation network is convenient, including highway, high-speed rail, subway, Hangzhou Xiaoshan International Airport and so on. It is an important aviation hub in East China and brings Hangzhou closer to other Chinese cities.</td>
</tr>
<tr>
<td>Social life</td>
<td>Hangzhou has a complete social security system, covering medical care, elderly care, housing and other aspects. At the same time, the city has a beautiful natural environment, a long history of cultural heritage and rich cultural and entertainment resources, providing citizens with a full range of materials.</td>
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Table 2: Introduction to Hangzhou Asian Games.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Details</th>
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<tbody>
<tr>
<td>Event time</td>
<td>September 23rd - October 8th, 2023</td>
</tr>
<tr>
<td>Event concept</td>
<td>“Green, Smart, Economical and Ethical”</td>
</tr>
<tr>
<td>Event scale</td>
<td>This Asian Games has a total of 40 major events, 61 sub-events and 482 minor events. It covers traditional sports such as track and field, swimming, basketball, football, and badminton, as well as emerging sports such as e-sports and skateboarding.</td>
</tr>
<tr>
<td>Participating countries</td>
<td>More than 12,500 athletes from 45 countries and regions in Asia covering East Asia, Southeast Asia, South Asia, Central Asia and West Asia participated in this event.</td>
</tr>
<tr>
<td>Event venues</td>
<td>A total of 56 competition venues have been built for the Hangzhou Asian Games. Based on the principle of &quot;Hangzhou as the mainstay and shared by the whole province&quot;, they are distributed in Hangzhou, Ningbo, Wenzhou, Huzhou, Shaoxing and Jinhua.</td>
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3.3. Analysis of the Impact of the 19th Asian Games on Hangzhou's Urban Competitiveness

3.3.1. The 19th Asian Games' Economic Impacts on Hangzhou's Urban Competitiveness

For one thing, the Asian Games has helped increase tourism revenue in Hangzhou. It has been proved that previous Asian Games helped drive the development of local tourism, and the Hangzhou Asian Games is no exception. For example, tourism data released by the Guangzhou Municipal Culture, Radio, Television and Tourism Bureau shows that from November 12th to 27th, 2010, Guangzhou received a total of 8.66 million tourists with a year-on-year increase of nearly 50%, while the city's total tourism revenue reached 7.047 billion yuan with a year-on-year growth rate of more than 50%[18]. Additionally, according to Hangzhou Municipal Culture, Radio, Television and Tourism Bureau, the occupancy rate of hotels has remained above 50% in the six months from March to August 2023, while in the first nine months of 2022, only the occupancy rate in July and August has exceeded 50%. Compared with the same period in 2021, the occupancy rate of Hangzhou hotels has increased significantly[19]. Overall, the Asian Games have had a positive impact on Hangzhou's urban economic and social development.

For another, the Asian Games has helped improve infrastructure construction in Hangzhou. In preparation for the Asian Games, Hangzhou upgraded and renovated the infrastructure required for the Asian Games, and built a number of modern sports facilities. These venues adopted the latest technology and materials in the design and construction process to improve the overall level to international competition standards, laying a solid foundation for hosting more high-standard sports events in the future[20]. In addition, in order to ensure convenient transportation between the various venues of the Asian Games, a total of 26 expressway projects of 130 kilometers have been built, with a total mileage of 480 kilometers open to traffic. Besides, 114 subway reconstruction roads of 140 kilometers have been built and opened with a cumulative total of 185 roads of 206 kilometers. 6 substations have also been put into operation and 106.43 kilometer of underground pipe corridors have been completed[21]. The construction and renovation of these infrastructures not only provide sufficient guarantee for the Hangzhou Asian Games, help improve the city's infrastructure level, promote the development of related industries and the surrounding economy, but also provide strong support for future urban economic development.
development.

3.3.2. The 19th Asian Games' Social Impacts on Hangzhou's Urban Competitiveness

On the one hand, the Asian Games helped enhance social cohesion in Hangzhou. The hosting of the Asian Games requires a large number of volunteers and service personnel, which provides Hangzhou citizens with abundant social practice opportunities and helps to enhance citizens' service awareness and social responsibility. During the Asian Games, Hangzhou actively mobilized citizens to participate in volunteer services and various activities. In May 2021, Hangzhou launched the recruitment of volunteers for the Asian Games and Asian Para Games. A total of 317,000 people signed up for the programme and after a global recruitment and supplementary recruitment process, 37,600 volunteers were ultimately selected. These volunteers came from 46 universities in Zhejiang Province with expertise in competitions, minority languages, medical and other professional fields. There were also about 400 volunteers from outside Zhejiang Province and other representative groups. The cooperation among the volunteers provided important support for the successful holding of the Asian Games and also improved their comprehensive capabilities and quality. By participating in various activities and services of the Asian Games, Hangzhou citizens have enhanced their sense of participation and gained a deeper sense of national strength and urban prosperity, which do good to the improvement of social cohesion. Moreover, the Asian Games can boost interaction and exchanges between different regions and groups, promoting the harmonious and integrated development of Hangzhou.

