Spatial Differentiation of Tourism Service Quality: A case of Shandong Province

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Abstract. The methods such as questionnaire, Importance-Performance and spatial analysis were used to study the spatial differentiation of tourism service quality in Shandong province. The result showed that: (1) The overall level of tourism service in western Shandong was lower than that of the other regions. (2) The tourism service was overall good in eastern Shandong. (3) In all the regions of central Shandong, the development levels of tourism service were balanced. Based on the above conclusions, this thesis put forward some corresponding policies, in order to promote the development of Shandong tourism. Firstly, all the regions should learn from each other to ensure each region had coordinated development. Secondly, further enhance the service quality of tour. Thirdly, attach importance to tourism shopping and improve shopping experience. Fourthly, improving the condition of the accommodation and adding entertainment items can improve tourist satisfaction. Finally, the weak areas of tourism must be seized in order to rectify them.

1. Introduction
In recent years, tourism had become an indispensable part in people’s daily life. The demand of the tourism industry was getting higher and higher and people also had higher expectations for the quality of tourism service. Therefore, the research on tourism service quality was becoming one of the most popular research fields in the academic field.

Tourism service quality was mainly represented by tourists’ satisfaction. The earliest foreign scholar who researched on the quality of tourism service and tourist satisfaction was Pizam. The tourist expectation and actual experience relationship model were put forward by Pizam. Pizam believed that tourists' satisfaction was the result of comparison between tourists' expectations of tourism destinations and the experience of field trips. Beard also emphasized that tourists’ satisfaction was based on the positive effect of the quality of tourism service. Tribe pointed out that satisfaction referred to the degree to which tourists’ experience met their expectations and needed in the process of traveling. In China, Jianfei Nan considered that tourists’ satisfaction was comprehensive psychological assessment of the products or services provided by tourist attractions. Zhihu Li considered that tourists' satisfaction was a psychological activity and a sense of pleasure after the need satisfied.

Shandong was a major tourist province, and in recent years, its tourism developed rapidly. But, there were a lot of problems in the quality of tourism service, such as “Qingdao prawn event”. Therefore, how to further improve the quality of tourism service in Shandong had become a pressing concern for tourists.
This research on the quality of tourism service in Shandong had meaning both in theory and practice. The results can improve the quality of the tourism service and can promote tourism development.

2. Questionnaire

This study on spatial differences of tourism quality covered 17 cities in Shandong Province. Because of the wide range of data, it adopted the form of cluster sampling survey. The province was divided into three regions, such as Eastern Shandong, Central Shandong and Western Shandong (Figure 1).

Figure 1. Division of Shandong Province.

2017 questionnaires were sent out, and the number of valid questionnaires was 1732. The validity rate of the questionnaires was about 85.87%.

According to the feedback results of the questionnaire, the basic personal information of the respondents was sorted out. The demographic characteristics of the respondents were shown in Table 1.

Table 1. The demographic characteristics of the respondents.

| Item               | Option        | Percentage (%) |
|--------------------|---------------|----------------|
| Place              | Inside-province | 53.58          |
|                    | Outside-province| 46.42          |
|                    | Junior school | 1.39           |
| Degree of education| Middle school | 15.53          |
|                    | College/university | 74.77        |
|                    | Postgraduate   | 8.31           |
|                    | Male           | 46.60          |
|                    | Female         | 53.40          |
|                    | <¥2000         | 44.11          |
| Monthly income     | ¥2000-¥5000 yuan | 32.74        |
|                    | ¥5001-¥8000 yuan | 17.96       |
|                    | >¥8000         | 5.19           |
| Sex                | Male           | 46.60          |
|                    | Female         | 53.40          |
| Age                | <18            | 5.42           |
|                    | 18-35          | 71.25          |
|                    | 36-60          | 19.75          |
|                    | >60            | 3.58           |
| Degree of education| College/university | 74.77        |
|                    | Postgraduate   | 8.31           |
|                    | Male           | 46.60          |
|                    | Female         | 53.40          |
|                    | <¥2000         | 44.11          |
| Monthly income     | ¥2000-¥5000 yuan | 32.74        |
|                    | ¥5001-¥8000 yuan | 17.96       |
|                    | >¥8000         | 5.19           |
| Occupat i-on       | Liberal professions | 12.93        |
|                    | student        | 42.15          |
|                    | farmer         | 1.62           |
|                    | Retirement     | 3.87           |
|                    | other          | 2.48           |

Table 1 showed that, the education levels of respondents were all above secondary school. The respondents had strong cognitive ability to ensure the scientific results of the questionnaire. The sex ratio of the respondents was balanced, and the careers were widely distributed, which can ensure the representativeness of the surveyed data.

3. Satisfaction analysis of tourism service quality

3.1 The satisfaction of “Food”
Based on analysis of 1732 valid questionnaires, the average of 17 cities tourists’ satisfaction with “Food” was obtained. Then, the spatial difference map of service satisfaction of “Food” was drawn with ArcGIS (Figure 2).

The overall satisfaction of “food” in Western Shandong was low, with an average score of 3.39. The satisfaction degree of “food” in Central Shandong was relatively high, with an average score of 3.93. In eastern Shandong, the satisfaction degree showed a decreasing trend from west to east, and the average score was 3.81.

