

Research Article

Economic Performance Evaluation of Tourism in Pearl River Delta Based on AHP Model

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With the development of the times, the leading role of tourism in economic growth has become increasingly prominent. Tourism economic performance is an important standard to measure the development of its economy. However, there is no quantitative research on tourism economic performance within a single region. Therefore, on the basis of relevant research, this paper first constructs the tourism economic performance evaluation system from four aspects such as industrial scale, economic benefits, support power, and input and output. Then, based on the relevant data of tourism indicators in the Pearl River Delta in the past five years, the analytic hierarchy process was introduced to evaluate the economic performance of tourism in the Pearl River Delta. The results show that the tourism industry in the Pearl River Delta has good economic benefits and large industrial scale. However, the social motivation and input-output efficiency supporting the development of tourism are poor. Finally, according to the evaluation results, we put forward the methods and suggestions of tourism efficiency optimization in the Pearl River Delta region, so as to further promote the development of tourism in the Pearl River Delta region.

1. Introduction

Since the reform and opening up, China's economy has developed rapidly and people's income has increased significantly. As China has issued a series of policies to promote the development of tourism, the number of tourists and tourism income in China continue to grow rapidly, and tourism has become an important industry for the development of China's national economy and one of the fastest growing consumer areas [1, 2]. The number of domestic and inbound tourists received by China from 2010 to 2019 is shown in Table 1. As can be seen from the table, the number of domestic tourists continues to grow at a fast speed. The growth rate of inbound tourists has been relatively slow. In the future, we can promote the further expansion of tourism by vigorously publicizing China's tourist attractions to foreign countries and encourage more overseas tourists to visit China's tourist attractions.

As a modern service industry, tourism is an effective industry that explores new markets for urban economic

transformation and upgrading and seeks the new fulcrum for economic growth [3]. In recent years, the tourism economy has continued to show new vitality. The proportion of the tourism income in China's GDP keeps expanding, and the status of tourism industry has improved [4]. Figure 1 shows the proportion of China's total tourism revenue in GDP from 2010 to 2017. As can be seen from the figure, China's tourism income shows a trend of steady growth.

Using the economy to drive tourism development, the Pearl River Delta region will have more advantages than other places, mainly for the two reasons [5, 6]. On the one hand, the Pearl River Delta has significant geographical advantages. The Pearl River Delta region is located in the central part of Guangdong Province, adjacent to Hong Kong and Macao, with advantageous geographical conditions and relatively early economic development. Moreover, the Pearl River Delta region has numerous ports, developed and convenient transportation network, and relatively strong economic strength. On the other hand, the Pearl River Delta region has abundant tourism

TABLE 1: Number of domestic and inbound tourists in China from 2010 to 2019.

Years	Number of domestic tourists (Billion people)	Number of inbound tourists (Million people)
2010	21.03	13376.22
2011	26.41	13542.35
2012	29.57	13240.53
2013	32.62	12907.78
2014	36.11	12849.83
2015	40.00	13382.04
2016	44.40	13844.38
2017	50.01	13948.24
2018	55.39	14119.83
2019	60.06	14530.78

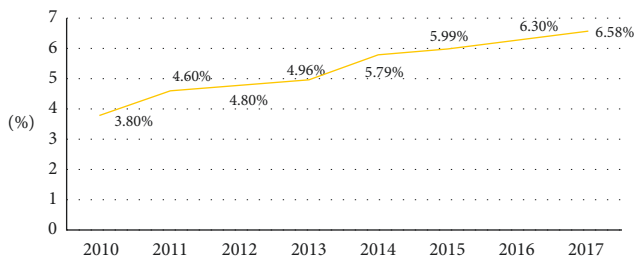


FIGURE 1: Proportion of China's total tourism revenue in GDP from 2010 to 2017.

resources. The Pearl River Delta region is rich in cultural and natural landscapes, and each city has its own charming tourism resources. Moreover, its tourism resource development rate is also very high [7]. According to statistics, many cities have more than a thousand tourist attractions, such as Guangzhou, Shenzhen, Foshan, and Dongguan, which are 5006, 3083, 1980, and 1347, respectively. And, many other cities have close to a thousand tourist attractions. These colorful tourism resources provide a solid foundation for the development of the tourism industry [8].

