Empirical analysis on domestic tourism consumption structure in Shandong

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Abstract: In accordance with the statistical data related to the tourism in Shandong from 2006 to 2015, conduct quantitative research on the domestic consumption structure in Shandong based on the tourist consumption level index and the advanced index of tourism consumption structure. The research result shows: the average consumption of the domestic tourists in Shandong presents a trend of slow increasing, which is higher than the average consumption level of Chinese tourists; the development of the consumption level of the domestic tourists in Shandong falls behind the development of the domestic tourism income, and the domestic tourism consumption belongs to lagging-type consumption; besides, in the domestic tourist consumption structure in Shandong, the non-basic consumption occupies a low proportion, and the advanced index $\beta$ of the tourism consumption structure is less than 1 in all years, which shows that the domestic tourism consumption level in Shandong is low and the tourism consumption structure is unreasonable. Therefore, it is suggested to optimize the tourism supply structure in Shandong and improve the quality of the tourism products thus to satisfy the demand of the domestic tourists on high-quality tourism and promote the optimization of the domestic tourism consumption structure.

1. Introduction
The tourism in China has developed rapidly with the increasing in the national income and statutory holidays since China carried out the reform and opening-up policy. Wherein, the domestic tourism market has been occupying the most important position in the three largest tourism markets of China. Shandong locates in the eastern coast of China and has developed economy in China, which is the birthplace of Confucian culture and owns the scenic spots and historical sites such as Mount Tai, Hometown of Confucius and Mencius in Qufu as well as the Spring City Jinan to attract numerous Chinese and foreign tourists for sightseeing.

The domestic tourism consumption structure is the important indicator to measure the tourism development, in order to comprehensively analyze the domestic tourism consumption structure in Shandong, the paper, in accordance with the statistical data of The Outline of Shandong Tourism Statistics (2007-2016) and Yearbook of Tourism Statistics in China (2007-2016), conducts analysis on the domestic consumption structure in Shandong based on the tourist consumption level index and the advanced index of tourism consumption structure thus to provide basis for the domestic tourism development in Shandong.

2. Analysis on the overall domestic tourism consumption level in Shandong
Based on the average consumption data of the domestic tourists in China and Shandong, draw figure 1 by aid of the Excel software. It can be seen from figure 1 that the development of the average
consumption of the domestic tourists in Shandong presented a trend of slow increasing from 724 Yuan in 2006 to 1000 Yuan in 2015 with the growth rate of 38.12%, which is similar to the indicator of China; besides, the average consumption of the domestic tourists in Shandong was far higher than that in China in 2011, which began to present a declining difference in 2011 with that in China. The above phenomenon shows that the additional value of the tourism products in Shandong is higher and the consumption of the tourists in Shandong is higher than the average level in China.

![Figure 1. Comparison between the average consumption of the domestic tourists in Shandong and China from 2006 to 2015](image)

3. Evaluation on the tourist consumption level

In order to evaluate the consumption level of the domestic tourists in Shandong more scientifically, the paper adopts the tourism consumption level index, which can be presented with the formula:

$$Q = \frac{X_d}{X_s} \cdot \frac{S_s}{S_d} \quad (1)$$

$Q$ represents the tourist consumption level index, $X_d$ represents the current-year tourist consumption expenditure in one certain place, $X_s$ represents the tourist consumption expenditure of last year in one certain place, $S_d$ represents the current-year domestic tourism income in one certain place, and $S_s$ represents the domestic tourism income of last year in one certain place. Wherein, if $Q$ is less than 1, the domestic tourism consumption in the place will belong to the lagging-type consumption; if $Q$ is equal to 1, the domestic tourism consumption in the place will belong to the synchronized-type consumption; if $Q$ is more than 1, the domestic tourism consumption in the place will belong to the advanced-type consumption [1].

