Analysis of the influencing factors of tourists in Siguniang Mountain Scenic area —— Empirical evidence from the Baidu Index

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Abstract: With the epidemic gradually under control, the policy of steady growth began to take effect, and China's economy gradually began to recover. Tourism, as an important component of our economy, is one of the important driving forces to promote our economic development. This paper takes Siguniang Mountain Scenic area as an example. In order to study the influencing factors of tourist volume of Siguniang Mountain, based on the 100 degree Index, the search index of "Siguniang Mountain", the search index of "Siguniang Mountain Guide" and the search index of "Siguniang Mountain altitude" from 2022 to 2023 are selected as explanatory variables, and the DATA is obtained from graphs by using GET DATA software. And through the use of SPSS software to carry out multiple regression analysis and test, so as to obtain significant influencing factors. Through the analysis results, reasonable and effective suggestions are put forward for related tourism departments.This study found that we can increase the number of tourists to "Siguniang Mountain" by optimizing the name search index, optimizing the search index of travel tips, highlighting the uniqueness of altitude, cross-channel marketing, continuous data analysis and monitoring, and other aspects. As there are many influencing factors in this experiment and not all of them have been taken into consideration, there are also certain deviations in the data. Therefore, further improvements can be made in future experiments.

Key words: Tourist volume, Baidu index, Siguniang Mountain

1.Introduction

Tourism not only promotes cultural exchange and communication, improves the city's image and recognition, but also promotes the economic growth of the region. The State Council on September 29,2023, issued by the release of the tourism consumption potential several measures to promote the development of tourism quality in the content of the clearly mentioned in order to further meet the

needs of the people, play an important role of tourism economic development, so to improve the quality of tourism, rich quality tourism supply, tourism consumption potential fully release, so as to promote the development of tourism with high quality. Data from relevant departments show that during the double festival, domestic tourism travel 830 million, the average daily tourists increased 71.3% compared with the same period last year; domestic tourism revenue 753.43 billion yuan, the average daily tourism revenue increased 129.5% over the same period last year. Thus it can be seen that tourist attractions should improve the quality of tourism and promote the importance of economic development.

"Siguniang Mountain", located in Xiaojin County, Aba Tibetan and Qiang Autonomous Prefecture, Sichuan Province, is famous for its lofty snow-capped mountains, rich plant resources and diverse animal ecology. It is the museum of snow mountains, showing the magnificence and purity of snow and ice, and the showroom of ancient trees and plants, telling the tenacious and colorful life, and the animal ecological park, showing the harmony and vitality of nature. "Siguniang Mountain" consists of four peaks, among which the main peak is 6250 meters above sea level, which is one of the highest peaks in Sichuan province. The beauty and mystery of "Siguniang Mountain" attracts countless tourists to visit it.

This paper takes "Siguniang Mountain" tourist attraction as an example to analyze the search data and tourist volume of the tourist attraction. Internet search data can be used as an effective indicator to analyze the tourists' tourism attention. The accurate selection of keywords is crucial for the accurate analysis of tourist flow[1]. Through multiple regression analysis of the relationship between factors and the number of tourists, and then from the perspective of various factors, to provide reasonable and effective improvement plans for the relevant management of scenic spots, and promote the economic development.

2. Research design

2.1 Subject investigated

"Siguniang Mountain", located in the eastern edge of the Hengduan Mountains in Aba Tibetan and Qiang Autonomous Prefecture, Sichuan Province, is the highest peak of Qionglai Mountain, which means the Great God Mountain. It is made up of four perennial snow-capped peaks, just like four beautiful white gauze girls, hence the name and known as the "Queen of Shu Mountain". It is not only a resort of natural scenery, but also known as the "outdoor paradise" because of its rich mountain sports tourism resources. Relying on the unique advantages of "Siguniang Mountain", Jinfeng Village and other villages have developed into a popular place for outdoor activities, with featured agricultural products, restaurants, inns, horses and outdoor companies, providing tourists with a rich outdoor experience. Whether it is mountaineering and exploration, or a taste of rural customs, "Siguniang Mountain" and its surrounding

villages are a rare choice[2]. During the Mid-Autumn Festival and National Day holiday in 2023, Sichuan province received a total of 56,910,200 tourists, and the reception volume of "Siguniang Mountain" scenic area exceeded 2 million for the first time. Therefore, this paper takes "Siguniang Mountain" as an example.

