

# Visual Analysis of Research Trends in Chinese Marathon Events (2010-2024)

Mingyuan Jia

School of Arts and Sports, Dong-A University, Busan, Republic of Korea  
jiamingyuan2022@gmail.com

**Abstract:** This study conducts a visual analysis to explore the research trends on marathon events in China over the past 14 years. By utilizing the China National Knowledge Infrastructure (CNKI) database and searching for literature using the keyword "marathon events," the study identifies key research topics and presents them through visual mapping. The results reveal that among the eight main research areas, Chinese scholars have primarily focused on issues related to the marathon industry. Overall, research trends in Chinese marathon events are closely tied to the industry, while also addressing event organization, management, and various other aspects of the marathon. The study provides a comprehensive view of the development and trends in this field.

**Keywords:** Marathon events, China, Research hotspots, Development trends.

## 1. Introduction

Since 2010, marathon events in China have witnessed significant growth, attracting increasing attention from scholars. Marathons are not only a symbol of mass sports but also serve as a vital window into urban development, public health, and social culture. With the continuous expansion of marathon events, the nature of these competitions has evolved from pure athletic contests into comprehensive activities that integrate fitness, tourism, and economic benefits. In this context, exploring the development trends of marathon events in China is crucial for understanding the socio-economic impacts, policy support, and future growth of these events.

In recent years, the implementation of national fitness policies has spurred the rapid growth of marathon events in Chinese cities [1], with participation and the number of events rising annually. Concurrently, academic research on marathons has also expanded, covering areas such as event organization, participants' health, economic benefits, and environmental impact. However, despite the substantial body

of research, there remains a lack of systematic reviews and quantitative analyses that examine the trends and hotspots in marathon-related studies.

By analyzing journal articles, academic conference papers, and other relevant research outputs, this study aims to uncover the primary research directions, hotspots, and trends during this period [2]. Additionally, based on these trends, we will offer recommendations for future developments. This analysis not only provides academic support for the future evolution of marathon events but also offers valuable insights for policymakers, event organizers, and sports enthusiasts.

## 2. METHODOLOGY

The keyword "marathon events" was used to conduct a systematic search in the CNKI database, with the search period set from July 2010 to July 2024. Visual analysis software (CiteSpace) was employed to generate visual maps and perform related calculations. To ensure the accuracy of search terms and avoid omitting relevant literature, the search was conducted at three different time points during the period.

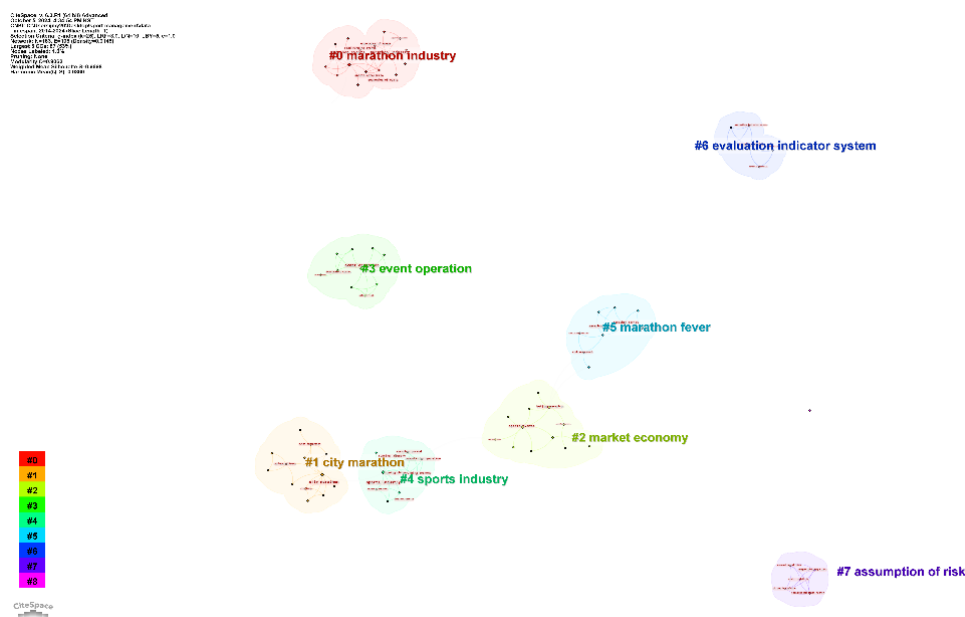


Figure 1. Hotspot Map of Research Trends

### 3. RESULTS

#### 3.1. Research Hotspot Keywords

Figure 1 presents the key research hotspots, identified through cluster analysis, which categorizes the most prominent research areas into eight main clusters: Marathon Industry, City Marathon, Market Economy, Event Operation, Sports Industry, Marathon Fever, Evaluation Indicator

System, and Assumption of Risk.

