sustainability

MDPI

Article

Residents' Attitudes toward Support for Island Sustainable Tourism

Cheng-Yu Hsu [1], Mei-Yen Chen [2,*] and Shih-Chieh Yang [3,*]

1 Educational & Student Affairs Division, Wude Primary School, Penghu 880, Taiwan
2 Graduate Institute of Sport, Leisure and Hospitality Management, National Taiwan Normal University, Taipei 106, Taiwan
3 Department of Leisure and Recreation Management, Taipei City University of Science and Technology, Taipei 103, Taiwan
* Correspondence: meiyen686@gmail.com (M.-Y.C.); alex0718@ms17.hinet.net (S.-C.Y.)

Received: 9 August 2019; Accepted: 11 September 2019; Published: 16 September 2019

Abstract: This study examined the relationships between the factors that influence residents' attitudes toward supporting for sustainable tourism in an island context. A quantification approach was employed to obtain the residents' perspectives. This study collected 384 valid questionnaires from the residents and analyzed the collected data using structural equation modeling to test the model. The findings revealed that the Maximizing Community Participation dimension demonstrated a positive direct effect on residents' support for sustainable tourism, and this dimension explained most of the variance in the model. The Perceived Economic Benefits dimension exhibited a positive direct effect on the residents' support for sustainable tourism. Perceived Economic Benefits mediated the effect of Environmental Sustainability on support for sustainable tourism. The findings provide practical implications for policy makers on the promotion of sustainable tourism.

Keywords: island sustainable tourism; residents' attitudes toward sustainable tourism; tourism resource management; social exchange theory; stakeholder theory

1. Introduction

Tourism has been considered as the most important and perhaps the only option for the development of social-economics for an island [1–4]. Tourism benefits the social, economic, and environmental development of islands, but it also has negative impacts; thus, it is necessary to promote management from different stakeholders for sustainable tourism in island destinations [5–8]. Residents are one of the stakeholders in sustainable island tourism management.

Local residents play an important role in sustainable tourism development. Their participation and support is crucial for successful sustainable tourism [9–12]. Residents' attitudes on sustainable tourism affect their cooperation and support for it [13–15]. Thus, obtaining residents' attitudes and opinions toward sustainability is the first step toward gaining public support for sustainable tourism development [16–18].

Residents' attitudes toward tourism has been widely discussed because the attitudes will affect their behavioral intentions toward positive or negative tourism development. Island tourism planners and destination managers need to know the supportive actions driven by local attitudes; thus, understanding residents' attitudes toward sustainable tourism will help the manager make relevant decisions [19,20].

The Social Exchange Theory (SET) is most frequently applied in the study of the relationship of residents' attitudes and levels of support for tourism [21,22]. Researchers have widely discussed and examined residents' attitudes toward economic, social, and environmental issues and whether such attitudes can be directly or indirectly correlated with levels of their support for tourism [23–26].

With a paradigm transfer, the exploration of residents' attitudes toward the support of tourism is transferred to the support of sustainable tourism. Residents are encouraged to be observers and express their perceptions; they can also serve as executants and supervisors who are involved in the process of tourism planning and offer more effective and appropriate management strategies and development among residents, businesses, and the government [19,27,28].

Nicholas, Thapa, and Ko [29] first applied Stakeholder Theory (ST) to explore the relationships between residents' participation attitudes, environmental attitudes, and the support for sustainable tourism. Then, Lee [30] applied SET to explore residents' attitudes, which are directly or indirectly correlated with support for the development of sustainable tourism through positive and negative perceptions.

An integrated approach has been adopted to explain the relationship between residents' attitudes toward sustainability. The integrated model combines two theories to identify key dimensions of island residents' attitudes toward sustainable tourism development [10,31]. Choi and Murray [31] integrated sustainable core dimensions, positive perceptions, negative perceptions, environmental attitudes, and participation attitudes and explored the direct and indirect relationships between these dimensions and support for tourism development. González, Parra-Lopez, and Buhalis [32] used an integrated model to test residents' attitude in an island destination.

