Study on Tourism Responsiveness and Habitat Environment-Influencing Factors of Traditional Villages in Huizhou Area

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Abstract: The tourism market for traditional villages in China is expanding, with the Huizhou region being particularly prominent. Traditional villages offer rich tourism resources. To ensure sustainable tourism development in the Huizhou region, this text explores the issues of tourism responsiveness and the sustainability impacts on the human environment in the development of traditional villages. The entropy weight-TOPSIS method is used to analyze the evaluation index system of the tourism response in Huizhou. Based on the three criteria of village resource endowment conditions, local economic development environment, and regional tourism development environment, a set of twenty indicators has been selected to establish an evaluation system for the tourism responsiveness of traditional villages in Huizhou. Feasible suggestions have been proposed to address the existing problems and the results of the data analysis in order to further improve tourism responsiveness. This study offers fundamental research for the sustainable development of traditional villages in Huizhou and the enhancement of tourism services in these areas. The results of this study show the following. (1) The highest weighting coefficient of the guideline layer of the garden green area affects the development of village tourism. (2) The high density of cultural heritage in traditional villages is conducive to the improvement of the service level and quality of the traditional village tourism, which will make the traditional villages more culturally connotative. (3) By studying the proportion of the tertiary industry in the GDP of the Huizhou region and its trend of change, it is possible to assess and study whether the tertiary industry’s development is in line with the law of industrial structure evolution. This also helps us to optimize and adjust the important impact of the tourism industry structure in the Huizhou area. (4) The tourism reception can be based on the data concerning passenger flow and scenic spots to plan the number of tourists and excursion routes, as well as optimize the service facilities, in order to alleviate the overcrowding situation, improve the experience of the tourists and satisfy the needs of the tourists.

Keywords: sustainable tourism; tourism responsiveness; traditional villages; habitat environment; entropy power method-TOPSIS; China

1. Introduction

Traditional villages are ancient settlements with a rich culture and social complexity [1]. The study of their formation and evolution is important for their protection and the development of rural tourism [2]. Traditional villages are a significant aspect of China’s agricultural civilization and a result of the coupling between humans and the land, with regional characteristics [3]. In 2023, China had 8155 traditional villages listed in the national protection list. The inheritance of traditional villages and cultural heritage is significant for passing on history and culture, improving social value, and realizing the sustainable
The acceleration of tourism development in traditional villages necessitates the improvement and preservation of these villages as a crucial representation of China’s living traditional culture and heritage resources [4]. Huizhou’s traditional villages, with their distinct regional characteristics in terms of the architectural style and historical culture, are a fundamental component of traditional villages. Tourists are drawn to the unique history, culture, and architecture of these traditional villages [5]. The tourism construction of traditional villages in the Huizhou region has been influenced by the village resource endowment, regional tourism development, and local economic inputs to varying degrees. Over the past decade of protection and development, there has been a common phenomenon of cultural stuffing in the tourism construction of traditional villages in the Huizhou area. This phenomenon does not take into account the regional characteristics of traditional villages and involves copying and imitating the development model [6]. Due to rapid urbanization and modernization, the population of traditional villages has migrated to surrounding areas, resulting in the hollowing out of these villages [7]. Each advanced and growing nation has confronted or is facing issues that include rural depopulation, rural decline [8] and homogenization [9], and has explored answers suitable for his or her own improvement [10]. The study of traditional village tourism responsiveness and the influencing factors can help to understand the core of the Huizhou area’s construction more comprehensively and retain the traditional Chinese rural characteristics [11].

The upgrading of traditional villages is accompanied by human activities. The traditional village habitat environment refers to the spatial environment dominated by the natural environment for human development of the means of production. The quality of the habitat environment and the development of traditional villages are closely linked, and they mutually influence each other. On the one hand, considering the relationship between traditional villages and the human environment can aid in addressing the issues of harmonious coexistence between the village environment and local residents, as well as alleviating cultural faults, in light of the weakening and homogenization of these villages. Studying the environmental needs and life trajectories of human activities in the context of urban–rural integration and development can facilitate population return to and economic growth in traditional villages, thereby promoting the evolution and reconstruction of traditional villages.

As the influence of tourism continues to expand, it affects the modern development of traditional villages. Among other things, “responsiveness” in tourism is used to explore the impact of regional differences, which play a significant role in the future development of traditional villages. The main objectives when studying tourism responsiveness are to recognize and understand the natural environmental constraints [12], infrastructure, history and culture [13], to protect and improve traditional villages, to promote the upgrading of village industries [14], to adjust the village structure, and to improve the quality of the villages [15] in the Huizhou region. The study obtained visitor perceptions to analyze and research the problems affecting the development of traditional villages, such as decay and poor living conditions [16]. The study of tourism responsiveness objectively reflects the gap between tourists’ real feelings and their expectations of the quality of the tourism environment and how it affects their travel experience. The study of responsiveness is significant to the history, reality, and future development of traditional villages in the Huizhou area. This research promotes the inheritance of tourism development in Huizhou and helps the management department enhance the transformation of traditional villages, promoting the integrated development of urban and rural areas.

