### A Study on Tourist Satisfaction in Sanyi

Huang Hui-Chuan and Kuo Mei Hua

Abstract-Sanyi is one of the "Top Ten Tourist Towns" selected by Tourism Bureau in March 2012. Featured by woodcarving industry, Sanyi has become an internationally renowned travel destination. In addition, tourist satisfaction is a key factor affecting revisit intention. Therefore, this study investigated tourist satisfaction in Sanyi by a questionnaire survey upon random sampling. The valid return rate was 100%. SPSS for Windows 18.0 was used to perform statistical analyses. The research results and findings are as follows: In terms of the dimensions of tourist satisfaction, the score of "physical and mental relaxation" is the highest. In the dimension of physical and mental relaxation, the score of "mood relaxation and stress relieving" is the highest, while that of "being attracted to a place by its reputation as a scenic spot and satisfying desire" is the lowest; Age, level of education, occupation and monthly income have a significant effect on tourists' satisfaction with service quality. The research results can serve as a reference for competent authorities of various units in Sanyi, operators and follow-up studies.

Index Terms—Sanyi, tourist satisfaction, service capability.

#### I. INTRODUCTION

According to the tourism policy of "Project Vanguard for Excellence in Tourism" and "Medium-range Project for Construction of Tourist Attractions" implemented by the government in 2012, tourism has become one of the main policies in Taiwan. Moreover, the expectations of tourists visiting Taiwan and Taiwanese toward tourist attractions are increasing as well. To respond to the government policy, Miaoli County Government selected Sanyi as the "new international tourist attraction in Taiwan." Moreover, Sanyi, known for the tourist attraction of woodcarving industry, is the "Top Ten Tourist Towns" selected by the Tourism Bureau in March 2012. Therefore, Sanyi has become an internationally renowned tourist option. This study selected Sanyi as the research target, with the aim to integrate natural and human resources with tourist activities, and develop tourism business in a balanced manner, thus further promoting local prosperity, continuously improving international tourist service capability, and providing effective samples for reference.

According to the research findings of tourist behaviors, once tourists are satisfied after travel, they may develop revisit intention and behaviors [1]-[3]. Many studies also pointed out that tourist satisfaction is significantly correlated with revisit intention. The higher the tourist satisfaction is, the higher the revisit intention is [3].

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Therefore, this study intended to investigate tourist satisfaction after the end of tourism activities. It is hoped that the research results can be provided as the basis for improving future tourism planning of Sanyi and creating the recreational environment that can make tourists feel comfortable and satisfied to attract more tourists. Based on the above, this study intended to investigate the tourist satisfaction with Sanyi. It is hoped that the research results can be proved as reference for Sanyi-related units and operators for future improvement. Therefore, the research purposes are:

- To analyze the current status of tourist satisfaction.
- To investigate how the difference in demographic variables of tourists affects satisfaction.

### II. RESEARCH METHOD

### A. Research Structure

The main purpose of this study is to investigate tourist motivation and satisfaction. The research framework is shown in Fig. 1:



Fig. 1. Research framework.

### B. Research Subjects

This study selected the tourists visiting Sanyi as the subject, and conducted a questionnaire survey on tourism activities. The calculated sample size was 384, and the error rate of general studies was set at 5%. To reduce the error rate and to improve accuracy, the valid sample size should be 450.

#### C. Research Tools

This study referred to satisfaction-related empirical studies to define satisfaction and to revise the questionnaires on tourist satisfaction [1], [2], [4]-[7]. The Likert 7-point scale was used for scoring, ranging from 7 (strongly agree) to 1 (strongly disagree). The questionnaire included 31 items that concern the tourist satisfaction with Sanyi, as shown in Table I.

The item analysis was performed on the retrieved data, finding that the correlation coefficient of all the items and the

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total score was > 0.4, and the criteria value was > 3, reaching the significance (p<0.05). Therefore, all the items were retained for further factor analysis.

