



Research on Behavior Characteristics of Festival Tourists in Jianye District of Nanjing Based on Big Data

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Abstract. Festival tourism, as a combination of culture and tourism, has multiple economic, social and cultural benefits. It plays an important role in enriching people's cultural life, promoting local economic development and establishing city image. Therefore, it has broad development prospects and research value. This paper collects data from seven key festival activities in Jianye District of Nanjing, including Youth Olympic Art Lantern Festival, may day life season, summer of music, Mochou Lake Garden opening, Xingchao Music Festival, National Day activities and mid autumn festival activities. Based on the big data of tourists, this paper analyzes the characteristics of tourists' behavior, and provides suggestions for the development planning, regulation control and management of festival tourism in Jianye District of Nanjing To provide scientific basis for service and marketing promotion.

Keywords: Big data · Jianye District of Nanjing · Festival and events Tourism · Tourist behavior characteristics

1 Research Background

1.1 Object of Study

Jianye District is the central city of Nanjing, the financial service center of the eastern region of China, and the business and Trade Center, exhibition center, sports center and innovation and Creativity Center of East China. It is an international new district with modern finance, headquarters economy, information service, culture and sports, software research and development, business office and tourism exhibition as its main functions.

Festival tourism, as a form of activity combining culture and tourism, plays an important role in enriching people's cultural life, promoting local economic development and establishing city image. The key festival activities in Jianye District of Nanjing city mainly include Youth Olympic Art Lantern Festival, may day life season, summer of music, Mochou Lake Garden, Xingchao Music Festival, National Day activities and Chinese Music Festival Autumn festival activities, etc. In 2019, Jianye District carried out data monitoring on the above seven key festival activities, so as to better grasp the pulling effect of festival tourism on local image and economy.

1.2 Data Sources

Based on the needs of global tourism development, Jianye District Culture and Tourism Bureau commissioned China Telecom Jiangsu Zhiguan Telecom big data center to establish a smart tourism big data platform. The main data contents include:

Visitor and visitor attributes and origin: according to the mobile phone user registration information, after anonymity and other de privacy processing, obtain the statistical data of age, gender, origin and other attribute information.

The consumption data of UnionPay channel tourists: the Jianye UnionPay POS card terminal swipe card for the consumption of food, accommodation, travel, entertainment and other industries in the whole area of the Jianye area, and the data recorded by WeChat, Alipay and other payment codes are scanned through the UnionPay terminal.

Tourism public resources: combined with Jianye District Culture and Tourism Bureau's own data and telecommunication network and location data, this paper analyzes the spatial distribution of various tourism public resources in Jianye District, such as catering, accommodation, entertainment, scenic spots, travel agencies, public toilets, parking lots, etc.

1.3 The Purpose and Significance of Big Data Monitoring

By monitoring the big data of key festival tourism in Jianye District of Nanjing in 2019 and analyzing the tourist portraits and tourism public opinion of the Lantern Festival, we can effectively improve the ability of collaborative management and public service, and promote the reform of tourism service, tourism marketing, tourism management and tourism innovation. Through the statistics of festival tourism related data, combined with the user's consumption ability, age and other label attributes, the consumption behavior of tourists can be deeply analyzed, the travel rules of tourists can be mined, the orderly travel of tourists can be guided, and the comfort of tourists can be improved. It is helpful for Jianye District government to carry out festival tourism planning, tourism market positioning and marketing, tourism market demand forecasting and monitoring, and big data is conducive to resource allocation in the era of global tourism.

2 Analysis on the Tourist Source of Festival Tourism in Jianye District of Nanjing City

2.1 Analysis of the Tourist Source Areas Outside Jiangsu Province

East China is the main source of tourists. Among the top eight provinces in terms of passenger flow, Shanghai, Anhui, Zhejiang and Shandong rank among them. The passenger flow of four provinces accounts for about 50% of all kinds of festival activities (except the Mid Autumn Festival). East China is the main source of tourists in our region (Fig. 1).

During the Mid Autumn Festival, the tourist sources are scattered. During the Mid Autumn Festival, the top eight provinces accounted for 39.63% of the total passenger flow, and these eight provinces accounted for more than 70% of the total passenger flow in other festival activities. Therefore, in the promotion of tourism activities, we should give full consideration to tourists' love of hometown during the traditional festivals.