Currently, China has entered the development stage of the “14th Five-Year Plan”, with the tourism industry continuously developing toward high-quality standards and the deep integration of culture and tourism. As people’s living standards improve, the demand for tourism increases, leading to the diversification of tourism methods [17]. Traditional villages have become a popular choice. China has entered the era of mass tourism, leading to rapid growth in the industry. Tourism is increasingly popular for leisure and entertainment, and rural areas offer great potential for development [18].
These areas often boast original natural environments and charming landscapes, and the promotion of rural tourism can facilitate urban–rural integration and cultural exchange [19], as well as the sharing and complementation of urban and rural resources [20]. The village typology assessed as village types is not only a pioneering and fundamental work for the implementation of the rural revitalization strategy but also the most basic and microscopic planning unit for the control of all the elements of rural land spatial planning [21]. In order to protect healthy rural ecosystems, it is necessary to maintain a dynamic balance of interrelated social development and energy operation within the carrying capacity of the system [22]. As rural tourism continues to grow, meeting the demands of high-quality development, Chinese tourists are shifting their consumption preferences from low-priced goods to reliable, high-quality experiences. In response, Wuzhen Wu Village in Jiaxing, Zhejiang Province, has implemented an all-inclusive package experience model, enriching the tourist experience through its mature operational approach. Development of village resource endowment conditions promotes the protection and upgrading of traditional villages [23], the study of the local economic development environment enhances tourism responsiveness, while the regional tourism development environment also enhances the promotion of the development of traditional villages and cultural resources of the general public [24], including excursions and research for the protection of traditional villages with tourism potential [25].

Based on the small scale and imperfect layout of the traditional village commercial space in the Huizhou area, other commercial inefficiency problems [26] are analyzed and improved. Strengthening the innovation of Huizhou’s culture and gathering local advantageous resources will help drive the economy of the Huizhou area and attract more employment needs [27], so that the public can better understand their national characteristics and history, enhancing national pride and cohesion [28]. Policy support has a driving role in studying the development of tourism in traditional villages, adopting differentiated planning contents and strategies for different types of areas, and developing detailed and focused village plans [29] to promote sustainable rural development [30].

The development of tourism, high-intensity human activities and massive occupation of the natural environment in recent years [31] have led to multiple challenges in the protection and development of traditional villages in the Huizhou area. During the historical changes, the ancestral halls, study houses, dwellings and bridges of the ancient villages have been damaged to varying degrees. The aging of traditional building facilities and factors such as lighting and ventilation affect the sense of the tourism experience. For research and analysis regarding the tourism responsiveness of traditional villages in the Huizhou area, to explore the coupling relationship between traditional villages and tourism with traditional village responsiveness, domestic academics mainly performed analysis and evaluation of traditional village resource competitiveness, industrial development [32], supporting services [33], social support, tourism environment [34], rethinking China’s rural revitalization: development of a sense of scale in Chinese traditional village communities [35]; analyzing and exploring geographic information visualization and the sustainable development of rural low-carbon slow tourism [36]. Overseas studies of heritage tourism responses have included the multiple social and economic benefits that cultural heritage tourism provides to local environments [37]; the touristification of rural communities and how it can contribute to sustainable rural development, providing new insights [38]; and the ecological impacts of unsustainable tourism activities by both tourists and villagers [39]. The ecological value of protected areas in traditional village areas focuses on environmental value [40], social value and economic value [41]. The above research on traditional villages by scholars at home and abroad analyses and studies the factors affecting traditional villages, but it lacks quantitative research. By establishing an effective evaluation system, the tourism experience of ancient villages can be further optimized and enhanced as a whole.

This study focuses on the Huizhou region in Anhui Province and uses the TOPSIS research method to identify three different criterion layers: village resource endowment conditions, the local economic development environment, and the local and regional tourism
development environments. Using 20 indicators, this study analyzes the tourism responsiveness of traditional villages in Huizhou based on these three criteria layers. The aim is to identify the factors influencing the tourism industry in Huizhou from 2017 to 2021. The results provide a basis for the protection and tourism development of traditional villages.

2. Methodology and Study Area

2.1. Study Area

The study area is the Huizhou region within Anhui Province (Figure 1). The Huizhou region refers to a historical geographic concept that roughly refers to the present-day city of Huangshan in Anhui Province, Jixi County in Xuancheng City, and Wuyuan County in Shangrao City, Jiangxi Province. At present, there are 341 villages in the Huizhou region listed in the traditional villages catalogue. Huizhou region has a large number of ancient villages, including Xidi, Hongcun, Chengkan, Nanping and hundreds of other villages, which are pursuing perfection and standardization in terms of both site selection and layout. Thus, many tourists are attracted to this place, which brings certain economic benefits to local residents. In terms of the spatial location, Huizhou is located in the southern part of Anhui Province, bordering Zhejiang, Anhui and Gan Provinces, with an area of about 12,000 km². The geographical location is between 117°02’ E–118°55’ E and 29°24’ N–30°24’ N. The average annual temperature in the region of Huizhou is 15.5–16.4 °C, and the precipitation is between 1395 and 1702 mm. The Huizhou region has favorable natural conditions; the region has four distinct seasons, abundant rainfall and plenty of heat. The forest cover is high, and there are many forest clouds and high humidity in the air. Most of the mountains in the Huizhou region have yellow soil, which has good air permeability and high fertility. The Huizhou area has high forest coverage, belongs to the humid monsoon climate, precipitation is mostly concentrated in May–August, water and heat resources are very rich, and the mild and rainy conditions are conducive to the growth of vegetation.

