Study on the influence factors of Rural Ecotourism development in Central Sichuan Hilly Area

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Abstract: With the development of ecological tourism in the production ， domestic competition is increasing. The rapid development of Sichuan Hilly rural ecological tourism industry is the urgent problem to be solved at present, in order to occupy a space in domestic tourism market. Basing on the theory of “tourism attractions - tourism satisfaction - tourism development”, the paper analyze the influence of the tourism environment, tourism services, tourism management and visitor satisfaction on ecological tourism development in Sichuan hilly country utility. Through the investigation of tourists visiting the region, the relationship between variables and the effect of utility is clarified. The investigation provides a reference for the rapid development of rural ecological tourism in Sichuan Hilly and Low Mountain to enhance their competitiveness in the tourism market.

1 Introduction

The low mountain in Sichuan is the most typical square mountain hilly region in China. It is also known as hills of basin. This area is extensive and has a number of villages. To shake off poverty, the development is affected by many factors, such as the low comprehensive cultural quality, conservative ideas, weaken regional economic foundation, etc. At present, the rural ecological environment is gradually degenerate in hilly of Sichuan, the land quality that the farmers rely on is reduced, the innovation of industrial structure is difficult and the rural surplus labor transfer in a large number, etc. The situation has become the bottleneck of solving “three rural” in Sichuan. The implementation of rural ecological tourism can effectively take the sustainable development strategy to the poverty alleviation of tourism, which has a far-reaching significance on promoting the tourism resources development , accelerating to solve “three rural” problem, and promoting the sustainable development of tourism industry in Sichuan Hilly.

Rural tourism is a new type of tourism ecological model which relies on the country and promote the ecological development vigorously. It is a product of the combination of ecological development and rural tourism. It is also a comprehensive form of tourism. The essence of rural ecological tourism not only includes the tourism, rural culture, leisure and entertainment, but also includes the experience of the ecological environment, it pays attention to the natural ecological environment, and realized the coordinated development of natural environment and rural economy at the same time. This paper explores the impact factors of Sichuan Hilly rural ecological tourism development on the premise of the comprehensive analysis of the development conditions of Sichuan hilly rural ecological tourism, and based on the current situation of the development of Sichuan hilly country. This paper also laid the foundation for the sustainable development of the Hilly Sichuan to promote rural ecological tourism.

2 Theoretical basis and Research hypothesis

At present, the restricting and influencing factors of rural tourism development is the focus of scholars at home and abroad. And at the same time, scholars have done a lot of research and achieved certain results. Miller(200)gave an empirical analysis of the influencing factors of American rural ecotourism development and pointed out that factors such as the tourism satisfaction , the environment of tourism attractions can directly affect the speed of American rural ecotourism development [1] ; Choi(2006)pointed out that factors like the economic benefits, social

and cultural interests, the interests of the community, tourists' interests, environmental sustainability, community participation, technical and political factors all have influence on the development of rural tourism[2] ; Through empirical analysis on the impact factors of the development of rural tourism in Korea, Byeong(2009)found that the influence factors of rural tourism development can be divided into four aspects---environmental, economic, cultural and scenic area management [3] ; Fotiadis A，Chris V(2010)analyzed the utility that service quality influence on the development of ecological tourism, and pointed out that the higher the service quality, the faster the development of ecological tourism [4] ; Based on the content analysis method, Zhou Lingling and Zhou Fa-fa (2012) analyzed the variable factor of affecting the development of rural tourism industry in Ningde area, and pointed out that the service environment of the scenic spot has direct impact on tourists' mood [5] ; Based on this, we can propose the following assumptions:

H1a: Tourism environment has a positive impact on tourist satisfaction. Tourism environment including ecological environment, political environment, economic environment, social environment, traffic environment and competitive environment，and so on.

H1b: Tourism services have a positive influence on tourist satisfaction.

H1c: Tourism management has a positive impact on tourist satisfaction. Tourism management including the management of the operators and the government.

H2a: Tourism environment has a positive effect on tourism economy.

H2b: Tourism services have a positive effect on tourism economy.

H2c: Tourism management has a positive effect on tourism economy.

H3: tourism satisfaction has a positive effect on tourism economy.

Based on the research hypothesis, we can build a theoretical model of influence factors of Sichuan Hilly rural ecological tourism development, shown in figure 1:

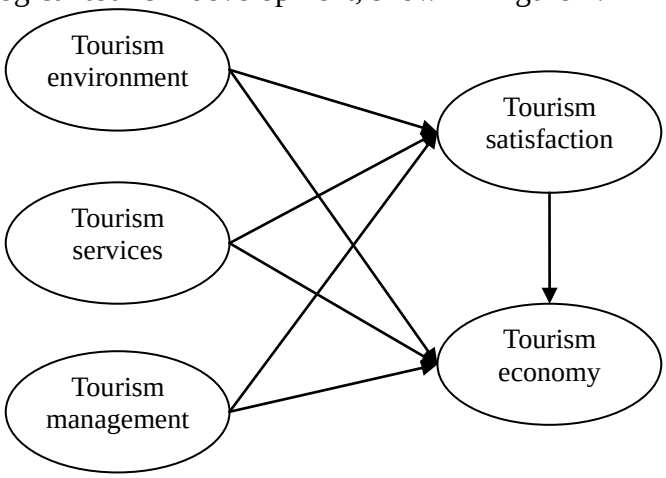

Figure 1: The theoretical model of the effect factors of Sichuan Hilly rural ecological tourism development

