

# An Analysis of the Multidimensional Enabling Mechanism of Marathon Events on Urban Development: A Case Study of the Yulin Marathon

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**Abstract:** To explore the empowerment mechanisms of urban marathon events on their host cities, this study takes the 2025 Wenchang Real Estate Yulin Marathon as a case study. Using questionnaire surveys (N=2038), mathematical statistics, and case analysis methods, it conducts an empirical analysis from the perspectives of participant characteristics, event satisfaction, participation motivation, commercial value, and social benefits. The results show that: (1) participants are mainly well-educated middle-class individuals aged 31–45 (65.46%) with strong sports consumption capacity; (2) overall event satisfaction reaches 92.94%, though deficiencies remain in areas such as course support and pre-race expos; (3) health value (77.53%) and cultural experience (59.18%) are the main participation motivations, with 60.3% of participants staying for more than two days, forming a “run-tourism integration” feature; (4) the sponsorship brand exposure rate is 87.49%, but the value co-creation mechanism is still underdeveloped; and (5) the event’s social benefits are significant, with 94.8% of participants incorporating running into their daily exercise routines. The study concludes that the Yulin Marathon has established a multidimensional mechanism through refined experiences, commercial ecology, policy coordination, and run-tourism integration to empower urban development, providing a practical model for the high-quality development of regional marathon events.

**Keywords:** urban marathon; participant characteristics; event satisfaction; run-tourism integration; value co-creation; sports event empowerment

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## 1. Introduction

In recent years, urban marathon events have been experiencing a booming development globally, undergoing a profound transformation from a professional competitive sport to a large-scale urban comprehensive activity<sup>[1]</sup>. This shift not only reflects the awakening of public fitness awareness and the upgrading of leisure consumption but also highlights the significant value of sports events as a catalyst for urban development. With the deep integration of marathons and urban development, the value connotation of these events has far surpassed the traditional scope of sports, becoming an academic issue worthy of exploration from multiple disciplines and perspectives. From an economic perspective, marathon events exhibit a strong consumer-driven capacity. events form a “core event consumption – related industry consumption – derivative symbolic consumption” compound value network, generating significant economic spillover effects through

hierarchical expansion and layer-based diffusion<sup>[2]</sup>. However, this process also faces challenges, such as consumption degradation caused by event homogenization and the increased social exclusion risks due to consumption stratification, which urgently requires breakthroughs through ecological transformation and value reconstruction<sup>[2]</sup>.

In the realm of cultural communication, marathon events have become an important platform for urban cultural display and identity construction. Through route planning, media coverage, and the interaction of power dynamics, marathons deeply participate in the process of urban image construction<sup>[3]</sup>. Meanwhile, local residents form a cultural identity through participation in these events, which enhances their sense of happiness and further strengthens the social and cultural value of the events<sup>[4]</sup>. This cultural empowerment mechanism makes marathons an important site for modern urban cultural production and reproduction. In tourism development, marathon events, with their unique “flowing landscape” characteristic, have become an important carrier for the integration of sports, the quality of the event’s landscape significantly promotes sports tourists’ perceptions of the destination’s image, which, through this intermediary variable, influences their behavioral intentions<sup>[5]</sup>. The organic combination of events and tourism has led to the emergence of a new “sports-tourism integration” model, injecting new vitality into urban tourism development through the overlapping effects of economic benefits, social impacts, and spatial effects<sup>[6,7]</sup>. In the field of social governance, digital transformation provides new possibilities for the management and service upgrading of marathon events. The introduction of agile governance concepts offers new ideas for addressing the complex risks involved in marathon organization. Through agile responses across dimensions such as value, stakeholders, tools, and processes, the modernization of event governance is enhanced<sup>[8]</sup>. Meanwhile, the construction and optimization of service quality models provide theoretical foundations and methodological guidance for continuously improving participant experiences<sup>[9]</sup>.