On the other hand, the Asian Games can foster social and public services in Hangzhou. Taking advantage of the opportunity of the Asian Games, Hangzhou's social and public service levels have been significantly improved. The upgrading of public service facilities has also provided citizens with more high-quality life services. For example, newly built and renovated hospitals, schools, cultural centre and sports venues have greatly improved the quality of public services such as medical care, education, culture and sports. Citizens can more conveniently enjoy high-quality medical services, better educational resources and a wealth of cultural and sporting activities. The comprehensive upgrading and transformation of infrastructure and public service facilities enhanced the happiness of citizens and greatly improved their living experience and living environment. In addition, it cannot be ignored that the hosting of the Asian Games has also provided a large number of temporary jobs, thus reducing employment pressure, boosting urban employment, and promoting the healthy development of Hangzhou.

3.3.3. The 19th Asian Games’ Cultural Impacts on Hangzhou’s Urban Competitiveness

To begin with, the 19th Asian Games has fostered the development of the cultural industry in Hangzhou. Hangzhou Asian Games not only demonstrated Hangzhou's city style and cultural heritage to the world, but also injected new vitality and impetus into Hangzhou's cultural industry. In order to ensure the success of the Asian Games, Hangzhou built and renovated a number of high-standard sports venues and cultural facilities. These facilities will continue serving various cultural activities and theatrical performances after the Asian Games as an important carrier for promoting the development of the cultural industry. In addition, various cultural and creative products related to the Asian Games have emerged rapidly. Designers and companies in Hangzhou have seized this opportunity and launched a large number of Asian Games-themed souvenirs, clothing, stationery, etc. The Asian Games have injected new vitality and momentum into Hangzhou's cultural industry with the flourishing development of cultural and creative products, the prosperity of cultural tourism, the richness and diversity of cultural activities, the upgrading of cultural infrastructure, the shaping and dissemination of cultural brands, and the cultivation and introduction of cultural and creative talents. Taking advantage of the opportunity of the Asian Games, Hangzhou has created a good atmosphere for culture, creation and innovation, attracting many cultural and creative enterprises and entrepreneurs, and promoting the prosperity and development of the cultural industry.

Furthermore, the Asian Games has helped improve cultural soft power of Hangzhou. The theme concepts of international sports events will, without exception, have a great impact on the development concepts of the host city. It can promote the integration of city positioning, strategic planning and the development concepts of large-scale sports events, thus giving birth to a distinctive urban culture. The concept of “Green, Smart, Economical and Ethical” of the 19th Asian Games is in line with Hangzhou’s development concept of promoting urban internationalization. Hangzhou regards culture as a core element, strives to enhance cultural soft power, and comprehensively builds an important city for international exchanges of oriental culture. Through the opening and closing ceremonies and cultural activities of the Asian Games, Hangzhou showcased its rich history, culture and modern features, enhancing the city's cultural soft power. The international competition platform not only allows Hangzhou to show its unique cultural charm and modern development, but also promotes the
improvement of cultural infrastructure, the deepening of international cultural exchanges, the improvement of citizens' cultural literacy, and the prosperity and development of cultural undertakings. These factors work together to give Hangzhou stronger cultural soft power and comprehensive competitiveness in global city competition.

3.3.4. The 19th Asian Games' Environmental Impacts on Hangzhou's Urban Competitiveness

Firstly, the Asian Games has improved the urban ecological environment in Hangzhou. As the largest sports event in Asia, the Asian Games is not only a grand event for sports competition, but also an important stage for ecological and environmental protection. In preparation for the Asian Games, Hangzhou has strengthened environmental governance and improved the city's ecological environment quality. Hangzhou considered the hosting of the Asian Games as an opportunity to increase investment in environmental protection, promote green construction, enhance urban greening levels, and improve the urban environment. The 19th Hangzhou Asian Games highlighted the importance of environmental protection. With its firm belief and powerful measures, it demonstrated Hangzhou's determination to the world in ecological development and environmental protection[24]. In this grand event, environmental protection concepts and sustainable development concepts were integrated into everything from venue construction to transportation, from garbage disposal to water resources management, setting a benchmark for subsequent world-class events. At the same time, the Asian Games also allows more people to understand and participate in ecological protection. Through the hosting of the Asian Games, it is expected to achieve a virtuous cycle of Hangzhou's economic development and ecological environmental protection, improve citizens' environmental awareness, and promote the popularization of green and low-carbon lifestyles to create a green city suitable for living, working and traveling[25]. This is not only a demonstration of China's achievements in the field of environmental protection, but also a positive response to the construction of ecological civilization that is of common concern to the world.

