

Research on the Development Efficiency of Tourism in the Non-Pearl River Delta of Guangdong

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Abstract

On February 18, 2019, the Chinese government officially released the Outline of the Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area, which will lead the country in a new round of reform and opening-up. The Greater Bay Area will become a dynamic world-class city cluster, an international scientific and technological innovation center with global influence, an important support for the development of the "One Belt And One Road", a demonstration area for in-depth cooperation between the mainland and Hong Kong and Macao, and a high-quality living area for living, working and traveling. Non-Pearl River Delta(Non-PRD) cities in Guangdong Province are adjacent to the Guangdong-Hong Kong-Macao Greater Bay Area, so it is of practical significance to promote the high-quality development of urban tourism from an international perspective. Based on the panel data released in Guangdong Yearbook 2019, this paper uses the envelopment data analysis (DEA) method to explore ways to promote the high-quality tourism development of Non-PRD cities in Guangdong Province based on the perspective of international development.

Keywords: Non-PRD cities; Tourism development; International perspective

1. INTRODUCTION

1.1 Tourism industry of China

Tourism, as an important part of the tertiary industry, is one of the fastest growing emerging industries in the world and is known as a sunrise industry. In 2009, China government clearly proposed that tourism should be developed into a strategic pillar industry of the national economy and a modern service industry that the people are more satisfied with. The status of tourism industry has been unprecedentedly improved [1]. China is the largest tourism market and international tourism consumption country in the world. As the strategic pillar industry of its national economic development, the tourism industry has been fully integrated into its national development strategy. According to the China tourism academy, China's tourism industry contributed 11.05% to GDP and 10.31% to national employment in 2019[2]. In 2019, the tourism economy continued to grow faster than GDP. The domestic and outbound tourism markets are growing steadily, and the inbound tourism market is on a more solid footing. The number of domestic tourists reached 6.06 billion, an increase of 8.4% over the same period last year. The total number of inbound and outbound tourists reached 300 million, increased 3.1% year on year. The total tourism revenue reached 6.63 trillion yuan, increased 11 % year on year.

The comprehensive contribution of tourism to GDP was 10.94 trillion yuan, accounting for 11.05% of the total GDP. Tourism directly employed 28.25 million people, and tourism directly and indirectly employed 79.87 million people, accounting for 10.31% of China's total employment. (See figure 1.)



Figure 1. China's Tourism Revenue 2012-2019

Data from: China Business Industry Research Institute

1.2 Tourism industry of Guangdong

Guangdong province has great tourism economic development potential, as one of the main tourism operators, the number of tourism agencies ranks the first in China. The Ministry of Culture and Tourism of China has released the 2019 annual national travel agency survey report. As of December 31, 2019, the total number of travel agencies nationwide was 38,943 (based on the number of travel agencies in the fourth quarter of 2019). In terms of the number of travel agencies, the top ten regions were Guangdong (3281), Beijing (3062), Jiangsu (2943), Zhejiang (2769), Shandong (2613), Shanghai (1758), Liaoning (1524), Hebei (1513), Anhui (1487) and Hubei (1267), accounting for 57.05% of the total number of travel agencies in China. (See figure 2.)

From the perspective that the degree of tourism development is highly correlated with the level of economic growth, this study will use DEA method to analyze the coordination relationship between the tourism development efficiency and the level of economic growth of cities in non-Pearl River Delta region of Guangdong Province. Based on the data released in the Statistical Yearbook of Guangdong Province in 2019, the data of cities in non-Pearl River Delta region from 2017 to 2019 were selected and analyzed by using DEA-CCR model, Super-CCR model and BCC model. It is hoped that through the measurement of sample cities, the tourism development efficiency of cities in non-Pearl River Delta region can be evaluated, and the change of tourism development efficiency of cities can be seen from time. From the analysis results, we can find the effectiveness of input-output indexes related to tourism development efficiency, so as to objectively put forward targeted suggestions for the development of tourism in non-pearl River Delta cities in Guangdong

Province. So as to help the region better achieve the goal of promoting urban economic development through tourism development.