![Figure 1](image_url)

**Figure 1.** Distribution of traditional villages in Huizhou.

The Huizhou area contains diverse landform types and rich forest resources, which provide the innate conditions for the development of tourism. Moreover, the traditional villages are well-protected and have a deep cultural heritage, which has a high value for tourism development. In 2008, Huizhou was indexed as a countrywide cultural ecological protection experimental area by the Ministry of Culture, and in 2012, the State Council officially accepted the establishment of the “South Anhui International Tourism and Culture Demonstration Zone”, with Huizhou as the main body. The traditional villages in the Huizhou area are among the traditional villages in China where tourism has been developed earlier and better. In a relatively closed geographical environment, the Huizhou region has formed a unique Huizhou culture and Huizhou-style architecture. The excellent
environment and culture of the Huizhou region have attracted scholars who prefer ancient architecture and tourists who love the natural scenery from home and abroad to visit the area. At present, with the increasing human activities in recent years, the traditional villages and original ecology have been damaged to a certain extent. In order to promote the development of tourism, the one-sided transformation of traditional villages will cause the homogenization of the villages and reduce the regional characteristics and economic value of tourism. Therefore, it is typical and representative to take the tourism responsiveness of traditional villages in Huizhou as the research object, which is of major importance for the safety of traditional villages.

2.2. Method Flow

Currently, the entropy weight method-TOPSIS is commonly used for the comprehensive evaluation of multiple indicators and for decision analysis. This method allows for a more precise study of the factors, coverage, and evaluation criteria of the region, and it helps to identify the important factors of traditional villages to obtain the optimal solution.

In this study, the entropy-weighting method was used to determine the weights of the indicators of traditional village tourism responsiveness and influencing factors in Huizhou, and the three guideline layers of the village resource endowment conditions, the local economic development environment and the regional tourism development environment in Huizhou were selected as the research objects. Twenty program layers (Q) were given for data processing and indicator construction as follows. First, learning from the existing research now, the indicator system of the three dimensions was constructed according to the entropy weight-TOPSIS. Second, the data of Huizhou region from the Anhui Statistical Yearbook, Huangshan City Statistical Yearbook (2017–2021) and Xuancheng City Statistical Yearbook (2017–2021) were analyzed and collated, respectively. Third, the traditional village tourism responsiveness in the Huizhou region was comprehensively evaluated by the entropy weight-TOPSIS. The horizontal development level of eight districts (counties) in the Huizhou region and the composition of factors affecting tourism responsiveness were analyzed. The longitudinal changes in the Huizhou region from 2017 to 2021 were studied. Fourthly, in conjunction with determining the evaluation indicators and ensuring that the evaluation indicators were in the same positive trend, they were analyzed according to the weight index ordering to compare the degree of influence of different indicators in a region.

Traditional evaluation studies cannot completely reflect the role of human activities in influencing the environmental factors of traditional villages, and it is also difficult to explain the influence of the ecological environment on tourism. Compared with the previous ones, the entropy weight method is a method that applies the information entropy theory to the weight allocation in the comprehensive evaluation model. The weight of each evaluation indicator is determined by calculating its entropy value. The advantage of the entropy weight method is that it can take into account the interrelationship between each evaluation index and avoid the problems of subjective assignment and inconsistency. The specific steps are as follows:

1. According to the village resource endowment conditions, local economic development environment and regional tourism development environment in the Huizhou area, three guideline layers are established to initially evaluate the matrix of traditional village tourism responsiveness and the influencing factors. By constructing the yi original matrix with m objects n indicators:

\[
X = [x_{ij}]_{m \times n}. 
\]

2. The data of the 20 indicators of the 3 guideline layers of traditional village tourism responsiveness and the influencing factors in the Huizhou region are processed to make them standardized. Different indicators will bring different degrees of influence to the outcomes of the examination, so that to make the research statistics dependable, it is necessary to standardize the data of the 20 indicators so that they are between [0–1]. For
the positive indicators of traditional village tourism responsiveness and the influencing factors in the Huizhou area, the standardized processing formula is as follows:

\[ X_{ij}' = \frac{x_{ij} - \min(x_{ij})}{\max(x_{ij}) - \min(x_{ij})} \] (2)

For the negative indicators of tourism responsiveness and the influencing elements of conventional villages in Huizhou, the standardization formula is as follows:

\[ X_{ij}' = \frac{\max(x_{ij}) - x_{ij}}{\max(x_{ij}) - \min(x_{ij})} \] (3)

(3) In the formula, the original value of the jth indicator of the ith unit of the traditional village tourism responsiveness and the influencing factors in the Huizhou area is set as \( X_{ij}' \), and the jth indicator of the ith unit calculated through standardization is set as \( X_{ij}' \).