With the continuous development of tourism in the Pearl River Delta region, more and more tourists from home and abroad are attracted to visit. In recent years, the development of tourism in the Pearl River Delta region has played an increasingly powerful role in expanding domestic demand and driving economic growth. However, due to the lack of reasonable and scientific allocation of resources, there is more or less waste of resources in many places [9]. Therefore, it is necessary to measure the economic performance of tourism [10]. By analyzing the results of economic performance evaluation, we can understand the allocation of tourism resources in various regions and their input-output effects and point out the areas that need to be improved, so as to provide reference and basis for the development positioning of tourism cities and the implementation of policies and measures. This is conducive to the further vigorous development of tourism in the Pearl River Delta region. At the same time, it is of great significance to narrow the differences between cities, promote the common development of the region, and promote the optimization and adjustment of the industrial structure of the Pearl River Delta region [11–13].

At present, scholars' studies on tourism mostly focus on the overall efficiency of the national tourism industry, the efficiency of travel agencies and hotels, and the comparative analysis of multiple regions [14–17], while there is no quantitative research on the economic performance of tourism within a single region. Therefore, through literature review, this paper improves the theoretical system of tourism efficiency research, clarifies the research progress of tourism efficiency, and provides certain references for this paper and subsequent in-depth research. In addition, this paper selects the tourism data of the Pearl River Delta region in recent years to conduct an empirical study on the economic performance of the region's tourism industry to verify the applicability of the model constructed in this paper.

To sum up, the main contribution of this paper has two aspects. On the one hand, this paper constructs the evaluation index system of tourism economic performance from four aspects: industrial scale, economic benefit, supporting power, and input and output. On the other hand, this paper puts forward a quantitative evaluation method of tourism economic performance using analytic hierarchy process. This not only makes up for the gap in the study of tourism economic efficiency in the Pearl River Delta region but also enriches the content of tourism research so that more people pay attention to the development of tourism within the region.

This paper is divided into six sections. Section 1 describes the research background and significance. Section 2 summarizes the relevant literature research. Section 3 constructs the tourism economic performance evaluation index system from four aspects. Section 4 describes the process of benefit evaluation using AHP. Finally, taking the Pearl River Delta region as an example for the empirical test, it is found that the index system proposed in this paper conforms to the actual situation, and the quantitative evaluation method can be used to evaluate the economic performance of regional tourism more accurately.

2. Related Work

Performance evaluation is of great significance to the management and development of any organization or industry. It can quickly find and deal with the problems and ensure the long-term development of the organization or industry. Scholars have carried out research on the economic performance of tourism from different perspectives. So far, there are abundant theories related to tourism economic research. The tourism performance evaluation system is improving day by day, and research methods have been constantly innovated. The theories, models, and methods applied by scholars in the research process are of great reference value to later scholars.

Research on tourism performance mainly focuses on two aspects. On the one hand, it evaluates the level of tourism's economic development. On the other hand, the correlation effect of tourism is analyzed. For example, Liu et al. [18] used the SBM model and Malmquist index to measure the tourism efficiency and selected the tourism data of 30 provinces in China from 2006 to 2018 in a total of 13 years, so as to measure the efficiency of China's tourism development quality. The research results showed that the