The efficiency of urban tourism takes the city as the production unit of tourism economy, takes the tourism enterprise as the main body, and drives the industrial growth by improving the utilization rate of resources, which is the main influencing factor of urban tourism competitiveness[3]. On February 18, 2019, the Chinese government issued the Outline of the Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area (GBA). A large Bay Area of Guangdong by both Hong Kong and Macao special administrative region and Guangzhou, Shenzhen, Zhuhai, Foshan, Huizhou, Guangdong province, Dongguan, Zhongshan, Jiangmen, Zhaoqing nine of the pearl river delta cities, with a total Area of 5.6 square kilometers, at the end of 2018 total population has reached 70 million people, this area has the highest degree of openness in China, also is one of the strongest regional economic vitality, has the important strategic position in the China's overall development. Guangdong culture will become the core of GBA, according to the plan, GBA is not only to build dynamic world-class city, international science and technology innovation center, plays an important role in the building of the "area" all the way to support, the mainland and Hong Kong and Macao depth cooperation demonstration zone, should be to create livable appropriate industry of high quality life, become a model of high quality development. The tourism industry has become an important economic engine for the Greater Bay Area of Guangdong, Hong Kong and Macao.



Figure 2. Amount of Travel Agent of China 2019

Data from: Ministry of Culture and Tourism of China

Although the total economic development of Guangdong's tourism industry ranks the first in China, the tourism development within Guangdong, especially in Pearl River Delta cities and Non-PRD cities, is not balanced. Behind the rapid development of The Times, the quality of tourism development and the utilization of resources, namely the relationship between tourism development input and output (tourism development efficiency), are the key to the study of tourism development. Meanwhile, economic growth is the main purpose of tourism development[4]. At present, the research on tourism efficiency measurement has become a hot topic

in the academic circle. Tourism efficiency is an important index reflecting the quality of tourism development based on tourism input and output. The analysis of tourism efficiency helps managers to improve the effective utilization of tourism resources and is of great significance to the formulation of tourism development policies[5]. As a matter of fact, strong development of tourism increases opportunities for employment and raises income levels, improves living standards and contributes to the elimination of a number of financial and institutional barriers. Analyze the tourism offer of a country or a region, it should be emphasized that it is most commonly based on natural and cultural-historical components that are most often present in underdeveloped and passive areas[6]. From the point of view of demand, the prospects and the potential for expansion are relatively unlimited, giving even underdeveloped economies an opportunity to identify their potentials relying on pre-existing inputs and reap the benefits of tourism with minimum investment[7].

2. LITERATURE REVIEW

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At present, the research on tourism efficiency mainly focuses on two aspects: tourism-related industries and regional tourism efficiency. Tourism-related industries mainly include hotels, travel agencies, tourism transportation, tourism destinations, etc. The study of tourism efficiency is mainly divided into three levels: national level, regional level and urban level. In terms of research methods, most of them are quantitative. The