(4) The data entropy cost \( e_j \) and the data utility value \( d_j \) of the traditional village tourism responsiveness and the influencing factor indicators in the Huizhou area are calculated:

\[ e_j = -k\left[ \sum_{i=1}^{n} p_{ij} \ln (p_{ij}) \right]; \] (4) \[ d_j = 1 - e_j. \] (5)

\[ \text{formula: } P_{ij} = X_{ij}' / \sum_{i=1}^{n} x_{ij}', K = 1/n(e_j). \]

According to the information entropy value \( e_j \) of the jth indicator of traditional village tourism responsiveness and the influencing factors in the Huizhou region, the larger the entropy value of the indicators of traditional village tourism responsiveness and the influencing factors in the Huizhou region, the smaller the role in the comprehensive evaluation of responsiveness and the smaller the weight; on the contrary, the larger the weight. Under the jth indicator, the weight of the ith year in the indicator is set as \( P_{ij} \).

(5) Determine the evaluation index weights according to the 20 indicators established for the response degree of traditional village tourism in the Huizhou area:

\[ w_{ij} = \frac{(1 - e_j)}{\sum_{j=1}^{m}(1 - e_j)}. \] (6)

\[ \text{formula: } 0 \leq w_i \leq 1. \]

Select a certain number of evaluation indicators of tourism responsiveness and the influence factors for the different evaluation districts of traditional villages in the Huizhou area through the TOPSIS model. The distance between the proximity of each district is calculated through the model. Therefore, the first-rate solution is determined based on considering the benefits and drawbacks of each assessment object. The TOPSIS model results are intuitive, and a closer distance indicates a better solution. The specific calculation steps are as follows:

(1) Decide the nice ideal answer \( X^+ \) and terrible best answer \( X^- \) for the traditional village tourism responsiveness and the influencing factors in the Huizhou area:

\[ x^+ = (\max\{x_{11}, x_{21}, \ldots, x_{m1}\}, \max\{x_{12}, x_{22}, \ldots, x_{m2}\}, \ldots, \max\{x_{1n}, x_{2n}, \ldots, x_{mn}\}) = (x^+_1, x^+_2, \ldots, x^+_n); \] (7)

\[ x^- = (\min\{x_{11}, x_{21}, \ldots, x_{m1}\}, \min\{x_{12}, x_{22}, \ldots, x_{m2}\}, \ldots, \min\{x_{1n}, x_{2n}, \ldots, x_{mn}\}) = (x^-_1, x^-_2, \ldots, x^-_n); \] (8)
(2) The distance between the tourism responsiveness of conventional villages in the Huizhou region and the values of each indicator of the influencing factors, as well as the superb and terrible best solutions, are calculated:

\[
D^+_i = \sqrt{\sum_{j=1}^{n} (x^+_j - x_{ij})^2}
\]  
(9)

\[
D^-_i = \sqrt{\sum_{j=1}^{n} (x^-_j - x_{ij})^2}
\]  
(10)

(3) Calculate the degree of closeness between the traditional village tourism responsiveness in the Huizhou area and the evaluation object of the influencing factors and the ideal solution \(c_i\):

\[
c_i = \frac{D^-}{D^+ + D^-}, 0 < C_i < 1.
\]  
(11)

The larger the price of \(c_i\), the better the factors influencing the responsiveness to tourism of conventional villages in the Huizhou area. On the contrary, it indicates the lower influence of the factors on the responsiveness of traditional village tourism in the Huizhou area.

3. Results

3.1. Indicator Creation and Data Sources

The study of the tourism responsiveness of traditional villages in the Huizhou area needs to be influenced by certain indicators. Based on the three guideline layers of the resource endowment conditions of traditional villages in the Huizhou area, local economic development environment and regional tourism development environment, 20 program layers \(Q\) are given for data processing and indicator construction. The program layers are established according to the three guideline layers, analyzing the village location advantages and village cultural heritage from the guideline layer \(B1\) village resource endowment conditions, analyzing regional production capacity and consumption potential from the \(B2\) local economic development environment, and analyzing the hospitality capacity and living support facilities from the \(B3\) regional tourism development environment.

The disposable income per capita of urban residents, disposable income per capita of rural residents and total retail sales of consumer goods; factors affecting the environment of regional tourism development: number of star-rated hotels, total tourism revenue, tourism reception, number of industrial waste treatment facilities, turnover of accommodation and catering, and number of personnel in health institutions. The data from the aforementioned 20 program are used to analyze the tourism responsiveness and influencing factors of traditional villages in Huizhou.

3.1.1. Village Resource Endowment Conditions

According to the traditional village tourism in the Huizhou area, the study starts from the perspective of regional architecture, ecological environment and humanistic characteristics (Table 1). From the perspective of the village resource endowment conditions, the area of garden green space is chosen, which reflects the fact that the green space area and the change in green coverage play a direct role in influencing the ecological environment of the Huizhou area, and good green resources are the core of tourism development. Secondly, the number of nature reserves creates the unique cultural connotation and spatial form of the local area, retaining a certain historical lineage and folk culture characteristics, and tourism development cannot be separated from the construction of nature reserves. The number of townships \(D1\) is related to human activities, village tourism development, and the sparse spatial distribution of traditional villages. The road mileage of the townships \(D4\) has an impact on human travel activities, and the road development is still to be upgraded.
and the number of roads affects the convenience and comfort of tourism travel. The museums (D2) and national key cultural relic protection units (D6) of traditional villages are historical and cultural resources that help promote the tourism value of conventional villages from the attitude of the humanistic connotation. The high density of provincial key cultural relic protection units (D7) in traditional villages is conducive to enhancing the service level and greatness of traditional village tourism, plus making traditional villages more culturally connotative.

