



COVID-19 Based on Big Data Analysis Research on the Influence and Countermeasures of 5A Tourist Attractions in Jiangsu Province

Hong-ying Zhang^(✉)

Department Tourism Management, Wuxi Vocational Institute of Commerce, Wuxi 214153,
China

331956419@qq.com

Abstract. The sensitive vulnerability of tourism determines that it is vulnerable to natural, social, economic and other aspects. As a sudden public health event, the outbreak of COVID-19 has a serious impact on the domestic and foreign tourism industry. As the core element of tourism, scenic spot is one of the focuses of tourists. This paper systematically analyzes COVID-19 epidemic impact on tourist attractions, and through Baidu index network attention analysis, and statistics of Jiangsu culture and Tourism Department, analyzes the epidemic situation, which has an important impact on the 5A level tourism attractions in Jiangsu, including tourism attention, number of tourists, tourism income and tourism employment. It also analyzes the role of various forces in the process of epidemic prevention in scenic spots, and puts forward new countermeasures for the development of tourist attractions.

Keywords: Big data · COVID-19 · 5A tourist attractions · Countermeasure

1 Introduction

In 2020, the major tourist attractions in Jiangsu were affected by the new crown epidemic situation. The number of tourists and their income declined. On the one hand, the epidemic prevention management of scenic spots was done well. On the other hand, we need to attract tourists' attention to the tourist attractions through methods and strategies. Under the influence of the epidemic situation, scenic spots can use the Internet to develop new products and develop business models.

5A scenic spot is the benchmark scenic spot in the development of various scenic spots, so this paper takes Jiangsu 5A scenic spot as the research object for representative research. As of 2021, there are 25 5A scenic spots in Jiangsu Province, and 21 5A scenic spots can be found in Baidu Index. The article takes 21 Jiangsu 5A scenic spots as the research object, and based on the big data of Baidu index and official website statistics of tourist attractions, analyzes the influence and performance of COVID-19 on Jiangsu tourist attractions, and puts forward the countermeasures for scenic spots to cope with the epidemic situation.