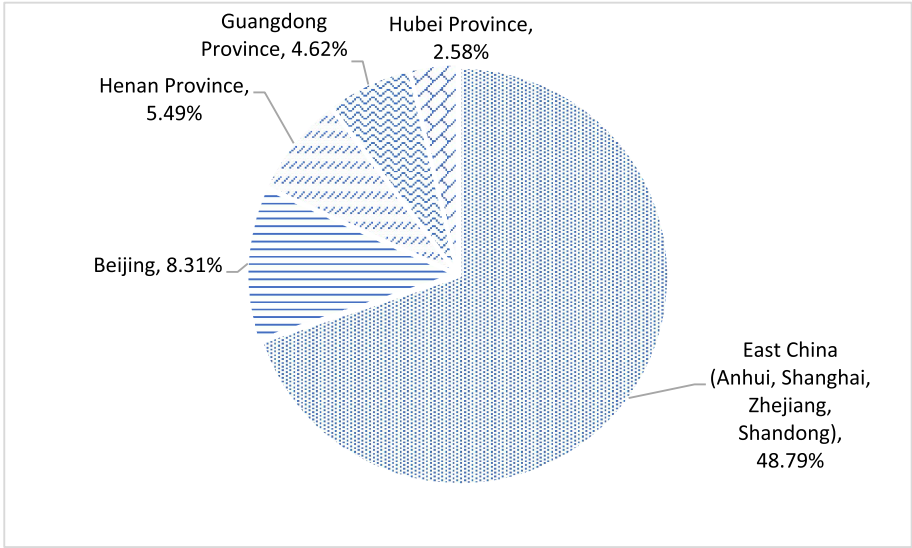


Fig. 1. Proportion of passenger flow outside the province during festival activities (TOP8)

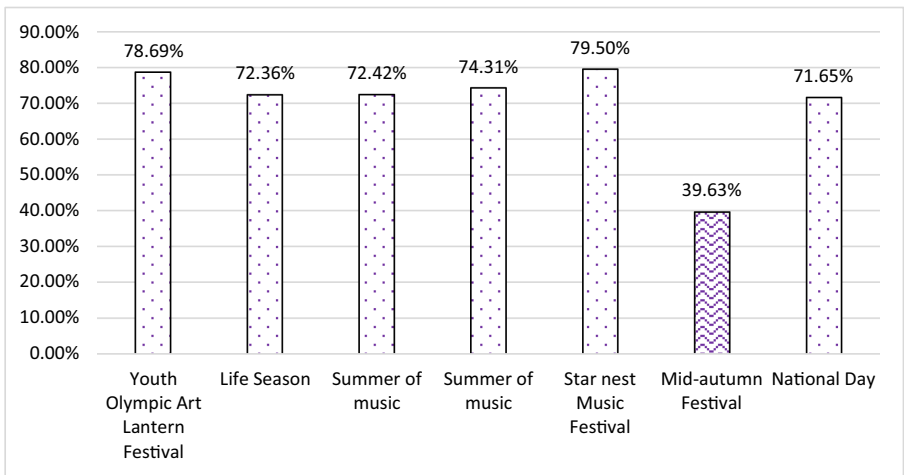


Fig. 2. The proportion of passenger flow outside the province during the Mid Autumn Festival (TOP8)

2.2 Analysis of Tourist Source Areas in Jiangsu Province

Northern Jiangsu is the main cross city tourist in the province. The top cities in Northern Jiangsu are Suqian, Huai’an, Xuzhou and Yancheng, accounting for more than 9% of the total passenger flow. Taizhou, Changzhou and Lianyungang have less passenger flow (Fig. 3).

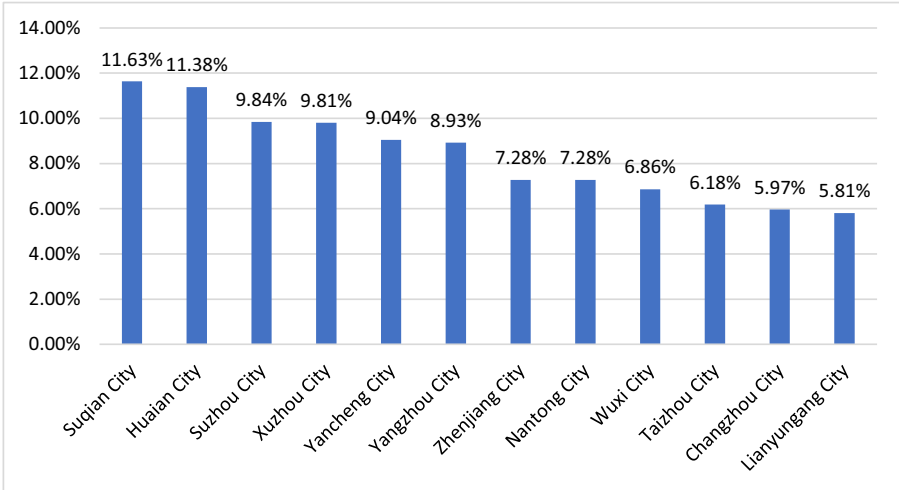


Fig. 3. Proportion of cross city passenger flow in the province during festival activities