widely used methods include DEA, SFA, Malmquist index. Research on the tourism topic of "Guangdong Pearl River Delta region" focuses on 2015-2017. Existing research results focus on strategic analysis from the perspective of macro theory, and most of them take countries and cities as research objects for qualitative analysis[8]. Yu-qin Sun & Yi-ming Guo research on the development efficiency of eco-tourism in 12 coastal cities in China with DEA method, input indicators include the length of coastline, number of employees in the tertiary industry, urban fixed asset investment, and output indicators include tourism resources attractiveness, eco-environmental attractiveness[9]. Zhang Fan studied the tourism efficiency of 11 provinces and cities of Yangtze River Economic Zone from 2006 to 2015 with Max DEA method[10]. Zhang Hong & Fang Fang etc. used the DEA-BCC model and the coordinated development evaluation model to investigate the coordination relationship between the tourism development efficiency and the economic growth level of the Yangtze River Economic Belt, the inputs included Number of travel agencies, Number of scenic area, Number of star hotels, Employment in the tourism end of the year and outputs included Total tourist amount and Total tourism revenue[4]. Wang Xinyue & Han Xiaxia selected 16 Chinese coastal port cities in the Belt and Road Initiative as the research object, then used the DEA model and the Malmquist productivity index to analysis the general characteristics of tourism comprehensive efficiency and total factor productivity. Paper including three inputs as Employment in the Third Industry, Urban fixed asset investment, Actual amount of foreign capital used by the city, two outputs as Total tourism revenue, Total tourist amount[8]. Cao Fangdong & Huang Zhenfang etc. used the DEA model and ArcGIS spatial analysis module, analyzed tourism development efficiency of cities in the Pan-Yangtze River Delta from 1998 to 2008. The inputs including Employment in the Third Industry, Number of scenic area, Number of star hotels, outputs including Total tourism revenue, Total tourist amount[11]. Zhang Guanghai & Zhu Xuna used DEA method to evaluate the tourism development efficiency of cities of Hebei province of China from 2009—2013[3].

Inputs including Number of star hotels, Number of scenic area, Employment of Accommodation and Food Services, outputs including Total tourist amount, Total tourism revenue. Qin Weishan & Zhang Yifeng etc. choosing China's eastern coastal cities as the research objective, analyzes the temporal and SPA evolution patterns of tourism development. The Inputs including Employment in the Third Industry, Number of star hotels, Number of scenic area, Number of travel agencies, Tourist traffic density, outputs including Number of Inbound Tourists, Revenue of international tourist, Number of Domestic tourists, Total tourism revenue[1]. At present, there is no research on tourism development of Non-PRD cities, and the completion of this study will fill the gap.

3. METHODOLOGY

The DEA method is a very good tool for conducting cross-sectional tourism efficiency comparisons between different decision-making units (DMUs). According to Cook and Seiford, as the DEA method uses linear programming to measure the relative efficiency of DMUs, it cannot further discriminate efficient DMUs[12]. Hence, Andersen and Petersen constructed a super-efficiency DEA model[13]. That addresses this short coming of CCR-DEA model[14]. Farrell (1957) developed Data Envelopment Analysis (DEA) with a piece-wise-linear hull approach to frontier estimation[15]. DEA is a linear programming methodology for measuring production and scale efficiencies. Overall technical efficiency is multiplied by two and represents only an input structure.

Farrell (1957) applied linear programming to estimate an empirical production technology frontier and measured the efficiency of decision-making units (DMUs) when the production process presents a structure of multiple inputs and outputs. The advantage of this method is DEA's ability to accommodate multiple inputs and outputs and take the returns to scale in calculating efficiency; the concept of increasing or decreasing efficiency is allowed based on size and output levels. DEA is used in productive efficiency to measure DMUs with equal conditions to obtain the highest efficiency and to depict production functions in the input and output combinations of a firm. This function can achieve the maximum output with any possible combination of

inputs and form a production technology frontier. On the other hand, Banker et al. (1984) developed the BCC model, also named after its developers, to estimate the pure technical efficiency (PTE) of decision making units, assuming variable returns to scale, under which the production possibility set is the convex combinations of the observed units. The economic scale of a decision making unit can be evaluated in three ways[16]. The decision-making unit can be evaluated as operating at its optimal scale[17], that is, constant returns to scale (CRS) which suggests its operating scale should remain unchanged. Otherwise, the operating scale should downsize or expand, and these can be identified as declining returns to scale (DRS), and increasing returns to scale (IRS), respectively[18]. In the DEA models, the input orientation model searches for input minimization from a linear combination of decision making units identifying the output shortfall and the input over consumption while the output orientation model finds output maximization[19]. Tourism farms generally tend to seek more outputs from current inputs, so analysis of increasing outputs may be more appropriate than that of decreasing the given inputs[20]. Therefore Output-oriented CCR model, BCC model and Super-CCR model were used in this research. DEA-CCR model, Super-CCR model and BCC model were used to measure the data of the sample cities in 2019 and evaluate the operating efficiency of each cities in that year. The three-year data of the sample cities from 2016 to 2018 were measured to evaluate the changes in the operating efficiency of each enterprise, so as to get the improvement suggestions on the operating efficiency of cities.