In accordance with related data, calculate the consumption level index $Q$ of the domestic tourists in Shandong from 2006 to 2015 by aid of the formula (1) (see figure 2). It can be seen from figure 2 that the consumption level index of the domestic tourists in Shandong from 2006 to 2015 presented a trend of small fluctuation. It began to have a slow increasing in 2011 and reached to the highest value 0.91 in 2014 and 2015 with the $Q$ value not more than 1, which shows that the development of the consumption level of the domestic tourists in Shandong falls behind the development of the domestic tourism income, and the domestic tourism consumption belongs to the lagging-type consumption.
4. Analysis on the domestic tourism consumption structure in Shandong

4.1 Analysis on the domestic tourism consumption composition in Shandong

The domestic tourism consumption is composed of basic consumption and non-basic consumption, wherein, the basic consumption includes the accommodation, catering, transportation (including long-distance transportation and urban transportation) and sightseeing in scenic area, which is the necessary and irreplaceable consumption for the tourists in the tourism process; the non-basic consumption include the shopping, entertainment, communication, neighborhood services, culture and art and others, which is the non-necessary consumption for the tourists in the tourism process with large elasticity. The larger the non-basic consumption occupies the proportion, the higher the tourism development level is, wherein, the non-basic consumption has occupied the proportion of more than 60% in the counties with developed tourism [2]. It can be seen from figure 3 that the various indicators of the consumption composition of the domestic tourists in Shandong changed little during the ten-year period. Wherein, the proportion of shopping was largest with largest growth range, and the proportion of shopping in 2016 occupied 22.78% of the total domestic tourism consumption amount in Shandong. In addition, it can be seen from figure 1 that the non-basic consumption proportion was about 30%, which reached to the highest proportion of 35.25% in 2010. All the above data show that the domestic tourism consumption structure in Shandong is very unreasonable, which has large difference with that in the countries and regions with developed tourism.
4.2 Analysis on the domestic tourism consumption structure change in Shandong

In order to analyze the domestic tourism consumption structure in Shandong more scientifically, the paper introduces the advanced index of tourism consumption structure for research [3], which can be presented with the formula:

$$\beta = \frac{F}{J}$$ (2)

$\beta$ represents the advanced index of tourism consumption structure, F represents the proportion of the non-basic tourism consumption expenditure, J represents the proportion of the basic tourism consumption expenditure. Wherein, the less the $\beta$ value is, the larger the proportion of the basic tourism consumption of the tourists is, which shows that the tourism consumption level is low and the consumption structure is unreasonable; the larger the $\beta$ value is, the larger the proportion of the non-basic tourism consumption is, which shows that the tourism consumption level is high and the consumption structure is reasonable.

It can be seen from Table 1 that the advanced index $\beta$ of the domestic tourism consumption structure in Shandong from 2006 to 2015 changed little, which fluctuated between 0.4 and 0.54 and less than 1. The result further shows that the domestic tourism consumption level in Shandong is low and the tourism consumption structure is unreasonable, therefore, it is suggested to optimize the tourism supply structure in Shandong and improve the quality of the tourism products thus to satisfy the demand of the domestic tourists on high-quality tourism and promote the optimization of the domestic tourism consumption structure.

Table 1. The advanced index of the domestic tourism consumption structure in Shandong from 2006 to 2015

| Year | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Non-basic consumption proportion (%) | 30.65 | 29.65 | 30.27 | 30.31 | 35.25 | 30.92 | 30.42 | 30.43 | 28.73 | 31.78 |
| Basic consumption proportion (%)    | 69.35 | 70.35 | 69.73 | 69.09 | 64.75 | 69.08 | 69.58 | 69.57 | 71.27 | 68.22 |
| $\beta$ value                      | 0.44  | 0.42  | 0.43  | 0.44  | 0.54  | 0.45  | 0.44  | 0.44  | 0.4   | 0.47  |
5. Conclusion

5.1 The development of the average consumption of the domestic tourists in Shandong presents a trend of slow increasing, and the consumption level of the tourists in Shandong is higher than that in China.

5.2 The consumption level index $Q$ of the domestic tourists in Shandong is less than 1, which shows that the development of the domestic tourism consumption level in Shandong falls behind the development of the domestic tourism income, and the domestic tourism consumption belongs to the lagging-type consumption.

5.3 In the domestic tourist consumption structure in Shandong, the non-basic consumption occupies the proportion of about 30%, and the advanced index $\beta$ of the tourism consumption structure is less than 1 in all years, which shows that the domestic tourism consumption level in Shandong is low and the tourism consumption structure is unreasonable.

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