

Study on the Correlations among Tourist Experience, Leisure Benefits and Leisure Satisfaction in Ecotourism

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Abstract: *The purpose of study is to interpret the relationship of tourist's tour experience · leisure benefits and leisure satisfaction in Ecotourism. The population is the tourists of ecotourism to visit Dapeng Bay National Scenic Area and questionnaire is by convenience sampling. According to purpose and hypothesis, the study is interpreted the hypothesis and analyzed the data by Structural equation modeling. The results are that: 1. The tourist experience is positive affect to leisure benefits. 2. The leisure benefits positive affect to leisure satisfaction. The structural equation modeling of the study is expected to have positive affect to the National Scenic Area and tourism in Taiwan.*

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I. Introduction

1. Research background and motivation

Dapeng Bay National Scenic Area is one of the national scenic areas of the Republic of China. Established in 1997, it covers Dapeng Bay on the southwest coastline of Taiwan's main island and the adjacent land. In 2000, it merged with the Xiao Liuqiu Scenic Area to form the Dapeng Bay Moorland Ecological National Scenic Area, which is entirely located in Pingtung County. In addition to the scenery of Dapeng Bay and Liuqiu Island, the Dapeng Air Force Centralized Training Campsite, originally located on land adjacent to Dapeng Bay, has also become another tourist attraction of military historical significance. Dapeng Bay is a bag-shaped lagoon located along the southwestern part of Taiwan that was formed by alluvial deposits from the Linbian River of Linbian Township and Pingtung County. The lagoon is two to six meters deep and has an average depth of about three meters. Mangrove plants such as the *avicennia marina* are scattered along the north side of the bay area, where the relative stability in changes to water levels and abundance of nutrient salts have enabled the formation of a wetland ecosystem. Biological species in the area include plants, waterfowl, fiddler crab, mudskipper, fish and shellfish. Located near the Nanping shoal at the south of the estuary of the bay area is the Qingzhou Coastal Recreation Area, which is surrounded by a windbreak of *ephedra*. The Dapeng Bay National Scenic Area is bordered by Provincial Highway 17 on the north side, and the Linbian Township border and Ping 128 County Road on the east side, while its west side is adjacent to residential areas and the Donggang Township. It currently contains six wetland parks, including the Datan Wetland, Pengcun Wetland, Right Bank Wetland, Left Bank Wetland, Cifong Wetland and Mangrove Wetland (Wikipedia, 2019).

The concept of ecotourism was first proposed by Hetzer in 1965, who called upon professionals in the fields of culture, education and tourism to rethink the meaning of "tourism," and who later became the first to propose the concept of "ecological tourism." Ecotourism first originated from the methods of management applied to protected areas in the Yellowstone National Park in the United States. It was originally a negative practice which involved the removal of local residents from the area designated for the preservation of wildlife living habitats. With Taiwan being surrounded on all sides by the sea and coastal wetland resources visible everywhere along Taiwanese coastlines, it was important to correctly develop coastal wetlands without destroying the original wetland environment (Chang & Wu, 2014). Ecotourism is a low-impact and small-scale form of tourism carried out in fragile, pristine and relatively undisturbed natural areas, with the purpose of educating tourists on respecting different cultures, providing funds for ecological protection, and directly benefiting the economic development of local communities (Liu, Lee & Lin, 2015). Ecotourism is a recreational activity with the following characteristics: it features relatively pristine and natural areas from cultural or ecological spheres as tourist destinations, provides environmental education to enhance general environmental awareness and contribute to the implementation of environmental protection policies, promotes the well-being of local residents through minimizing the negative impact that can potentially be brought about by tourist activities, and at the same time constitutes a form of environmentally responsible tourist activity (Huang, 2006). The levels of exploration for tourist experience are broad, and one of the main points of focus in the field of tourism is to explore the experience of tourists in their process of travel, including their experiences of the

sensory, emotional, thought, physical action and relations (Luo, Li, Jhu & Huang, 2018). The benefits of ecotourism are the positive changes brought about in regard to the needs of people and the actual environment, including in terms of interpersonal relationships, physical fitness, prevention of societal problems and community stabilization (Driver, 1997). Ajzen (1991) believes that, upon achieving recreational objectives through leisure activities and after studying the degree of satisfaction and subjective experience of leisure benefits, when the level of benefit was higher, the level of participation was also more active. Leisure satisfaction is the positive perception or feelings that an individual forms, derives or obtains from engaging in leisure activities (Beard & Raghed, 1980). Bigne, Sanchez and Sanchez (2001), on the other hand, believe that leisure satisfaction is the tourist's overall assessment of the leisure experience.

