



Effects of Marathon Competition on Economic Aspects in Guangzhou City

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Abstract

Background and Aim: In recent years, participation in Chinese marathons has experienced significant growth, with the number of participants rising from thousands to hundreds of thousands, and even millions. This surge underscores the growing economic impact of marathon events on urban economies, as they attract participants and stimulate various related industries. However, this rapid expansion also presents challenges in organizing and managing these events, particularly in ensuring safety, professionalism, and fairness.

Materials and Methods: The objective of this study was twofold: first, to measure the direct economic impact of hosting major marathon events, and second, to develop a guideline for hosting such events in Guangzhou city. The research utilized a descriptive survey method, employing questionnaires to gather data from different stakeholders and participants involved in the Guangzhou Marathon. Subjects were a simple random sampling of 341 participants, including college students, social workers, and marathon enthusiasts. The research instrument was questionnaire development, and four separate questionnaires were designed to address different aspects of the research: 1) "Marathon runners wearing shoe survey". 2) "Consumer Survey of Marathon Participants". 3) "Guangzhou Marathon and the Image of Guangzhou". 4). "Investigation on the Impact of Holding a City Marathon on the City Economy". To ensure the validity and reliability of the questionnaires, the following steps were taken: content and structure evaluation by 10 experts in related fields, pilot testing for validity, with an Index of Item-Objective Congruence (IOC) of 1. Data Analysis: The collected data were analyzed using descriptive statistics, including frequency and percentage.

Results: 1) guidelines for the economic aspects of hosting the Guangzhou Marathon, based on the POLC (Planning, Organizing, Leading, and Controlling) theory framework, such as planning: conduct economic impact analysis, set objectives, develop an economic plan, and establish partnerships. Organizing: form an economic committee, develop a marketing plan, coordinate with businesses, engage sporting brands, and facilitate temporary employment. Leading: Provide leadership, maintain communication, foster collaboration, ensure regulatory compliance, and Control: Monitor progress, collect data, conduct reviews, implement quality control, and conduct post-event economic impact analysis. 2) Summary of the new knowledge presented in 4 parts: Marathoners' investments were to prioritize mid-high priced running shoes, purchase dedicated running apparel, invest in watches, headphones, and accessories, and optimize training and performance. Economic benefits included enhanced city visibility and image, driving sporting goods sales, attracting tourism and hospitality revenue, and creating new employment opportunities. Social and cultural impacts were to promote sports participation, foster creativity and cultural expression, increase social cohesion, and enhance city vibrancy and global profile. The Guangzhou Marathon's role was to promote sports culture, boost sponsor brand power and recognition, showcase economic development strengths, and provide perceived multifaceted benefits.

Conclusion: The data suggests that hosting a large-scale city marathon can bring about various benefits such as economic growth, social engagement, cultural enrichment, and enhanced city branding, making it an appealing event to organize for cities, as indicated by the respondents surveyed.

Keywords: Marathon competition, Economic aspects

Introduction

In the late 1980s and early 1990s, China introduced international marathon events, starting with the Beijing International Marathon in 1986. The first National Marathon Championships followed in 1991, drawing runners nationwide. Cities sought accreditation from the IAAF, making marathons international competitions. Beijing, Shanghai, and Guangzhou received IAAF Bronze Label certification. By the early 21st century, marathon development surged, with more cities hosting events. The Guangzhou Marathon began in 2012, growing annually to include full and half marathons. Its scenic route showcases Guangzhou landmarks, attracting international attention. With increasing popularity, thousands participate yearly, enhancing Guangzhou's sports and tourism reputation. Foreign scholars' studies on marathons largely





concentrate on their economic and cultural impacts on cities, covering aspects like promoting city development, branding, and enhancing influence. They also examine negative effects such as environmental damage, disruptions to residents' lives, traffic issues, and social problems like drug abuse and human rights abuses. However, many studies lack classification and comparison, resulting in overly general conclusions that don't address specific event details. Research on the Guangzhou Marathon is notably scarce. In summary, marathons have emerged as a popular sport among the public, significantly impacting the economy, environment, and society of host cities. Hosting marathon events stimulates the city's tourism industry, fosters cultural exchange, accelerates urban development, and enhances public health. These benefits underscore the positive impact of marathons on host cities.

The development of Chinese city marathons encompasses spiritual, material, and institutional aspects. Spiritual and cultural challenges include insufficient ideological mobilization during event organization, participants lacking fair competition consciousness and team spirit, and neglect of the marathon's cultural value. Material and cultural issues involve inadequate supplies, limited portable toilets, poor competition environments, and inappropriate equipment. Institutional problems encompass a lack of elite runners, insufficient medical care, delayed start times, and crowded starting stages. Some cities face media and public attention deficits due to limited urban strength and influence, while small cities hosting marathons may lack experience, operational abilities, and pre-event evaluations, risking harm to elite athletes. While marathons align with urban development, some events suffer from poor planning, coordination, and environmental impact. Government focus on marathon impact over quality contributes to uneven event standards. Despite the recognized benefits of marathons on urban development, challenges persist, including race safety, inadequate sports knowledge, and organizational discrepancies. Addressing these issues requires timely action and adaptation during marathon operations.