3 Analysis on the Population Characteristics of Festival Tourists in Jianye District of Nanjing City

Young customers account for a large proportion. The average proportion of passenger flow in the age group of 45 and below is 58.75%. There are four festival activities in this age group whose proportion exceeds the average. The top three are Xingchao Music Festival (66.83%), Youth Olympic Art Lantern Festival (65.60%) and music summer

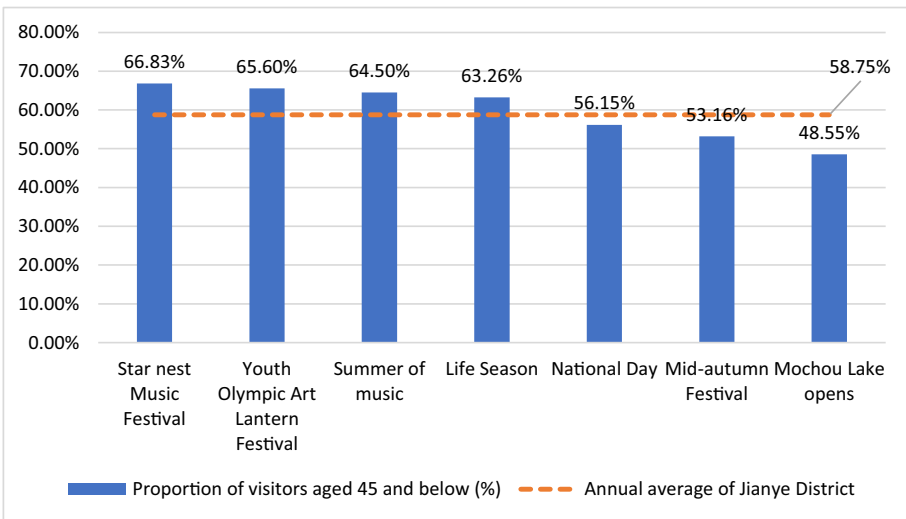


Fig. 4. Proportion of young customers in festival activities

(64.50%). These three festival activities are all related to art, and they are mainly designed for young customers. Among the actual visitors, young visitors accounted for more than 60%, which was in line with the expectation. Among the traditional festivals, such as national day and Mid Autumn Festival, young tourists account for more than 50% of the total, but they are not attractive to young tourists (Fig. 4).

Women accounted for a large proportion of festival activities. In all festival activities, only during the Mid Autumn Festival and the national day, the passenger flow of men is more than that of women. It is opposite to the annual average sex ratio of visitors (51.79% for males, 48.21% for females). Statistics show that women are more enthusiastic about fashion and arts festivals (Fig. 5).

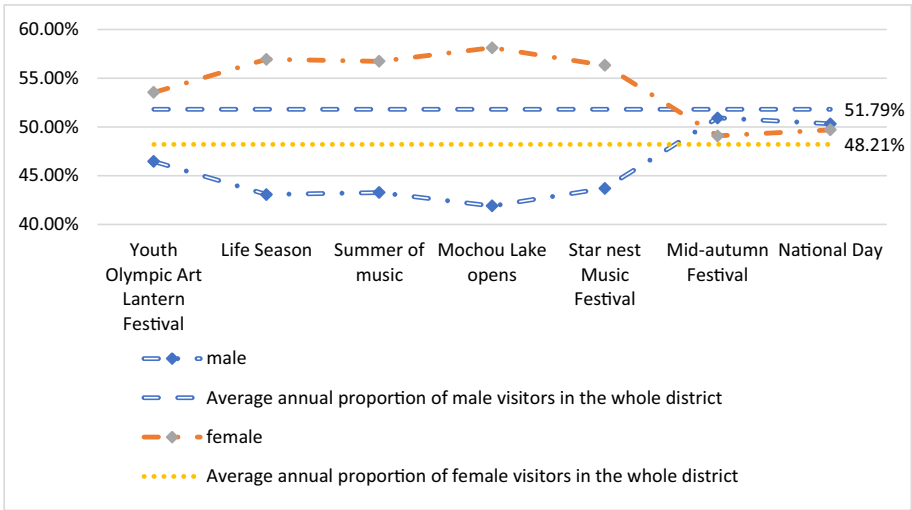


Fig. 5. The proportion of male and female tourists during festival activities

4 Analysis on the Consumption Behavior of Festival Tourists in Jianye District of Nanjing City

The average daily visitors of Jianye District in the whole year is 146800 person times, and there is a certain difference in the average daily visitors of Jianye District during the festival activities. During the Youth Olympic Art Lantern Festival, Jianye District has 191100 visitors per day, ranking first; during the Mid Autumn Festival, Jianye District has 12.62 visitors per day, ranking last; during the Xingchao Music Festival and the Mid Autumn Festival, Jianye District has less visitors per day than the average of the whole year (Fig. 6).