Despite valuable explorations of the relationship between marathons and urban development from different perspectives, there are two notable limitations: on one hand, they are relatively narrow, often focusing on economic impact analysis or cultural communication value, lacking a systematic analysis of the multi-dimensional empowerment mechanisms of marathon events on urban development; on the other hand, most studies remain at a macro level, without in-depth case studies or analysis of the intrinsic connections, collaborative pathways, and symbiotic logic among various empowerment dimensions.

Therefore, this study takes the 2025 Wenchang Real Estate Yulin Marathon as an empirical case, employing including surveys and in-depth interviews, aiming to construct a more systematic and comprehensive analytical framework for the multi-dimensional empowerment of marathon events in urban development. The study will focus on the following key questions: How can the Yulin Marathon enhance the city’s brand reputation through the fine design of the participant experience? How can the “sports-tourism integration” model innovatively activate the city’s cultural and tourism consumption potential? How do the transformation of sponsorship cooperation models and government-enterprise collaboration mechanisms jointly drive urban economic development? What are the internal connections and collaborative mechanisms between various empowerment dimensions? Through an in-depth analysis of these questions, this study aims to reveal the intrinsic logic between marathon events and high-quality urban development, providing new theoretical perspectives for understanding the interactive relationship between sports events and urban development, as well as offering valuable insights for the event organization and urban marketing practices of similar cities.

## 2. Methods

This study primarily adopts a questionnaire survey method. After the event, questionnaires were distributed to participants through official channels, and a total of 2,038 valid responses were collected. The data were organized and analyzed using mathematical statistics, focusing on examining participants’ satisfaction, participation motivations, consumption behaviors, and evaluations of various event services.

### **3. Results and Analysis**

#### **3.1. Participant Profile: The Main Force of High-Value Sports Consumption**

This study analyzes the demographic characteristics of 2,038 valid samples to paint a clear picture of the participants in the Yulin Marathon. In terms of age structure, the 31 to 45 age group dominates, accounting for 65.46%. This age group is typically in a stable phase of their careers, possessing strong economic independence and a heightened awareness of health investment. Regarding educational background, 77.38% of the participants have a college degree or higher, reflecting a significant proportion of highly educated individuals, suggesting that they have higher expectations when choosing events and pursuing a healthy lifestyle. From an economic standpoint, 75.86% of participants come from middle-to-high-income households with an annual income exceeding 100,000 RMB, providing a solid economic foundation for event-related spending. The characteristics of this “highly educated, middle-class, middle-aged” group closely align with the profile of core sports consumers. Further consumer behavior data shows that over half of the participants (55.15%) purchased specialized gear before the event, 41.03% bought health recovery supplements, and 37.89% invested in systematic training. These figures not only reflect the strong consumption power of this group but also reveal that they view the marathon event as a comprehensive consumption process, including gear, nutrition, and training, which provides diverse opportunities for commercial development related to the event.

#### **3.2. Event Satisfaction : A Coexistence of Overall Excellence and Specific Shortcomings**

Survey data reveals that the 2025 Yulin Marathon received widespread acclaim from participants, with an overall satisfaction rate of 92.94% and an average event rating of 4.69 out of 5. An analysis of various segments highlights that core service processes stand out for their exceptional performance: registration convenience (88.32% very satisfied), race medal design (91.85% very satisfied, average score 4.87), and results inquiry services (87.34% very satisfied, average score 4.8) all demonstrate the event organizers’ professionalism and reliability at key junctures, forming a solid foundation for the high satisfaction rate. However, while the overall event experience is exemplary, certain areas reveal noticeable shortcomings. Specific services, such as on-course supply stations (4.47 points, 70.46% very satisfied), the pre-race expo (4.53 points, 70.61% very satisfied), and shuttle transportation (4.56 points, 74.98% very satisfied), received ratings significantly lower than the overall average (4.69), indicating relative deficiencies in these aspects of the event experience. Notably, the satisfaction with on-course supply services was considerably lower than that of critical services such as volunteer support (4.75 points) and medical assistance (4.68 points), which are essential for safety and overall experience. This suggests that the current supply arrangements fail to fully meet the needs of seasoned runners, particularly those who place high value on performance and experience, highlighting an increased demand for “scientific” and “specialized” nutrition support.