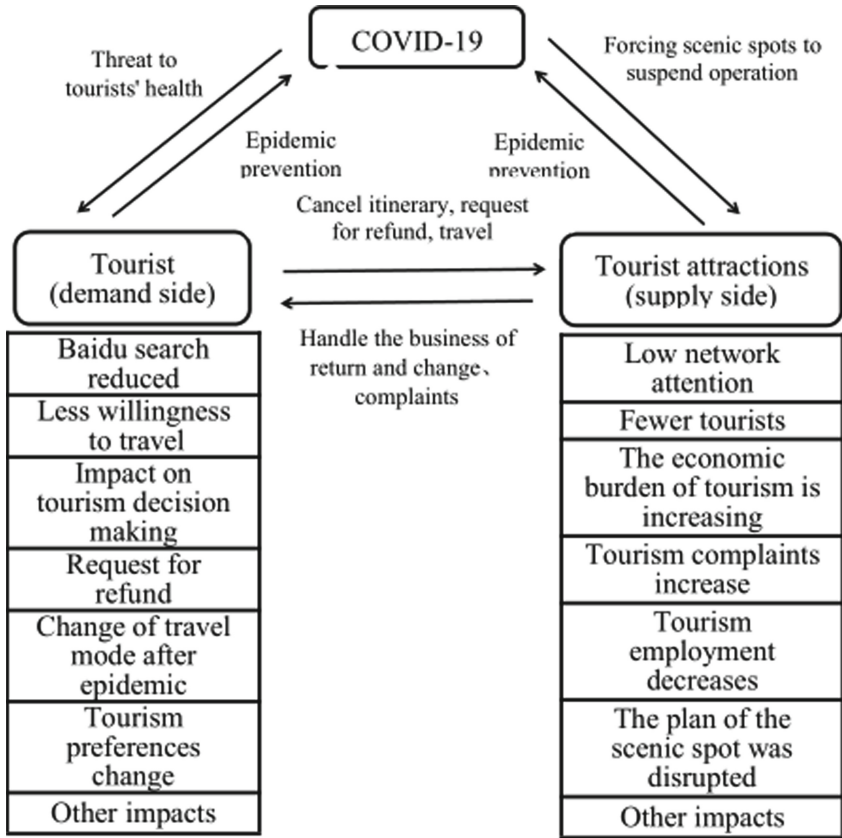


Fig. 1. Analysis of the influence mechanism of COVID-19 on tourist attractions

2 Analysis of the Influence Mechanism of COVID-19 on Tourist Attractions

As shown in Fig. 1, COVID-19 affects the health of tourists and the operation of scenic spots from the demand side and the supply side, forcing tourists to change the network search, travel willingness, travel decisions, travel preferences and travel modes of tourist attractions, and then affect the network awareness, travel time, economic status, tourism employment and scenic area plan of tourist attractions [1].

3 The Impact of COVID-19 on the Development of Tourist Attractions in Jiangsu

3.1 The Impact on the Network Attention of Scenic Spots

2020 Compared with the same period in 2019, the Baidu Index network attention of 5A scenic spots in Jiangsu Province decreased by an average of 33%, and the network attention of each scenic spot decreased to varying degrees, as shown in Table 1.

From the comparison of monthly Baidu index statistics, compared with 2019, the monthly Baidu Index in 2020 has a certain proportion of decline, as shown in Fig. 2.

Table 1. List of Baidu Index network attention of each 5A scenic spot in Jiangsu Province in 2020

Serial number	5A scenic spot	total	Year on year ($\pm\%$)	year
1	Changzhou global dinosaur city leisure tourism area	23,232		2019
		11,540	-50	2020
2	Zhongshan Mausoleum scenic spot, Zhongshan Mountain scenic spot, Nanjing	25,512		2019
		15,015	-41	2020
3	Suzhou gardens (Zhuzheng garden, Huqiu mountain, Liuyuan)	28,907		2019
		21,144	-27	2020
4	Lingshan scenic spot in Wuxi City	19,217		2019
		12,105	-37	2020
5	Nanjing Confucius Temple Qinhuai Scenic Area	19,437		2019
		12,528	-36	2020
6	Changzhou Tianmu Lake Scenic Spot	17,437		2019
		12,819	-26	2020
7	Shajiabang Yushan Shanghu tourist area, Suzhou	17,558		2019
		13,732	-22	2020
8	Yuantouzhu scenic spot in Wuxi City	21,077		2019
		11,765	-44	2020
9	Suzhou Zhouzhuang Ancient Town scenic spot	17,356		2019
		9,344	-46	2020
10	Jurong Maoshan scenic spot in Zhenjiang City	15,969		2019
		13,859	-13	2020
11	Lianyungang Huaguo Mountain Scenic Spot	15,078		2019

(continued)

Table 1. (continued)

Serial number	5A scenic spot	total	Year on year ($\pm\%$)	year
		8,255	-45	2020
12	Jinshan, Jiaoshan and Beigushan scenic spots in Zhenjiang City	16,632		2019
		14,120	-15	2020
13	Suzhou Tongli ancient town scenic spot	13,484		2019
		8,247	-39	2020
14	Slender West Lake scenic spot in Yangzhou City	13,934		2019
		10,139	-27	2020
15	Jinji Lake scenic spot in Suzhou	10,533		2019
		7,000	-34	2020
16	Changzhou Chunqiu Yancheng tourist area	6,985		2019
		5,495	-21	2020
17	Zhou Enlai's hometown scenic spot in Huai'an City	10,038		2019
		8,023	-20	2020
18	CCTV Wuxi film base Three Kingdoms Water Margin scenic spot	7,721		2019
		5,207	-33	2020
19	Yunlong Lake scenic spot in Xuzhou City	4,830		2019
		3,452	-29	2020
20	Qinhu scenic spot in Jiangyan City	3,493		2019
		2,499	-28	2020
21	Huishan ancient town scenic spot	6,432		2019
		4,673	-27	2020
total		314862		2019
		210961	-33	2020

3.2 Impact on the Number of Tourists in Scenic Spots

The COVID-19 led to a decrease in the number of tourist attractions. According to the statistics of Jiangsu provincial culture and Tourism Department, the number of tourist arrivals in Jiangsu scenic spots in 2020 was 346 million 727 thousand and 400. The number of tourists in the tourist spots decreased by 45.9% in 2020 compared with that in 2019. It is obvious that the impact of COVID-19 on tourist attractions in Jiangsu is obvious, and the loss of tourist attractions is significant. As shown in Table 2.