3 Study design

3.1 Questionnaire design

The design of the questionnaire is composed by four parts, the first part is the survey description; the second part is to determine the object of investigation; the third part is the personal information of respondents; the fourth part is the measurement items of the influence factors of the development of Sichuan Hilly rural ecological tourism, which is composed by 32 questions, we use 5 level Likert scale to measure the questions, from 1 points to 5 points means from very do not agree to very agree.

3.2 Sample selection

This research gathered information by using questionnaire investigation, with the form of random distributing the paper-based questionnaire. The aims of the investigation are to obtain reliable data. The survey sample is selected from the tourist of Sichuan Hilly rural ecological

tourism scenic. The total issuance amount of survey questionnaire is 450, recovery of questionnaires is 398. After the preliminary screening and reorganization and the elimination of the invalid questionnaire, we obtained 372 copies of effective questionnaire in the end. The total recovery rate of questionnaire is 88.4%, the total efficiency is 93.4%.

3.3 Research methods

To analyze the variables valid data , this paper mainly by means of the statistical analysis software SPSS17.0 and AMOS17.0, using the frequency analysis method to analyze the general characteristics of the respondents; using the Cronbach alpha coefficient to verify the reliability of the measurement variables items; using confirmatory factor to analyze the validity of the latent variables; At last, discuss the causal effect between variables with the help of the structural equation model, and explore each variable factors of influencing on ecological tourism development in Sichuan Hilly Country.

4 Empirical studies

4.1 Analysis of the sample population statistics

From the gender perspective of tourists, we can see that men accounts for 54.6%, and women accounts for 45.4% , there is not too much difference; according to the marital status, unmarried tourists have a larger proportion, which shows that the free time of unmarried tourists is relatively well-off; from the view of occupation, student have the highest proportion, accounted for 25.4%, the followed is teachers, accounting for 18.5%, the main reason of this phenomenon is that the travel time is regular of this part of tourists, the travel time is usually focused on weekends and statutory holidays. Besides, the pressure in working and learning is larger of this crowd. Therefore, the quiet village air travel is the first choice for them to ease the pressure; in terms of age, visitors who is in the range of 25 to 44 years old have a larger proportion, accounting for 38.6%; in terms of degree, college and undergraduates have the largest proportion among tourists; from the income, the tourists whose monthly income is between 3001-5000 yuan is the main source of rural ecological tourism.

4.2 Analysis of confirmatory factor

In order to further analyze the influence of tourism environment, tourism services, tourism management, tourism satisfaction and other influencing factors on the development of ecological tourism in Sichuan hilly country utility, this paper has analyzed the confirmatory factor. With the help of the analysis software AMOS17.0, model A is constructed and measured. The specific fitting parameters is shown in table 1.

Table 1: model fitting index

Model	x2/df	RMSEA	GFI	AGFI	CFI	NFI	IFI	TLI
Model A	2.236	0.042	0.918	0.899	0.971	0.916	0.966	0.964
Model B	2.228	0.042	0.918	0.899	0.971	0.916	0.966	0.964
Model C	2.179	0.035	0.916	0.900	0.972	0.914	0.966	0.967

4.2.1 Model fitting test. As the value parameters shown in model A, the value of x2/df is 2.236< 3, The value of RMSEA is 0.042< 0.05, GFI, CFI, NFI, IFI, TLI values are all above 0.9, AGFI value is approximately equal to the value of 0.9.This shows that the fitting degree of model A is relatively good, and it is an acceptable model.

4.2.2 Reliability test. Under normal conditions, if the comprehensive reliability value is above 0.7, we can say that the scale has high reliability. From table 2 we can see that, the comprehensive reliability of each latent variable are in the range of 0.823-0.880, more than 0.7. At the same time, the Cronbach alpha value of latent variable measurement problem is between 0.822-0.884, which

fully illustrated that the measurement scale in this paper has higher reliability.

4.2.3 Convergent validity test. Convergent validity is mainly used to verify the contribution of measurement items to its framework. Generally, if the average variance present value (AVE) is more than 0.5, the convergent validity is high. As is shown in table 2, the average variance suggested value (AVE) is between 0.506-0.609, all above 0.5, which illustrates that each variable has a high convergent validity.

4.2.4 Discriminate validity test. From the data of table 3, we can conclude that the latent variables have higher discriminate validity, because the square root of AVE in model A are above the correlation coefficients of other variables.