utilization rate of various input factors of tourism in China is constantly improving, tourism efficiency is constantly improving, and the overall development level is increasingly balanced. Liu et al. [19] used the data envelopment analysis (CAR-DEA) model to evaluate hotel performance in the Pearl River Delta region. 41 hotels in Guangzhou, Hong Kong, and Macao were selected in this paper. The comprehensive performance evaluation results showed that hotels in Guangzhou perform better than those in Hong Kong and Macao, with higher pure technical efficiency (PTE), but Macao has the best hotel scale efficiency (SE). In order to improve the economic development efficiency of coastal tourism cities, Yang et al. [20] proposed a comprehensive evaluation model of the economic benefits of coastal tourism cities based on fractal theory. The evaluation results showed that the model is effective in the evaluation of economic efficiency, and it is beneficial to improve the economic growth efficiency of coastal tourism cities through the comprehensive evaluation of economic efficiency. Li et al. [21] used data envelopment analysis (DEA) to build a mixed effect model and analyze the nonlinear relationship between the intensity of tourism economic connection and the efficiency of tourism. Taking the urban agglomeration on the west coast of the Straits of China as an example, the mechanism and influencing factors of regional cooperation were studied. The results showed that regional economic level and urbanization level have an impact on tourism efficiency. However, the level of openness and transportation development in the region will not significantly affect the efficiency of tourism.

In terms of tourism correlation effects, Brida et al. [22] explored the evolution path of tourism clusters according to the growth rate of GDP per capita and the growth rate of international tourists per capita. Among them, per capita GDP growth rate represented the economic growth variable, and per capita growth rate of international tourists represented the tourism growth variable. It also explores the evolution of economic growth and tourism in 80 countries between 1995 and 2016. Chang et al. [12] used social exchange theory (SET) and social network theory (SNT) to test the influencing factors of tourism development. This can not only examine the attitudes that influence tourism development but also explain the influence of social relationship structure.

3. Design of the Tourism Economic Performance Evaluation Index System

3.1. Principle of Design. The design of the tourism economic performance evaluation index system needs to take into account the current situation of tourism development and its economic benefits. We should not only refer to the direct economic impact brought by the development of tourism but also consider the essential characteristics of the linkage of tourism industry, study the correlation between tourism and other industries, and select the evaluation index of the economic performance of tourism industry comprehensively and systematically. Therefore, this paper follows the following principles when designing the index system:

3.1.1. Systematic and Representative Principles. Tourism is a complex industry, and the selection of indicators should be able to systematically and comprehensively evaluate the research object. For this paper, both the dynamic process of tourism development and its results should be taken into account. A comprehensive reflection of the problem does not mean listing all available indicators but selecting different indicators based on a comprehensive and objective analysis of the characteristics and environment of the research object. That is, on the basis of systematic criteria, to simplify, we must select representative indicators and strive to use the least systematic evaluation of indicators of the study.

3.1.2. Scientific and Objective Principles. The evaluation of tourism economic performance is an important work to promote the sustainable development of cities and tourism. Therefore, a fair and objective attitude should be taken in the establishment of the index system. The establishment of tourism economic performance evaluation index system should have a rigorous scientific attitude and spirit, so as to ensure the objective evaluation of tourism economic performance.

3.1.3. Operational Principle. When evaluating the economic performance of the tourism industry, it is necessary to use quantitative data for mathematical statistics on the basis of qualitative analysis, which requires the selected indicators to be operable. The data required for the indicators can be obtained from the data shown in the relevant archives and databases, and the authenticity and reliability of the indicator data can be ensured. The most important thing is that these indicators can be used in practical operations and have promotional value and practical value.

3.1.4. The Principle of Combining Input and Output. The input and output factors involved in tourism are complex, and the economic performance of tourism cannot be measured by a single input or output. Theoretically, performance includes two aspects: performance and efficiency. Therefore, in the construction of tourism economic performance evaluation system, we should not only pay attention to input and output indicators but also cannot ignore the importance of input-output ratio indicators.

3.2. Index System Establishment. This paper summarizes the literature on tourism economic performance, combined with the opinions and suggestions of experts and professors, and has a full understanding of the tourism economic performance evaluation system. Then, according to the basic idea of analytic hierarchy process, this paper analyzes the relationship among the internal factors of the system, summarizes the four categories of industrial scale, economic benefits, support power, and input-output, and establishes the tourism economic performance evaluation index system as shown in Figure 2.