	TABLE	1: SCALE ON TOURIST SATIS	FACTION	
dimensions	No.	Item	Theore tical basis	Measure ment scale
Physical	1	Being able to appreciate		
and mental		beautiful scenery		
relaxation	2	To approach and experience nature		
	3	To enjoy forest bathing		
	4	To enjoy rich phytoncid and anion		
	5	Being able to relieve stress and relieve		
		physical and mental	Yu,	Order of
	6	exhaustion To increase the	2011	scale
	-	emotional exchange with	Chou, 2011	
	7	families and friends Mood relaxation and	Huang,	
		stress relieving	2007 Lin,	
	8	Being attracted to a place by its reputation as a	2000 Cheng,	
		scenic spot and satisfying desire	2010	
	9	To protect health status		
		and to improve physical health		
Public	10	Complete traffic control		
facilities	11	system Parking space and		
	11	convenience		
	12	Tourism information		
	13	service Transportation shuttle		
		service		
	14	Complete trail facilities		
	15	Detailed tourism information boards		
	16	Installation of tourism		
	17	signs Rationality of tickets		
	18	Number of toilets		
	19	Safety of scenic environment		
	20	Maintenance of trail		
	21	facilities Plant plantation		
	22	Service facilities		
	23	Seats for resting		
Service	24	Cleanliness of toilets		
quality	25	Expectation towards		
	26	knowledge enrichment Cleanliness of scenic		
	20	environment		
	27	Provision of travel guides		
	28	F&B service facilities		
	29	Installation of		
	30	information desk Provision of emergency		
	50	service		
	31	Promotion and		
		advertising		

TABLE II: ANALYSIS ON THE ITEMS OF TOURIST SATISFACTION

Item No.	Item content	Correlation of total score of item	Criteria value (CR)	Retained
1	Being able to appreciate beautiful scenery	0.66***	13.52***	Y
2	To approach and experience nature	0.72***	14.56***	Y
3	To enjoy forest bathing	0.72***	16.22***	Y
4	To enjoy rich phytoncid and anion	0.68***	14.67***	Y
5	Being able to relieve stress and relieve physical and mental exhaustion	0.70***	13.84***	Y
6	To increase the emotional exchange with families and friends	0.59***	12.57***	Y
7	Mood relaxation and stress relieving	0.67***	13.83***	Y
8	Being attracted to a place by its reputation as a scenic spot and satisfying desire	0.70***	16.69***	Y
9	To protect health status and to improve physical health	0.76***	17.33***	Y
10	Complete traffic control system	0.80***	22.62***	Y
11	Parking space and convenience	0.76***	23.61***	Y
12	Tourism information service	0.84***	26.11***	Y
13	Transportation shuttle service	0.84***	23.02***	Y
14	Complete trail facilities	0.82***	22.85***	Y
15	Detailed tourism information boards	0.82***	23.78***	Y
16	Installation of tourism signs	0.83***	24.42***	Y
17	Rationality of tickets	0.78***	21.68***	Y
18	Number of toilets	0.73***	22.10***	Y
19	Safety of scenic environment	0.74***	17.45***	Y
20	Maintenance of trail facilities	0.81***	20.54***	Y
21	Plant plantation	0.80***	18.80***	Y
22	Service facilities	0.81***	21.33***	Y
23	Seats for resting	0.78***	20.45***	Y
24	Cleanliness of toilets	0.66***	16.58***	Y
25	Expectation towards knowledge enrichment	0.79***	19.80***	Y
26	Cleanliness of scenic environment	0.78***	21.41***	Y
27	Provision of travel guides	0.69***	14.88***	Y
28	F&B service facilities	0.84***	22.59***	Y
29	Installation of information desk	0.77***	18.82***	Y
30	Provision of emergency service	0.73***	17.91***	Y
31	Promotion and advertising	0.78***	21.41***	Y

Further analyses were performed according to the results of item analysis. This study used Kaiser- Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett test of Sphericity to obtain the test values. The KMO value of the research questionnaire was 0.95, and the Bartlett value was 8326.83 (degree of freedom 210), reaching the significance. This proved that the scale used in this study is applicable to factor

Source: Compiled by this study

analysis. This study used principal component factor analysis to perform factor analysis, as well as to establish the validity of factors of each subscales. The maximum variation method for orthogonal axis rotation was employed. The items with eigenvalue > 1 were selected as the common factors, and the items with factor loading > 0.4 were retained. As shown in the analysis on factors of satisfaction in Table III, a total of 3 factors were extracted after the axis rotation. Except for items 9, 10, 19, 20, 22, 24, 25, 26, 28 and 31, which were not selected because the factor loading was too low, the cumulative explained variance was 71.30%, suggesting that the validity of the scale was good. This study divided the items into three dimensions: public facilities, physical and mental relaxation, and service quality.