Rapid increase in the number of participants: In recent years, the number of participants in Chinese marathons has shown a trend of rapid growth. From the earliest scale of thousands of people to the current hundreds of thousands or even millions of people, China's marathon is experiencing vigorous development. **Increasing economic influence:** The driving effect of marathon events on the urban economy is becoming more and more obvious. Holding a marathon event can not only attract a large number of participants, but also promote the development of tourism, hotels, catering, sports brands, and other related industries, and enhance the image and popularity of the city. **Challenges in organization and management:** The rapid development of marathons in China has also brought some challenges in organization and management. How to guarantee the safety of the competition, improve the professional level of the organization, and ensure the fairness and justice of the competition have become the focus of the research.

Policy support: With the deepening of China's reform and opening up, the living standards of the Chinese people have been improved, and the requirements for people's health have been significantly improved. At the same time, our country is also facing problems caused by population aging, ecological environment deterioration, and rapid lifestyle changes. Therefore, paying attention to the physical and mental health of the whole nation will be an important and long-term issue. On October 25, 2016, the Central Committee of the Communist Party of China and The State Council issued the outline of the "Healthy China 2030" plan, which pointed out that the government should increase resources to adhere to prevention, promote a healthy and civilized lifestyle, and emphasize the importance of the sports industry to national fitness. In 2016, The State Council promulgated the "National Fitness Plan (2016-2020)", the national fitness plan as an important national development strategy, the plan pointed out that by 2020, mass participation in sports and fitness ideas to be significantly improved, national fitness will become the best source of power for the sports industry. During the "13th Five-Year Plan" period, the state issued the "National Fitness Guide" to encourage the broad masses to participate in national fitness. In the report of the 19th National Congress, we also deeply understand that national fitness and national sports are integrating into our lives, and the physical and mental health of the whole people has officially become one of the important standards for our good life.

1. Overcrowding

The rapid increase in the number of marathon participants in China has led to huge challenges for race organizations. Past solutions include limiting the number of participants, setting up qualification checks, and distributing the number of participants in batches, but these methods may make it difficult for some runners to participate. In addition, for some large-scale events, there are still too many participants leading to track congestion and increased safety risks.

2. Event security issues



With the increase in the number of participants, event security issues have been a concern. Past solutions include strengthening security forces, optimizing the layout of the track, and increasing medical rescue resources. However, there are still deficiencies in security and medical assistance in some races, such as insufficient emergency response capacity and imperfect track management.

3. The level of organization specialization is not high the level of organization and management of Chinese marathon events is relatively low

Previous solutions include training organization personnel, the introduction of professional event management companies, etc., but due to the huge scale of the event and complex management needs, there are still some events that lack professional organization and management, resulting in the uneven quality of the event.

With the arrival of China's marathon boom, various marathon events are in full swing, which will inevitably bring a series of problems: noise, air pollution, infrastructure tension, environment, and other problems have become the current problems of urban marathon events. This paper is based on excellent papers at home and abroad in recent years and combines its views into an analysis.

Objectives

1. To quantify the direct economic impact of hosting major marathon events in Guangzhou city.
2. To construct a guideline for hosting major marathon events in Guangzhou city.

Literature review

Chinese Marathons

The history of marathon development in China began in the late 1980s and early 1990s with the introduction of international events. The first Beijing International Marathon in 1986 marked China's entry into international marathons, followed by the inaugural National Marathon Championships in 1991. Cities like Beijing, Shanghai, and Guangzhou sought IAAF accreditation for their marathons, drawing more international participants. By the early 21st century, marathons in China saw rapid growth, attracting both domestic and foreign runners and sponsors. The Guangzhou Marathon, established in 2012, exemplifies this growth, evolving into an annual international event with full and half marathons. Its scenic route showcases Guangzhou's landmarks, attracting thousands of participants each year and enhancing the city's international sports and tourism reputation.

Problems existing in the organization and operation of urban marathon events in China

The Chinese city marathon is viewed through three lenses: spiritual culture, material culture, and system culture. Spiritual and cultural issues arise from inadequate ideological promotion during event organization, a lack of fair competition and teamwork among participants, and neglect of the marathon's cultural value. Material and cultural challenges include inadequate supplies along the route, scarcity of portable toilets, subpar competition environments, and inadequate participant equipment. Systemic issues encompass a shortage of elite runners, insufficient medical support, delayed start times, and congestion at the starting line (Zhu, 2013). Bi (2016) observed that some cities with limited comprehensive strength fail to garner urban influence through marathon events, resulting in limited media and public attention. Urban marathon organization in China primarily involves government, social, and joint government-society organizations. However, most events are joint efforts, leading to excessive government involvement and inflexible event structures. The rapid growth of urban marathons and participant numbers often leads to superficial engagement and limited understanding of the marathon's essence, increasing event risks.