4. EMPIRICAL ANALYSIS

4.1 Input & Output factors

Tourism development efficiency includes input and output. In terms of input index, capital, land and labor force are the most basic factors of production. Through the literature review and combined with data availability and the characteristics of the tourism industry, this paper choose the urban fixed asset investment, number of A grade scenic area, number of travel agencies, employment in the third industry as input indicators, choose total tourism revenue, total tourist amount as output analysis indicators, to build the Non-PRD cities efficiency evaluation index system of tourism development, as shown in table 4-1. The organization and coordination of community tourism in China are usually under the supervision of governments at all levels. In this study, 12 prefecture-level representative quality Non-PRD cities as the objects or DMUs of this paper were selected: Shantou, Shaoguan, Heyuan, Meizhou, Shanwei, Yangjiang, Zhanjiang, Maoming, Qingyuan, Chaozhou, Jieyang, Yunfu. All the 12 DMUs share two characteristics, firstly, they have very attractive tourism resources, and secondly, they are cities in less developed areas of Guangdong province.

Table 1. Input and Output

Type	Name of indicators	Unit
Input	Urban fixed asset investment	100 million yuan
	Number of A grade scenic area	Unit
	Number of travel agencies	Unit
	Employment in the third industry	10000 persons
Output	Total tourism revenue	100 million yuan
	Total tourist amount	10000 person-times

4.2 Data Collection

In this study, 12 Non-PRD cities were selected as DMU, and the panel data of input-output indicators in 2017-2019 were selected as the research samples. Data from Guangdong Statistical Yearbook of 2019 and the department of Culture and Tourism of Guangdong Province. The original data shown as table below.

Table 2. Original Data of Inputs

DMU	UFAI			NSA			NTA			ETI		
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
Shantou	2006.40	2391.63	2700.15	10	10	10	90	105	112	239.76	246.70	248.49
Shaoguan	692.82	737.85	764.42	24	25	26	49	56	57	144.67	133.26	133.82
Heyuan	778.47	836.86	998.37	13	13	15	42	52	54	141.02	138.95	142.02
Meizhou	806.77	794.67	826.45	30	33	33	44	58	59	216.55	167.39	169.02
Shanwei	669.33	780.44	898.28	7	9	9	21	29	30	120.21	123.70	124.67
Yangjiang	540.21	563.44	649.65	9	9	11	35	37	39	129.22	109.99	111.53
Zhanjiang	1641.53	1851.65	1809.06	14	15	16	45	59	66	344.51	395.43	391.78
Maoming	1415.73	1441.21	1338.88	9	13	13	20	22	24	284.06	326.44	323.63
Qingyuan	666.31	754.26	847.79	23	24	26	53	56	57	205.42	200.92	201.13
Chaozhou	501.05	518.09	550.21	7	8	8	40	44	48	124.71	109.08	109.26
Jieyang	1667.31	1872.39	2128.91	9	10	11	28	38	38	274.94	187.53	198.23
Yunfu	628.50	696.38	775.77	12	10	12	16	20	20	134.31	123.86	124.29

Data from : Guangdong Statistical Yearbook of 2019

UFAI: Urban Fixed Asset Investment (100 million yuan)

NSA: Number of A grade Scenic Area (unit)

NTA: Number of Travel Agencies (unit)

ETI: Employment in the Third Industry (10000 persons)