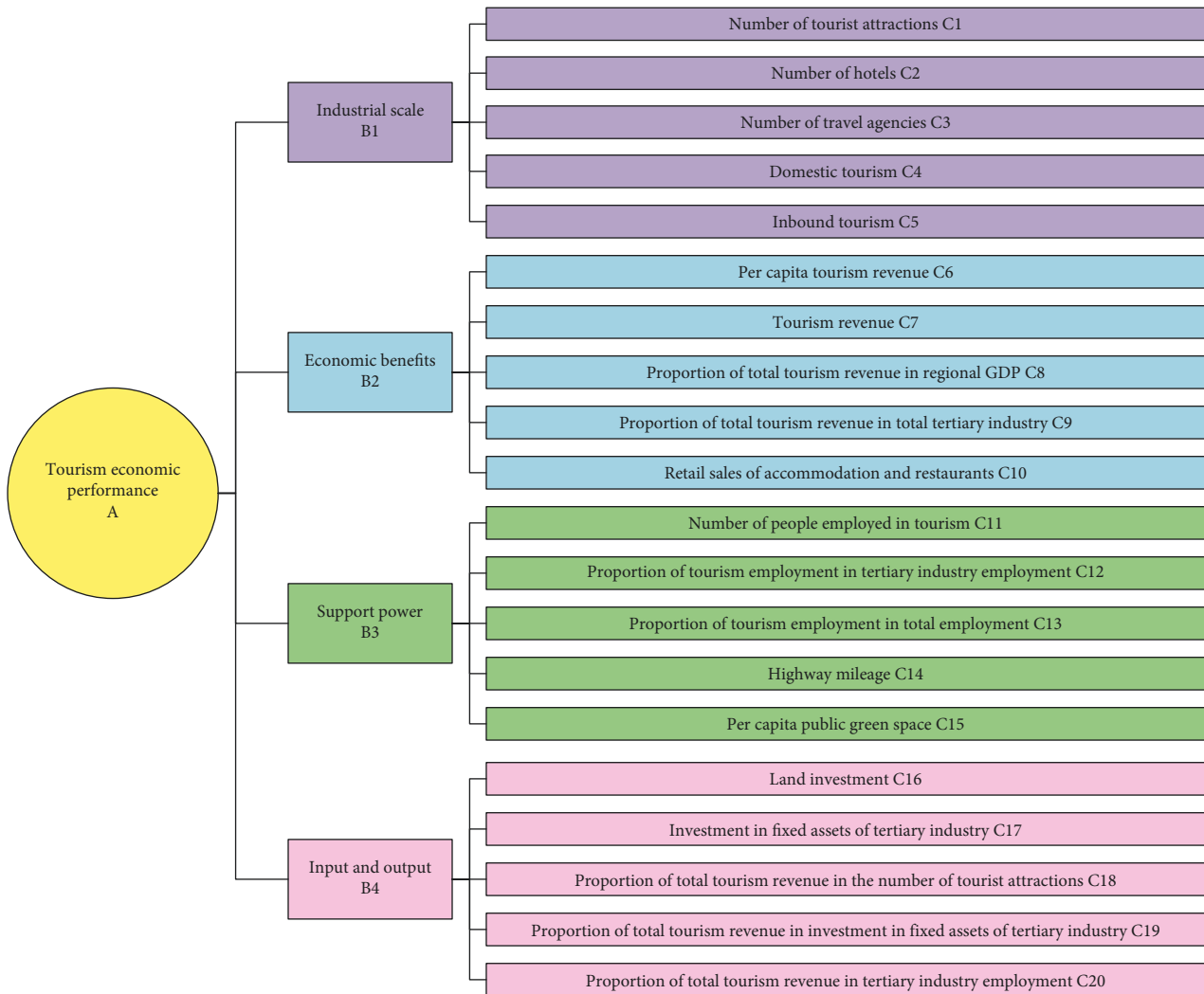


FIGURE 2: Evaluation index system of tourism economic performance.