In 2015, national city marathons were analyzed, revealing that their popularity stems from the substantial economic benefits they bring to host cities. However, safety concerns persist, attributed to inadequate dissemination of scientific marathon knowledge and lower-than-expected race completion rates. (Tian, 2016). The post-event approval rights cancellation, and holding marathon events became more challenging due to sluggish policy promotion. This lag in policy reform doesn't align with evolving trends, hindering event progress. Despite advancements, insufficient government cooperation and imperfect operations remain practical challenges in marathon organizations.

Xu (2016) analyzed heat exposure issues in urban marathons in China, highlighting problems such as insufficient safety awareness, subpar race environments, excessive registration fee hikes, unreasonable scheduling, and imperfect race services. Li et al. (2017) argued that event organizers often fail to utilize existing human and material resources effectively. They also neglect to implement preemptive measures to

address potential issues before and during the event, thereby increasing operational risks. Furthermore, post-event, relevant departments often fail to systematically analyze and rectify problems identified during the marathon. Xing et al. (2017) assert that the rapid growth of urban marathons is attributed to the alignment between marathon characteristics and modern city development, fostering progress in humanities, economy, politics, and sports. However, many cities exhibit blind adherence to the marathon trend, lacking pre-event preparations and coordination capabilities, leading to issues like fatalities, diminished economic gains, and environmental pollution. Excessive government focus on marathon event influence over quality exacerbates inconsistencies in event standards across cities. Rong Hao (2017) discovered that the Zhuhai International Marathon faced challenges such as a lack of event diversity, disorganized capital investment and operation, and inadequate publicity efforts. Li and Li (2011) highlighted that most city marathons lack a comprehensive rescue system, sustainable mechanisms, and sufficient cultural emphasis, crucial for the sustainable growth of marathon events in China. The Wuhan Marathon includes limited event diversity, low participation rates, inadequate government funding, and poor air quality during races. Gou and Du (2018) observed problems in China's urban marathon and economic development, such as a lack of innovation, singular functionality, subpar service standards, weak community engagement, and low market recognition.

Aurora et al. (2020) discovered that employing a process-based approach in managing marathon events positively correlates with their sustainability. They advocate for leveraging process management theory to enhance event organization and implement sustainable practices. The article presents a case study based on Spain's major marathons, illustrating a flowchart delineating key functional areas and processes crucial for event management. Process management theory offers a valuable tool for managers to optimize planning and execution. Technical management is pivotal in marathon races, encompassing course design, aid station placement, and logistics coordination. The allocation of tasks and coordination among departments is crucial. Methods outlined in the reference information include prioritizing tasks based on expert advice, establishing task relationships and timelines, and employing the management core-support framework. Strategic planning and marketing strategies are essential components. Analyzing and setting goals, strategic planning, internal communication, and technical planning are integral steps. While the research focuses on marathon process management, its applicability to other sports is plausible. To validate and analyze the feasibility of the model, several steps can be taken: conducting stakeholder surveys on perceived quality and satisfaction, longitudinal analysis of events, model validation in other sports contexts, and studying marathon processes in diverse cultural and developmental settings. Overall, the sports process management model's feasibility can be evaluated through these methods.

Conceptual Framework

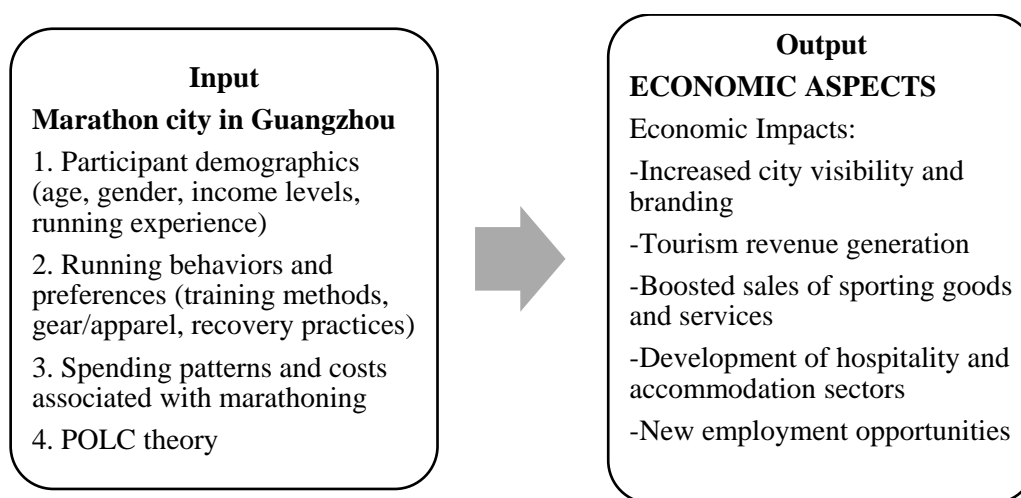


Figure 1 Conceptual Framework



Methodology

Population and sample:

Population; The total number of participants in this survey is 3000. Among them, are college athletes, social workers, marathon enthusiasts, and marathon volunteers. SamplesThe sample size was 341, determined using the Krejcie & Morgan sampling table. It included 85 college athletes, 85 social workers, 86 marathon enthusiasts, and 85 marathon volunteers from various backgrounds related to marathons.

