How Large-Scale Sports Events Can Promote Urban Economic Development: Taking the Hangzhou Asian Games as an Example

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Abstract. This study aims to explore the role of large-scale sports events in promoting urban economic development, taking the Hangzhou Asian Games as an example. The research motivation stems from interest in the potential impact of sporting events on urban economies. This article adopts the method of literature review and collects primary and secondary materials to conduct an in-depth analysis of previous cases of holding large-scale sports events and their post-match utilization. Large-scale sports events can not only drive growth in various fields such as tourism, catering, and retail, but also enhance a city's image and popularity. At the same time, organizers also need to pay attention to balancing the input-output ratio, formulate scientific and reasonable plans and do management work, and solve their post-game venue utilization problems to improve their venue utilization, give full play to the long-term economic benefits of the stadium after the game, create post-game income, and promote the long-term sustainable development of the urban economy.

1 Introduction

1.1 Research background

After China's economy and society returned to normal operation, contact-based and service-based consumption took the lead [1]. China's economy has burst out with huge development resilience and potential, and its long-term positive fundamentals have not changed [1]. It is at the critical stage of promoting the domestic economic cycle and promoting the common development of domestic and international economic dual cycles [2]. With the development of social economy, people's consumption level is also constantly improving, they have a deeper understanding of sports, have more leisure time to pursue a better and high-quality life, and their participation in sports events continues to increase [3]. The hosting of the Hangzhou Asian Games can empower the economic construction dimension of Hangzhou and surrounding cities in all aspects, and further improve people's living standards on the basis of achieving common prosperity. This event accelerates the construction of urban infrastructure such as transportation, communications and sports facilities, promotes the development of tourism and service industries, and enhances the city's international competitiveness. The Asian Games also brought new vitality and development opportunities to the local community, improving the quality of life and happiness of residents. Large-scale sports events will greatly promote the development of the secondary and tertiary industries, especially those industries such as tourism, commercial catering, social services, and cultural industries that are closely related to the sports economy, and will have obvious stimulation and incentives for them.

Large-scale sports events are regarded as key factors in promoting urban economic and social development in sports economics. The hosting of sports events not only brings economic benefits, such as increased tourism expenditure, promotion of business activities and increased employment opportunities, but also promotes the construction of local infrastructure and enhances brand image [4]. Sports economy and cultural industry are also inextricably linked. Similar sports events have a significant positive impact on the long-term development of cities. Not only do they boost economic growth and attract tourists and investment, they also improve urban infrastructure and public services. In addition, sports events also promote cultural exchanges and social integration, increasing the city's international visibility and attractiveness. Hosting conferences or conferences, collective events, festivals, etc. will also become a city's heritage. Some cities (or regions) can also establish a city's identity through conferences.

1.2 Research questions

This study aims to explore the positive impact of the Hangzhou Asian Games on the long-term sustainable development of the city. Specifically, the research will focus on how the Asian Games improve urban
infrastructure and public services, promote diversified local economies, and how these sporting events strengthen community cohesion and cultural identity. In addition, the impact of the Asian Games on environmental sustainability will be examined, including its role in promoting urban greening and environmental protection plans. This study aims to reveal the potential role of large-scale international sports events in promoting comprehensive urban development.

1.3 Research significance

The significance of this study is to provide an in-depth understanding of the impact of the Hangzhou Asian Games and provide a reference for urban planning and development strategies for similar sports events in the future. It emphasizes the potential of sports events to promote sustainable urban development, especially in terms of economic growth, social integration, cultural exchange and environmental protection. Furthermore, this study provides empirical data to the academic community and enriches the theoretical foundation in the fields of sports economics and urban development. For policymakers, this study provides practical insights and suggestions to help them make more informed decisions in future urban planning and hosting of international events. Hangzhou has become a window for internationalization. Hosting sports games is not only to build awareness, but also an opportunity to improve overall urban construction. Another example of China's continued support and contribution to the Asian Olympic Movement is a new paradigm in which sports events force infrastructure improvement and optimization. It is a leap forward in Hangzhou's economic vitality and development model, and a useful attempt for sports to drive economic growth and service upgrades.