#### **3.3. Participation Motivation: The Integration of Intrinsic Health Drivers and Extrinsic Cultural Appeal**

An analysis of participation motivations reveals the deeper psychological mechanisms behind participants’ behaviors. The data show that intrinsic motivations play a dominant role, with “improving physical fitness” (77.53%) and “relieving stress” (67.62%) emerging as the primary driving factors. This indicates that marathon running has become both a proactive approach to pursuing a healthy lifestyle and an effective means of psychological regulation. Meanwhile, “challenging oneself” (57.07%) reflects that, particularly among experienced runners, participation often stems from a desire to test personal limits and embody the spirit of self-transcendence. At the same time, extrinsic motivations also play a significant role in shaping participation behavior. “Experiencing the race atmosphere” (63.94%) and “exploring urban culture” (59.18%) are among the key external motivators. This trend moves beyond the traditional perception of marathons as purely competitive events, underscoring their dual function as platforms for social interaction and cultural engagement. Notably, the strong alignment between motivational and behavioral data further supports this finding: the 59.18% cultural experience motivation corresponds closely with the 60.3% of participants who stayed in Yulin for more than two days and

the 61.29% who visited tourist attractions. This alignment demonstrates that the Yulin Marathon has successfully attracted a large cohort of participants embodying dual identities as both “runners” and “tourists,” thereby revealing vast potential for the integrated development of the “sports + cultural tourism” industry.

### **3.4. Sponsor Effectiveness Analysis: High Brand Exposure and the Potential for Co-Created Value**

In this year’s event, sponsors achieved remarkable success in brand communication. Survey results indicate that 87.49% of participants perceived sponsor brands through event-related settings or materials (such as race kits, running shirts, and bibs), a penetration rate far exceeding that of conventional advertising channels. This high-frequency visual and experiential exposure significantly enhanced brand recall and recognition among participants. More importantly, interactive experiences along the course—such as intangible cultural heritage performances, product sampling, and local specialty showcases—received positive feedback from 91.32% of participants. This demonstrates that the integration of commercial elements within the event was well-balanced: rather than diminishing the professionalism or immersion of the marathon, these elements enhanced its overall appeal, enjoyment, and interactivity.

However, despite the impressive brand exposure, the pathways for sponsors’ commercial conversion and value extension remain underdeveloped. Currently, most sponsorship models still rely primarily on static logo displays and one-way messaging, lacking deep emotional engagement with runners and effective post-event consumer conversion. Although 55.2% of participants expressed strong pre-race consumption enthusiasm, this potential has not yet been effectively translated into purchasing behavior. To address this issue, future sponsorship strategies should evolve from traditional “exposure-driven” models to “value co-creation” approaches. This can be achieved by developing limited-edition merchandise with collectible value, establishing interactive “energy stations” at key points along the course, and implementing systematic post-event user engagement and community-building mechanisms. Such measures would facilitate the transformation of short-term visibility into long-term brand equity and tangible sales leads, thereby enhancing the sustainability and synergistic impact of marathon sponsorship.