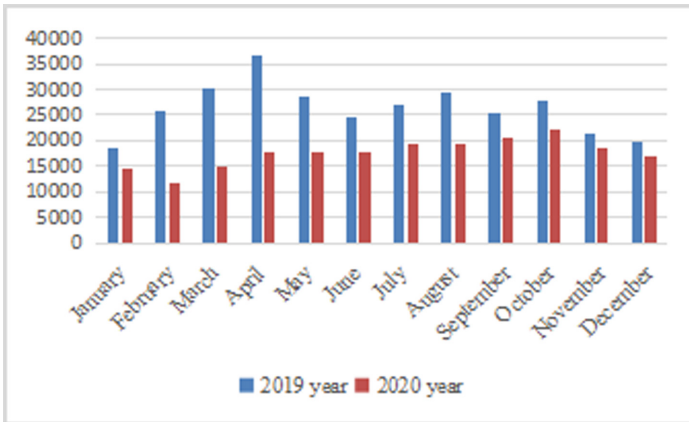


Fig. 2. January-December Baidu index network attention comparison chart

Table 2. Tourist reception of 5A and 4A scenic spots in Jiangsu Province from January to December 2020

month	Number of people (10000 person times)	Year on year 2019 (±%)
January	1916.33	-35.6
February	168.14	-96.8
March	1078.96	-79.8
April	2094.97	-69.7
May	2663.26	-58.7
June	2463.69	-51.1
July	2787.47	-43.5
August	3917.17	-27.9
September	3762.8	-24.6
October	6623.4	-13.2
November	3876.1	-14.6
December	3318.18	-16.8
Total	34672.74	-45.9

Remarks: according to the statistical data of Jiangsu Provincial Department of culture and tourism

3.3 Impact on Tourism Revenue of Scenic Spots Impact on the Network Attention of Scenic Spots

The decrease in the number of tourists will inevitably affect the tourism revenue of the scenic spots. In addition, after the completion of the business of returning and changing the scenic spots, the cash flow of the scenic spots will decrease sharply. During the period of full closure of scenic spots, major scenic spots in Jiangsu still need to spend a certain

amount of money on prevention and control of epidemic situation, daily maintenance of scenic spots, payment of personnel wages and other rigid expenses, which has also caused a certain financial crisis to scenic spots themselves, especially some scenic spots with debt ratio seem to be unable to make ends meet, and the economic income of scenic spots is affected by the cliff during the severe epidemic period [2].

3.4 Tourism Complaints Caused by the Epidemic Affect the Image of Tourist Attractions

On the one hand, the scenic area responded to the request to suspend operation, on the other hand, for their own safety, most of the tourists actively or passively cancelled or postponed the original travel itinerary in Jiangsu, so they asked the scenic area to refund the tickets, return the performance tickets, return the accommodation expenses and traffic expenses. As tourists do not travel, the vast majority of tourists hope that the scenic spot can refund the booking fee in full. However, the tourism industry and the real tourism environment are very complex. When the travel plan of tourists changes and the business is changed, the processing speed, attitude and result of the scenic area for the unsubscribed itinerary are the visual display of the image of the scenic area. Once the service of the scenic spot is not in place, the time is delayed, the tourism disputes or fail to meet the psychological expectations of tourists, the tourists are easy to produce dissatisfaction or initiate tourism complaints, and have a negative evaluation on the image of the scenic spot [3].