Table 1. Traditional village tourism response indicator system in the Huizhou area 2021.

<table>
<thead>
<tr>
<th>Target Level</th>
<th>Standardized Layer</th>
<th>Programmatic Level</th>
<th>Description of Indicators</th>
<th>Unit (of Measure)</th>
<th>Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Traditional Village Tourism</td>
<td>B1</td>
<td>C1</td>
<td>D1 Number of communes (towns) (+)</td>
<td>One</td>
<td>0.0363</td>
</tr>
<tr>
<td>Response System in Huizhou Area</td>
<td>Village resource endowment conditions</td>
<td></td>
<td>D2 Museums (+)</td>
<td>One</td>
<td>0.0395</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C2 Village cultural heritage</td>
<td>D3 Nature reserve (+)</td>
<td>One</td>
<td>0.1013</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D4 Road mileage (+)</td>
<td>Kilometers</td>
<td>0.0440</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D5 Area of landscaped green space (+)</td>
<td>Hectares</td>
<td>0.1076</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D6 Nation-level key cultural relics safety unit (+)</td>
<td>One</td>
<td>0.0344</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C3 Regional production capacity</td>
<td>D7 Provincial cultural relic safety unit (+)</td>
<td>One</td>
<td>0.0610</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D8 Value added by tertiary industry (+)</td>
<td>Billions USD ten thousand</td>
<td>0.0429</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D9 Gross domestic production (GDP) (+)</td>
<td>Ten thousand people</td>
<td>0.0296</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C4 Consumer potential</td>
<td>D10 Number of resident population (+)</td>
<td>Unit of money (in PRC: Chinese yuan)</td>
<td>0.0375</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D11 Per capita disposable income of urban permanent residents (+)</td>
<td>Unit of money (in PRC: Chinese yuan)</td>
<td>0.0687</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D12 In line with capita disposable earnings of urban everlasting citizens (+)</td>
<td>Unit of money (in PRC: Chinese yuan)</td>
<td>0.0426</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D13 In step with capita disposable income of permanent citizens in rural areas (+)</td>
<td>Unit of money (in PRC: Chinese yuan)</td>
<td>0.0144</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D14 Total retail sales of consumer goods (+)</td>
<td>USD ten thousand</td>
<td>0.0499</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D15 Number of star-rated hotels (+)</td>
<td>One</td>
<td>0.0574</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D16 Gross tourism receipts (+)</td>
<td>Billions USD ten thousand</td>
<td>0.0336</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D17 Tourism receipts (+)</td>
<td>Ten thousand people</td>
<td>0.0320</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D18 Number of industrial waste gas treatment facilities (−)</td>
<td>Bend</td>
<td>0.0241</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C5 Hospitality</td>
<td>D19 Accommodation catering turnover (+)</td>
<td>USD ten thousand</td>
<td>0.0864</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D20 Number of personnel in health institutions (+)</td>
<td>One</td>
<td>0.0568</td>
</tr>
</tbody>
</table>

3.1.2. Nearby Monetary Improvement Surroundings

The neighborhood financial development environment of conventional villages in the Huizhou region consists of the level of service industry, regional investment capacity, and consumption potential, which constitute the economic carriers of village tourism development. The value added by the tertiary industry plays an effective role within the financial improvement of traditional village tourism, where the tertiary industry is all kinds of service industries or businesses. The study of the price brought by a tertiary enterprise can more closely replicate the first class of countrywide financial development and promote the upgrading of the industrial structure according to the study of data changes. The tertiary industry focuses on satisfying personalized consumption demand, which can effectively stimulate and expand domestic demand and promote the improvement of residents’ income.
and consumption level. The study of the price brought by a tertiary enterprise displays the scale of the development of tertiary enterprises in the Huizhou region and the degree of rapidity of growth, as well as the contribution of tertiary industry units or sectors to the GDP. The GDP is of great practical significance for the study of the economic and political interests of traditional villages in the Huizhou area. Local economic development is closely related to human activities, and the number of the resident population is one of the most important indicators of the regional population size, which not only reflects the population size and population density of the region but also has great significance for the planning and construction of the city and public services. Traditional villages are facing problems such as population loss and employment difficulties, while some small and medium-sized cities are attractive due to opportunities and resources, and their resident population is growing. In addition, as the pace of social aging accelerates, demographic modifications are posing an increasing number of extremely demanding challenges to the development of tourism in traditional villages within the Huizhou location. The improvement of the economic development environment through tourism can attract tourists to spend money, enhance the commercial value of the whole traditional village, and provide more employment opportunities for local youth. The per capita disposable income right (D11) of the region shows the economic development level and consumption potential of the whole village.