### **3.5. Social Benefits: A Comprehensive Value Platform Beyond Competition**

The social value of the Yulin Marathon extends far beyond the 42.195-kilometer course, encompassing multiple dimensions of public life. First, in terms of health promotion, the event has played a significant leadership role. According to the survey, 94.8% of participants reported that the event encouraged them to incorporate running into their daily exercise routines, and 65.26% of participants felt that their health had experienced a “significant improvement” due to participation. This highlights the positive impact of marathon events in promoting health behaviors among the general public. In terms of mental health and well-being, the event has also demonstrated its unique social benefits. 58.78% of participants stated that they felt “extremely happy” during the event, reflecting the positive effect of large-scale sports events on enhancing public mental health and happiness in the fast-paced modern society. This underscores the role of sports activities in emotional regulation and psychological relief. In terms of social connections, the event has also played a vital role. 54.42% of participants reported that their daily social interactions during the event ranged from 3 to 9 people, indicating that the marathon is not just a competitive event, but also an effective platform for expanding social networks and fostering interpersonal relationships. This data further demonstrates that the event has strengthened community cohesion and a sense of belonging by facilitating interaction and communication among participants. These findings fully demonstrate that the Yulin Marathon has successfully created a multi-dimensional value platform that promotes public health, enhances happiness, and strengthens social capital, making its social benefits one of the most valuable intangible assets of the event.

## **4. Discussion and Recommendations**

### **4.1. Focusing on Experience Refinement: Upgrading from “Functional Satisfaction” to “Emotional Resonance”**

Currently, there exists a “barrel effect” in the event experience, with aspects such as racecourse aid stations, pre-race

expos, and shuttle transportation becoming key bottlenecks that limit overall experience improvement. These touchpoints are where participants invest the most emotional energy and have the strongest on-site perceptions. Therefore, future optimization should not only address the basic “existence” issues but should also focus on creating “memorable” event experiences that resonate emotionally with participants. First, regarding the optimization of racecourse aid services, the principle of “scientific foundation, cultural enrichment” should be followed. A tiered aid strategy is recommended: basic aid stations should provide sufficient drinking water and sports drinks; at critical race points (such as the 25km and 35km marks, where wall-hitting is common), “enhanced aid stations” should be added to offer energy gels, salt tablets, and other professional supplies; and in race segments that showcase the city’s landscape, “Yulin Specialty Aid Stations” could be introduced, offering local delicacies (such as sugar-coated pears and yellow millet cakes). This would not only provide necessary energy support for runners but also evoke participants’ memories of the city’s culture, thereby better addressing the 59.18% of runners who expressed a desire for cultural experiences.

Second, the core issue with the pre-race expo is its singular focus, which fails to effectively spark participants’ anticipation and engagement. Therefore, the pre-race expo should evolve from a simple “material collection center” to a “marathon-themed carnival.” Specifically, three interactive modules could be set up: first, a “Scientific Running Workshop” inviting sports experts to discuss training, nutrition, and injury prevention, meeting the needs of 37.9% of runners who desire structured training; second, a “Sponsor Innovation Experience Zone,” allowing participants to preview the latest equipment and technology products, thereby deepening their brand awareness; and third, a “Yulin Cultural Interaction Zone,” where activities like intangible cultural heritage experiences and tastings of local foods could spark participants’ curiosity and enthusiasm for the city’s culture. In terms of optimizing shuttle transportation at the start and finish lines, breakthroughs should be sought in both “data-driven” and “human-centered” approaches. Organizers could use accommodation data provided by participants to dynamically optimize shuttle routes and frequencies. Additionally, at the finish line, besides efficient bag collection services, a “Post-Race Recovery Zone” should be planned, offering professional muscle relaxation, ice therapy, foot soak pools, and comfortable waiting areas for family and friends. This would effectively alleviate physical fatigue and psychological stress for runners after completing the race, making the conclusion of the event a warm memory of care and respect, thus improving the satisfaction of 73.6% of runners with the overall event atmosphere.