Based on the discussion above, there is a need for providers of ecotourism services to also understand the needs of tourists while putting in place conservation efforts for the natural ecosystem and taking leisure benefits into account, in order to improve the degree of satisfaction in the overall tourist experience. Thus, taking Dapeng Bay National Scenic Area as a case study, this study explored the motivations for the mutual influence among the factors of tourist experience, leisure benefits and leisure satisfaction in ecotourism.

2. Research objectives

This study selected Dapeng Bay National Scenic Area as a case study based on the active promotion of ecotourism in Dapeng Bay National Scenic Area: (1) structural equation modeling was applied to verify and establish correlations among the factors of tourist experience, leisure benefits and leisure satisfaction in ecotourism. (3) The structural model constructed in this study is expected to aid towards promoting ecotourism in the national scenic areas of Taiwan and contribute positively to the tourism industry.

II. Literature review

1. Tourist experience

In the process of engaging in leisure activities, the senses, perceptions, mental and physical aspects of an individual are constantly interacting with surrounding environmental factors, and participants of leisure activities derive their feelings and experiences from these interactions. This is referred to as "experience in leisure pursuits" (Kao, 1993). Millman and Pizam (1995) believe that the tourist experience is a hybrid of a variety of different product and service experiences, including physical and mental activities, and these tourist activities influence the perception, awareness, imagination and reasoning of the tourist after tourist activities. The experience module proposed by Schmitt (1999) includes five experiences of the sensory, emotional, thought, physical action and relations. Tourists proceed to travel destinations and engage in activities based on the evaluations and tendencies linked to their inner imagery; the activities begin with the inner experiences of the tourists, allowing them to integrate into their activities through the rendering of these experiences, and forming unique feelings and memorable values in the process. These values form the key factors in transforming the behavior and willingness of tourists in tourist activities (Kuo, Lee & Chang, 2014). Cole and Scott (2004), in their study of the tourist experience model, found that tourist experience is based on individual perception towards the quality of performance, which in turn induce psychological experience from participating in leisure activities, the experience eventually influences the overall degree of satisfaction through the intermediary effects of the quality of experience. Kuo, Huang and Tang (2017) divide the measurement indicators for tourist experience into four kinds of experiences, namely entertainment, educational, esthetic and escapist. The levels of exploration for tourist experience are broad, and one of the main points of focus in the field of tourism is to explore the tourist experience in their process of travel (Luo et al., 2018). Chang, Chang and Hsu (2008), in their study of the tourist's imagery of tourist destinations, environmental perception, tourist experience and willingness to revisit, divide the aspects of tourist experience into three factors: thinking and relation, emotional experience and experience of physical action.

2. Leisure benefits

Leisure benefits refer to the aspect of leisure resource utilization that is capable of meeting the needs of individual or social groups of leisure participants and improving their present circumstances (Kao, 1995). After an individual acquires a variety of different experiences through the process of leisure participation, the results of these experiences can help the individual meet his internal and external needs, and are thus called "leisure benefits" (Liao & Hsieh, 2015). Li and Hung (2017), in their study on the differences in leisure benefits among groups with differing motivations for participation, measured leisure benefits in terms of three factors, namely social image, self-fulfillment, and physical and psychological recovery. Wu and Ching (2016), in their study that explored the correlations between leisure benefits and the degree of happiness of participants of leisure camping activities, divided the aspects of leisure benefits into three factors of "psychological benefit," "physiological benefit" and "social benefit." Travel offers different models of tourist experience, allowing visitors to enjoy leisure benefits through direct participation in experiences and activities; such benefits include the physical,

