Influence of Large Marathon on City Brand Building Based on Big Data Analysis

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Abstract. With the rise of the national fitness tide, marathon has become one of the popular sports in the city. Marathon has a positive impact on the shaping of city brand, but there is little research on this aspect in China at present. Therefore, this paper puts forward the research on the impact of large-scale marathon on city brand building based on big data analysis. Through the investigation and analysis of the effect of marathon on urban construction, the results show that marathon competition in the city has the functions of carrying forward the city culture, strengthening the citizens' fitness consciousness, clarifying the city brand positioning, and strengthening the construction of sports infrastructure. In order to further investigate the role of marathon in the construction of city brand, this paper takes the marathon race of a city as the research object and makes an in-depth study on it. While analyzing the impact of marathon on city brand building, the paper also analyzes the passenger flow and passenger flow structure during the marathon race through big data. The data show that during the marathon, the city's passenger flow has been significantly improved. From the crowd structure, marathon is more popular with young groups. In this paper, the author holds that the marathon race in a city has an important impact on the image of the city concept. It can not only shape the city brand image, but also promote the development of tourism industry.

Keywords: Marathon Events, Big Data Technology, City Image, Brand Building

1. Introduction
In recent years, with the rise of the national fitness boom, marathon has entered the public vision and is favored by more and more people. As a large-scale national fitness activity, marathon not only plays the role of competitive sports, but also shoulders the important task of publicizing the city [1-4]. It can provide a platform for participants to understand the local area and promote the development of local tourism. Many cities take this opportunity to develop tourism. At the same time, marathon will also
promote the construction of local public infrastructure, improve the overall environment of the city, and enhance the attractiveness of the city. In the context of big data, we can quickly and comprehensively promote activities to attract a large number of participants. It can not only stimulate consumption and promote the development of the city, but also make a positive contribution to the city's brand building [5-7].

Big data refers to the data beyond the "traditional scale", rather than the general software tools of "capture, storage, management and analysis" [8]. Through in-depth mining and analysis of these data, we can find out the reasons and influencing factors hidden behind the data [9-10]. Some experts pointed out that "big data governance" must be included in the future national governance modernization, and the big data governance path in national governance includes "data mining", "data integration", etc. Now is the era of big data, people's lifestyle, way of thinking, values, government governance are deeply affected, so it is necessary to optimize the city image communication strategy [11-12].

This paper makes an in-depth investigation on the role of marathon in urban construction. Through the survey results, it can be seen that holding marathon in cities can promote urban culture, strengthen citizens' awareness of fitness, clarify the city brand positioning, and strengthen the construction of sports infrastructure. This fully shows that marathon has a positive influence on city brand building. In order to do further research, this paper takes the 2019 marathon race of a city as the research object, and makes a detailed investigation and Analysis on it. Through the survey results, this paper believes that holding marathon in the city can contribute to the city's culture, tourism, and sports construction. The tourist flow of Marathon increased by 81.21%, especially for the tourists outside the province. Through the analysis of the results of passenger flow, we can see that young people are mainly interested in marathon race, while middle-aged and young people are relatively less interested. This paper believes that the flow of people is the source of urban development, and the greatest benefit of marathon is to be able to quickly and effectively attract people. Through such large-scale sports activities, the city can have more space and time to prepare to show the charm of the city, and has always achieved the purpose of shaping the city's brand image.

2. Marathon and City Brand

2.1. Meaning of City Brand Image

The concept of city brand is based on the concept of commodity brand and related theoretical research. It consists of cultural characteristics, economic conditions, industrial distribution, geographical conditions, living conditions, government capacity and other elements of the city, as well as the overall impression and evaluation of the city in people's mind [13]. It is the expression of city function, nature and civilization. Different commodity brands take products and services as standards, the soul elements of city brands form traditional culture, historical details, city signs, ecological environment, economic strength, etc., and form the appearance of the city, which represents the comprehensive competitiveness of the city. It is not only the most important intangible assets and key resources of a city, but also a strategic resource for a city to maintain and create sustainable competitive advantages.

2.2. Origin and Concept of Marathon

Marathon is a long-distance running event. It was originally set up in memory of a soldier named fidipitz. In 1896, Pierre de Coubertin officially named it "marathon". Today, marathon has become one of the most popular competitive sports with the largest number of participants. In the long development process of marathon, its track is more and more close to the city. The city provides a beautiful landscape and a wide and flat road for marathon, which not only promotes the development of urban marathon sports, but also contributes to the publicity of city brand image.

3. Investigation and Analysis on the Effect of Marathon on Urban Construction
Taking the relationship between urban marathon and city brand as the research object, this paper investigates the athletes, staff and volunteers who have participated in urban marathon, as well as the families and audience of athletes who have watched International Marathon in a city. A total of 350 questionnaires were distributed and 350 questionnaires were returned, with the recovery rate of 100%. Through the analysis of the questionnaire, 327 valid questionnaires were confirmed, and the effective questionnaire recovery rate was 93.4%.

According to Table 1, there are 296 people who can promote the city culture by holding marathon, accounting for 90.5%, which is the highest; followed by 254 people who agree that it is conducive to strengthening citizens' fitness awareness, accounting for 77.7%; and it is conducive to strengthening the construction of sports infrastructure, accounting for 75.5%; it also plays a role in promoting economic growth, clarifying the city's brand positioning, and promoting the development of sports industry. From the above proportion, the development of Marathon can bring significant benefits to tourism cities, and the development prospect of marathon is very good.