2 Theoretical review

Before delving into the impact of the Hangzhou Asian Games on urban sustainable development, this article first synthesizes relevant empirical research. Past studies generally believe that large-scale sports events, such as the Olympic Games and the World Cup, have significant economic and social impacts on the host cities. At the economic level, large-scale sports events usually drive large-scale infrastructure construction and investment, which directly stimulate the economic growth of cities. For example, the Asian Games had a significant positive impact on Hangzhou's fixed asset investment, GDP, fiscal revenue, and employment. The investment in urban rail transit, sports venues and other infrastructure completed by Hangzhou during the preparatory stage of the Asian Games boosted GDP by 414.1 billion Yuan.

At the social level, large-scale sports events not only enhance a city's international visibility and image, but also promote the shaping of city culture and identity. By hosting the Asian Games, Hangzhou has demonstrated the charm of its historical and cultural city and promoted the development of the cultural and sports industries. For example, the new and renovated venues for the Hangzhou Asian Games, as well as the construction of the Asian Games Village, have not only promoted the development of high-tech and modern service industries, and also strengthened the city's cultural and ecological environment construction.

At the same time, large-scale sports events have also had a profound impact on the digital and intelligent construction of cities. Taking the Hangzhou Asian Games as an example, digital technologies were widely used in the preparation and hosting of the event, such as 5G network, electronic identity registration cards, smart Asian Games one-stop platform, etc. These applications not only provided support for the smooth progress of the event, but also it has promoted the improvement of Hangzhou's urban intelligence level.

Therefore, from the perspective of theoretical and empirical research, large-scale sports events have a profound impact on the economic growth, social development and technological innovation of the host city. The case of the Hangzhou Asian Games clearly demonstrates this, not only bringing direct economic growth and employment opportunities, but also making positive contributions to the sustainable development of the city in many aspects such as social culture, environmental protection, and technological innovation. Especially in terms of promoting green and low-carbon life, intelligent applications and regional coordinated development, the Hangzhou Asian Games has demonstrated the new functions and new significance of large-scale sports events in the context of the new era.

3 The impact of the Hangzhou Asian Games on urban economic development and its reasons

3.1 Direct economic impact

The Hangzhou Asian Games has had a direct positive impact on the city's economic development. According to statistics, the Hangzhou Asian Games contributed 414.1 billion Yuan to Hangzhou's GDP, accounting for 7.6%, and Created employment for approximately 670,000 jobs. Through large-scale infrastructure construction and investment, the growth of tourism and the development of related industries, the Asian Games has injected economic vitality into Hangzhou and promoted the city's high-quality development. This series of economic effects were not only significant during the Asian Games, but also had a profound impact on the sustainable development of cities in the future.

3.1.1 Infrastructure construction and investment

The holding of large-scale sports events has effectively promoted the improvement of various software, hardware and infrastructure in the city [5]. The hosting of the Asian Games in Hangzhou prompted large-scale infrastructure construction and investment from 2016 to 2020. According to estimates from the Zhejiang Provincial Bureau of Statistics, the cumulative
investment completed reached 224.8 billion Yuan. Among them, venue construction alone accounted for 10.2 billion Yuan of funds. This initiative not only provides the city with more advanced transportation, sports, culture and other infrastructure, but also becomes a powerful engine for stimulating the local economy.

3.1.2 Growth of tourism industry

During the Asian Games, Hangzhou received a total of 13.0087 million domestic and foreign tourists, and tourism consumption reached 19.328 billion Yuan. The hosting of the Asian Games has enhanced Hangzhou's popularity and attracted a large number of domestic and foreign tourists to watch the games and travel. Scenic spots such as Qiandao Lake in Chun'an County have become venues for Asian Games competitions, attracting many tourists and driving the development of the local tourism industry. The experience of previous Asian Games also shows that hosting large-scale sports events can help improve the level of the city's tourism industry and drive the development of related industries.