social, relaxation, educational, psychological and esthetic (Kuo et al., 2017). Chang (2017) found that when people participated in a certain type of activity or hobby and derived feelings of exhilaration from it, they were able to improve and strengthen their physical and psychological well-being as well as interpersonal relationships. Furthermore, when they were active, brain morphine levels increased, putting them in a good mood and generating feelings of happiness. The study divided leisure benefits into three factors of physical, psychological and social benefit. Chung and Tseng (2015) believe that leisure benefits for each individual vary with differing personal backgrounds or the activities that they participate in, with indicators for measuring leisure benefits divided into physical, social, educational, psychological and esthetic benefit. Wang, Hsu and Lee (2018) pointed out in their study that leisure benefits are the subjective evaluation of results of individual participation in leisure activities, and that the measurement of leisure benefits may be divided into the aspects of physiological, social, relaxation, educational, psychological and esthetic benefit. Lin, Yeh, and Lin (2016), in their study, divided the scale of measurement for leisure benefits into the four aspects of physical, psychological, social, and esthetic benefits.

3. Leisure satisfaction

Beard and Ragheb (1980) defined leisure satisfaction as the positive perception or feelings that an individual forms, derives or obtains from engaging in leisure activities, and the degree of satisfaction that an individual feels towards his present leisure experiences and circumstances in general. The measurement scale for leisure satisfaction developed in their study measures the extent to which an individual gains awareness of his needs through participation in leisure activities and the satisfaction derived from the leisure activities. The indicators for measuring leisure satisfaction are divided into the aspects of the “psychological,” “educational,” “social,” “relaxation,” “physiological” and “esthetic.” Liao and Hsieh (2015) defined leisure satisfaction as the degree of positive satisfaction experienced by an individual after a process of engaging in leisure activities and comparing one’s actual experience with past experiences. In their study, the method of principal component analysis was adopted to extract four main components of leisure satisfaction, namely, leisure satisfaction in the psychological, social, physiological and environmental aspects. Wu, Huang and Hsu (2015), in their study of the impact of the motivations of college students for participating in leisure sports on their degree of satisfaction, divided the leisure satisfaction of college students into four aspects that covered social, psychological, educational, and relaxation dimensions. Song (2018), in his study on the motivations for the public’s participation in leisure activities and leisure satisfaction, divided the leisure satisfaction scale into relaxation, psychological, social and educational, physiological, and esthetic dimensions.

4. Research Hypotheses

Based on the objectives and theoretical derivations, this study proposed the following research hypotheses:

4.1 tourist experiencesignificantly affects leisure benefits.

4.2 leisure benefitssignificantly affects leisure satisfaction.

III. Methodology

1. Participants

The population if the study is the tourists who visit the National Scenic Area. The study collected 286 valid questionnaires during 2018/11/01-2019/01/31 from total 500 questionnaires including 15 invalid questionnaires.

2. Research Tools

The questionnaire is used by the statistical tool in the study. According to tourist experience 、leisure benefits and leisure satisfaction scales of ecotourism tourists, the study concerns and edits form following references and scales Cole and Scott(2004), Chang et al.(2008),Liao and Hsieh(2015), Wu et al.(2015), Chungand Tseng(2015), Lin et al.(2016), Wu andChing(2016), Kuo et al.(2017), Chang(2017), Li and Hung(2017), Luo et al.(2018), Song (2018) to edit and create the questionnaires for this study. The concept of the study create from the questionnaire items to be the research variables.

2.1 Exogenous Latent Variables

In SEM, the study identifies the latent variables to become a factor called Exogenous Latent Variables. The Exogenous Latent Variables of study is tourist experience. The tourist experience concerns the reaction of five observed variables depending on Exogenous Latent Variables: sense 、feel 、think 、act and relate.

2.2 Endogenous Latent Variables

The study identifies the results to become latent variables called Endogenous Latent Variables.

According to factor and result relationship, the study divided into two items Intervening Variables and Outcome Variables.

2.2.1 Intervening Variables

The Intervening Variables of study is leisure benefits. The tourist experience can affect leisure satisfaction by leisure benefits of Endogenous Latent Variables' reaction. The Intervening Variables of the study are educational affection · psychological affection · social affection and relaxing affection in Observed Variables.