## **4.2. Promoting Sponsor Transformation: Building a New “Value Co-Creation” Ecosystem for Sports Events**

Although event sponsors have achieved significant brand exposure, their commercial potential remains underutilized. In the future, the sponsorship system of sports events should transition from a simple “resource-selling” model to one of “value co-creation,” transforming sponsors from passive “participants” into active “co-builders.” This shift will enable them to jointly create greater added value for participants and enhance the overall brand ecosystem of the event. First, an “Event Material Value Enhancement Initiative” should be implemented. Given that race kit collection has an almost 100% reach rate, the traditional “bundle of promotional flyers” should be upgraded into a “runner’s exclusive gift box.” Organizers and sponsors can jointly design and develop limited-edition products that combine practical functions with aesthetic design—such as high-tech performance T-shirts, modular storage equipment, and customized recovery items. This approach not only satisfies the 41.17% of participants who view event items as collectibles but also ensures ongoing brand visibility through everyday usage scenarios, thereby extending the life cycle of brand exposure.

Second, an “immersive racecourse interaction paradigm” should be established. Moving beyond static advertising boards, event organizers should create dynamic, interactive brand experience zones. For instance, title sponsors could set up “brand-themed cheering stations” at the most challenging segments of the race, organizing cheer squads and offering signature refreshments to foster emotional connection. Meanwhile, technology sponsors could install “real-time timing and data feedback points” that provide runners with split times and physiological metrics, aligning the brand with athletes’ pursuit of performance and scientific training. Finally, a “full-cycle participant value operation system” should be



developed to form a closed-loop marketing model centered on the entire participant journey. Before the event, sponsors can co-launch online training camps and check-in challenges to engage potential participants; during the event, immersive interactions can strengthen brand recognition; after the event, loyalty programs, personalized race certificates, exclusive discounts, and customized memorabilia can sustain engagement and convert enthusiasm into long-term brand loyalty and purchasing behavior. In particular, for the 20.61% of advanced runners who already use wearable monitoring technologies, sponsors can offer data-driven product recommendations and personalized services—thus realizing a strategic shift from “brand exposure” to “value co-creation.”

#### **4.3. Building a “Policy-Business” Dual-Engine: Systematic Release of Participants’ Consumption Potential**

In the face of participants’ strong consumption potential and the low coverage of policy support (with government consumption vouchers covering only 14.82% and corporate welfare covering 22.77%), there is an urgent need to establish a “policy-guided—business-collaborated” dual-drive consumption incentive system to systematically unleash participants’ consumption potential and stimulate regional economic growth. At the policy level, it is crucial to fully leverage the high-value characteristics of participants—65.46% are in the prime consumption age group, and 60.3% of participants stay in Yulin for more than two days—by making the “Yulin Marathon” a key scene for issuing sports consumption vouchers. It is recommended to implement the “Runner Yulin Pass” electronic voucher program, where participants’ race numbers are linked with the “Yulin Tour” city service mini-program. This will automatically distribute vouchers that can be used at local hotels, restaurants, tourist attractions, and sports goods stores. This initiative will not only directly stimulate consumption during the event but also guide the 61.23% of participants who prefer visiting scenic spots to engage in secondary consumption, thus creating a “one participant, multiple consumption” ripple effect.

At the business collaboration level, it is important to precisely engage the 36.16% of corporate employees participating in the race by developing the “Corporate Health Partner Program.” This program should go beyond traditional group registration discounts, providing corporate running teams with customized race service packages, exclusive photo spots, rest areas, and other value-added services. More importantly, by establishing a post-event continuous service mechanism, offering health lectures, fitness assessments, and scientific training guidance to employees of partner companies, the event can be transformed from a one-time activity into a long-term corporate health management and team-building platform. This approach not only extends the value of the marathon into the corporate culture sector but also achieves a sustainable development model of “employee health—corporate culture—event economy” with mutual benefits for all parties.

