

A Study of How Indigenous Peoples Perceive the Impact of Tourism and Support These Attitudes in Their Tribes

Chiu-Hui Hung^{1*}

¹*Department of Tourism, Leisure and Entertainment Management, Tatung Institute of Technology, Taiwan.*

Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/AJEE/2017/39012

Editor(s):

(1) Onofre S. Corpuz, CFCST-Doroluman Arakan 9417 Cotabato, Philippines.

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Complete Peer review History: <http://www.sciencedomain.org/review-history/23190>

Original Research Article

Received 6th November 2017
Accepted 26th January 2018
Published 15th February 2018

ABSTRACT

The purpose of this study is to analyze how indigenous peoples perceive the impact of tourism and their attitudes regarding its development within their tribes. Indigenous people from three tribes in south Alishan, Taiwan—Shanmei, Chashan, and Xinmei—were included in this study. The random sample method was used to carry out the survey, and a total of 256 effective questionnaires were collected. After statistical analysis, the findings of this study are as follows: 1. Although indigenous peoples perceive tourism's environmental impact as negative, they tend to be supportive of tourism development; 2. When indigenous peoples perceive positive economic and sociocultural impacts from tourism development, they tend to have higher levels of support; and 3. When indigenous peoples have a negative perception of the economic impact of tourism development, their support is lower. According to the above results, this study puts forward some suggestions for the management indigenous tourism efforts and future research directions.

*Corresponding author: E-mail: chiuhui@ms2.ttc.edu.tw;

Keywords: Tourism impact; indigenous tourism; tribe; Alishan; support attitude.

1. INTRODUCTION

Ali Mountain, in the Alishan township, is an important tourist and recreational spot in Taiwan. It not only possesses natural resources, but also has a rich Tsou Aboriginal culture. Furthermore, it has become an internationally famous tourist destination. There are eight Tsou tribes: Dabang, Tefuye, Leye, Laiji, Lijia, Shanmei, Xinmei and Chashan. Six of the tribes are on the south side of the Ali Mountain Highway, while the Laiji tribe is on the north side. Alishan is a famous tourist attraction; after its establishment as a national scenic area, it has not only actively promoted the characteristics of the Tsou culture, but also localized the tribes according to their characteristics. In southern Alishan, the Xinmei tribe has developed organic agriculture, the Shanmei tribe has the famous Tanayiku Natural Ecological Park and Chashan, the southernmost tribe, has a wooden thatch pavilion surrounded by rich ecological resources. At present, only the Shanmei tribe has realized a successful tourism trade. In 2016, the number of tourist admissions reached 227,217, a record-high increase of 67,811 over the 159,406 admissions in 2015 [1]. In this study, the Alishan tribes have suggested that local tribal development should focus on sustainable development. If tribes focus on meeting increasing tourism demand at the expense of their tribal cultures and traditions, they will lose the unique characteristics of their tribes to pluralistic economic development [2]. A study by Lee et al. [3], which focused on the tourism development of the Tsou Dabang tribe, along with the cultural preservation of the state from viewpoint of authenticity and tourist attractions, found that visitors consider the Tsou tribal culture to have different degrees of understanding of bias, because many things do not belong to the tribe [3]. Faced with the rise of tourism in recent years, what is the perception of the positive and negative impacts of tourism by the residents of the Alishan indigenous tribes? Are they satisfied with this situation? Do they support the development of tourism? The purpose of this study is to analyze how these indigenous peoples perceive the impact of tourism and their attitudes regarding its development. It is hoped that the results here will provide a reference for governmental and tribal tourism development.

2. LITERATURE REVIEW

2.1 Theory Foundation

There are several important theories that can be used to explain the tourism development attitude of the tribal residents, such as the tourism destination life cycle theory [4], the social exchange theory [5,6,7,8], and the tourism to community impact analysis framework [9]. The tourism destination life cycle theory has been put forward by Butler [4]. Butler believes that tourist areas are dynamic and will continue to change and develop with time. This evolution is caused by different factors, including the original natural and cultural attractions, gradual changes in tourist needs and preferences, the recession, replacement of facilities and equipment, and changes in or disappearance of the original area of popular choice [4]. Social exchange theory is like a general theory of sociology and is concerned with the exchange of resources between individuals and groups in the context of an interaction [5,6]. Each person's way of perceptual exchange is different. When individual perceptual exchange is positive, each person will evaluate the exchange in different ways, but if the perceptual exchange is negative, they will give up the exchange [7]. The tourism impact architecture proposed by Faulkner and Tidswell [9] pointed out that the negative impacts of tourism will appear at a tourist destination in the mature stage of tourism development, where there is a high proportion of tourists, and that emphasis should be placed on international tourism during the peak season. In the early stages of tourism development, when a destination has a low proportion of tourists, a domestic tourism orientation and a low season, a more positive community reaction is expected. However, when these effects occur at the same time, it is expected that there will be some changes in community member views on tourism, which are also affected by the characteristics of the residents [9].