TABLE III: FACTOR ANALYSIS ON TOURIST SATISFACTION

Original	New	Item content	Public facilities	Physical and mental relaxation	Service quality
11	9	Parking space and convenience	0.80		
18	16	Number of toilets	0.78		
13	11	Transportation shuttle service			
17	15	Rationality of tickets	0.74		
14	12	Complete trail facilities	0.73		
12	10	Tourism information service	0.72		
15	13	Detailed tourism information boards	0.70		
16	14	Installation of tourism signs	0.68		
23	17	Seats for resting	0.63		
2	2	To approach and experience nature		0.83	
3	3	To enjoy forest bathing		0.80	
1	1	Being able to appreciate beautiful scenery		0.79	
7	7	Mood relaxation and stress relieving		0.76	
5	5	Being able to relieve stress and relieve physical and mental exhaustion		0.76	
4	4	To enjoy rich phytoncid and anion		0.74	
6	6	To increase the emotional exchange with families and friends		0.74	
8	8	Being attracted to a place by its reputation as a scenic spot and satisfying desire		0.53	
30	21	Provision of emergency service			0.79
29	19	Installation of information desk			0.76
27	18	Provision of travel guides			0.72
21	20	Promotion and advertising			0.66
		Eigenvalue	5.94	5.54	3.49
		Explained variance (%)	28.30	26.40	16.61
		Cumulative explained	28.29	54.69	71.30
		variance (%)	20.29	54.09	/1.50
		Kaiser-Meyer-Olkin			
		Measure of sampling adequacy		0.95	
		Bartlett test of sphericity approximate chi-square distribution		8326.38	
			Degree of freedom	210	
			Significance	0.00	

Source: Compiled by this study

After the item analysis and factor analysis on the

questionnaire, this study used Cronbach's Alpha coefficients to perform reliability analysis. As shown in Table IV, the Cronbach's  $\alpha$  coefficient of the dimension of public facilities was 0.95, that of the dimension of physical and mental relaxation was 0.93 and that of the dimension of service quality was 0.89, suggesting that the internal consistency and the reliability of the questionnaire were good.

TABLE IV: RELIABILITY ANALYSIS ON VARIOUS DIMENSIONS OF

TOURIST SATISFACTION					
Number of	Cronbach's Alpha				
items	Value				
9	0.95				
8	0.93				
4	0.89				
21	0.96				
	Number of items 9 8 4				

Source: Compiled by this study

### III. RESULTS AND DISCUSSION

### A. Analysis on the Current Status of Tourist Satisfaction

# 1) Analysis on the current status of overall tourist satisfaction and various dimensions in Sanyi

As shown in Table V, in terms of overall current status, the mean was 4.98, suggesting that the satisfaction was medium and higher. In terms of the scores of various dimensions, the score of the dimension of "physical and mental relaxation" was the highest, followed that "service quality" and "public facilities."

TABLE V: ANALYSIS ON VARIOUS DIMENSIONS OF SATISFACTION OUESTIONNAIRE

	Mean	SD	Number of items	Mean	Order
Physical and mental relaxation	43.02	7.43	8	5.38	1
Public facilities	42.35	10.49	9	4.71	3
Service quality	19.11	4.22	4	4.78	2
Satisfaction scale	104.48	19.88	21	4.98	

### 2) Analysis on the current status of mean of various items of tourist satisfaction with Sanyi

As shown in Table VI, the 6 items with the highest scores were in the order as follows: mood relaxation and stress relieving, to increase the emotional exchange with families and friends, being able to relieve stress and relieve physical and mental exhaustion, to approach and experience nature, being able to appreciate beautiful scenery and to enjoy forest bathing. The result is consistent with that of the study by [6]. The reason was that travel can achieve the effect of mood relaxation and stress relieving. The analysis results of various items are as follows:

- Dimension of physical and mental relaxation: the score of "mood relaxation and stress relieving" was the highest, and that of "being attracted to a place by its reputation as a scenic spot and satisfying desire" was the lowest.
- 2) Dimension of public facilities: the score of "complete trail facilities" and "installation of tourism signs" was

the highest, while that of "parking space and convenience" was the lowest.