Festival activities have a certain pulling effect on regional consumption. The average daily consumption of the whole region is 54.5401 million yuan, and the corresponding daily average value during festival activities is 55.5234 million yuan. The pulling effect

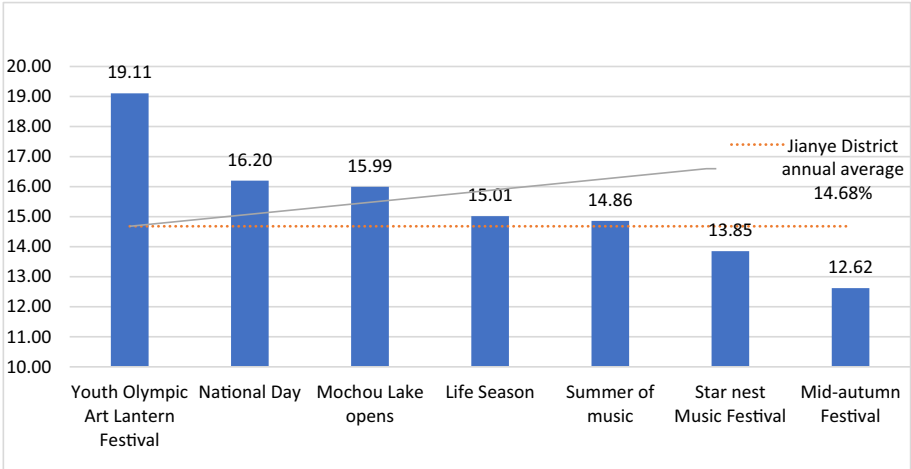


Fig. 6. Average daily visitors during festival activities

is particularly obvious in Xingchao Music Festival (63.1213 million yuan per day), National Day (57.2653 million yuan per day) and music summer (56.2597 million yuan per day) (Fig. 7).

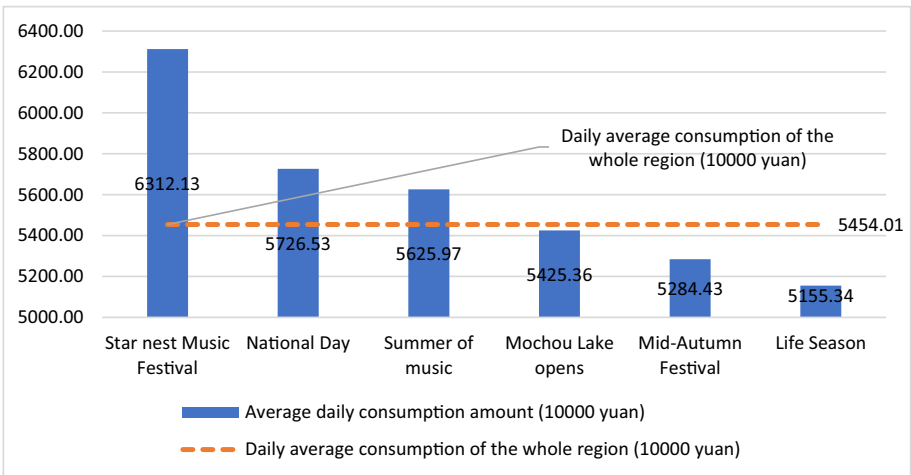


Fig. 7. Consumption of visitors during festival activities

5 Summary

Festival activities significantly promote the passenger flow and consumption. During the Youth Olympic Art Lantern Festival, the daily average number of visitors was 191100,

an increase of 30.16% over the annual average number of visitors; during the national day, the daily average number of visitors was 162000, an increase of 10.34%; during the opening of Mochou Lake, the daily average number of visitors was 159900, an increase of 8.95%; during the May Day, the daily average number of visitors was 150100, an increase of 2.28%; during the summer of music, the daily average number of visitors was 148600, an increase of 1.24%.

The daily average consumption of the whole region is 54.5401 million yuan, and the corresponding daily average value during the festival activities is 55.5234 million yuan. The pulling effect is particularly obvious in Xingchao Music Festival (daily average 63.1213 million yuan, increased by 15.74%), National Day (57.2653 million yuan, increased by 5%) and music summer (56.2597 million yuan, increased by 3.15%).

Festival activities boost the overall image of Jianye District. During the festival activities, the proportion of young visitors increased significantly, such as the star nest Music Festival (66.83% of the young visitors under 45 years old), the Youth Olympic Art Lantern Festival (65.60%) and the summer of music (64.50%). These festival activities want to convey the spirit of “Youth and vitality”. In the process of holding the event, it successfully attracted a large number of young people, and the young customers accounted for more than 60%, which was in line with the expectation. This has played a positive role in promoting the transmission and expression of the youth and vitality image of science and technology Jianye, humanity Jianye and vitality Jianye.

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