Research instrument

Questionnaire: According to the needs of the research, four questionnaires were designed in this study, namely, Questionnaire 1 "Survey on Running shoes worn by Marathon Participants", Questionnaire 2 "Survey on consumers of Hosting Marathon Participants", questionnaire 3 "Survey on Guangzhou Marathon and the image of Guangzhou", and questionnaire 4 "Survey on the impact of holding City Marathon on urban Economy". In this paper, 341 marathon participants or staff participating in the marathon in Guangzhou, Guangdong province, were surveyed by questionnaire to collect their opinions and suggestions on related research issues of this paper, ensure the authenticity, accuracy, and rigor of the research, and obtain the data required for the research on the development of Guangzhou Marathon, and provide data support for this paper.

Questionnaire Design

According to the research needs, this study designed four questionnaires.

Part 1: "Marathon runners wearing shoes survey";

Part 2: "Consumer Survey of Marathon Participants";

Part 3: "Guangzhou Marathon and the image of Guangzhou";

Part 4: "Investigation on the Impact of Holding City Marathon on City Economy".

To ensure the scientific nature of the questionnaire, a total of 10 experts in related fields were invited to evaluate the content and structure of the questionnaire. 10 people were tested for the validity of the Questionnaire, there was an Index of Item- Objective Congruence (IOC) = 1

Data collection

1. Proceed to contact, coordinate, and distribute questionnaires to the specified sample groups.
2. Collect the returned questionnaires, inspect them, and select the complete ones.
3. Organize the data for statistical analysis.

Data Analysis

Data analysis was performed using frequency and percentage.

Research Process

Step 1: Review literature and research

1. Consult the relevant literature and newspapers at home and abroad to provide supporting arguments

2. Formulate the relevant information content of the questionnaire

Step 2: Gathering ideas and consulting data to formulate a conceptual frame

1. Prove that holding a city marathon can promote the city's economy

2. Prove the advantages and disadvantages of holding a city marathon

3. Prove that the consumption power of participants in urban marathons has an impact on sports brands, operators' promotion force, and city image

Step 3: Formulating conceptual frameworks

Activity scale and quality improvement: City marathons should be continuously improved in scale and quality. Increase the number of participants, attract more domestic and foreign players to participate, and improve the level of competition organization and service quality. This includes the provision of professional tracks, timing systems, security, and medical facilities to ensure the fairness and safety of the race.

Event promotion and publicity: City marathons need to carry out extensive publicity and promotion activities, including media coverage, social media marketing, city advertising, etc., to attract more



participants and viewers. At the same time, through cooperation with the media, sponsors, and celebrities, to enhance the visibility and influence of the city marathon.

Community inclusion and participation: City marathons should actively engage with local communities and build strong ties with residents and organizations. Through the organization of community running activities, volunteer recruitment, public welfare projects, etc., to enhance the sense of participation and identity of community residents. In addition, the city marathon will be built into a part of the city culture, combined with the city's history and humanistic characteristics, to increase the appeal of the race.

Environmental protection and sustainable development: City marathons should be committed to environmental protection and sustainable development. Take measures to reduce the impact of the event on the environment, such as garbage classification, energy conservation and emission reduction, and the use of environmentally friendly materials. At the same time, participants and spectators are encouraged to take environmental actions and promote low-carbon travel and healthy lifestyles.

Economic benefits and urban promotion: The city marathon, as a large-scale event, can bring huge economic benefits and publicity value to the city. Attract participants and visitors, and promote the development of tourism, catering, accommodation, and other related industries. At the same time, the city marathon is combined with the image promotion of the city to show the charm and vitality of the city.

Step 4: Constructing research instrument

1. Questionnaire Survey
2. Expert interview

Step 5: Collecting data

1. Four questionnaires provided data validity and authenticity
2. The participants were college students, social workers and marathon enthusiasts

Step 6: Analyzing and interpreting data

1. Data analysis using mean, mode, SPSS, etc
2. The authenticity of the four questionnaires is used to explain the advantages and disadvantages of holding city marathon, which has a role in promoting urban economic development

Step 7: Concluding and writing the final report

Results

1. Quantify the direct economic impact of hosting major marathon events in Guangzhou city.

Table 1 The effects of Marathon City's economic development.