4. Performance Evaluation of the Tourism Economy

4.1. Research Method Selection. Analytic hierarchy process (AHP) is a multicriteria decision-making method combining qualitative and quantitative analysis. It decomposes the decision-making problems into objectives, criteria, programs, and other levels and uses certain weights to objectively quantify people's subjective judgments [23]. On this basis, quantitative analysis and qualitative analysis are carried out. Its principle is to compare the relative importance of each factor in the same level relative to the same factor in the previous level, construct the pairwise comparison matrix, and then calculate and test the consistency of the pairwise comparison matrix. When necessary, we need to modify the comparison matrix to achieve acceptable consistency [24]. In accordance with the consistency test, the

eigenvector corresponding to the maximum eigenvalue of the pairwise comparison matrix is calculated and then the weight of each factor relative to the previous level factor is determined. Finally, the total sorting weight of each factor relative to the system target can be calculated. The analytic hierarchy process can not only simplify the system analysis and calculation but also help decision makers maintain the consistency of the thinking process. Therefore, based on the constructed tourism economic performance evaluation index system, this study calculates the standard weight of each evaluation index.

4.2. Evaluation Process

4.2.1. Constructing the Judgment Matrix. In the analytic hierarchy process (AHP), the matrix judgment scale is first used to make each element in the matrix quantitatively show

its importance. Let n indicators at a certain level be related to an element at a higher level, and define judgment matrix A as follows [25]:

$$A = \begin{bmatrix} a_{11} & a_{12} & \cdots & a_{1n} \\ a_{21} & a_{22} & \cdots & a_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ a_{n1} & a_{n2} & \cdots & a_{nn} \end{bmatrix}. \quad (1)$$

Here, a_{ij} is the comparison between index i and index j satisfying the following relationship:

$$\begin{cases} a_{ij} > 0, \\ a_{ii} = 1, \\ a_{ji} = \frac{1}{a_{ij}}. \end{cases} \quad (2)$$

According to the actual situation and expert experience of tourism economic performance in the Yangtze River Delta region, this paper uses the 1–9 scale method to score each index and constructs the judgment matrix of the tourism economic performance evaluation index in the Yangtze River Delta region. Assuming that the comparison score of index X and index Y is a , the comparison score of Y and X is $1/a$. Table 2 shows the 1–9 scale method for judging matrix elements.

4.2.2. Calculating the Weight Vector. Firstly, the column vector is normalized, then the new matrix is summed, and finally the weight vector is obtained by normalization.

$$A \cdot W = \lambda_{\max} \cdot W. \quad (3)$$

Here, A is the original judgment matrix, W is the feature vector, and λ_{\max} is the maximum eigenvalue of the judgment matrix.

4.2.3. Consistency Test of the Judgment Matrix. In practical applications, the calibration of judgment matrix is often carried out by pairwise comparison, and the situation of an inconsistent matrix often occurs. In order to avoid calculation error and logic contradiction, consistency check is needed. There are three steps for consistency checking. Firstly, we calculate the consistency index (CI). Then, the corresponding average random consistency index, RI, is determined according to Table 3. Finally, the consistency ratio (CR) is calculated and the consistency degree is judged. If $CR < 0.1$, it indicates that the consistency of the judgment matrix is acceptable; otherwise, the judgment matrix should be adjusted until it meets the consistency standard.

$$CI = \frac{\lambda_{\max} - n}{n - 1}. \quad (4)$$

Here, n represents the order of the judgment matrix.

$$CR = \frac{CI}{RI}. \quad (5)$$

4.2.4. Calculating the Weight. After calculating the weight of criterion layer and index layer, the final weight of each index is obtained according to

$$V = V_i V_{ij}. \quad (6)$$

Here, V is the final weight of the index, V_i is the weight of the criterion layer, and V_{ij} is the weight of the index layer.

In summary, the tourism economic performance evaluation process is shown in Figure 3.

5. Example Analysis

5.1. Determination of the Index Weight

5.1.1. Constructing the Hierarchical Model. According to the hierarchical model and data collection results, as well as the specific conditions of the four evaluation indexes of industrial scale, economic benefit, supporting power, and input and output, the primary indicators are set as $U = (U_1, U_2, U_3, U_4)$.