2.2.2 Outcome Variables

The Outcome Variables of study is leisure benefits by psychological level · social level · physiological level · educational level · relaxing level and beauty level in Observed Variables. Bollen (1989) think that seven points of scale is the best scale of the study. Therefore, the questionnaire of study uses the seven points Likers scale is Totally agree gets seven points · very agree gets six points · agree gets five points · no comment gets four points · don't agree gets three points · very don't agree gets two points and totally don't agree gets one point. The all variables are divided into the questionnaire items.

3. Data Processing

The study of questionnaire's result data is analyzed by SPSS 18.0 statistical software to the basic data analysis and used LISREL8.7 software to testify the verification analysis and SEM model analysis. The maximum likelihood estimation of SEM is affected by variables distribution a lot. To avoid the calculation and testify affection of model, Kline(1998) points out testify the samples of the Observed Variables Skewness and Kurtosis. According to Bagozzi & Yi (1988), Lisrel model suitable testify should observe by offending estimates · overall model fit and fit of internal structure of model. The offending estimates confirms the limitation of the offending violation. The general model calculation can be the negative variance · large standard deviation and standard regression coefficient can be large than 0.95(Bagozzi & Yi, 1988). The major testify of whole model observe the whole suitable degree. The whole model uses at least three types of index absolutely index · relative index and simple index to assessment standard(Bagozzi & Yi, 1988). The suitable assessment of internal model is the last. The internal model of suitable assessment in structure is observe the internal quality assessment including individual item validity · latent variables validity · · latent average variance sampling and calculation coefficient. The hypothesis testify of model verify the positive of study hypothesis.

IV. Data Analysis And Results

1. Basic data analysis

The population of study is female 136 (47.56%) and male (52.44%). The ages are between the 45 and 55 years old. The educational degree is between high school and college.

2. Selection of estimation methods

The maximum likelihood estimation of SEM is affected by variables distribution a lot. According to Kline(1998), if the Skewness and Kurtosis is large than 3 the coefficient is extremely skewness. The kurtosis coefficient is invalid over 10 and is the extremely kurtosis over than 20. According to scale 2, the skewness of the study is between -0.681 and 0.324. The absolute value is smaller than 3. The kurtosis is between -1.082 and -0.135. the absolute value is smaller than 10. The results of the Observed Variables are not large so can use Maximum likelihood to calculate the model of study.

3. Inspection of violation estimates

The general model coefficient can be the negative variance. The general model calculation can be the negative variance · large standard deviation and standard regression coefficient can be large than 0.95(Bagozzi & Yi, 1988). The scale 3 shows all the coefficient is positive and significant difference. (significant testify t is large than 1.96). The large standard deviation and standard regression coefficient can be large than 0.95 and less than 0.5. The result is valid.

4. Verification of Reliability

According to scale 4 to 12 Observed Variables R^2 between 0.44 and 0.86, The individual Observed Variables reliability is must larger than 0.20(Bentler & Wu, 1993). The three Latent Variables are 0.93 · 0.89 and 0.92 and are all less than 0.5(Hair et al., 1998).

5. Verification of Validity

According to scale 3 Observed Variables are between 0.66 and 0.93 and they reach the significant difference standard. The results show that all the Observed Variables can react the lent variables(Bentler& Wu, 1993). The three lent variables of Observed Variables are larger than standard deviation.

6. Fit test of overall model

The whole model index uses at least three types of indexes to be the standard of suitable assessment.

6.1 absolute fit indexes

6.1.1.Goodness of Fit Index, GFI is larger than 0.9 is suitable index. The study is 0.93 and is Goodness of Fit Index.

6.1.2.The RMR less than 0.05 is a suitable index. The model index is 0.034 and is a suitable index.

6.1.3 .The RMSEA is less than 0.05 and is a good suitable index. The model is 0.073 and is a nice index.

6.2relative fit indexes

6.2.1. In general, NFI is 0.9. The model is 0.97 and is a suitable index.

6.2.2.In general, NNFI is 0.9. The model is 0.97 and is a suitable index.

6.2.3.In general, CFI is 0.9. The model is 0.98 and is a suitable index.

6.3 Parsimonious fit indexes

6.3.1.In general, PNFI is 0.5. The model is 0.53 and is a suitable index.