3.5 Impact on the Employment of Staff in Scenic Spots

According to the multiplier effect of tourism, the development of tourism has a strong driving effect on employment. When the development of tourism encounters a crisis, it is necessary to increase revenue and reduce expenditure. When it comes to cost cutting measures, labor cost is an important part of the cost of scenic spots. In order to reduce expenditure, some scenic spots with high debt ratio and great financial crisis in their own development may take measures to reduce the salary or lay off staff. For example, Lingshan scenic spot in Wuxi, Jiangsu Province recruits a large number of tourism interns to work in the scenic spot every year. During the epidemic period, all the interns terminate the internship contract, which also shows that the scenic spot encounters business difficulties, which will inevitably affect the number and income of the staff in the scenic spot.

3.6 Other Impacts on Tourist Attractions

In addition to affecting tourist attractions, tourism revenue and image, COVID-19 will also produce some less intuitive effects. For example, the Spring Festival is a peak season in the tourism industry. Tourist attractions carried out publicity and marketing on some large platforms and held various spring festival and lantern festival celebrations in an attempt to “show their skills” during the Spring Festival. However, due to the epidemic, the scenic area is closed, and the marketing cost in the early stage of the scenic area is almost wasted. The epidemic even disrupts the development plan of the scenic area.

4 Jiangsu Tourist Attractions to Deal with the Impact of COVID-19 Countermeasures

During the epidemic period, when the income of the scenic spot is damaged, the scenic spot and relevant departments and personnel also begin to think about the survival of the scenic spot, the risk resistance of the scenic spot, what measures can be taken to make the scenic spot quickly resume business and generate income after the epidemic is alleviated, and the future development direction of the scenic spot.

From the perspective of tourism circulation system as a whole and individual scenic spots, combined with the development advantages of scenic spots and the changes of consumption forms of consumers, this paper puts forward some new measures for Jiangsu scenic spots to cope with the epidemic situation.

4.1 The Positive Measures of Tourist Attractions

1) Establish the crisis warning, handling and evaluation mechanism before, during and after the epidemic

COVID-19 belongs to public health emergencies. In order to improve the ability of tourist attractions to deal with crises, scenic spots need to establish a sound crisis response mechanism. In terms of links, the crisis response mechanism can be divided into three links: pre crisis, in crisis and post crisis. The establishment of crisis early warning mechanism before the crisis can help scenic spots make a quick response in the first time when the crisis occurs, and minimize the impact and loss caused by the crisis to scenic spots; In the crisis, we should establish a crisis management mechanism, and fully mobilize all kinds of resources to deal with the crisis; After the crisis, we should establish a crisis feedback mechanism, reflect on the response measures of scenic spots in the crisis, analyze the effective measures and short board in the response measures, and further optimize the short board [4].

2) Countermeasures of scenic spots during epidemic period

During the epidemic prevention period, on the one hand, tourist attractions carefully listen to and actively cooperate with the government's epidemic prevention command and guidance work, the vast majority of tourist attractions suspended the opening to the public and suspended all kinds of activities; On the other hand, all tourist attractions actively carry out self-help, to prepare for the normal operation of tourist attractions after the end of the epidemic. The health code and detection platform are set at the entrance of the scenic area, and there are two more health code verification and temperature measurement gates when entering the scenic area. Only when everything is normal can you enter the scenic area. It is stipulated that the catering units inside and outside the scenic area will not meet or gather meals, and at the same time, it is strictly detected to ensure food safety.

During the closing period, the scenic spot actively explores new ideas for the development of the scenic spot. For example, to carry out online learning at home for employees

to improve their service awareness and service skills. In order to provide tourists with high-quality tourism experience, we should make preparations for planning, marketing and service in advance. In addition, many scenic spots take the initiative to implement free ticket tour for the front-line medical staff of epidemic prevention. On the one hand, they use the resource advantages of scenic spots to express respect and reward for the front-line medical staff, showing the social responsibility of scenic spots; On the other hand, it is also a marketing of tourist attractions, attracting medical staff and their families to visit after the epidemic.

3) Study hard in scenic spots

After the epidemic, the revitalization of tourist attractions can not rely on “price war” to attract tourists, which will lead to unhealthy market ecology of tourism competition, and does not meet the requirements of “improving quality and efficiency” of tourism development. To realize the revitalization of the scenic spots in the future, the scenic spots need to work hard from the aspects of cultural tourism products, scenic spot marketing, service and profit model.