2.2 Data sources

By observing the intensity of correlation with "Siguniang Mountain" in Baidu demand map, this paper selects the three keywords "Siguniang Mountain", "Strategy of Siguniang Mountain" and "Altitude of Siguniang Mountain". The data source of this paper is from entering the search keywords on the Baidu index, setting the time to "2022-12-20 to 2023-12-7", and then searching the index data extraction to obtain information. The number of tourists in "Siguniang Mountain" is the way of the official website to obtain the data.

2.3 Research technique

Multiple linear regression models were analyzed after determining the independent and dependent variables and setting the regression equation. The regression equations were then tested to significance using the test statistic. If the test passes, the regression model can be used for predict and the predicted value evaluated.

The expression of the multiple linear regression model is:

$$y = \beta_0 + \beta_1 \chi_1 + \beta_2 \chi_2 + \beta_3 \chi_3 + \varepsilon \qquad (1)$$

Y means the number of tourists in "Siguniang Mountain", X_1 means the search index of "Siguniang Mountain", X_2 means the search index of "Siguniang Mountain Strategy", and X_3 means the search index of "Altitude of Siguniang Mountain". ε is the error term, β_0 is the regression constant term, β_1, β_2, and β_3 is the regression coefficient.

3. Empirical results and analyses

3.1 Data collection and analysis

In December 2022, the number of tourists is low, according to the data table in "Siguniang Mountain" search index is higher, but the actual tourism strategy and altitude search index is low, and in the outbreak of more severe environment, speculation "Siguniang Mountain" tourism quantity received the impact of the outbreak and reduced. But around January 2023, the number of tourists began to gradually recover, and the search index also increased.

3.2 Regression analysis was performed using the SPSS

Using SPSS software, enter the original data of the four items of name search index, strategy search

index, altitude search index and tourist number of "Siguniang Mountain", click analysis--regression-linear for linear regression analysis. The results are shown in Table1 and Table 2 below.

Table 1 Basic linear regression R-square

R	R^2	Adj. R^2	Standard Error	Debin Watson
.873a	0.763	0.761	2865.21673	2.053

From the data provided in Table 1, the fitting coefficient R^2=0.763, the adjusted fit coefficient R^2=0.761, indicating that the search index of predictor name, strategy search index and altitude search index explain 76.3% of the tourists of the dependent variable, so it has a good fitting ability. The D-W value (Debin Watson) is 2.053, and the residual sequence has no auto correlation, which is independent and meets the statistical modeling requirements.

In Table 2, it can be seen that the significance of the name search index of "Siguniang Mountain", the strategy search index and the altitude search index is less than 0.05, respectively, which can significantly affect the number of tourists. The "Siguniang Mountain" name search index and the altitude search index are positively correlated with the number of tourists, while the strategy search index is negatively correlated with the number of tourists. As can be see from Figure 4, the VIF values of these three independent variables are 5.539,1.299 and 5.404, which are less than 10, so there is no multicollinearity.

In conclusion, the resulting regression equation is:

$$y = 1.281x_1 - 8.507x_2 + 14.184x_3 - 2950.198 \qquad (2)$$

Table 2 Main regression report

Model		Unstandardized coefficients		Standardization coefficient	t	Conspicuousness	Collinearity statistics	
		B	Standard error	Beta			Tolerance	VIF
The number of y tourists	(Constant)	-2950.198	443.505		-6.652	0		
	Name search index	1.281	0.272	0.289	4.704	0	0.181	5.539
	Strategy search index	-8.507	4.077	-0.062	-2.087	0.038	0.77	1.299
	Elevated search index	14.184	1.359	0.632	10.433	0	0.185	5.404

4. Conclusion

"Siguniang Mountain" scenic spot, with its unique natural scenery and rich tourism resources, has attracted the attention of countless tourists. However, in today's increasingly fierce competition in the tourism market, how to accurately grasp the influencing factors of the number of tourists, so as to formulate effective operation strategies, has become an urgent problem to solve by the scenic spot management. In this paper, "Siguniang Mountain" scenic spot, for example, through establishing a regression model established the "Siguniang Mountain" tourists and "Siguniang Mountain" name search index, strategy search index and altitude search index have significant relationship, through regression analysis discusses the relationship between the tourists and related search index, provide decision support for the scenic spot management.