#### 3.2. Keyword Frequency Analysis

The frequency analysis of keywords that appeared more than three times is shown in Table 1. Notably, the keywords Beijing Marathon and National Fitness appeared frequently, differing slightly from the core research hotspots identified earlier.

Table 1. Keyword frequency

Keywords	marathon events	city marathon	event operation	marathon industry	sports events	sports industry	beijing marathon	national fitness
Year	2018	2015	2018	2018	2015	2017	2015	2020
Count	8	6	5	5	5	5	4	3

#### 3.3. Research Trends

The surge in research on marathons in China began in 2016,

with the peak in 2017 and 2018, followed by a gradual decline in research volume (Figure 2).

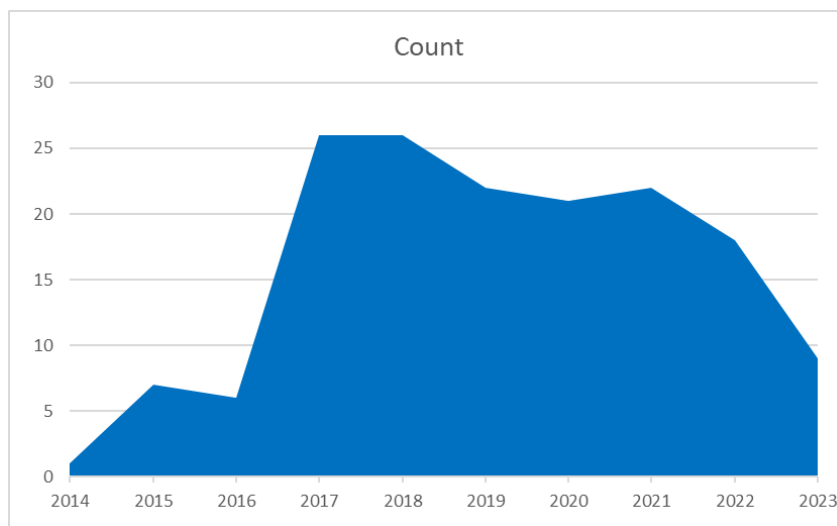


Figure 2. Trend change chart

### 4. Discussion

The marathon industry has emerged as a prominent research topic in recent years, driven by several key factors. First, the growing global awareness of health has made running an increasingly popular and low-cost form of exercise, with marathon events becoming a symbol of mass fitness. The Chinese government's active promotion of national fitness initiatives has also played a significant role, with marathons receiving widespread support under these policies [3].

Moreover, marathons are not just sports events but catalysts for economic growth, driving industries such as tourism, hospitality, and catering, creating a multi-level economic value chain that has attracted researchers' attention from multiple perspectives. Another significant factor is the promotion of city branding through marathons [4]. Many cities have used marathons as a way to enhance their international image and appeal, making urban planning, economic impact assessments, and city branding key research focuses.

In addition, as marathon events expand, the need for effective organization and management to ensure participant safety and experience has become a major concern for researchers [5]. Technological advancements, such as data analysis in events and the use of smart wearable devices, have

provided new angles for research, further spurring academic exploration in the marathon industry [6].

In recent years, however, there has been a noticeable decline in marathon research, likely due to several factors. First, as marathon events have become widespread across China, the novelty of research in this area has diminished. Key topics, such as event organization, health impacts on participants, and economic benefit analysis, have already been extensively studied, making it challenging for researchers to introduce new questions or groundbreaking insights.

Second, the rapid expansion of marathon events has revealed several issues, such as event homogenization, overuse of urban resources, and increased safety risks. These challenges have dampened the enthusiasm of some cities and organizers for hosting marathon events, which has, in turn, impacted the volume of related research [7].

Furthermore, shifts in policy priorities may also be a contributing factor. While national fitness remains a core component of China's sports policies [8], the focus has shifted towards promoting more diverse and inclusive physical activities rather than concentrating on large-scale events like marathons [9]. This shift has likely reduced the policy support for marathons, leading to a decline in academic interest.

Lastly, advancements in technology and changes in

academic research trends have shifted researchers' focus toward emerging fields [10]. With the development of smart sports equipment and data analysis technologies, more scholars are now focusing on topics such as sports technology and personalized health management, rather than limiting their studies to marathon events. This shift in research focus may explain the gradual decline in marathon research.

## 5. Conclusion

Over the past 14 years, research on Chinese marathons has primarily centered on the industry, while also covering various aspects of event organization, management, and marketing. As marathon events continue to mature, the research boom appears to be slowing down.

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