2.2 Tourism Impact

Since tourism development will bring positive and negative impacts on a tourist area [4,5,6], whether residents support the tourism will highlight its importance [7]. Whether in the development of the local tourism industry or in the formulation of a governmental tourism policy [8], the influence of sustainable development on

the community is the most important factor when determining tourism impact [9,10]. Tourism impact can be divided into three main categories: economic, sociocultural, and environmental [11,12,13,14].

2.2.1 Economic impact

For positive economic impact, the most important factors are: increased employment opportunities [15,16,17,18], increased resident income [17,18,19], increased tribal income [16,20], enhanced material welfare, higher living standards [15], increased sale of local agricultural products, outside investment and improved public facilities and services [21]. The most important signs of negative economic impact include: income inequality, widening of the gap between the rich and the poor [19], residents borrowing money to invest (liabilities), resources used in conflict with traditional production activities, loss of land ownership, indigenous people serving as laborers and tourists being unable to pick up crops [22].

2.2.2 Sociocultural impact

For positive sociocultural impact, the most important factors are: pride in one's culture [16,21,23,24], cultural recovery [15,21,25], culture continuation and preservation [18,20,26, 27], increased understanding of different cultures [6,15], the sharing of Aboriginal cultures with outsiders [24,25,7], tribal people being able to work together [15,21], closer interaction between community residents, increased leisure and entertainment opportunities and promotion of local popularity [21,24]. The most important signs of negative sociocultural impact include: the gradual disappearance of traditional cultures [21,24], the lack of cultural authenticity [6,28], cultural devolution [6,15], conflicts produced by interactions between tribe members [15], tribe members turning to utilitarian attitudes and shifting from their traditional values [15], the commercialization of traditional products and rituals, the disturbance of daily life by outsiders, the lack of respect for indigenous culture by outsiders and the production of low-quality, counterfeit or non-local cultural products.

2.2.3 Environmental impact

For positive environmental impact, the most important factors are: protection of wildlife habitats of the most important species [29,30], increased environmental awareness [31],

protection of the environment and natural resources [31], beautification and improvement in tribal appearance [22,27] and improvements in tribal access to outside traffic [18,31]. The most important signs of negative environmental impact include: increased noise levels [31], community overcrowding [31], traffic congestion, environmental pollution [31], increased garbage, destruction of natural resources [23] and improper community (tribal) development [15].

2.3 Residents Support Tourism Development

Allen, Hafer, Long and Perdue [15] analyzed attitudes toward tourism and recreation development among the residents of 10 counties in Colorado. They found that attitudes toward leisure and entertainment development were affected by the level of economic activity, but the level of tourism development itself was not affected [9]. Haralambopoulos and Pizam studied tourism impacts and the attitudes of residents on the Greek island of Samos, finding that tourism brought negative social impact in the forms of high prices, drug abuse, sexual harassment and destruction, affray and crime. Yet, residents were not only satisfied with the development of tourism in their area, but also in favor of its expansion, mainly because tourism had brought considerable economic benefit. In addition, the study found that the residents who depended on tourism not only had a positive attitude toward tourism development, but their levels of satisfaction were higher than those who did not depend on tourism [32]. Besculides, Lee and McCormick have pointed out that social and economic factors, such as community attachment, living in a region for a long time and economic dependence on tourism, will affect residents' perceptions and attitudes toward tourism development [33]. Andereck, Valentine, Knopf and Vogt studied residents of a community in Arizona who felt that tourism development had a positive impact because they perceived economic development, increased employment opportunities and local tax. On the negative side, the Arizona residents believed that tourism development also caused serious problems in the community, including increased garbage, traffic congestion, community crowding and increased crime [10]. Ko and Stewart [34] studied Jeju Island residents to understand the impact of and local attitudes toward tourism development. They found that the residents felt both positively and negatively about the impacts of tourism and had positive and negative levels