3.1.3 Development of related industries

During the Hangzhou Asian Games, industries related to sports events received a large number of orders. In particular, the export of sporting goods increased by 33.0% year-on-year, bringing dividends to small and micro enterprises in Yiwu and other places. From hand-cranked rattle to the world's largest small commodity market, the number of offline shops in Yiwu International Trade City has reached 75,000, becoming an active cell of Zhejiang's economic operation and reflecting the vivid development of Zhejiang's private economy.

3.2 Indirect economic impact

3.2.1 City image and brand improvement

The rich emotions stimulated by sports prove that sports is a fusion agent that can unite people's hearts and minds, and is also an effective lever to promote ecological transformation and social innovation. The successful hosting of the Hangzhou Asian Games has significantly improved the city's image and brand. In terms of urban landscape and architecture, Hangzhou uses its unique West Lake, canals, ancient buildings and other scenery as its background. Through digital and intelligent technology presentation and magnificent scenes such as large-scale digital people crossing the Qiantang River, it shows modernity, innovation and internationalization, modernized city image. This unique urban landscape has become a prominent feature that attracted the attention of the world during the Asian Games.

As the nature of cross-border development of sports continues to increase, the social, emotional and identity value of urban sports is increasingly enriched, which can effectively connect multiple scenes of production, life and ecology, and is conducive to creating a more attractive city image in the post-industrial era. The promotion of tourism resources is a direction that Hangzhou will strive to promote during the Asian Games. By displaying its rich tourist attractions, food, shopping and other features, the city attracts more tourists to experience it and enhances the city's popularity and reputation. During the Asian Games, tourists can not only enjoy Hangzhou's traditional attractions, but also experience modern and convenient urban tourism services.

In terms of environmental protection and sustainable development, Hangzhou has demonstrated its high concern for environmental protection by emphasizing the city's efforts and achievements in environmental protection and sustainable development, such as green transportation, urban greening, etc. This makes Hangzhou a modern city that pays attention to the ecological environment and sustainable development, further consolidating its environmental image at home and abroad.

In terms of technological innovation, Hangzhou demonstrated its achievements and development in smart city construction, emerging industries and other fields during the Asian Games. This reflects Hangzhou's leading position in technological innovation, making it a dynamic and forward-looking city that attracts more attention and investment from the technology industry.

3.2.2 Attract investment and talents

The successful hosting of the Hangzhou Asian Games attracted a large amount of domestic and foreign investment and talent inflow. According to statistics, during the Hangzhou Asian Games, Hangzhou's GDP is expected to grow by more than 8%, which will greatly promote the release and development of Hangzhou's economic potential. At the same time, the Asian Games also brought economic development opportunities to Hangzhou, with related investment reaching 120 billion Yuan. International sports events are a global window through which Hangzhou shows the city’s charm and development potential to the world. This attraction is not only reflected in the sports industry, but also spreads to other industries, such as technology, culture, education, etc. The investment and talents attracted will bring more development opportunities and innovation power to Hangzhou, and promote the continuous optimization and upgrading of the city's economic structure.

3.3 How does the Hangzhou Asian Games promote sustainable urban economic development?

3.3.1 Government support and investment

The government played a major driving force in the Hangzhou Asian Games. The government actively participates in the preparation and organization of the Asian Games by providing financial support, formulating relevant policies, and promoting
infrastructure construction. The Hangzhou Municipal Government has invested a lot of money in the Asian Games, including venue construction and transportation infrastructure upgrades. This investment of public funds has promoted the development of related industries to a certain extent, stimulated market vitality, and formed a government-led promotion mechanism.

3.3.2 Event organization and operation

As the organizer of the Asian Games, the Hangzhou Asian Games Organizing Committee played a key role in the preparation and operation. The organizing committee ensured the smooth progress of the Asian Games through careful organization and efficient operations. Properly arranging the event schedule, providing high-quality services, and creating exciting events have made the Asian Games a grand event that attracts global attention. This high-level event organization and operation not only enhances Hangzhou's international image, but also attracts more spectators and sponsors to participate, creating good conditions for the multi-faceted development of the city's economy.