Item	N	Opinion
1. Holding a city marathon was of positive significance to the city's economic development		
1. Yes	312	91.49%
2.No	9	8.50%
2. Impact of the city marathon on the city economy		
1. Improve city visibility	218	63.92%
2. Increase tourism income	164	48.09%
3. Promoting the development of the catering and accommodation industry	150	43.98%
4. Promotion of sporting goods sales	171	50.14%
5. Increase employment opportunities	100	34.10%

From Table 1 Overall Impact on Economic Development: An overwhelming majority of 91.49% believed that holding a city marathon was of positive significance to the city's economic development, while only 8.50% disagreed.



Specific Economic Impacts:

1. Improving City Visibility (63.92%): The biggest perceived impact was improving the visibility and image of the city itself.

2. Promotion of Sporting Goods Sales (50.14%): Half of the respondents felt the marathon would promote and boost sales of sporting goods and related products.

3. Increasing Tourism Income (48.09%): Nearly half believed the event would help attract more tourists and increase tourism revenue for the city.

4. Promoting the Catering and Accommodation Industry (43.98%): A sizeable portion expected the marathon to drive the development of the city's catering, restaurant, and accommodation sectors.

5. Increasing Employment Opportunities (34.10%): Over a third believed the marathon would create new employment opportunities, though this was seen as the lowest potential impact.

In essence, the data shows that hosting a city marathon was widely viewed as economically beneficial, particularly for enhancing the city's image and visibility, spurring sporting goods sales, attracting tourists, and giving a boost to related service industries like hospitality. Even increasing jobs was seen as a likely positive outcome by many respondents.

Table 2 The city marathon on the image, the social and cultural development of cities.

1. The role of holding a city marathon in shaping the image of a city.	N	Opinion
1. Enhance the vitality and charm of the city	225	65.98%
2. Showcasing the city's development achievements	170	49.85%
3. Increasing the soft power of cities	164	48.09%
4. Enhance the city's international visibility	127	37.24%
2. The impact of holding city marathons on the social and cultural development of cities.		
1. Promote the popularization of sports	207	60.70%
2. Stimulate residents' cultural creativity	184	53.95%
3. Increasing social solidarity and cohesion	177	51.90 %
4. Enriching urban cultural activities	133	39.00 %

Table 2 found that

Impact on City Image:

1. Enhancing City Vitality and Charm (65.98%): The majority viewed hosting a city marathon as a way to enhance the vibrancy, energy, and attractiveness of the city itself.

2. Showcasing Development Achievements (49.85%): About half felt the marathon provided an opportunity to showcase and highlight the city's development and progress.

3. Increasing City's Soft Power (48.09%): Nearly half believed it would increase the city's "soft power" or intangible appeal and influence.

4. Boosting International Visibility (37.24%): Over a third saw the marathon as a means to raise the city's profile and visibility internationally.

Impact on Social and Cultural Development:

1. Promoting Sports Popularization (60.70%): The majority viewed it as a way to help popularize and encourage sports/fitness among residents.

2. Stimulating Cultural Creativity (53.95%): Over half felt it would stimulate residents' cultural creativity and expression.

3. Increasing Social Solidarity (51.90%): About half believed it would increase a sense of social unity, cohesion, and community spirit.

4. Enriching Cultural Activities (39.00%): Two-fifths saw hosting the marathon as enriching the variety and vibrancy of the city's cultural activities.



In summary, respondents felt a city marathon could enhance the image, energy, and global profile of the city while promoting sports, fostering creativity, increasing social bonding, and adding to the cultural vibrancy of urban life.

1. Marathoners prioritized investing in quality running shoes, mainly in the 500-1000 yuan range from popular brands. They also equipped themselves with dedicated running apparel and accessories to enhance training and race performance.

2. In essence, the data shows that hosting a city marathon was widely viewed as economically beneficial, particularly for enhancing the city's image and visibility, spurring sporting goods sales, attracting tourists, and giving a boost to related service industries like hospitality. Even increasing jobs was seen as a likely positive outcome by many respondents.

3. Respondents felt a city marathon could enhance the image, energy, and global profile of the city while promoting sports, fostering creativity, increasing social bonding, and adding to the cultural vibrancy of urban life.

4. The data indicates an overwhelming consensus among respondents that the Guangzhou Marathon plays a distinctly positive role in areas like promoting sports culture, enhancing sponsor brand power, and demonstrating the region's economic development strengths. Very few respondents disagreed with these perceived benefits of hosting the event.

Based on the data provided, this was a suggested guideline using the POLC (Planning, Organizing, Leading, and Controlling) theory framework, specifically focused on the economic aspects of hosting the Guangzhou Marathon:

Planning:

1. Conduct a thorough analysis of the economic impact of previous Guangzhou Marathon events, including data on tourism revenue, sporting goods sales, employment opportunities, and other relevant economic indicators.