Table 1. The effect of marathon on urban construction

| Influence                                      | Number of people | Frequency (%) | Sort |
|------------------------------------------------|------------------|---------------|------|
| Carry forward urban culture                    | 296              | 90.5          | 1    |
| Define the city brand positioning              | 189              | 57.8          | 5    |
| Strengthen citizens' awareness of fitness     | 254              | 77.7          | 2    |
| Promoting the development of sports industry  | 185              | 56.6          | 6    |
| Strengthen the construction of sports infrastructure | 247              | 75.5          | 3    |
| Promoting economic growth                      | 213              | 65.1          | 4    |
| other                                          | 31               | 9.4           | 7    |

4. Discussion

4.1. Impact of Marathon on the City and the Analysis of Passenger Flow

Marathon is a landscape sports project with the largest number of participants, the greatest social impact and the most humanistic sports spirit in China. Marathon changes the present and future of the city, and also expands the connotation and extension of urban marathon. The impact of marathon is diverse. With the help of the international marathon, the cultural connotation of the city is constantly improved, and the aggregation and diffusion of people are promoted. Logistics, information and capital flow in the city, it provides a strong platform for the coordinated development of regional economy, and injects vitality into the prosperity and development of the city [14].

Through the monitoring of the marathon day passenger flow of China Telecom on July 12, 2019, the following data are obtained, which is of great significance to the analysis of the passenger flow attribute and the city brand construction of a city. As can be seen from Figure 1, the total number of marathon athletes in a city will reach 62700 in 2019, an increase of 81.21% compared with the 34600 people on weekdays. Among them, the city's passenger flow reached 37300, accounting for 59.5% of the total passenger flow; the provincial intercity passenger flow reached 4100, accounting for 6.6%; among which, the passenger flow outside the province reached 20000, accounting for 31.9%.
Figure 1. Passenger flow analysis of marathon in a city

As can be seen from the results in Figure 2, from the age distribution of passenger flow during the marathon, the proportion of 20-34 years old is the highest, accounting for 39.87%, followed by 35-44 years old, and accounting for 33.74%. In terms of gender ratio of passenger flow, male accounted for 54.26%, female accounted for 45.74%. It can be seen that the people who participate in the marathon race in the city are becoming younger and younger. The marathon culture is widely spread in the city and is deeply loved by young people.
4.2. An Analysis of the Influence of Marathon on City Concept Image

The concept of city concept image is relatively abstract and conceptualized, because there is no specific thing to represent the city concept. From the concept of city, we can study the influence of City Marathon on city concept. The concept itself cannot be expressed concretely, but it can be expressed by the residents living in the city and the historical and cultural atmosphere of the city. A city has experienced hundreds of years of historical accumulation, through the spread of time and word-of-mouth effect, as long as you see the city, you will associate with it, and the image of the city comes from it. Through this way of expression, urban marathon can further spread the spirit and culture of the city and let the citizens get more sense of belonging and pride. Through the above theoretical analysis, it can be concluded that the city marathon needs the efforts of the whole city to influence the image of the city concept, but improving and changing the city concept is not a one-day feat. The emergence of City Marathon provides a platform for each city to show itself to the outside world. Integrate all the resources of the city to hold a successful marathon. In this way, it creates a beautiful business card for the city, and the image of the city will be widely spread.

4.3. Driving the Development of Tourism Industry

City marathon will also have a great impact on the city's tourism industry. More and more people begin to pay attention to their life taste and quality of life. After working hard, more and more people are willing to go out of their homes to have leisure. Therefore, tourism has become an important way for many people to spend their holidays and leisure. In people's choice of tourist attractions, popularity can be said to be a very important choice factor. Through the holding of Marathon and the spread of television and media, people's travel and tourism can be more attractive. Under the background of sports power, it is obviously effective to drive people's passion for sports through marathon.
4.4. **Big Data Technology Establishes Realization Means for City Image Communication**

In the era of big data, behavior patterns and living habits can be digitized. Whether in a subway car or on a party table, your information is likely to be collected as data as long as you are connected to the Internet. In other words, it is no longer difficult to master people's living, leisure and shopping habits, analyze people's thinking mode, living habits and interests, and feed back to wireless networks, communication platforms and some intelligent applications. This makes the city image communication more scientific and practical. Big data not only changes the information productivity, but also changes the relationship of information production. With the development of science and technology, the communication channel is becoming the core leading factor of city image communication. The direction of communication is from mass communication to minority communication, from one-way communication to interactive communication, from ordinary communication to individual communication, so as to make the target audience more accurate. Therefore, in the opinion and evaluation, the city image presents a more three-dimensional and dynamic form. The results expressed by big data analysis often have accurate real-time feedback, and the city image communication can interact and adjust in real time. In this way, big data endows the city with the ability of perception and calculation, and realizes the comprehensive, accurate, real-time, classified perception and grasp of information. At the same time, it also lays a technical foundation for the adjustment and optimization of development policies.

5. **Conclusions**

In the research on the impact of large-scale marathon events on city brand building based on big data analysis, this paper makes a detailed investigation and research on the impact of a city's marathon race on the city. Using the form of questionnaire survey, the survey results of a large number of relevant personnel shows that holding a large marathon in the city can effectively and quickly improve the ability of city brand building. Through the media and big data network platform, it has a good publicity effect on marathon and city image. This paper believes that marathon has many influences on city brand building, especially the tourism industry. According to the relevant research, during the marathon, the total passenger flow of a city increased by 81.21% compared with the usual weekend passenger flow, which shows that the marathon has a positive role in promoting the development of tourism industry. Secondly, the impact on the image of the city concept, through such large-scale sports events, further show the vitality of the city, as well as support for sports, and provide technical support for the formulation of scientific optimization measures.

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