3.3.3 Collaborative development of related industries

The hosting of the Asian Games has promoted the coordinated development of related industries and formed an industrial chain with sports as the core. From infrastructure construction to sports goods manufacturing, to tourism, catering, cultural creativity and other fields, the Asian Games has driven the coordinated development of various industries. For example, the production of smart premium cars, the sales of sporting goods, and the promotion of cultural and creative products have all benefited from the hosting of the Asian Games. This multi-field industrial coordinated development provides a broader space for growth for Hangzhou's urban economy, forming a comprehensive economic system with the Asian Games as the leader.

4 Analysis of the post-game utilization model and implementable paths of the Hangzhou Asian Games

4.1 Analysis of post-game utilization patterns of Hangzhou Asian Games

4.1.1 Utilization of venues and facilities after the game

In order to fully utilize the benefits of Asian Games venues and facilities, Hangzhou can adopt a variety of utilization models. Combining the experience and inspiration from the operation of large-scale sports venues at home and abroad, this paper propose post-game utilization strategies and models to provide a reference for the sustainable development of sports venues in the Wenzhou Division of the Hangzhou Asian Games, as shown in Table 1 and Table 2 [9]. First of all, through multi-functional design, the Asian Games venues can be transformed into multi-purpose stadiums to host various international and domestic sports events and improve the utilization rate of the venues. Secondly, the venue can serve as a venue for large-scale cultural activities, including concerts, theatrical performances, etc., to promote the prosperity of urban culture. In addition, the venue will be used for large-scale conferences and exhibitions to promote the city's exhibition economy. Through these methods, the service life of venues and facilities can be maximized and more output value can be brought to the urban economy.

| Table 1. Overview of post-game utilization of the Olympic/Asian Games Village |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| session | time | Place | Post-game utilization type |
|---|---|---|---|---|---|
| Olympic village | 21 | 1976 | Montreal (Canada) | Residential complexes and apartments |
| 22 | 1980 | Moscow (Soviet Union) | residential area |
| 23 | 1984 | Los Angeles (USA) | University dormitory |
| 24 | 1988 | Seoul (South Korea) | High-end residential area |
| 25 | 1992 | Barcelona (Spain) | High-end residential area |
| 26 | 1996 | Atlanta (USA) | student dormitory |
| 27 | 2000 | Sydney (Australia) | multi-level residential area |
| 28 | 2004 | Athens (Greece) | low-income housing complex |
| 29 | 2008 | Beijing (China) | High-end residential area |
| 11 | 1990 | Beijing (China) | High-end residential area |
| 12 | 1994 | Hiroshima (Japan) | Comprehensive residential area |
| 14 | 2002 | Busan (South Korea) | residential area |
| Asian Games Village | 15 | 2006 | Doha (Qatar) | Hamad Medical City, medical dormitory |
| 16 | 2010 | Guangzhou (China) | residential area |
| 17 | 2014 | Incheon (South Korea) | residential area |
| 18 | 2018 | Jakarta (Indonesia) | low-income housing complex |
Table 2. Post-game utilization patterns and approaches of competition venues