### 3.1.3. Regional Tourism Development Environment

The enhancement of the tourism development environment not only facilitates the improvement of facilities and environments in traditional villages but also provides residents and tourists with good environmental quality and living experience. By studying the number of star-rated hotels in traditional villages (D15), tourists can grasp the information about hotel quality more quickly. Star-rated hotels in Huizhou can provide more high-quality tourist living conditions, and a basic service experience is guaranteed by booking local star-rated hotels. Meanwhile, the total income from tourism (D16) is crucial to the development of the local economy. It not only increases local employment opportunities and improves people’s quality of life but also provides the necessary funding for a range of local infrastructure development. In addition, a popular tourist destination brings in more inward investment and promotes economic and social development. The tourism reception can be based on traffic data and scenic spots to plan the number of tourists and tour routes, optimize service facilities to ease congestion, improve the tourist experience and meet the needs of tourists. The development of the human industrial environment, the impact on the environment, the need for industrial exhaust treatment facilities mitigation, and treatment of industrial exhaust to maintain the quality of the environment are necessary, as the emission of exhaust not only affects the air quality but also the ecological environment, meaning nature reserves have an adverse impact.

### 4. Statistics and Analysis

Based on the entropy-weighting method, the weighting results of the village resource endowment conditions, the local economic development environment and the regional tourism development environment of the traditional village tourism in the Huizhou area from 2017 to 2021 are summarized. It can be concluded that the larger the weight coefficient (W), the richer the information of the indicator and the more the effect on the assessment of the responsiveness of traditional villages in the Huizhou region. Among them, according to the data for these five years, it could be concluded that the better the relative proximity, the better the tourism responsiveness and influence factors. Tunxi District is located in the first of eight districts (counties) for five consecutive years, and the relative proximity of the tourism responsiveness of traditional villages in the Huizhou area shows an upward trend under small fluctuations. Specifically, it can be divided into three stages:

The period 2017 to 2019 shows a small fluctuation down (Table 2). From the indicators, the garden green space area (D5), a guideline layer weight coefficient from 0.1139 to 0.1101, in the three guideline layers in the highest weight coefficient of the resource endowment
conditions of the villages in the districts and counties of the Huizhou region. The garden green space provides a place for people’s leisure and recreation, which can make people relax and enhance their physical health. Secondly, the green environment can effectively reduce air pollution and noise pollution and improve the ecological environment of the city. The weight coefficient of the nature reserve (D3) 0.1065–0.0936–0.1035 fluctuates slightly. The significance of traditional villages for the construction of nature reserves lies in the protection of the natural environment, the maintenance of biodiversity, and the preservation of natural landscapes and resources. The establishment of nature reserves can stimulate the economy and employment to spread the concept of environmental protection through eco-tourism and environmental education activities, and it can improve the income of local residents with the promotion of sustainable improvement of tourism in conventional villages in the Huizhou area. The number of townships (D1) declined from 0.0372 to 0.0361, museums (D2) from 0.0405 to 0.0393, and highway mileage (D4) from 0.0436 to 0.0433. Overall, the push-up index declined slightly. The underlying reason is that the policy direction has changed, and it now focuses more on ecological construction and protection of natural forest resources. Compared with the past, the proportion of artificial forestation has been reduced. On the other hand, the government has increased the development of forest tourism in order to meet people’s demand for recreational tourism and experiencing nature. With these changes, the intervention and impact of human activities on forest ecosystems have been reduced.

Table 2. The 2021 response of traditional village tourism in the Huizhou area.

<table>
<thead>
<tr>
<th>Term</th>
<th>Fantastic Best Answer Distance D+</th>
<th>Poor Perfect Answer Distance D−</th>
<th>Relative Proximity C</th>
<th>Sorting Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jixi county</td>
<td>0.227</td>
<td>0.035</td>
<td>0.134</td>
<td>8</td>
</tr>
<tr>
<td>Tunxi district</td>
<td>0.139</td>
<td>0.202</td>
<td>0.592</td>
<td>1</td>
</tr>
<tr>
<td>Huangshan district</td>
<td>0.196</td>
<td>0.089</td>
<td>0.311</td>
<td>4</td>
</tr>
<tr>
<td>Huizhou district</td>
<td>0.216</td>
<td>0.063</td>
<td>0.225</td>
<td>5</td>
</tr>
<tr>
<td>She county</td>
<td>0.191</td>
<td>0.125</td>
<td>0.395</td>
<td>3</td>
</tr>
<tr>
<td>Xiuning county</td>
<td>0.218</td>
<td>0.059</td>
<td>0.214</td>
<td>6</td>
</tr>
<tr>
<td>Yixian county</td>
<td>0.228</td>
<td>0.055</td>
<td>0.195</td>
<td>7</td>
</tr>
<tr>
<td>Qimen county</td>
<td>0.180</td>
<td>0.128</td>
<td>0.415</td>
<td>2</td>
</tr>
</tbody>
</table>