of community satisfaction. In their established model, Ko and Stewart found that the above factors affect resident's attitudes on tourism development [34]. Gursoy, Jurowski and Uysal [35] developed a model to study community resident support of tourism development, which found that the degree of community care, ecocentric values and the use of tourism resources, based on local economic status, perceived benefits and perceived expenditure, have a positive influence on whether residents support tourism development. Gursoy and Rutherford [8] analyzed residents from Washington and Idaho and found that nine factors directly or indirectly determined levels of tourism development support, including the degree of community care, ecocentric values, tourism resources, community attachment, local economic status, economic benefits, social benefits, social costs and cultural interests. Nunkoo and Ramkissoon [36] studied resident perceptions of the social and cultural impacts of tourism development in the Mauritius, finding that respondents generally supported development of the tourism industry, mainly because they depended on tourism. When positive benefits are greater than negative ones, local community residents are more likely to support tourism development. Nunkoo and Ramkissoon [37] constructed a community support integrated resort model to research Mauritius residents. The results found that three factors affected resident support for integrating a resort on the premises: community satisfaction, the local economy and environmental attitudes. And the interests with expenditure perceptual development of these two factors have a direct impact on whether residents support tourism development. Yu, Chancellor and Cole [38] studied the attitudes of Orange County residents toward sustainable tourism development in 2007 and found that perceived social cost, environmental sustainability and economic benefits were related to impact. Boley, McGehee, Perdue and Long [39] studied the empowerment residents for tourism development attitude, found that economic benefits have the main influence on resident attitudes toward tourism development, along with psychological empowerment and individual economic interests.

According to the above literature, when indigenous peoples feel that tourism development has a positive impact, they will be more supportive of tourism. However, when they feel negative impacts, their support for tourism will be reduced. Therefore, the following

six hypotheses (H) are proposed in this study:

- H1. If indigenous peoples perceive a positive economic impact, they will have a positive attitude toward tourism development.
- H2. If indigenous peoples perceive a negative economic impact, they will have a negative attitude toward tourism development.
- H3. If indigenous peoples perceive a positive sociocultural impact, they will have a positive attitude toward tourism development.
- H4. If indigenous peoples perceive a negative sociocultural impact, they will have a negative attitude toward tourism development.
- H5. If indigenous peoples perceive a positive environmental impact, they will have a positive attitude toward tourism development.
- H6. If indigenous peoples perceive a negative environmental impact, they will have a negative attitude toward tourism development.

3. METHODS

3.1 Subject and Sampling

This study focused on three Tsou tribes in the southern Alishan National Scenic Area, located in Chiayi County, Taiwan. Subjects were tribe members over the age of 20. According to government statistics, in 2016, the tribes had a total of 429 households; however, members of some households were no longer living, so this study takes the ratio of the number of households in 50% to conduct its questionnaire survey. In total, 260 questionnaires were gathered, including 104 from the Shanmei tribe, 78 from the Chashan tribe and 78 from the Xinmei tribe. The total number of effective questionnaires collected was 256.

3.2 Questionnaire

The study questionnaire was divided into three parts. First, the tribal tourism impact perceptible scale consisted of 40 questions, which primarily sought to understand perceptions on what positive or negative impacts of tourism had been experienced by the tribes. The questionnaire mainly referred to relevant research on the impact of tribal tourism [6,15,16,18,19,21,22,23,24,26,27,28,29,30,31]. Second, the tourism development support attitude scale consisted

of five questions, which primarily sought to understand feelings on the current situation of tourism development, tribal satisfaction as well as attitudes toward future tourism development. The questionnaire mainly referred to relevant research on tribal support for tourism development [7,8,35]. These two scales were measured by the Likert five-point scale. The responses—"strongly agree," "agree," "ordinary," "disagree," and "strongly disagree,"—received scores of 1 to 5, respectively. Third, the questionnaire included these demographic variables: gender, marital status, age, education level, income and occupation.