4.1 The name search index of "Siguniang Mountain" is positively correlated with the number of tourists in "Siguniang Mountain"

In this regression analysis, it is found that the name search index of "Siguniang Mountain" is positively correlated with the number of tourists of "Siguniang Mountain". Therefore, it can be considered to enhance the tourism publicity of "Siguniang Mountain" attractions, so as to increase the tourist flow. This result fully illustrates the importance of web search in the tourism decision-making process. When tourists are interested in "Siguniang Mountain", they often get more information about the scenic spot through a search engine. Therefore, the management of the scenic spot should make full use of this feature, strengthen the tourism publicity, and improve the popularity and reputation of Siguniang Mountain. For example, exquisite pictures of scenic spots, detailed tourism strategies and tourist comments can be released on major tourism websites, social media platforms and other channels to attract the attention and interest of more potential tourists.

4.2 The search index of "Siguniang Mountain" strategy is negatively correlated with the number of tourists in "Siguniang Mountain"

At the same time "Siguniang Mountain" strategy search index and "Siguniang Mountain" tourists, shows that in certain cases tedious and complex tourism strategy will let tourists, such as bad tourism environment, distant travel, and so on, through the search strategy and negative feedback will make tourists to the tourism initiation timid, so as to give up travel. Studies have shown that there is a deep correlation between the attraction factors of mountain outdoor tourist destinations and their cultural environment, and both play a key role in determining tourist satisfaction[3]. Therefore, the management of scenic spots should attach great importance to the construction of network word of mouth, timely respond to the concerns of tourists, and optimize the tourism environment and service quality. By improving tourism facilities, improving service quality, strengthening the management of scenic spots, improve the satisfaction and loyalty of tourists, so as to attract more tourists to visit.

4.3 The altitude search index of "Siguniang Mountain" is positively correlated with the number of tourists

In this study, the altitude search index of Sigunjiang Mountain is positively correlated with the number of tourists. It is also worth considering. One of the areas rich in mountain sports tourism resources is Siguniang Mountain, which can be used to attract more tourists interested in mountain climbing and other mountain sports tourism[4]. Studies have shown that the geographical conditions of Siguniang Mountain are suitable for the construction of tourist attractions with rock climbing as the theme, and a series of projects such as low and medium level climbing experience area, extreme rock climbing area, viewing deck and tourist rest camp can be planned to set up[5]. In view of this characteristic, the scenic spot management can further develop challenging sports tourism projects, such as mountaineering, hiking, rock climbing, etc., to meet the diversified needs of tourists. At the same time, it can also strengthen the cooperation with relevant sports organizations, hold various sports events and activities, and improve the popularity and influence of Sigunjiang Mountain in the field of sports tourism.

4.4 Limitations and deficiencies

But in the actual operation of scenic spots, to visit the number of tourists numerous factors, such as scenic spots using the management and service, weather, the surrounding hotel quantity and other important factors, this paper is not included, and the data part from the website part from baidu index, these conditions will affect the accuracy of the analysis results.

There are many factors affecting the number of tourists, such as the management and service of tourist attractions, weather and climate, and the number of surrounding hotels, and all these factors may have an important impact on the number of tourists. However, these factors were not included in this analysis due to limitations in data acquisition and processing. Future studies could further expand the range of factors affecting the number of visitors and improve the accuracy and comprehensiveness of the analysis.

Secondly, the data used in this paper mainly come from the official website and Baidu index. Although these data are representative to some extent, there may still be deviations or errors. For example, tourists may obtain relevant information about Siguniang Mountain through other search engines or channels, which is not included in the analysis scope of this paper. Therefore, future studies could further expand the data sources and improve the accuracy and reliability of the data.

In conclusion, this paper found a significant relationship between the number of tourists and the Internet search index through regression analysis. This discovery provides useful inspiration and decision support for the management of scenic spots. However, we should also recognize the limitations and shortcomings of studies and improve and refine in future studies. At the same time, the

management of the scenic spot should also comprehensively consider other factors and formulate scientific operation strategies to ensure the sustainable development of the scenic spot.