In terms of cultural and tourism products, in order to take the lead in the revitalization of tourist scenic spots from the supply side, on the one hand, we need to maintain the existing market demand, and on the other hand, we also need to develop new products to stimulate the potential market demand. The scenic spot should combine the actual situation of the scenic spot, fully realize the advantages and disadvantages, development opportunities and possible challenges of the scenic spot, strengthen the research and development and innovation on the cultural tourism products and projects of the scenic spot, develop distinctive cultural tourism products, and form the core competitiveness of the scenic spot. For example, from the perspective of the types of cultural and tourism products, after the epidemic, rural tourism, health tourism, TCM tourism, green tourism and ecological tourism products will usher in new development opportunities.

In terms of marketing, scenic spots should have clear marketing plans, and realize precision marketing from marketing crowd, marketing methods, marketing strategies, etc., so as to improve the efficiency of scenic spot marketing. From the perspective of marketing media, with the advent of we media era, many scenic spots adopt diversified marketing methods such as “two micro blogs and one short” (microblog, wechat and short video), and the marketing methods and media have changed. Traditional scenic spots need to explore new marketing methods in order to obtain high-quality development after the epidemic.

In terms of service, on the one hand, strengthen staff service attitude, service consciousness and service ability training; on the other hand, optimize and design, improve tourism service efficiency, enhance tourism service effect and improve the satisfaction of tourists in tourist attractions.

In terms of profit model, most of the tourism revenue of traditional scenic spots depends on ticket revenue, namely ticket economy. The profit model of scenic spot is single, and its anti risk ability is reduced to a certain extent. The epidemic forced the scenic spots to close down, and some scenic spots with ticket income suffered serious losses and were in a passive position. The scenic spots with diversified profit models have relatively more profit ways in this epidemic, such as relying on cultural tourism

products with scenic features to create revenue. Therefore, in order to enhance the anti risk ability of scenic spots, it is necessary to innovate the profit model of scenic spots. Combined with the resource advantages of scenic spots, it is necessary to explore the characteristic profit model suitable for scenic spots.

4) Tourism safety and health normalization

According to Maslow's demand hierarchy theory, the most basic human demand is the demand for security. The epidemic has also fully shown the importance of tourism safety and tourism health to the tourism industry. In the past, the tourism safety and health work of many tourist attractions became a mere formality. The management personnel or staff of the scenic spots did not fundamentally realize the importance of the tourism safety and health. Therefore, the scenic spots need to normalize the safety and health of the scenic spots, so that the tourism safety and health have become the consensus of the scenic spots. Scenic spots can carry out regular safety and health work month of scenic spots, strengthen the safety and health training of tour guides and other staff, carry out regular tourism emergency drills, and improve and enhance everyone's psychological awareness of tourism safety and health and practical response ability.

5) Pay more attention to local tourists and fully tap the domestic tourism market

In the current international epidemic situation, the international tourism market is in the pause key. Tourist attractions should focus on the domestic market and understand the needs of local tourists at any time, especially the tourism market in and around Jiangsu Province. After the epidemic, people will pay more attention to health and health preservation. Tourist attractions can develop such tourism products and routes, so that tourists can enjoy mental pleasure and physical health.

6) We should pay attention to the cultivation of rural residents & apos; tourism consumption and dig deep into the tourism market

With the continuous advancement of rural revitalization, the key support policies in the "agriculture, rural areas and farmers", and poverty alleviation, it will further promote the development of rural economic economy and the growth of farmers' income, and then promote the consumption of rural and farmers, the rural tourism market has great development potential. Wuxi scenic spot can explore the surrounding rural tourism market, and expand the number of tourists and business revenue.

7) Reduce the price of tickets and play a leading role in ticket price

In the tourism industry, the source of economic benefits does not come from the tickets themselves. With the powerful traction of tickets, the local economy should take the tourist attractions as the core, expand the relevant resources and form an industrial chain, including the accommodation industry, catering industry, transportation industry, tourism and entertainment industry, tourism supplies and souvenir sales industry and other related industries, The key is to make the whole industrial chain bigger and stronger.