Secondly, in terms of the local economic development environment, the weight coefficient of the per capita disposable income (D11) shows an upward trend under small fluctuation from 0.0681 to 0.0699. As the income level of Chinese residents increases, the way of traveling is diversified. The value added by the tertiary industry (D8) is from 0.0427 to 0.0438. Here, tourism as an essential part of the tertiary enterprise, and its value added can be assessed by measuring the tourism consumption expenditure and tourism business income indicators. The value added by tourism plays an important role in economic development, which can promote employment and income growth, as well as the development of related industries, which in turn results in the growth of the whole economy. At the same time, the growth of the tourism value added can also bring employment opportunities and promote the growth of residents’ income. The turnover of accommodation and catering in the regional tourism development ring is on a downward trend from 0.0816 to 0.0702, while the occupancy rate of hotels tends to be lower in the off-season of tourism, especially in the winter, which requires different promotions and preferential policies to attract guests. With the continuous expansion and optimization of the tourism market, hotels also need to continuously strengthen their brand building and service level improvement to adapt to market changes and customer needs. The relative proximity of Tunxi District in 2017–2019 shows an upward trend under small fluctuations from 0.581 to 0.501 to 0.565, and the value ranks first among the eight districts and counties. Tunxi District has a small area, but the number of garden green space areas has increased significantly, and the protection
of the forest ecological environment has increased to meet the people’s demand for forest recreation, natural recreation and other needs.

Tourism reception (D17) declined sharply in 2020 under the new COVID-19 epidemic. According to the study of the 2019–2020 indicators, the relative proximity of Qimen County decreased from 0.422 to 0.372, and the relative proximity of Jixi County decreased from 0.163 to 0.136, and the improvement of tourism in conventional villages in the Huizhou region was subjected to the impact force. At the same time, Jixi County’s tourism resource endowment conditions were weak in competitiveness, the construction of garden green area needed to be strengthened, and the quality of tourism living facilities needed to be upgraded. The resident population of Jixi County decreased in 2017–2021, with many people leaving the agricultural areas to search for better employment possibilities and living conditions in the cities. In terms of the negative contributing factors, the weight coefficient of the number of industrial waste gas control facilities (D18) decreased from 0.0507 to 0.0239, and the number of transportation trips and industrial waste gas decreased under the new COVID-19 epidemic, so that the positive contributing factors and the negative impact factors cancelled each other out.

It enters a phase of moderated enhancement in 2021. The indicators accommodation and catering turnover (D19) from 2020 to 2021 weighting coefficient changed from 0.0778% to 0.0864. With the enhancement of the ecological environment and the slowing down of the epidemic, people are more likely to go in pursuit of a high quality of life and relaxation of the body and mind, so tourism and travel have become among the best choices. Secondly, the environment of traditional villages can effectively reduce air pollution and noise pollution. Accommodation and catering turnover (D19) has an important influence on the regional tourism development environment for the study of tourism responsiveness of conventional villages in the Huizhou region. As well as the provision of living facilities to enhance the quality of tourism, it is vital to enhance the quality of traditional villages and tourism. Accordingly, the number of health institution staff in the Huizhou region (D20) reflects the development of medical conditions in the tourism region, thus contributing to the configuration of living facilities for residents and tourists.

5. Discussion

Through the above data analysis, this study puts forward the following views on the tourism responsiveness and influencing factors of traditional villages in the Huizhou area. Firstly, Tunxi District (0.592) and Qimen County (0.415) are relatively stable in terms of the area of regional gardens and green spaces (0.1076) and nature reserves (0.1013). Green plants help to improve the urban environment by increasing the air humidity, reducing noise, purifying the air, absorbing dust, and lowering temperatures. The increase in nature reserves protects biodiversity and regulates the climate environment [42]. Traditional villages can stimulate tourism consumption in traditional villages by providing green and sustainable services [43]. With the increase in green areas, the quality of the tourism environment is improved to provide a relaxing and pleasurable experience for people [44]. In addition, landscaped green spaces can promote tourism social exchanges [45], increase people’s social participation in traditional villages during tourism [46], as well as enhance the well-being and quality of life of the residents of traditional villages in the Huizhou region [47].

Secondly, a favorable habitat provides economic conditions for the conservation and development of tourism in traditional villages. Higher per capita income means that people have more economic resources to buy more goods and services and improve their quality of life. In this case, people may be more capable of travelling, enjoying different cultures, cuisines and landscapes, and increasing their personal recreation and leisure activities [48]. The value added by the tertiary industry and the total retail sales of consumer goods have steadily increased, which is highly correlated with the economic value brought by the number of permanent residents. The loss of permanent population in Jixi County (0.134) and the lack of effective development opportunities for youth in traditional villages...
have led to the problem of a lack of equity in habitat resources. Traditional villages cannot provide sufficient employment opportunities and living conditions locally, forcing residents to move to cities. By enhancing the competitiveness of tourism in Huizhou and creating more employment opportunities, it can satisfy the need for village construction and slow down the loss of population, as well as improve the quality of life of local residents [49]. Population is the basic root of the tourism industry, and in terms of changes in the distribution of the population, the ups and downs of the data touch the nerves of the tourism industry. The above areas need to invest funds in traditional village supporting facilities and the inheritance of traditional cultural heritage tourism construction projects to increase the competitiveness of their own traditional village tourism.