Table 2: The results of confirmatory factor analysis

Latent variable	Question number	Comprehensive reliability	Cronbach α	AVE
Tourism environment	6	0.859	0.849	0.506
Tourism services	5	0.884	0.881	0.522
Tourism management	5	0.838	0.829	0.521
Tourism satisfaction	4	0.841	0.840	0.609
Tourism economy	3	0.822	0.819	0.597

Table 3: AVE square root and correlation coefficient

	Tourism environment	Tourism services	Tourism management	Tourism satisfaction	Tourism economy
Tourism environment	0.719				
Tourism services	0.553	0.724			
Tourism management	0.484	0.571	0.704		
Tourism satisfaction	0.574	0.572	0.525	0.780	
Tourism economy	0.071	0.341	0.068	0.618	0.754

Note: Above the diagonal is (AVE) arithmetic square root; below the diagonal is the correlation coefficient between the latent variables.

4.3 Hypothesis verification

After testing the credibility and validity of variable model, we can take the latent variable and its measurement subject into the model that has been set, so that the hypothesis proposed in this paper can be verified. In this paper, the measurement model is estimated by the maximum likelihood method. In this way, we can obtain the fitting values of the variables (in Table 2 model B), the C.R. value and the path coefficient. As is displayed in Table 2 model B, each variable has a good fitness. The results of hypothesis testing show that, tourism environment, tourism services, tourism

management have significantly positive effect on the development of tourism, which verified the hypothesis H1a, H1b, H1c; Tourism service has a significant positive effect on tourists satisfaction, which verifies the H2b; tourism satisfaction has a significant positive effect on the development of tourism, which verifies the H3. On the contrary, the utility of the effect of tourism environment and tourism management on the development of tourism has not been validated. That means hypothesis H2a and H2c do not have enough validity. The results above show that the measurement still needs to be corrected, in order to realize the effective fitting of the model and data.

4.4 correction of the theory model

In order to explore an optimum model, it is necessary to amend the setting model in this paper, eliminate the path which is not passing the hypothesis testing, and change the path according to the revised index. The fitted parameter values of corrected model (Table 2 model C) have reached the level of optimization, at the same time, the path coefficients are all validated, confirmed the point that the modified model is more scientific and reasonable. Based on this, we can draw the final model, the specific is shown in figure 2.

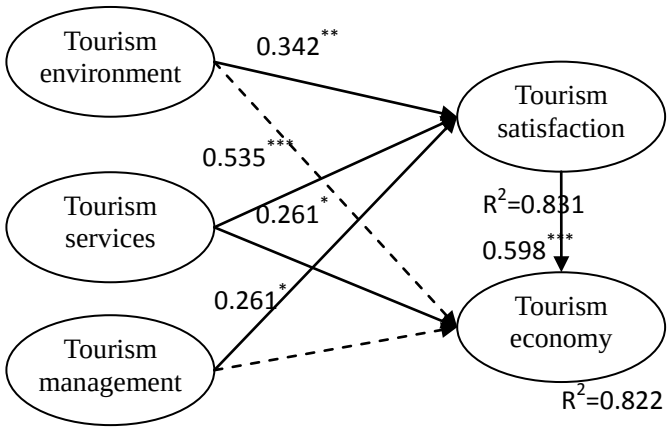

Figure 2: Correction model

Note: The dotted line represents the path is not significant; * indicates significance at the level of P<0.05; * * indicates significance at the level of P<0.01; * * * indicates significance at the level of P<0.001.

From the figure 2 above, the corrected model has good ability of prediction, the model indicates the variance of tourism satisfaction and tourism development are respectively 83.1%, 82.2%, both above 80%.

5 Conclusions

First of all, tourism environment, tourism service and tourism management have a direct positive effect on tourism development. The path coefficients are 0.342, 0.535, 0.219, which confirms that better tourism environment, tourism service and tourism management can help to enhance tourist satisfaction. The travel service has significant direct positive effect on tourism development, but the effectiveness of the tourism environment and tourism management are not significant. The path coefficient from tourism services to tourism development is 0.261, which shows that good travel service can accelerate the speed of the development of rural ecological tourism in Sichuan Hilly to some extent.

Secondly, tourism satisfaction has a direct significant positive effect on tourism development. The path coefficient of tourism satisfaction to tourism development is 0.598, which shows that tourism satisfaction is an important antecedent of tourism development.

What's more, tourism satisfaction plays a role as the intermediary in the effect of tourism environment, tourism service, tourism management on the development of tourism. There are several paths as follows: Tourism environment-tourism satisfaction-tourism development; tourism service-tourist satisfaction- tourism development; tourism management-tourism satisfaction- tourist development. The tourism environment and tourism management have the indirect influence on the

development of tourism. Tourism service not only affect the development of tourism directly but also affect the development of tourism indirectly. And tourism satisfaction has some effect on the development of tourism.

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