Generally speaking, the spatial distribution of tourists’ satisfaction with “food” tourism services showed a trend of increasing first, then decreasing, and then increasing from west to east.

3.2 The satisfaction of “Shelter”

The average of 17 cities tourists’ satisfaction with the “Shelter” was obtained. Then, the spatial difference map of service satisfaction of “Shelter” was drawn with ArcGIS (Figure 3).

The overall satisfaction of “Shelter” in Western Shandong was low, with an average score of 3.59. The quality of “Shelter” service in Central Shandong was obviously higher than that in other areas, with an average score of 3.89. In Easter Shandong, Yantai was the centre, and from it decreased to both sides.

From the overall spatial distribution pattern, in terms of the satisfaction degree of "Shelter" tourism service quality, the Easter Shandong was higher as a whole.

3.3 The satisfaction of “Transportation”
The average of 17 cities tourists’ satisfaction with the “Transportation” was obtained. The spatial difference map of service satisfaction of “Transportation” was drawn with ArcGIS (Figure 4).

Figure 4. Spatial difference map of service satisfaction of “Transportation”.

The overall satisfaction degree of “Transportation” tourism services in Western Shandong was low, with an average score of 3.62, and slightly higher in the south part than in the north part. The service satisfaction of “Transportation” in Central Shandong was generally higher, with an average score of 3.86. In Eastern Shandong, the overall service satisfaction was high, with an average score of 3.87, which showed a decreasing trend from east to west.

From the overall spatial layout of the province, the satisfaction degree of “Transportation” tourism services was increasing from west to east.

3.4 The satisfaction of “Travel”
The average of 17 cities tourists’ satisfaction with the “Travel” was obtained. The spatial difference map of service satisfaction of “Travel” was drawn with ArcGIS (Figure 5).

Figure 5. Spatial difference map of service satisfaction of “Travel”.

The overall satisfaction degree of “Travel” in Western Shandong was low, with an average score of 3.67, of which Liaocheng was the lowest. The satisfaction degree of “Travel” in Central Shandong was higher as a whole, and Tai’an was the highest. In the Eastern Shandong, the satisfaction degree of “Travel” in this area shows a decreasing trend from east to west.

The overall satisfaction of tourism service quality of Shandong Province showed a trend of increasing first from west to east, then decreasing and then increasing. Tai’an and Weihai were the
highest, and the average score of the Central Shandong was obviously higher than that of the other two regions.

3.5 The satisfaction of “Purchase”

The average of 17 cities tourists’ satisfaction with the “Purchase” was obtained. The spatial difference map of service satisfaction of “Purchase” was drawn with ArcGIS (Figure 6).

![Figure 6. Spatial difference map of service satisfaction of “Purchase”.

The overall satisfaction degree of “Purchase” service in Western Shandong was low, with an average score of 3.52. The satisfaction of “Purchase” service in Central Shandong was relatively high, among which Tai’an and Binzhou were high-value centres. In Eastern Shandong, the satisfaction degree gradually decreased from east to west, and the Weihai was the highest and Weifang was the lowest.

Shandong Province’s satisfaction with “Purchase” tourism services was generally the highest in the central region, declining to both sides. The satisfaction of the Central Shandong was significantly higher than that of the other two regions.

3.6 The satisfaction of “Entertainment”

The average of 17 cities tourists’ satisfaction with the “Entertainment” was obtained. The spatial difference map of service satisfaction of “Entertainment” was drawn with ArcGIS (Figure 7).

![Figure 7. Spatial difference map of service satisfaction of “Entertainment”.

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The service satisfaction of “Entertainment” in Western Shandong was on the low side, and Liaocheng was the lowest. The overall satisfaction of Central Shandong is relatively average, at a medium level. The satisfaction degree of “Entertainment” in Eastern Shandong was relatively high.

The map showed that the overall satisfaction of tourism services of “Entertainment” in Shandong was a decreasing trend from Yantai to both sides, with a little increase in Weifang, Tai’an and Laiwu.

4. Conclusions
Through the above analysis, it clearly reflects the spatial differences of tourism service quality in the whole province, and some relevant strategies were put forward by this analysis.

(1) Draw lessons from each other and coordinate development among regions
There were obvious differences in various elements among regions, which required the regions to learn from each other, and constantly improve their own weak aspects.

(2) Further improve the service quality of “Travel”
The average value of “Travel” in every city of Shandong province was high, which showed that tourists in Shandong had better experience in this aspect.

(3) Attaching importance to “Purchase” and improving shopping experience
The average service satisfaction of “Purchase” was the lowest among all factors, which indicated that “Purchase” was a major problem in the tourism process. By improving shopping, tourists can enrich their experience of the tour process.

(4) Consolidate the basic conditions of “Food”, “Shelter” and “Transportation”
“Food”, “Shelter” and “Transportation” were the basic conditions for tourists to travel. From the analysis, most cities had done well in the three aspects, but they still needed to be strengthened.

(5) Add entertainment items to enhance tourism entertainment
After satisfying the basic elements, adding some entertainment items can increase the pleasure of tourism and add to the whole trip.

(6) Grasp weak areas and carry out key rectification
Comparing the three regions, the quality of tourism service in Western Shandong was weak. In order to improve the overall quality of tourism service in the province, Western Shandong must be rectified and reformed.

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