The price reduction of tickets in scenic spots can reduce the burden of tourists to a certain extent, attract the growth of the number of tourists, increase the demand of peripheral tourism, and promote the secondary tourism consumption, so as to improve the tourism quality of Jiangsu Province Revenue and scenic area revenue contribution value.

4.2 Policy Support for the Surrounding Environment of Scenic Spots

1) The government provides policy guidance, support and supervision

Tourism is of great significance for the adjustment of the national economic structure and the improvement of people's living standards. The central government and governments at all levels fully realize the role of tourism and realize the impact of the epidemic on the tourism industry. In the face of the epidemic prevention process of the scenic spot, the government has played an important role in guiding the scenic spots to return to work and provide policy support. In response to COVID-19, governments and departments have adopted a lot of corresponding policies.

2) Tourist attractions related associations and research institutions actively guide and provide intellectual support

In the process of epidemic prevention in the scenic spots, the association of scenic spots fully shows the advantages of the industry association, integrates and utilizes various resources, builds a platform for enterprises and scenic spots, helps scenic spots get rid of difficulties, and enhances their ability of risk prevention and control. From the perspective of scientific research, tourism related research institutions also actively offer suggestions and suggestions for the revitalization of post epidemic tourism industry and improve its intellectual support.

3) Banks and other financial institutions provide financial support

Since the outbreak of the epidemic, in order to support the development of scenic spots seriously affected by the epidemic and help them tide over the difficulties, banks have implemented a series of supporting measures, such as issuing bonds, reducing loan interest rates, reducing taxes, increasing credit support, and improving the efficiency of online business [5].

4) Improve the tourism insurance system

COVID-19 Coronavirus outbreak caused tourists panic, make it pay more attention to tourism safety and health, more favor their own safe tourism products, so need to improve the tourism insurance system, develop the vital interests of tourists tourism insurance products, scenic spots can cooperate with relevant insurance companies, develop insurance for tourist safety and health, let tourists travel, travel.

To sum up, in the process of anti epidemic in scenic spots, the government provides policy guidance, support and supervision, each scenic spot actively carries out internal

self-help, relevant associations and research institutions of scenic spots actively guide, provide platform and intellectual support, and banks and other financial institutions provide financial and insurance support.

5 Conclusion and Summary

COVID-19 has a certain negative impact on tourists, tourism income, economic pressure, tourism image, travel willingness and attention of potential consumers in tourist attractions, but at the same time, it also forces scenic spots to walk out of the comfort zone and seek their own way to survive. To strengthen policy guidance and support, and enhance development vitality, tourism attractions actively develop self-help activities from tourism product design and development, marketing mode, scenic service and profit model. Finally, the whole society needs to normalize tourism safety and health, improve the tourism insurance system, and promote the high-quality development of tourist attractions.

Acknowledgment. This paper is supported by the training object of “Blue Project” of Jiangsu Universities in 2020: innovative teaching team of tourism management, Jiangsu Provincial Department of Education (Su teacher’s letter [2020] No. 10).

References

1. Wang Shaohua, Wang Lu, Wang Mengyuan, Wang Wei. Study on the Impact Identification and Impact Mechanism of COVID-19 Epidemic on Tourism in Henan Province [J]. *Regional Research and Development*, 2020,39 (02): 1-7.
2. Xia Jie Chang, Feng Xiaoxu. Impact and Countermeasures of COVID-19 Epidemic on Tourism [J]. *China Circulation Economy*, 2020,34 (03): 3–10.
3. Li Chuan. 11 Question after the cancellation [N]. *China Travel News*, 2020–03–18 (003). 407.
4. Wei Xiaolan, Fu Lei. Analysis of the influence of tourism industry by SARS and the analysis of several related problems [J] *Tourism Journal*, 2003,18 (3): 14–23.
5. Huang Lin. Research on the Development Strategy of Tourist Attractions under the Background of Normalization of Epidemic Prevention and Control [J]. *Business Exhibition Economics*, 2021 (23): 32-34

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