Table 3. Original Data of Outputs

DMU	TTR			TTA		
	2017	2018	2019	2017	2018	2019
Shantou	445.35	534.47	568.42	1879.67	2164.43	2306.87
Shaoguan	390.13	453.02	512.09	1650.21	1832.26	2001.11
Heyuan	372.86	316.82	357.66	1548.46	1728.16	1930.57
Meizhou	445.18	504.31	550.02	2000.66	2223.27	2358.66
Shanwei	130.23	161.89	172.58	845.12	928.15	965.06
Yangjiang	276.61	307.83	349.39	1317.50	1478.86	1622.85
Zhanjiang	421.43	510.89	601.22	2231.46	2639.41	2800.32
Maoming	328.33	425.85	476.09	1096.32	1398.54	1545.81
Qingyuan	314.50	346.21	377.36	1192.11	1292.68	1363.09
Chaozhou	234.76	306.35	398.23	1534.60	2007.23	2535.03
Jieyang	292.21	330.09	362.75	1933.91	2189.74	2347.52
Yunfu	257.61	286.47	345.46	1525.21	1659.84	1816.67

Data from : Guangdong Statistical Yearbook of 2019

TTR: Total Tourism Revenue (100 million yuan)

TTA: Total Tourist Amount (10000 person-times)

4.3 Result analysis

Sample data of Non-PRD cities in 20189 were selected for longitudinal efficiency analysis. DEA-SOLVER-LV8 software was applied to calculate the sample data by applying output-oriented CCR model, BBC model and Super-CCR mode, the comprehensive efficiency value, pure technical efficiency value and scale efficiency value of sample cities were obtained, and then the efficiency effectiveness and RTS change of sample cities were clear to see. As table 4, six cities were achieved effective Technical Efficiency (TE), at the same time also the Pure Technical Efficiency (PTE) and Scale Efficiency (SE) were effective, the value is 1 too. By calculating the comprehensive Efficiency Value of each sample city is not only 1, but also slack value is 0, thus achieving DEA effectiveness, which means that half of the sample cities at the minimum production frontier composed are these effective the cities of Comprehensive Efficiency have shown strong profitability and good technical innovation, and are highly competitive in business. The other six sample cities have values less than 1, which can be regarded as that DEA is invalid.

Table 4. DEA Efficiency of Sample Cities in 2019

DMU	TE	PTE	SE	RTS
Shantou	1	1	1	-
Shaoguan	1	1	1	-
Heyuan	0.7425	0.7996	0.9285	drs
Meizhou	1	1	1	-
Shanwei	0.5187	0.9999	0.5187	irs
Yangjiang	0.9722	1	0.9722	irs
Zhanjiang	0.8868	1	0.8868	drs
Maoming	1	1	1	-
Qingyuan	0.6859	0.7203	0.9522	drs
Chaozhou	1	1	1	-
Jieyang	0.9592	0.9886	0.9702	-
Yunfu	1	1	1	-
Ave	0.8971	0.959	0.9354	

The Output-oriented was applied to all the analysis of sample cities, it means that how to achieve efficiency by adjusting output factors while input factors remain unchanged. Therefore, the six sample cities that invalid DEA-should consider how to adjust output factors to achieve the effectiveness of overall development. Table4 shown that the mean value of all the sample cities is 0.9354. On the whole, SE is relatively high, which means that these sample cities are in the state of scale economy. The mean value of the PTE of the sample cities is 0.959. In the further calculation, it can be seen that the PTE value of two sample cities is below 0.9, accounting for 16.67% of all sample cities, which means that the existing technical level needs to be further improved. In order to measure 6 effective DMUs which value is 1 in 2018 specifically, Super-CCR model of DEA was used, and the cities efficiency values of DEA were classified and sorted. By comparing efficiency values, the cities with the best performance were obtained. Specific measurement values are shown in Table 5.