<table>
<thead>
<tr>
<th>City</th>
<th>City</th>
<th>Post-match utilization model</th>
<th>Main uses after game</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olympic venues</td>
<td>Barcelona (Spain)</td>
<td>After the game, all facilities will be owned by the government, and the management rights will be owned by the company.</td>
<td>Driving ranges for large-scale performances, exhibitions, water sports, ice sports and driving schools</td>
<td>Multifunctional venue with good operation and management</td>
</tr>
<tr>
<td></td>
<td>Sydney (Australia)</td>
<td>After the game, government will jointly operate and manage the venues through partnership (ppp) with private companies.</td>
<td>Olympic Park becomes an education base and university town</td>
<td>Increase income during the idle period of the venue and relieve the pressure of venue maintenance</td>
</tr>
<tr>
<td></td>
<td>Athens (Greece)</td>
<td>Establish public corporations to minimize operating costs</td>
<td>Development of a new urban park in Athens with numerous recreational, commercial and other functions</td>
<td>The post-game utilization of venue facilities has been slow, and many venues are still closed.</td>
</tr>
<tr>
<td>Asian Games venues</td>
<td>Hiroshima (Japan)</td>
<td>Transfer of company operations and management through bidding</td>
<td>Venues for large-scale sports events, mass sports training venues and concerts, etc.</td>
<td>High utilization efficiency, all venues are used during holidays</td>
</tr>
<tr>
<td></td>
<td>Busan (South Korea)</td>
<td>After the game, the venues are open to the public at low prices, and the government subsidizes operating costs.</td>
<td>Multi-purpose use, concerts and commercial activities, and also a venue for professional games such as baseball and football</td>
<td>The purpose is not to make profits, but to improve the service level of sports facilities in various regions</td>
</tr>
</tbody>
</table>

4.1.2 Promote the sustainable development of urban tourism

The Hangzhou Asian Games opened up Hangzhou's international market and promoted the transformation and upgrading of sports tourism and related industries [3]. The successful hosting of the Hangzhou Asian Games has enhanced the city's popularity and tourism appeal. Utilize Asian Games venues and facilities to create unique tourism experience projects to attract more tourists to participate. In conjunction with the successful hosting of the Asian Games, government will develop related themed tourism products, such as Asian Games souvenirs, Asian Games themed exhibitions, etc., to increase tourists' stay time and consumption levels. At the same time, by improving the level of tourism services and the image of the city, attracting more domestic and foreign tourists to visit and experience the city, the city can achieve sustainable growth of urban tourism.

4.1.3 Analysis of venue usage patterns after the Hangzhou Asian Games

Based on the above points of view, the optimal solution for the venue utilization model after the Hangzhou Asian Games is to transform it into a multi-purpose sports event venue, such as hosting domestic and international sports events. The reasons can be divided into two aspects. One: Take advantage of the unquenched popularity of the Hangzhou Asian Games to attract more sports, literature and art enthusiasts to continue to pay attention and consume. Second: Hangzhou is a major tourist province. There are many urban parks such as cultural and sports parks in the province, and the homogeneity is serious. If the Hangzhou Asian Games venues are converted into cultural and sports parks, it will be a waste of resources, and it will not be able to maintain long-term economic benefits and venue utilization efficiency.

4.2 Explore possible implementation paths for post-match utilization of the Hangzhou Asian Games

The possible implementation paths for post-game venue utilization of the Hangzhou Asian Games can be divided into three main aspects. The first is to flexibly control the scale of the venue to save construction costs and later maintenance costs; the second is to transform and upgrade the stadium into a comprehensive service system, such as opening an exhibition economy, transforming into a cultural performance club or a national fitness activity center; the third is to expand the post-game space investment channels for venue construction strengthen cooperation between enterprises and the government, such as the PPP model, to improve the utilization rate of venues after the game and maximize their long-term economic benefits [10].
5 Conclusion

Cities can learn from the successful experience of the Hangzhou Asian Games when hosting large-scale sports events in the future. First of all, the government should actively support and make adequate planning and preparations in the early stages of the event to ensure that infrastructure construction is connected with urban development. Secondly, the organization and operation of the event need to be efficient and collaborative, pay attention to details, enhance the city's image, and attract more spectators and sponsors to participate. At the same time, government must pay attention to the coordinated development of industries and form a comprehensive economic system with sports as the core. The use of venues and facilities after the game should be multifunctional and bring long-term benefits to the city. Continuously developing the sports industry and promoting the sustainable development of urban tourism are also future development directions. The most important thing is to pay attention to the integration with local culture and economic characteristics, making the event an integral part of urban development.

Generally speaking, large-scale sports events have great potential for urban economic development, but they need to comprehensively consider all factors and carefully plan and manage them to achieve good economic benefits. The Hangzhou Asian Games provides us with a successful case and provides useful experience and reference for future urban development.

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