The secondary indicators corresponding to each primary indicator are set as $U_1 = (U_{11}, U_{12}, U_{13}, U_{14}, U_{15})$, $U_2 = (U_{21}, U_{22}, U_{23}, U_{24}, U_{25})$, $U_3 = (U_{31}, U_{32}, U_{33}, U_{34}, U_{35})$, and $U_4 = (U_{41}, U_{42}, U_{43}, U_{44}, U_{45})$.

5.1.2. Constructing the Judgment Matrix. According to the experts' evaluation index, the score of the evaluation index is clarified and the judgment matrix is constructed. The experts score the indicators in pairs according to the panel data of all indicators and their own experience. All the index data in this study are derived from the 2016–2020 “China Statistical Yearbook,” “China Urban Statistical Yearbook,” “Guangdong Statistical Yearbook,” and related statistical bulletin. Then, according to the results of the matrix operation, the feature vector and feature root are obtained and finally the combination weight is obtained. Accordingly, the index weight at the first level $V = (V_1, V_2, V_3, V_4)$ can be determined, and $\sum V_i = 1$. The index weights of the second level are $V_1 = (V_{11}, V_{12}, V_{13}, V_{14}, V_{15})$, $V_2 = (V_{21}, V_{22}, V_{23}, V_{24}, V_{25})$, $V_3 = (V_{31}, V_{32}, V_{33}, V_{34}, V_{35})$, and $V_4 = (V_{41}, V_{42}, V_{43}, V_{44}, V_{45})$, respectively.

5.1.3. Consistency Test and Weight Calculation. The calculation results of each index are shown in Tables 4–8.

5.2. Results and Discussion. According to the above results, it can be seen that all the judgment matrices given by the experts in this paper have passed the one-time test; that is, the results are valid. The final index weight values are shown in Table 9.

It can be seen from Table 9 that the economic performance of tourism in the Pearl River Delta region has not reached its ideal state. Among them, the sum of economic

TABLE 2: The 1–9 scale method of judging matrix elements.

Level division	Weight
X and Y are equally important	1
X is a little more important than Y	3
X is more important than Y	5
X is very more important than Y	7
X is extremely more important than Y	9
Median of the above two adjacent judgments	2, 4, 6, and 8

TABLE 3: Random consistency index table.

Order	RI
1	0
2	0
3	0.58
4	0.90
5	1.12
6	1.24
7	1.32
8	1.41
9	1.45
10	1.49
11	1.51

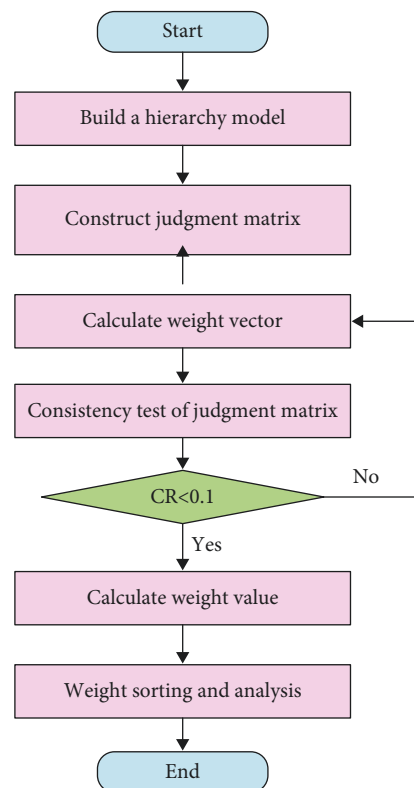


FIGURE 3: Flow chart of tourism economic performance evaluation.

benefits and industrial scale under the criterion level is 0.827, while the ratio of input-output and support power is only 0.173. From the perspective of criterion level indicators, the performance evaluation results show that the tourism industry in the Pearl River Delta has good economic benefits

and large industrial scale. However, the social motivation and input-output efficiency supporting the development of tourism are poor. It shows that the key to the quality of rural tourism public services is public transport services and security services. Therefore, the government and enterprises

TABLE 4: Weight of primary indicators.