3) Dimension of service quality: the score of "promotion and advertising" was the highest, and that of "provision of travel guides" was the lowest.

dimensions	No.	Mean	SD	Order
	1	5.29	1.16	5
	2	5.41	1.09	4
	3	5.28	1.18	6
Physical	4	5.26	1.22	7
and mental relaxation	5	5.48	1.13	3
	6	5.58	1.05	2
	7	5.61	1.06	1
	8	5.10	1.25	8
	9	4.52	1.56	21
	10	4.72	1.33	14
	11	4.57	1.39	20
	12	4.88	1.32	10
Public facilities	13	4.85	1.38	12
	14	4.88	1.33	11
	15	4.62	1.31	19
	16	4.64	1.55	18
	17	4.66	1.21	16
	18	4.66	1.14	17
Service	19	4.72	1.23	15
quality	20	4.98	1.30	9
	21	4.75	1.20	13

TABLE VI: DESCRIPTIVE STATISTICAL ANALYSIS ON SATISFACTION

# B. Analysis on How the Difference in Demographic Variables Affects Tourist Satisfaction with Sanyi

As shown in Table VII, the difference in age, level of education, occupation and monthly income had a significant effect on satisfaction. Age had a significant effect ton "service quality," education had a significant effect on "service quality," occupation had a significant effect on "service quality" and monthly income had a significant effect on "service quality." The results are described as follows:

- 1) Gender: the result is consistent with [8]-[10]. Satisfaction is not affected by gender.
- 2) Age: the result is consistent with [11], [12]. In other words, the elderly are satisfied with the effects of mood relaxation and increase in emotional exchanges between families or friends and sports and fitness.
- 3) Marital status: the result is consistent with [8], [10]. Satisfaction is not affected by marital status.
- 4) Level of education: the result is consistent with [13] suggesting that the lower the level of education is, the higher the satisfaction with tourist service quality is.
- 5) Occupation: the result is consistent with [8], [9], [13]. The

reason is that the demand for service quality of students or the self-employed is not high. Therefore, occupation has a significant effect on tourist satisfaction.

- 6) Average monthly income: the result is consistent with [13]-[16]. In other words, tourist satisfaction is affected by the variable of personal income.
- 7) Residence: the result is consistent with [4], [17]. Satisfaction is not affected by residence.

Based on the above, age, level of education, occupation and monthly income of tourists have a significant effect on their satisfaction with service quality. In other words, tourists' satisfaction with service quality is higher than that with physical and mental relaxation and public facilities, and tourists attach more importance to service quality. The result is consistent with [18].

TABLE VII: SUMMARY OF DEMOGRAPHIC VARIABLES THAT HAVE A SIGNIFICANT EFFECT ON TOURIST SATISFACTION

Demographic variables	Overall satisfaction	Physical and mental relaxation	Satisfaction Service quality	Public facilities
Gender				
Age			*	
Marital status				
Level of			*	
education				
Occupation			*	
Monthly income			*	
Residence				

\*denotes significant difference

### IV. CONCLUSION AND SUGGESTIONS

### A. Conclusion

In terms of the current status of satisfaction, the score of the dimension of "physical and mental relaxation" was the highest. In the dimension of physical and mental relaxation, the score of "mood relaxation and stress relieving" was the highest, while that of "Being attracted to a place by its reputation as a scenic spot and satisfying desire" was the lowest. The results showed that the tourists were satisfied with the effect of mood relaxation and stress relieving of Sanyi. In addition, the difference in demographic variables has a significant effect, namely, age, level of education, occupation and monthly income have a significant effect on tourist satisfaction.

### B. Suggestions

To strengthen transportation planning and increase transportation shuttle service: the analysis on various dimensions of satisfaction showed that, the satisfaction with public facilities was the lowest. In the dimension of public facilities, the score of parking space and convenience and transportation of shuttle service was the lowest. The government is advised to integrate traffic flows, parking space and shuttle service.

To beautify the landscape of attractions and environmental cleanliness: the result showed that tourists' satisfaction with public facilities is lower, suggesting that the environmental cleanliness should be strengthened.

In terms of research subjects: future studies may

investigate the needs of tourists of different age, level of education, occupation and monthly income, add research methods (e.g. on-site inspection, interviews and observations), perform both qualitative and quantitative studies to provide in-depth and effective suggestions for operators.

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