Table 5. Results of Super-CCR in 2019

DMU	Super-CCR	Rank
Shantou	1.1418	3
Shaoguan	1.0499	5
Heyuan	0.7425	10
Meizhou	1.0183	6
Shanwei	0.5187	12
Yangjiang	0.9722	7
Zhanjiang	0.8867	9
Maoming	1.1198	4
Qingyuan	0.6858	11
Chaozhou	2.1163	1
Jieyang	0.9591	8
Yunfu	1.7672	2

Can be seen in the table 5, rounding out the top four, respectively is Chaozhou, Yunfu, Shantou, Maoming, as one of the tourist city of Chaozhou, is rich in tourism resources and cultural history, is the most representative cities in Guangdong. Its high efficiency value indicates that The optimal allocation of input and output resources is achieved. Although Yunfu city, ranked the second, is not dominant in total tourism economy among all the sample cities, it shows a very high level of tourism economy comprehensive technical efficiency. In tourism development, Maoming realizes that the economic effectiveness cannot be separated from different input factors, especially the input of urban fixed assets, which plays a great role. The three cities at the bottom of the list are Heyuan, Qingyuan and Shanwei, according to DEA calculation, comprehensive efficiency of Shanwei is only 0.5187, it can be seen from table 4, in 2019 the return on scale of the cities

decreases, This indicates that in the development and expansion of tourism, with the investment of factors not realizing effective economy, it means that there is still a lot of space for improvement in technological innovation and management level.

DEA model analysis on the data of sample cities in 2019 cannot reflect the stability of the tourism economic development efficiency of each sample city, nor can it directly see the development changes in different years. In order to make a better longitudinal analysis, it is very necessary to introduce the time element for dynamic measurement of sample cities[18]. Therefore, in this study, the output-oriented CCR Model and BCC model were used to measure the efficiency value of the data of sample cities from 2017 to 2019, so as to observe and analyze the change of effectiveness of each sample city, as shown in Table 6. As can be seen from the table, six cities with the efficiency value of 1 from 2017 to 2019, Shantou, Shaoguan, Meizhou, Maoming, Chaozhou and Yunfu, all of which have achieved all reaching the effective level of DEA. Therefore it means that most of the sample cities show stable development and better technical level in these cities. Among them, the efficiency value of pure technical (PTE) of Zhanjiang is 1, which indicates that the pure technical input factor of Zhanjiang is effective in the process of tourism economic development. However, the total technical efficiency (TE) continues to show inefficiency, which ultimately affects the total efficiency (SE=TE×PTE). This means that in the process of tourism development and expansion, economies of scale are not realized with the input of factors. The PTE value of Shanwei city is only 1 in 2017, which indicates that the pure technology is effective in that year. However, as the proportion of input factors increases in 2018 and 2019, it does not bring economic efficiency, which means that it has encountered the wrong direction in the development process of tourism economy.

It can be seen from Table 2 that the urban fixed investment of Shanwei increased by 15% during 2018-2019, but it can be seen from Table 3 that the total tourism revenue of Shanwei only increased by 6.6% during 2018-2019. The total tourists amount of Shanwei only increased by 3.9% in 2018-2019, compared with Maoming, which ranks the fourth (shown as Table 5), the urban fixed investment in Maoming increased by 1.7%, the tourism income increased by 29.7%, and the total number of tourists increased by 27.57% during 2017-2018. As can be seen from Table 4, the TE efficiency value of Jieyang in 2017 and 2018 was 1, but it was less than 1 in 2019, resulting in the total efficiency SE value being less than 1 in 2019. This shows that Jieyang city is still in the groping stage in the process of strategic adjustment of tourism economic development, and has not seen an obvious stable development trend.