3.3 Data Analysis

In this study, the 256 effective questionnaires were analyzed using SPSS for Windows 22.0 version package software for statistical analysis. The following steps were undertaken: 1. Descriptive statistical methods of frequency distribution and percentage were used, including analysis of gender, marital status, age, education level, income and occupation. Then, resident perceptions of the impact of tourism and their attitudes about the impact of tourism development on the tribe were analyzed. 2. Warp PLS 6 statistical software was used to analyze the reliability and validity of the tourism impact scale and the causal relationships between the seven variables in this study through the partial least squares (PLS) statistical method. For the reliability index, composite reliability (CR) and Cronbach's alpha value were used to determine the value of constituent reliability, where the verification standard of Cronbach's alpha value must be equal to or greater than .70 [40,41]. For validity, whether the factor loading with each observed variable is larger than .50 determines whether each potential variable has a convergent validity [42]. For discriminant validity, test methods used by Chin (1998) have pointed out that the latent variable square roots of average variances, when extracted, should be greater than the covariation between the latent variable model and other potential variables [43]. In addition, Venkatesh, Thong and Xu [44] have suggested that the detection standard for the AVE square root should be at least or equal to .70. The measure index of the hypothesis model is used to see (1) whether standardized path coefficients achieved statistical significance (2) R^2 explanatory power of the structural model [42].

4. RESULTS AND DISCUSSION

4.1 The Effective Sample Characteristics Analysis

The 256 effective questionnaires included 124 male respondents (48.4%) and 132 female respondents (51.6%). There were 146 married respondents (57.3%) and 110 unmarried respondents (43%). In terms of age, 82 respondents (32%) were between 21-30 years old. The highest percentage of respondents (58.1%) completed high school (vocational school). Service occupations were reported by 109 respondents (42.6%). In terms of personal monthly income, 165 respondents (60.5%) had a monthly income equal to or below NT. 25000 (US\$.1 = NT\$.30). There were 101 respondents (39.5%) with a job related to the tourism industry, including services, business and manufacturing.

4.2 Analysis of Tourism Impact and Attitudes in Support of Tourism Development

4.2.1 Tourism impact

Tourism impact analysis showed that the first five were negative environmental impacts, of which "caused garbage" ($M = 4.03$) was the most frequent, while the second was "increased noise" ($M = 3.98$), the third was "environmental pollution" ($M = 3.93$), the fourth was "leads to traffic congestion" ($M = 3.92$) and the fifth was "tourists have not been allowed to collect crops" ($M = 3.89$). Therefore, it is obvious that the most common perceptions of the impact of tourism were negative environmental impacts.

4.2.2 Attitudes in support of tourism development

The analysis showed that attitudes toward tourism development were between common and consent. However, after looking at the average values, it was found respondents were still inclined to support tourism development. Among the top five responses, "I support tribal tourism development" was the highest ($M = 3.86$), with "agree" being the most common answer. Second was "I support more tourism in the tribe" ($M = 3.77$) and third was "I support indigenous tribes encouraging the development of tourism to improve quality of life" ($M = 3.75$). These were also most commonly answered "agree."

4.3 Analysis of Reliability and Validity

4.3.1 Tourism impact scale

The results from Table 1 show that the CR and Cronbach's alpha values of all variables are

equal to or above .70, which is consistent with the verification standard, indicating that the reliability of the tourist impact scale is acceptable. However, a total of seven factor loading were less than .05, so they were deleted.

Table 1. Analysis of reliability and validity of tourism impact scale

Factors	Items	Factor loading	CR	Cronbach's alpha
Positive economic impact	1. Increase in employment opportunities	.63	.81	.72
	7. Increase in residents' income	.70		
	13. Increase the income and tax of the tribal economy	.68		
	19. Attract outside investment	.66		
	25. The increase of local agricultural products sales	.13*		
	31. Improving living conditions	.68		
	40. Standard of living promotion	.72		
Negative economic impact	2. Widening the gap between the rich and the poor	.55	.75	.70
	8. resources used in traditional production conflict with tourism	.54		
	14. loss land ownership	.61		
	20. indigenous become to workers	.65		
	26. tourist are not allowed to pick up the crops	.45*		
	32. Rising prices	.68		
Positive environmental impact	3. species of wildlife habitats are protected	.84	.86	.80
	9. increasing awareness of the environment	.50		
	15. under the protection of the environment and natural resources	.77		
	21. the appearance of the tribe was beautified and improved	.80		
	27. Improvement of public facilities and services	.72		
	33. tribe to outside traffic was improved	.59		
Negative environmental impact	4. noise increase	.77	.87	.83
	10. leading to the tribe become overcrowded	.73		
	16. traffic congestion	.79		
	22. environmental pollution	.69		
	28. garbage increase	.76		
	34. natural resources have been destroyed	.56		
	37. occur tribe improper development	.59		
Positive sociocultural impact	5. identify and proud of self-culture	.61	.81	.72
	11. the continuation and preservation of culture	.60		
	17. increase the understanding of different cultures	.66		
	23. let outsiders know Aboriginal Culture	.73		
	29. Increasing tribal popularity	.66		
	35. community interaction more closely	.45*		
38. tribe people can work together	.50			