Secondly, the Asian Games can help promote sustainable urban development of Hangzhou. Seizing the opportunity of holding the Asian Games, Hangzhou has emphasized the concepts of "green, environmental protection and sustainability" by increasing investment in environmental protection, promoting green construction, upgrading the level of urban greening, and improving the urban environment while trying to avoid neglecting ecological benefits due to economic construction. The Hangzhou municipal government adhered to the overall layout and planning and focused on the protection of the ecological environment to ensure the implementation of the strategic goal of "Green mountains are gold mountains" while promoting urban development[26]. When planning the construction of sports venues, Hangzhou fully considered the city's spatial layout, population distribution and future development needs to avoid blind pursuit of large-scale and luxury, and focused on the practicality and sustainability of the venues. The construction of sports venues was guided by the green building concept, trying to save energy resources, reduce operating costs, and consider long-term use and development needs to reserve space for future urban upgrade and development. Hangzhou government also emphasized on strengthening coordinated development with surrounding areas to ensure that venue construction has a positive impact on the urban environment and social economy. These overall layouts and plannings have provided new vitality to Hangzhou's sustainable development and internationalization process.

4. Conclusion and Suggestion

4.1. Conclusions

4.1.1. Economic Aspects

The 19th Asian Games directly promoted the development of tourism, catering, accommodation and retail industries in Hangzhou city, which led to the growth of the local economy. Hosting of the Asian Games events attracted a large amount of investment, which improved the infrastructure of Hangzhou city and promoted the optimization and upgrading of the economic structure.

4.1.2. Social Aspects

The 19th Asian Games not only enhanced citizens' sense of pride and city identity, promoted national fitness and the spirit of volunteer service, but also provided citizens with a better living environment through the improvement of public facilities and urban management levels. These positive changes will continue playing a role in promoting the harmony and progress of Hangzhou society.
4.1.3. Cultural Aspects

The Asian Games has demonstrated Hangzhou's rich cultural heritage and achievements made in modernization to the world, enhancing Hangzhou's cultural soft power and international image. At the same time, it also drove the development of cultural products, cultural tourism and sports-related cultural industries, and promoted the upgrading of the cultural infrastructure, which provided Hangzhou with a new impetus for development of its cultural industries.

4.1.4. Environmental Aspects

The hosting of the 19th Asian Games has enabled Hangzhou to vigorously promote urban greening projects, increase green space, improve the urban ecological environment, and better the overall environmental quality of the city. In addition, the improvement of urban construction concepts and public awareness of environmental protection has promoted the transformation of urban management and residents' lifestyles, pushing the city forward on the road of sustainable development.

4.2. Suggestions

First and foremost, develop long-term urban development plans to ensure the sustainability of tourism and infrastructure construction and continue increasing investment in urban infrastructure construction, especially in transportation, communications, energy, etc. These can not only improve the city's operational efficiency and convenience, but also improve the overall image and quality of life of the city in the long term.

Furthermore, it is essential to strengthening cultural exchanges and cooperation activities with international cities, attracting more international resources and projects, expanding Hangzhou's development space and international influence, and creating an urban cultural brand with international influence. It is suggested that Hangzhou further enhance cultural soft power, promote the development of cultural industries, and achieve a win-win situation between culture and economy.

Lastly, pay attention to ecological environmental protection in the process of urban development. Specifically, it is proposed that Hangzhou promote the implementation of green development concepts to achieve coordinated development of economy, society and environment, further enhancing the level of urban ecological civilization to create a green and beautiful modernization city with improved comprehensive competitiveness and attractiveness.

5. Finally

Through research on the impact of the 19th Hangzhou Asian Games on urban competitiveness of Hangzhou, the following conclusions can be made. Firstly, Hangzhou has taken advantage of the opportunity of the Asian Games to accelerate the construction of urban infrastructure, promote economic development, and promote social and cultural progress. It also played an important role in promoting the city's ecological and cultural construction and environmentally sustainable development, and had a significant positive effect on improving Hangzhou's urban competitiveness. Secondly, Hangzhou can tap into the positive impact of the post-Asian Games era in the future, deepen the integration of the sports event industry and the city's competitiveness, and continuously improve the city's soft power and core competitiveness. Lastly, the Hangzhou Asian Games can not only provide us with valuable practical experience and inspiration, but also provide a research basis for future discussions on the sports event industry and urban competitiveness, which can help enrich empirical research on urban competitiveness theory.

References

Shandong University Of Sport, 2018, 34(2):5.