U	U_1	U_2	U_3	U_4	V_i
U_1	1	1/2	6	4	0.373
U_2	2	1	7	4	0.454
U_3	1/6	1/7	1	1/2	0.059
U_4	1/4	1/4	2	1	0.114
Total					1

$\lambda_{\max} = 4.105$, $CI = 0.035$, and $CR = 0.039$.

TABLE 5: Weight of the industry scale.

U_1	U_{11}	U_{12}	U_{13}	U_{14}	U_{15}	V_i
U_{11}	1	2	4	1/4	1/2	0.164
U_{12}	1/2	1	2	1/6	1/5	0.082
U_{13}	1/4	1/2	1	1/7	1/5	0.044
U_{14}	4	6	7	1	2	0.424
U_{15}	2	5	5	1/2	1	0.286
Total						1

$\lambda_{\max} = 5.1558$, $CI = 0.039$, and $CR = 0.035$.

TABLE 6: Weight of economic benefits.

U_1	U_{21}	U_{22}	U_{23}	U_{24}	U_{25}	V_i
U_{21}	1	1/8	1/5	1/6	1/2	0.041
U_{22}	8	1	4	2	5	0.408
U_{23}	5	1/4	1	1/2	3	0.199
U_{24}	6	1/2	2	1	4	0.275
U_{25}	2	1/5	1/3	1/4	1	0.077
Total						1

$\lambda_{\max} = 5.2192$, $CI = 0.055$, and $CR = 0.049$.

TABLE 7: Weight of supporting power.

U_1	U_{31}	U_{32}	U_{33}	U_{34}	U_{35}	V_i
U_{31}	1	5	8	2	7	0.460
U_{32}	1/5	1	4	1/2	3	0.174
U_{33}	1/8	1/4	1	1/6	1/2	0.041
U_{34}	1/2	2	6	1	3	0.250
U_{35}	1/7	1/3	2	1/3	1	0.076
Total						1

$\lambda_{\max} = 5.2398$, $CI = 0.060$, and $CR = 0.054$.

TABLE 8: Weight of input and output.

U_1	U_{41}	U_{42}	U_{43}	U_{44}	U_{45}	V_i
U_{41}	1	1/4	5	1/2	2	0.178
U_{42}	4	1	8	2	5	0.407
U_{43}	1/5	1/8	1	1/7	1/2	0.040
U_{44}	2	1/2	7	1	4	0.295
U_{45}	1/2	1/5	2	1/4	1	0.080
Total						1

$\lambda_{\max} = 5.1548$, $CI = 0.039$, and $CR = 0.035$.

should improve the service level of these two aspects so as to achieve higher tourist satisfaction.

The scores of each index in the index layer are sorted in the order from high to low, and the total ranking results of the index scores are obtained, as shown in Figure 4. It can be

seen from the chart that the total tourism income (C7) index score is the highest (0.185), followed by the number of domestic tourism (C4) index, indicating that the total tourism income of the Pearl River Delta region is higher, and the number of domestic tourism is greater. Although the

TABLE 9: Index weights of tourism economic performance evaluation in the Pearl River Delta region.

Criterion layer	Weight	Indicator layer	Weight	Ultimate weight
B1	0.373	C1	0.164	0.061
		C2	0.082	0.031
		C3	0.044	0.016
		C4	0.424	0.158
		C5	0.286	0.107
		C6	0.041	0.019
		C7	0.408	0.185
B2	0.454	C8	0.199	0.090
		C9	0.275	0.125
		C10	0.077	0.035
		C11	0.460	0.027
		C12	0.174	0.010
B3	0.059	C13	0.041	0.002
		C14	0.250	0.015
		C15	0.076	0.004
		C16	0.178	0.020
		C17	0.407	0.046
B4	0.114	C18	0.040	0.005
		C19	0.295	0.034
		C20	0.080	0.009