2. Set clear economic objectives and targets, such as increasing tourism revenue by a certain percentage, boosting sporting goods sales, or creating a specific number of temporary and permanent jobs.

3. Develop a detailed economic plan that outlines strategies for attracting tourists, promoting local businesses, and leveraging the event for economic development.

4. Establish partnerships and collaborations with relevant stakeholders, including tourism boards, local businesses, sponsors, and economic development agencies.

Organizing:

1. Form an economic committee or task force within the organizing committee, responsible for overseeing and implementing economic strategies.

2. Develop a comprehensive marketing and promotion plan to attract tourists and position the marathon as a key event for sports tourism in Guangzhou.

3. Coordinate with local businesses, hotels, restaurants, and retailers to offer special packages, discounts, and promotions during the marathon period.

4. Engage with sporting goods brands and retailers to leverage the event for product launches, sales promotions, and brand visibility.

5. Collaborate with relevant authorities and agencies to facilitate temporary employment opportunities related to the event, such as hospitality, security, and logistics.

Leading:

1. Provide strong leadership and guidance to the economic committee, ensuring effective coordination and execution of economic strategies.

2. Maintain open communication channels with stakeholders, sponsors, and local businesses to gather feedback and address concerns.

3. Foster a collaborative environment and encourage innovation in developing economic opportunities related to the marathon.



4. Ensure adherence to relevant regulations and policies regarding tourism promotion, business operations, and economic development initiatives.

Controlling:

1. Implement robust monitoring and evaluation mechanisms to track progress against established economic targets and objectives.

2. Collect and analyze data on tourist arrivals, spending patterns, sporting goods sales, and other relevant economic indicators during and after the marathon.

3. Conduct regular progress reviews and make necessary adjustments to the economic strategies based on emerging trends and feedback.

4. Establish quality control measures to ensure a consistent and high-quality experience for tourists, participants, and other stakeholders, which can impact future economic benefits.

5. Conduct a post-event economic impact analysis to assess the overall economic success, identify areas for improvement, and document lessons learned for future editions of the Guangzhou Marathon.

2. Constructed a guideline for hosting major marathon events in Guangzhou city.

Summary result of Group discussion points to check the suitability of the guidelines for organizing the marathon sports competition in terms of the expected economy of hosting the Guangzhou Marathon.

1. Planning Phase: The planning phase of the guideline focuses on laying the groundwork for the economic strategies. It begins with conducting a thorough analysis of the economic impact of previous Guangzhou Marathon events, including data on tourism revenue, sporting goods sales, employment opportunities, and other relevant economic indicators. This analysis provides valuable insights and helps set clear economic objectives and targets, such as increasing tourism revenue by a certain percentage, boosting sporting goods sales, or creating a specific number of temporary and permanent jobs.

2. Organizing Phase: Once the planning is in place, the guideline moves on to the organizing phase, which involves forming an economic committee or task force within the organizing committee. This dedicated team is responsible for overseeing and implementing the economic strategies. A comprehensive marketing and promotion plan is recommended to attract tourists and position the marathon as a key event for sports tourism in Guangzhou. Coordinating with local businesses, hotels, restaurants, and retailers to offer special packages, discounts, and promotions during the marathon period is another important aspect of the organizing phase. Engaging with sporting goods brands and retailers is also encouraged to leverage the event for product launches, sales promotions, and brand visibility.

3. Leading Phase: Effective leadership plays a crucial role in the successful execution of economic strategies. The guideline emphasizes providing strong leadership and guidance to the economic committee, ensuring effective coordination and execution of the economic strategies. Maintaining open communication channels with stakeholders, sponsors, and local businesses is vital for gathering feedback and addressing concerns. Fostering a collaborative environment and encouraging innovation in developing economic opportunities related to the marathon is also highlighted as an important aspect of effective leadership.

4. Controlling Phase: The controlling phase is focused on monitoring, evaluating, and making necessary adjustments to ensure the economic success of the event. Implementing robust monitoring and evaluation mechanisms to track progress against established economic targets and objectives is a key component of this phase.

Collecting and analyzing data on tourist arrivals, spending patterns, sporting goods sales, and other relevant economic indicators during and after the marathon is crucial for comprehensive evaluation and informed decision-making.

The guideline recommends conducting regular progress reviews and making necessary adjustments to the economic strategies based on emerging trends and feedback. This agile approach allows organizers to adapt to changing circumstances and capitalize on new opportunities. Establishing quality control measures to ensure a consistent and high-quality experience for tourists, participants, and other stakeholders



is also emphasized, as it can impact future economic benefits. Finally, the guideline suggests conducting a post-event economic impact analysis to assess the overall economic success, identify areas for improvement, and document lessons learned for future editions of the Guangzhou Marathon.

By following this comprehensive guideline structured around the POLC framework, the organizers of the Guangzhou Marathon can effectively plan, organize, lead, and control the economic aspects of the event, maximizing its economic impact and contributing to the overall success of the marathon.