Factors	Items	Factor loading	CR	Cronbach's alpha
Negative sociocultural impact	6. traditional culture gradually disappeared	.73	.70	.70
	12. lack of authenticity of culture	.45*		
	18. the interaction between the tribe people produced conflicts	.46*		
	24. the attitude of the tribe people turned to utilitarianism and the change of traditional values	.04*		
	30. traditional products and ritual commercialization	.15*		
	36. life is disturbed by outsiders	.73		
	39. outsiders do not respect the indigenous living culture	.70		

*factor loading less than .05 to be deleted

4.3.2 Support attitude scale

The results from Table 2 show that the CR and Cronbach's alpha values are above .70, which is consistent with the verification standard, indicating that the reliability of the tourist development support attitude scale is acceptable. In addition, the factor load of each factor is more than .50, which shows that all the factors in this research scale have good convergent validity.

4.4 Analysis of Discriminant Validity

Table 3 shows that the AVE square roots of all the potential variables in this study model are between .70 and .75, which is greater than .70, and each potential AVE variable is greater than the standard values associated with all relations and in accordance with the test standards. Therefore, the measurement model of this study has good discriminant validity.

Table 2. Analysis of reliability and validity of tourism development support attitude scale

Items	Factor loading	CR	Cronbach's alpha
1. I support the current situation of the development of tribal tourism	.85	.90	.87
2. I am very satisfied with the development of our tribe's tourism	.70		
3. I support the tribe to attract more tourists	.77		
4. Indigenous tribes should develop sightseeing and improve their lives	.85		
5. I support more tourism development in the tribe	.86		

Table 3. Analysis of discriminant validity

Factors	EPI	ENI	ENPI	ENNI	SPI	SNI
EPI	.73					
ENI	.24	.71				
ENPI	.56	.16	.71			
ENNI	-.05	.48	-.03	.70		
SPI	.66	.07	.71	-.09	.76	
SNI	.13	.57	.09	.58	.03	.75

*Square roots of average variances extracted (AVE); ** Economic positive impact (EPI), Economic negative impact (ENI), Environmental positive impact (ENPI), Environmental positive impact (ENPI), Environmental negative impact (ENNI), Sociocultural positive impact (SPI), Sociocultural positive impact (SNI)

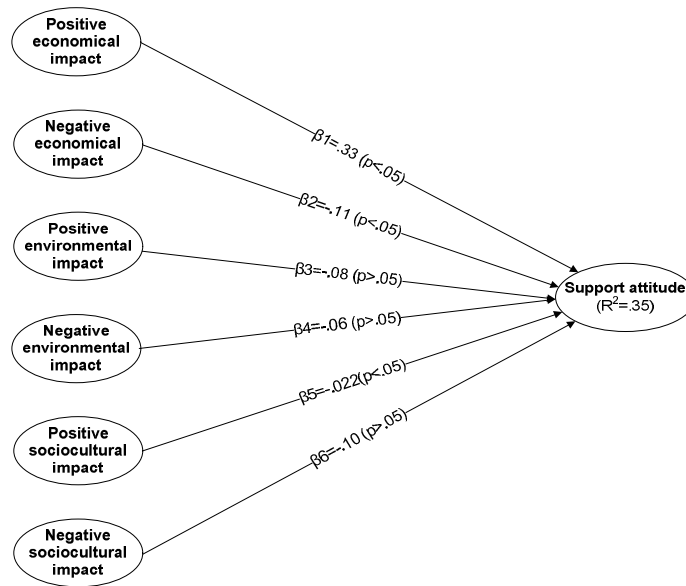


Fig. 1. Structural model

4.5 Structural Model Analysis

In above Fig. 1, the line represents the value of the path coefficient of the standard regression coefficient (β value), the economic positive impact ($\beta_1 = .33$, $p < .05$), the negative economic impact ($\beta_2 = -.11$, $p < .05$) and the sociocultural positive impact ($\beta_5 = .22$, $p < .05$). For the influence on attitudes supporting tourism development, the explanatory power reached 35% ($R^2 = .35$). The positive environmental impact ($\beta_3 = .08$, $p > .05$), negative environmental impact ($\beta_4 = .06$, $p > .05$) and negative sociocultural impact ($\beta_6 = .10$, $p > .05$) did not influence attitudes supporting tourism development.