Table 6. Measurement Comparison of DEA efficiency 2017~2019

DMU	TE			PTE				SE			
	2017	2018	2019	2017	2018	2019	Ave	2017	2018	2019	Ave
Shantou	1	1	1	1	1	1	1	1	1	1	1
Shaoguan	1	1	1	1	1	1	1	1	1	1	1
Heyuan	0.9199	0.7919	0.7425	0.956	0.8555	0.7996	0.8703	0.9622	0.9256	0.9285	0.9387
Meizhou	1	1	1	1	1	1	1	1	1	1	1
Shanwei	0.6994	0.5555	0.5187	1	0.9996	0.9999	0.9998	0.6994	0.5557	0.5187	0.5912
Yangjiang	1	1	0.9722	1	1	1	1	1	1	0.9722	0.9907
Zhanjiang	0.9447	0.9411	0.8868	1	1	1	1	0.9447	0.9411	0.8868	0.9242
Maoming	1	1	1	1	1	1	1	1	1	1	1
Qingyuan	0.8389	0.7515	0.6859	0.8527	0.7731	0.7203	0.7820	0.9838	0.9720	0.9522	0.9693
Chaozhou	1	1	1	1	1	1	1	1	1	1	1
Jieyang	1	1	0.9592	1	1	0.9886	0.9962	1	1	0.9702	0.9900
Yunfu	1	1	1	1	1	1	1	1	1	1	1

In addition, super-CCR is also analyzed and ranked according to the 3-year data of 12 sample cities. Table 7 shows that Yunfu city, Chaozhou City, Shantou City and Maoming City have stronger tourism economic development competitiveness compared with other cities. In particular, Yunfu and Chaozhou, have shown great competitiveness in the current resource investment and development mode, although they do not account for a high proportion of the total tourism economy among all the sample cities. Their stable development trend

proves that it is worth expecting to vigorously develop the tourism economy.

Table 7. Change of Super-CCR 2017~2019

DMU	Super -CCR			Rank		
	2017	2018	2019	2017	2018	2019
Shantou	1.2776	1.3957	1.1418	6	3	3
Shaoguan	1.3021	1.1342	1.0499	5	5	5
Heyuan	0.9198	0.7919	0.7425	10	10	10
Meizhou	1.0855	1.0666	1.0183	7	6	6
Shanwei	0.6994	0.555	0.5187	12	12	12
Yangjiang	1.0791	1.0356	0.9722	8	8	7
Zhanjiang	0.9447	0.9410	0.8867	9	9	9
Maoming	1.3527	1.3514	1.1198	3	4	4
Qingyuan	0.8389	0.7514	0.6858	11	11	11
Chaozhou	1.4356	1.5182	2.1163	2	2	1
Jieyang	1.3063	1.0444	0.9591	4	7	8
Yunfu	1.6588	1.5604	1.7672	1	1	2

5. CONCLUSION AND SUGGESTION

On the whole, the development of the total efficiency of tourism economy in Non-PRD cities from 2017 to 2019 is not stable. Only half of the cities have reached economies of scale, which means that there is still a lack of effective technical applications in the expansion of urban tourism scale. In terms of the specific efficiency of urban tourism economic development, the gap of development efficiency between cities is relatively large, and some cities have no awareness of scale economy and pure technical efficiency. From the analysis results of economic development efficiency, in the process of tourism economic development, Non-PRD cities should pay attention to the characteristics of the city, dig into the tourism resources and cultural deposits, improve the development structure, explore new development mode, and avoid homogenized development between cities.

In the long - term tourism economic development process of the city, we should pay attention to the balance of various development elements, let each development elements give full play to the role. In the process of expansion, attention should be paid to the relationship between resource input and technical factors, so as to improve the total technical efficiency and pure technical efficiency, so as to improve the overall efficiency of urban tourism economic development.

In the new situation, there is a close relationship between urban tourism development efficiency and economic growth, and tourism is an important driving force to promote the sustainable development of regional economy. Non-PRD cities in Guangdong should focus on the important goal of coordinated development of the Guangdong-Hong Kong-Macao Greater Bay Area and actively improve the development efficiency of tourism economy. The development of urban tourism economy needs the natural tourism resources and the cultural connotation of the city. There are many inland and coastal areas with rich natural resources in Non-PRD cities the development of urban tourism should be based on its own resource characteristics. On the one hand, tourism resources should be vigorously developed and urban infrastructure construction should be strengthened. On the other hand, it is necessary to introduce the concept of city marketing, emphasize the building of city cultural brand, do a good job of city image design and positioning, and rely on the tourism economy with local characteristics to do a good job of coordination and dislocation development with Guangdong Pearl River Delta cities.

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