Discussion

The results indicate that marathon runners' investment in quality running gear is influenced by factors such as performance improvement, injury prevention, and personal comfort. Many prioritize spending between 500 and 1000 yuan on reputable running shoe brands, recognizing the significance of proper footwear in boosting performance and minimizing injury risks.

Recent studies support the notion that marathon runners' investment in quality running gear is influenced by factors such as performance enhancement, injury prevention, and personal comfort (Tiller et al., 2019). The prioritization of spending on popular brands of running shoes in the 500–1000-yuan range is attributed to the recognition of proper footwear's importance in enhancing running performance and reducing injury risks (Smyth & Muniz-Pumares, 2020). Nutritional considerations also play a crucial role in marathon performance, with recommendations emphasizing individualized strategies to meet caloric demands, maintain lean mass, and support recovery from training (Lindorfer et al. 2020). Furthermore, research indicates a rise in cardiac troponin levels post-marathon running among all runners, with no significant differences based on pre-existing heart conditions or collapse at the finish line (Madininos et al., 2021).

In essence, hosting a city marathon was widely perceived as economically advantageous. It enhanced the city's image and visibility, boosted sales of sporting goods, attracted tourists, and stimulated related service industries like hospitality. Many respondents also viewed it as likely to increase job opportunities.

According to recent reports and research, hosting a city marathon is indeed seen as economically advantageous, with various positive outcomes. Studies indicate that municipal marathon events significantly boost local tourism performance, thereby enhancing the city's image and visibility (Tiller et al., 2019). Moreover, marathons play a substantial role in promoting the city's brand by showcasing its culture, raising fitness awareness, and improving sports infrastructure (Fernández et al., 2022). While economic impact studies have yielded positive results for host cities, there have been questions raised about the methodologies employed (Ferreira et al., 2023). Additionally, the surge in national fitness enthusiasm has led to marathons attracting sports enthusiasts, showcasing their significant social and economic impact (Shi et al., 2020). Overall, hosting a city marathon is associated with increased tourism, higher sales of athletic products, job creation, and support for allied service industries such as hotels.

Conclusion

This research objective was to quantify the direct economic impact of hosting major marathon events in Guangzhou city and to construct a guideline for hosting major marathon events in Guangzhou city.

This research employed a descriptive survey method utilizing questionnaires to collect data from various stakeholders and participants in the Guangzhou Marathon. Subjects were a simple random sampling of 341 participants, including college students, social workers, and marathon enthusiasts. The research instrument was questionnaire development, and four separate questionnaires were designed to address different aspects of the research: 1) "Marathon runners wearing shoe survey". 2) "Consumer Survey of Marathon Participants". 3) "Guangzhou Marathon and the Image of Guangzhou". 4). "Investigation on the Impact of Holding a City Marathon on the City Economy". To ensure the validity and reliability of the questionnaires, the following steps were taken: content and structure evaluation by 10 experts in related fields, pilot testing for validity, with an Index of Item-Objective Congruence (IOC) of 1. Data Analysis: The collected data were analyzed using descriptive statistics, including frequency and percentage.



This study found that a summary of the new knowledge presented in those four points: 1) Marathoners invest significantly in high-quality running gear and accessories to optimize their training and performance. This includes prioritizing running shoes in the mid-to-high price range from popular brands, as well as purchasing dedicated running apparel, watches, headphones, and other accessories. 2) Hosting a city marathon is widely perceived to yield substantial economic benefits. Key perceived economic impacts include enhancing the city's visibility and image, driving sales in the sporting goods industry, attracting tourism and related hospitality revenue, and creating new employment opportunities. 3) Beyond economic factors, city marathons are also viewed as having positive social and cultural impacts. Respondents felt marathons can enhance a city's vibrancy, global profile, and "soft power" appeal while promoting sports participation, fostering creativity and cultural expression, and increasing social cohesion among residents. 4) There is an overwhelming consensus that the Guangzhou Marathon specifically plays a distinctly positive role in areas like promoting sports culture, boosting sponsor brand power and recognition, and showcasing the region's economic development strengths. Very few respondents disagreed with the perceived multifaceted benefits of hosting the event.

In essence, the data suggests that investing in and hosting a large-scale city marathon can yield wide-ranging economic, social, cultural, and branding benefits for the host city, making it an attractive event to organize from multiple perspectives, according to the respondents surveyed.

Recommendation

1. Invest in City Marathon Infrastructure and Promotion should be studied to enhance marathon infrastructure and logistics, improve running routes and participant amenities, increase marketing efforts across digital platforms, and forge partnerships to maximize promotional reach.

2. Should collaborate with Corporate Sponsors and Partners, seek partnerships with reputable brands, develop customized sponsorship packages, provide value-added benefits for sponsors, and foster long-term relationships with partners.