5. Propose

Based on the analysis results, this paper puts forward the following suggestions:

5.1 Strengthen the optimization of the name search index

Since the "Siguniang Mountain" name search index is positively correlated with the number of visitors, this means that optimizing the search results of this name can increase the interest and visits of visitors. You can consider providing more detailed and accurate information about Siguniang Mountain on relevant websites and tourism platforms, such as the features of scenic spots, historical background, and the latest tourism information, to improve its online visibility. The management of scenic spots should pay attention to the optimization of keywords on major search engines and tourism platforms to ensure that tourists can quickly find accurate and detailed information of scenic spots when they search for "Siguniang Mountain". In addition, you can consider working with well-known travel bloggers and Internet celebrities to improve the online visibility of Siguniang Mountain through their influence. This will not only attract the attention of more potential tourists, but also improve the visibility and reputation of the scenic spot.

5.2 Optimize the strategy search index

Although the "Siguniang Mountain" strategy search index is negatively correlated with the number of tourists, it does not mean that the optimization of this aspect should be reduced. Instead, we need to delve into the reasons, which may be that the existing strategies are of low quality, outdated information, or negative reviews. Therefore, the scenic spot management party should strengthen the review and update of the content of the strategy, to ensure that the tourists are provided with the latest, the most accurate and the most valuable travel guide. At the same time, special feedback channels for tourists can be set up to collect and deal with the feedback of tourists on the strategy in time, so as to continuously improve and optimize.

5.3 Highlight the uniqueness of the altitude

As a high-altitude scenic spot, Sigunjiang Mountain's unique geographical environment provides tourists with a rich tourism experience. According to the analysis results, the altitude search index is positively correlated with the number of tourists, indicating that tourists have a strong interest in the high altitude characteristics. Therefore, in the tourism promotion, we can make full use of this advantage to highlight the mountain scenery, characteristic activities and challenging experience of Sigunjiang Mountain. For example, a series of tourism products related to alpine hiking and viewing plateau scenery can be designed to attract tourists who like outdoor sports to experience them. Studies have also shown that mountaineering guides are also one of the main forces driving mountain tourism,

so we can provide the necessary training and support for mountaineering guides to improve their professional skills and service level to provide better services for mountaineering tourists[6].

5.4 Cross-channel marketing

In addition to online optimization, cross-channel marketing strategies combining online and offline can also be considered. In the digital age, a single marketing channel can no longer meet the diversified needs of tourists. Therefore, the scenic spot management should combine online and offline marketing means to achieve multi-channel coverage. Online, social media, tourism forums, blogs and other platforms can be used to improve the visibility and exposure of "Siguniang Mountain"; Offline, various tourism activities, publicity activities and special commodity sales can be held to attract tourists to visit on the site. Through cross-channel marketing, online and offline interaction and complementary effect can be formed, and the tourism attraction of "Siguniang Mountain" can be further enhanced.

5.5 Continuous data analysis and monitoring

The tourism market is a dynamic and changing process, and the needs and preferences of tourists are also constantly evolving. Therefore, the management of the scenic spot should regularly collect and analyze the data related to "Siguniang Mountain", including the search index, tourist behavior, market trends, etc., so as to better understand the needs of tourists and market changes. Through data analysis and monitoring, marketing strategies can be adjusted and optimized in time to ensure to keep pace with the needs of tourists and achieve sustainable development.

To sum up, we should take comprehensive measures in view of the increase of tourists in Siguniang Mountain. First of all, strengthen the optimization of the name search index, so that it is easier for tourists to find the relevant information of "Siguniang Mountain" in the network search, and increase the exposure rate. Secondly, optimize the search index to provide detailed and practical travel suggestions to stimulate tourists' interest and yearning for "Siguniang Mountain". At the same time, we should highlight the uniqueness of the altitude of"Siguniang Mountain" and publicize it as a tourism highlight to attract more tourists who pursue natural wonders. In addition, the cross-channel marketing strategy is implemented, and social media, tourism websites and other channels are used to widely spread the beautiful scenery and tourism resources of "Siguniang Mountain". Finally, continuous data analysis and monitoring to deeply understand the needs of tourists and market changes, timely adjust strategies to ensure the sustainable development of "Siguniang Mountain" tourism. Through the comprehensive application of this series of measures, it will attract more tourists to appreciate its unique charm and further promote the prosperity and development of local tourism.

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