4.6 Discussion

The results of the analysis show negative environmental impacts as the most common responses regarding tourism development in tribal areas. Increased garbage was the most frequent response, followed by increased noise, environmental pollution, traffic congestion, and tourists not being allowed to collect crops. The results of research on related tribes are the same [10,15,23,31]; obviously, when large groups of tourists visit a tribe, the aforementioned negative environmental problems will result. Although tourists have brought negative environmental impacts to tribes, indigenous peoples are still supportive of tourism development. They also hope for more development. The main reason is

the relationship between the development of tourism, "increased sales of local agricultural products" and "increasing employment opportunities." The results of this study also confirmed that tourism can help increase the income of residents and tribes and improve the economic conditions of residents, who would, therefore, support local tourism development [10,32,36,37,38,39]. Regarding relationships between variables, the analysis found that positive economic impact and positive sociocultural impact have a positive effect on attitudes about tourism development. This shows that when tourism development can bring positive benefits to tribal and indigenous peoples, their support for tourism development will be higher. This finding is the same as in previous tourism research [32,36,37,38,39]. However, this study also found that indigenous peoples believe that tourism development has brought negative economic impacts, which lead to opposition to tourism development. Reasons include: the widening of the gap between the rich and the poor [19], the need for residents to borrow money to invest (liabilities), resources being used in conflict with traditional production activities, loss of land ownership, indigenous people serving as laborers, and tourists being unable to pick up crop resources [22]. These indigenous peoples do not want tourists to visit their tribes and influence their lives. Therefore, based on the above results, it is also known that not all indigenous people support the development of tourism in their tribe, even when the

positive impacts are greater than the negative ones.

5. CONCLUSION AND FUTURE PLAN

Based on the above discussion, this study has the following conclusions: 1. Indigenous peoples most commonly perceive that tourism development brings negative environmental impacts; 2. Indigenous peoples tend to support tourism development; 3. When indigenous peoples perceive that tourism has brought positive economic and sociocultural impacts, their support for tourism development is higher and more positive; and 4. When indigenous peoples believe that tourism has brought negative economic impacts, their support for tourism development is lower and they hold more negative views of tourism.

6. SUGGESTIONS

6.1 For Government Sectors

Overall, tourism has brought positive impacts. Therefore, indigenous peoples are not only satisfied the current tourism development, but have also agreed to support more development in the future, unless it were to bring a negative environmental impact on the tribes. To reduce waste, traffic congestion and noise problems, the government and the tribes should plan travel routes, create visitor parking at tribal locations, please tourists can walk mining tourism and setup environmentally-friendly areas for trash and trash removal. In addition, the government should promote tourist visits to the indigenous tribes, express attitudes respecting and protecting the environment and allow tribes to incorporate sustainable development into tourism.

6.2 For Tribes

This study shows that tribal indigenous peoples hold positive attitudes toward the development of sightseeing, even though tourism has brought negative impacts and only the Shanmei tribe has achieved success in the tourist trade. The researchers suggest that every tribe should rethink and investigate their tourism resources. How can the tribes integrate tourism resources between them to complement what each tribe has to offer for tourism development? The tribes can provide many products for tourism development, but they still need tribal leadership to reintegrate, with the help of the government, to maintain the long-term development of tribal tourism.

6.3 For Future Research

Due to the influence of the researcher's ability, only three tribes could be studied as part of this project, creating limitations on what can be inferred from these results and applied to understanding other tribes. In light of these limitations, it is suggested that future researchers expand their scope of study to investigate additional tribes in Taiwan or tribes in foreign countries. In such a comparative study, different cultures and sightseeing destinations may have different results. Regarding the design of the questionnaire, the tribes surveyed were composed mostly of farmers, which posed difficulties when entering their "monthly income" values. Instead, this variable could be changed to "family income" or "yearly income" in future questionnaires. It is also suggested that future researchers take into account the opinions of indigenous peoples on tourism development and seek to understand the ways in which indigenous peoples want to develop and promote tourism.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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