3. Future research should explore the long-term economic impact of hosting city marathons on local businesses and industries, investigate the social and cultural effects of marathon events on community cohesion and identity, and examine the branding and promotional strategies employed by successful city marathons to attract participants and sponsors.

References

- Aurora, M., Alberto, A., Vicente, A. & Aurora, G. (2020). What's Behind a Marathon? Process Management in Sports Running Events. *Strategic Planning of Sports Systems*, 12(15), 6000; <https://doi.org/10.3390/su12156000>.
- Bi, C. (2016). Development of Beijing Marathon and Its Impact. Doctoral dissertation, Beijing Sport University.
- Fernández-Martínez, A., Cabello-Manrique, D., Roca-Cruz, A.F., & Nuviala, A. (2022). The Influence of Small-Scale Sporting Events on Participants' Intentions to Recommend the Host City. *Sustainability*, 14, 7549. <https://doi.org/10.3390/su14137549>.
- Ferreira, S., Batista, P., Sánchez-Sáez, J.A., Sánchez-Sánchez, J., & Carvalho, M.J. (2023). Road Racing Event Management Satisfaction: A Scoping Review of the Literature in Different Populations. *Sustainability*, 15, 2251. <https://doi.org/10.3390/su15032251>.
- Gou, S., & Du, T. (2018). Analysis of the status quo of urban marathon in China. *Journal of Chi Zhou University*, 32(03), 112-123.
- Li, G., & Li, W. (2011). *Strategic Thinking on the Development of Urban Marathons in China*. Science and Technology Information.
- Li, W., Liu, Y., Zhu, A., & Hai, H. (2017). Marathon risk analysis and countermeasures. *Value Engineering*, 36(2), 94-96.
- Lindorfer, J., Kröll, J., & Schwameder, H. (2020). Does enhanced footwear comfort affect oxygen consumption and running biomechanics? *European Journal of Sport Science*, 20(4), 468–476. <https://doi.org/10.1080/17461391.2019.1640288>



- Maditinos, Z., Vassiliadis, C., Tzavlopoulos, Y., & Vassiliadis, S. A. (2021). Sports events and the COVID-19 pandemic: assessing runners' intentions for future participation in running events – evidence from Greece. *Tourism Recreation Research*, 46(2), 276–287.
<https://doi.org/10.1080/02508281.2020.1847422>.
- Nicholas, B. T., Tiller, J. D., Roberts, L. B., Beasley, L., Chapman, S., Marques Pinto, J., & Bannock, L. (2019). International Society of Sports Nutrition Position Stand: nutritional considerations for single-stage ultra-marathon training and racing. *Journal of the International Society of Sports Nutrition*. <https://doi.org/10.1186/S12970-019-0312-9>.
- Rong, H. (2017). Research on Sustainable development of Marathon events in China - A case study of Zhuhai International Half Marathon. *Intelligent Information Technology Applications Meeting*, 180-188.
- Shi, R., Zhang, J., Fang, B., Tian, X., Feng, Y., Cheng, Z., Fu, Z., Zhang, J., & Wu, J. (2020). Correction to: Runners' metabolomic changes following Marathon. *Nutrition & Metabolism*, 17, 53-60.
<https://doi.org/10.1186/s12986-020-00468-6>.
- Smyth, B., & Muniz-Pumares, D. (2020). Calculation of Critical Speed from Raw Training Data in Recreational Marathon Runners. *American College of Sports Medicine*, 52(12). Retrieved from <http://hdl.handle.net/10197/12215>
- Tian, X. (2016). Research on the reasons, problems, and development path of marathon popularity. *Journal of Nanjing University of Physical Education (Natural Science Edition)*, 3, 88-92.
- Tiller, N.B., Roberts, J.D., Beasley, L., Chapman, S., Pinto, J.M., Smith, L., Wiffin, M., Russell, M., Sparks, S.A., Duckworth, L., O'Hara, J., Sutton, L., Antonio, J., Willoughby, D.S., Tarpey, M.D., Smith-Ryan, A.E., Ormsbee, M.J., Astorino, T.A., Kreider, R.B., McGinnis, G.R., Stout, J.R., Smith, J.W., Arent, S.M., Campbell, B.I., & Bannock, L. (2019). International Society of Sports Nutrition Position Stand: nutritional considerations for single-stage ultra-marathon training and racing. *J Int Soc Sports Nutr*. 16(1), 50. doi: 10.1186/s12970-019-0312-9.
- Xing, J., Liu, B., & Ou, Y. (2017). Cold thinking behind Marathon 'hot' "J7, *Journal of Sports*, 3(24), 52-56.
- Xu, Y. (2016). Cold thinking behind the Chinese city marathon craze "J7. *Sports Culture Guide*, 3, 108-111.
- Zhu, L. (2013). *A study on the relationship between urban marathons and urban development in China*. Doctoral dissertation, Beijing Sport University.