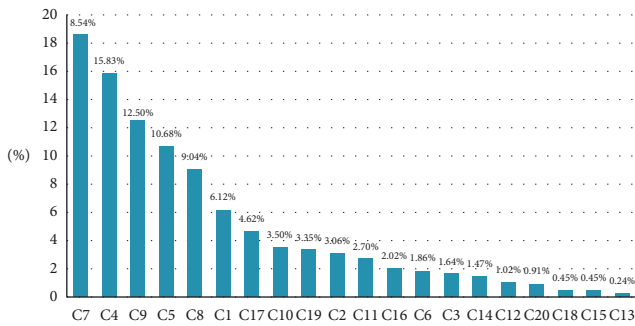


FIGURE 4: The total ranking weight of the tourism economic performance evaluation index layer in the Pearl River Delta region.

total tourism income is high, the proportion of total tourism income to GDP and the proportion of total tourism income to the total value of the tertiary industry are at a general level, indicating that the total tourism income needs to be further improved. In addition, there is a certain gap between the number of inbound tourists and the number of domestic tourists. Therefore, in the future, China’s tourist attractions should be vigorously promoted abroad, and more overseas tourists should be encouraged to visit China’s tourist attractions so as to promote the further expansion of the scale of the tourism industry.

6. Conclusions and Suggestions

The Pearl River Delta region has abundant tourism resources, rapid tourism development, and rapid economic growth. However, the process of tourism development also exposed many problems, such as management confusion, low efficiency of input and output of tourism resources, and an uneven level of information technology, which seriously restricted the development of tourism in the Pearl River Delta region. Therefore, based on the economic performance

of the tourism industry, this study summarizes the relevant literature and designs the tourism economic performance evaluation index system from four aspects: industrial scale, economic benefits, support power, and input-output. Then, it introduces the analytic hierarchy process and evaluates the current tourism economic performance of the Pearl River Delta region according to the relevant data of tourism indicators. The evaluation results show that the tourism economic performance of the Pearl River Delta region has not reached its ideal state. Although the Pearl River Delta region’s tourism economic benefit is good and the market scale is large, the social motivation and input-output level to promote tourism development are poor. Therefore, according to the evaluation results, we propose suggestions to improve the efficiency of tourism in the Pearl River Delta region. In the future, the evaluation index system of rural tourism public service performance can be constructed from more aspects, and the combination weight can be determined by the weight calculation method combining qualitative and quantitative methods, so as to evaluate the performance of rural tourism public service more scientifically.

Specifically, the efficiency of tourism in the Pearl River Delta can be improved from the following three aspects:

- (1) Promoting tourism and multiparty integration in the Pearl River Delta:

In the development of regional tourism, in addition to paying attention to the development and utilization of traditional tourism resources, we should adhere to the concept of large tourism resources, and focus on the cultivation and innovative application of social, cultural, and ecological resources. For example, in the planning and construction of regional key projects, appropriate and inappropriate tourism-related factors and functional carriers

should be implanted in a timely manner to actively promote the effective integration and common prosperity of tourism development and regional economic, social, cultural, and ecological construction in the Pearl River Delta region.

- (2) Optimizing the development pattern of tourism in the Pearl River Delta:

It not only needs to improve the public service system of the tourism but also needs to improve the management level of tourism in the Pearl River Delta region to excavate the cultural heritage of tourism in the Pearl River Delta region. In addition, the government should optimize the allocation of public resources. While breaking the boundaries inside and outside the scenic area, it also needs to make tourism public service facilities such as transportation network construction and supporting facilities that complement each other with the main body and style of the scenic area and become a part of tourism value.

- (3) Developing tourism in the Pearl River Delta based on local conditions:

In future tourism development planning, the government should promote tourism development in the Pearl River Delta region according to local conditions. For cities with better tourism development, they should make full use of existing conditions, deeply excavate the cultural connotation of tourism products, innovate the research and development, and design related tourism products, so as to meet the differentiated needs of tourists. For cities with general tourism development, they need to rationally allocate existing tourism resources, reduce resource waste in the input-output process, introduce advanced management technologies, and improve tourism efficiency.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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