Third, the enhancement of the local tourism development surroundings inside the construction of public centers, medical and health services affects the comfort and safety of tourists in the traditional villages in Huizhou [50]. Meanwhile, within the context of the transformation of the national financial improvement mode, industrial and commercial waste management has been further strengthened, and exhaust emissions have been significantly reduced. The Huizhou region should utilize its superior natural conditions, good resource endowment and the cultural heritage of traditional villages in the Huizhou region in order to enhance the responsiveness of tourism inside the area and increase the advertising velocity and coverage of tourism activities in traditional villages in Huizhou. The increase in the responsiveness of tourism in the traditional areas will increase the exchange and communication among people and promote social harmony.

Fourthly, comparing the same type of research, take the Study on the Spatial Divergence of Tourism Response of Traditional Villages in Shanxi Province and its Influencing Factors as an example, which focuses on the combination of the village’s own resource endowment with the neighboring resources, and on the impact of the region’s economic level on the development of the tourism industry. Among them, geographical location has a significant impact on the development of traditional villages in Shanxi Province. This study provides a reference for tourism development in the region from the point of view that the enhancement of the human environment and the regional tourism development environment can bring about development momentum for traditional villages.

6. Conclusions

Using the evaluation index system for the tourism response in traditional villages in Huizhou and the TOPSIS method, this study proposes feasible suggestions to improve the tourism response based on the identified problems and data analysis results. We analyzed the degree of and difference in influence of the three criteria of resource endowment conditions of traditional villages in Huizhou, local economic development environment, and regional tourism development environment at different regional scales. Our findings are as follows.

(1) In terms of the natural ecological environment of the Huizhou region, the total amount of waste gas emissions has had a negative impact on the traditional villages, as well as the overdevelopment and commercialization of the tourism industry, which may damage the traditional culture and ecological environment of the area. In order to achieve the coordinated development of traditional villages and tourism in the Huizhou area in the future, a series of measures need to be taken, such as strengthening the protection of cultural heritage, improving the conditions of tourism facilities, and optimizing the mechanism of tourism income distribution. Alleviating the over-consumption of natural resources will ensure the sustainable development of tourist areas. Enhancing the tourist experience and increasing tourist satisfaction and loyalty by upgrading public facilities and service quality will make it more comfortable and convenient to experience the local culture and customs. The establishment of a sound tourism public service system has a positive contribution to promoting the overall operational efficiency of the tourism industry, the quality of the industry, the integrated development of the industry, the creation of employment opportunities, and the promotion of energy conservation and environmental
protection elements. It can also stimulate the general public to participate in traditional village tourism.

(2) From the economic development of the Huizhou area, the number of corresponding public facilities in traditional villages affects the visitors’ experience. Upgrading the supporting living facilities can promote the development of the local economy, but at the same time, it also requires a huge capital investment. The enhancement of the human habitat environment has increased the consumption potential and job creation in traditional villages. The effective establishment of a tourism business model for human settlements and traditional villages that meets the needs of the residents will improve their living standards and enhance their dependence on the localities, and through the enhancement of the tourism development of the traditional villages in Huizhou, the living inheritance of both material and intangible traditional cultures of the Huizhou region will be realized. The growth of the GDP in traditional villages is an intrinsic motivation to promote the sustainable development of village civilization, with the help of tourism economic development, thus increasing the intrinsic driving force for the protection and development of traditional villages. People will be able to better inherit the Huizhou culture in the future. By promoting the development of rural tourism and cultural innovation industries, it is possible to make full use of the natural scenery, history, culture and rural landscape resources of traditional villages to develop rural tourism projects with Huizhou characteristics, such as Huizhou specialty food and Huizhou folk activities, so that tourists can feel the unique charm of the traditional villages in Huizhou. The Chinese traditional festivals held related cultural festivals can promote the integration of folk culture and tourism development.

(3) From the viewpoint of public facilities supporting services in the Huizhou area, traditional villages can enhance the attractiveness of tourist destinations through their unique architectural shapes and landscape layouts, and they can become a highlight for tourists to visit and share traditional villages. Enhancing the rural infrastructure and public services in Huizhou, and ensuring sound public facilities, can make tourists have a comfortable living experience in the traditional villages in Huizhou and improve the attractiveness and satisfaction of the traditional villages in Huizhou. Improvement of rural sanitation, traffic and travelling, and network coverage will tourists to play with peace of mind. A well-designed public facility is also an important factor in attracting tourists and increasing tourism income. Customizing the brand image of the traditional villages in the target Huizhou region with unique and local characteristics can improve the recognition and competitiveness of the destination. Interaction design enhances the interactive experience for visitors to traditional villages by focusing on the design of interactive activities and facilities that are unique to local characteristics, creating an interesting and varied tourism experience that attracts tourists to stay. This also has a positive impact on the development of a good tourism brand and reputation for a city.

(4) Regarding the limitations of this study, the first is that the data in this study relied on a specific sample and the selection of the sample was limited. The second limitation is the time limitation, as the middle period was affected by the epidemic, which indirectly had an effect on the data collection by making it difficult to collect data. By dissecting the research on the factors influencing the human habitat and tourism responsiveness of traditional villages in Huizhou region from 2017 to 2021, the results of this study provide basic cases and references for the protection and tourism development of other traditional villages.

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