6.3.2.In general, PGFI is 0.5. The model is 0.44 and is a suitable index.

6.3.3.general, Normed Chi-Square= χ^2/df_m is less than 3 and is a suitable index. The model is 2.3134 and is a suitable index.

The whole model suitable assessment can analyze the Observed Variables and hypothesizes. According to the data, the whole model of suitable index can accept.

7. Verification of path relationship

Figure 1shows the study testify the result form coefficient finds that (1)There is a significant difference between tourist experience and leisure benefits. The result shows that the standard coefficient is 0.29 (t=4.42) and has a significant difference. (2) The leisure benefits has a significant difference to leisure satisfaction and coefficient is 0.23 (t=3.39. The two hypothesizes of study are all accepted.

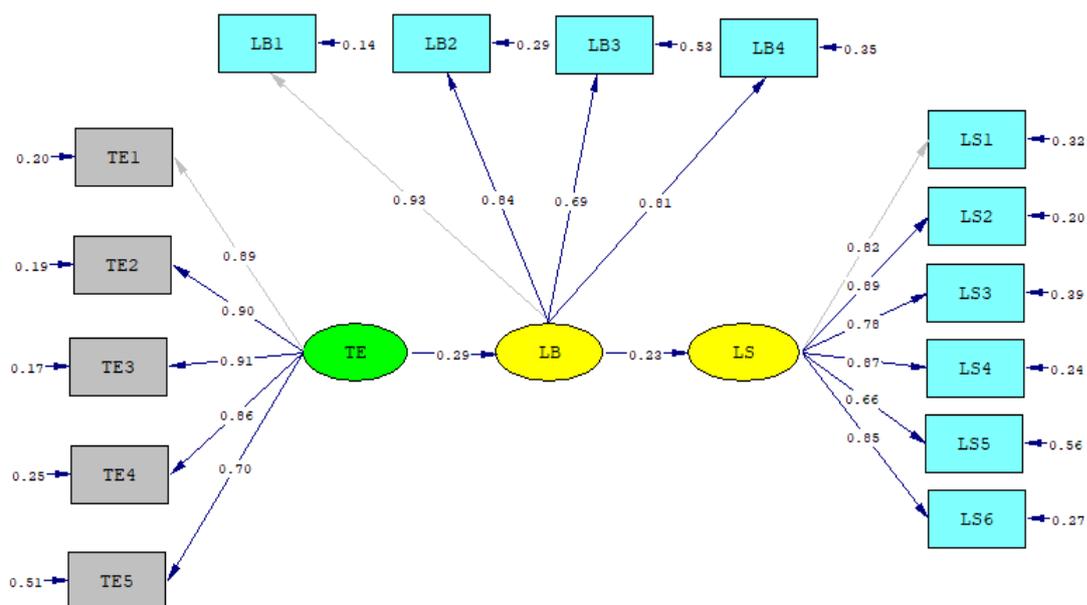


Figure 1.Standardized path diagram of this study

V. Conclusion and recommendation

1. Conclusion

This study aimed to explore the correlations among tourist experience, leisure benefits and leisure satisfaction in ecotourism, establishing correlations among the three potential variables of tourist experience, leisure benefits and leisure satisfaction. After verifying the research hypothesis through structural equation modeling (SEM), the following conclusions were derived:

2. Recommendation

In recent years, the government has encouraged the local development of indigenous populations and wildlife conservation through ecotourism, as well as the establishment of ecological villages with equal developments in production, livelihood and ecology. In 2017, under government efforts to promote activities for ecological experiences in Taiwan, the Tourism Bureau of the Ministry of Transportation and Communications invited the public to visit various parts of Taiwan for their natural beauty and scenery, where people were allowed to get to know a different side of Taiwan through the rich varieties of flora and fauna of the ecosystem and understanding the transformations in cultural history. However, most of the visitors surveyed felt that the development of ecotourism in various parts of Taiwan was primarily limited by insufficient support from present environmental laws and policies in Taiwan, resulting in the destruction of the local economic, cultural and ecological resources of ecotourism destinations. Thus, it is recommended that the relevant government units review outdated laws and policies, in order to enable ecotourism to gain the support of the general public in Taiwan.

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