#### **4.4. Deepening “Run-Travel Integration”: Transforming the Event into a Premier City Cultural Experience IP**

The greatest potential of the Yulin Marathon lies in its ability to become a significant narrative vehicle for the city’s culture. In the future, the event should systematically integrate sports activities, urban spaces, and cultural resources to create a unique “run-travel integration” brand, promoting deep fusion between the event and the city’s culture. First, a thematic cultural tourism product system should be established. Based on participants’ stay durations (37.29% stay for 2 days, 23.01% stay for more than 3 days), it is essential to carefully design and promote “Yulin Run-Travel Themed Routes.” For example, the “Race Track Imprint Route” could connect the starting point, finish line, and iconic race segments to create a culturally immersive experience along the racecourse. The “Historical Exploration Route” could connect cultural landmarks such as Zhenbei Tai and Hongshi Gorge, allowing participants to delve into Yulin’s rich history. The “Ecological Leisure Route” would highlight Yulin’s green transformation in recent years. These travel routes can be pushed through dedicated channels, providing a seamless connection between race registration and pre-race tourism experiences.

Second, a city-wide atmosphere-building mechanism should be established for all periods. During key pre-race periods, “Runner Welcome Centers” could be set up at transportation hubs and commercial centers, where city decorations and intangible cultural heritage performances can create a festive race atmosphere. After the event, participants can

enjoy continued consumption discounts with their race bib numbers, effectively extending their stay and prolonging the consumer engagement. This strategy transforms the event's "heat" into long-lasting "warmth," creating sustained economic benefits. Finally, in-depth development of racecourse storytelling should be implemented. The 42.195-kilometer racecourse into a "moving city exhibition." An online audio guide app could be developed to automatically push historical anecdotes and stories related to key landmarks as participants pass them. Along the course, cultural information signs with thoughtful designs could be set up, providing participants with an immersive experience of Yulin's city transformation and cultural heritage. This deep cultural empowerment not only enriches the event's content but also gives the Yulin Marathon a unique cultural competitive edge, distinguishing it from other races.

## 5. Conclusion and Prospects

This study conducted an empirical survey of 2,038 participants in the 2025 Yulin Marathon, providing an in-depth analysis of the race's participant experience, demographic characteristics, commercial value, and social benefits, yielding the following key conclusions: Firstly, the Yulin Marathon has successfully established itself as a regional benchmark event, with an overall satisfaction rate of 92.94% and a recommendation rate of 81.4%. This reflects the high level of organizational operation and has generated a strong word-of-mouth effect within the runner community, laying a solid foundation for the event's sustainable development. Secondly, the participants are primarily aged between 31 and 45, with a high level of education and middle-to-high income, forming a stable base for the event and creating a potential market with both purchasing power and health consciousness. Notably, pre-event consumer behaviors, such as the 55.15% rate of equipment purchases, indicate the substantial potential for commercialization. Thirdly, refined event management will become a core competitive advantage in the future. Through data comparison, this study revealed shortcomings in areas such as race course supplies, pre-event expos, and shuttle transportation. The findings suggest that future competition should focus on creating emotional resonance and lasting memories, enhancing the overall participant experience. Fourth, the sponsorship model needs to evolve from mere "traffic exposure" to "value co-creation." By implementing immersive interaction and full-cycle operation, brands can increase value and customer loyalty, thus driving deeper commercialization of the event. Finally, the integration of running and tourism has become a crucial path for the event to empower urban development. The combination of participants' cultural experience motivations and tourism consumption behaviors further demonstrates that the Yulin Marathon has the potential to go beyond a sports event, becoming a cultural celebration and economic catalyst for the city.

Looking ahead, the Yulin Marathon is at a key stage in transitioning from a regional event to a national brand IP. The event organizers and city administrators should adopt three strategies to drive its development: first, the refined experience strategy, continuously optimizing the participant experience; second, the ecological symbiosis strategy, creating a win-win ecosystem for the event, brands, participants, and the city; and third, the long-term value strategy, extending the social, cultural, and economic benefits of the event to empower the city's brand and public health in the long term. Through the coordinated implementation of these three strategies, the Yulin Marathon is expected to not only consolidate its sports professionalism but also expand its multidimensional value in social responsibility, cultural heritage, and economic development. Ultimately, it aims to realize the grand vision of "empowering cities through running and enriching lives through sports," becoming a shining symbol of Yulin's urban development.

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## Disclosure statement

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