However, empirical studies for comprehensive residents' attitudes toward support for sustainable tourism has not been conducted in the island context. To fill the research gap and respond to island sustainable tourism knowledge, the objectives of this study were to develop an integrated model to examine the relationships between residents' attitudes toward sustainability and their support for sustainable tourism. The finding provides a new and comprehensive perspective for island sustainable tourism, and the crucial attitude factors, including social, economic, environment, and participation, are examined in the one model. It will be useful for island sustainable tourism planning and management.

2. Literature Review

2.1. Residents' Attitudes toward Tourism and Social Exchange Theory

From the psychological perspective, attitude is a particular way to evaluate people, issues, problem, things, or events in a positive, negative, or mixed manner. Residents' attitudes toward sustainable tourism incorporate a cognitive evaluation for opinion, belief, emotion, or feeling toward sustainable tourism, and the attitudes lead their intentions to act in a certain way [20].

During the past ten years, studies of residents' attitudes toward tourism development have increased [33,34], and conceptual models and theories have sought to explain the relationship between residents' attitudes toward tourism development [22].

The Social Exchange Theory (SET) is the most popular theory that has been adopted in structural modeling studies of residents' attitudes toward tourism. Ap [35] first applied SET to tourism, and based on SET, the study found that residents' perceived benefits of tourism development are tied to their intention for higher levels of support for tourism development, whereas residents' perceived costs of tourism development are tied to their intention for lower levels of support for tourism development.

The studies that followed used SET as a framework through which the relationship between resident attitudes toward tourism and dimensions of sustainability is examined [24,36,37]. Prior research has discussed the relationships between economic, social, and environmental concerns in terms of support for tourism development in studies of residents' attitudes toward tourism development [23,24,26,38]. Gursoy et al. [24] discussed the relationships between perceived benefits and perceived costs in terms of support for tourism development, and Gursoy and Rutherford [30] further modified the model to include the perceived positive economic impact of tourism, the positive social impact of tourism, and the positive cultural impact of tourism and found them to be positively related to support for tourism development. They further found that perceived social and cultural

costs of tourism were negatively related to support for tourism development. Dyer et al. [23] proposed that positive economic impact, positive social impact, and positive cultural impact were positively correlated with support for tourism development, and negative economic impact and negative social impact were negatively correlated with support for tourism development.

Recently, researchers have applied SET test modeling for residents' attitudes toward sustainable tourism and support for sustainable tourism development [32]. Lee [30] explored the relationships between perceived benefits and perceived costs with support for sustainable tourism, and perceived benefits were positively related to sustainable tourism development while perceived costs were negatively related to sustainable tourism development.

Thus, the current study examines the island residents' consideration of their support level for sustainable tourism according to benefits and costs. It posits that they will have higher support levels with higher perceived economic benefits and that they will have lower support levels with higher social costs. This study presents the following two research hypotheses:

Hypothesis 1 (H1): *The perceived economic benefits of sustainable tourism are directly and positively related to residents' support for sustainable tourism.*

Hypothesis 2 (H2): *The perceived social costs of sustainable tourism are directly and negatively related to residents' support for sustainable tourism.*

2.2. Residents' Attitiude toward Environental Sutainability

The New Environmental Paradigm (NEP) is a concept that is usually used in resident attitude studies, and the idea of eccentricity has often been used to measure residents' attitudes toward humans and nature. NEP focused on beliefs about the ability for humans to destroy the natural balance, the limitations of growth for human societies, and the right for humans to rule over the rest of nature. The NEP Scale consists of elaborate measuring instruments, embracing a wide range of the beliefs, and it has become the far more widely used measure of the environment [39]. In these studies, some respondents tend toward protecting and preserving the natural environment, and some think that the environment should be developed to meet people'ls needs [40]. Therefore, different island residents have different viewpoints toward the environment, which will affect their opinions toward tourism development [41,42]. Such opinions will affect residents' levels of support for sustainable tourism development. Those with higher sustainable environment attitudes believe that the protection of tourism resources will promote the economic benefits of tourism, enhance their perceived economic benefits of tourism, and reduce their perceived social costs of tourism. Thus, such attitudes affect residents' levels of support for sustainable tourism. Prior studies also provide empirical data to support this argument [24,28,31]. The study presents the following three research hypotheses:

Hypothesis 3 (H3): *Residents' attitudes toward environmental sustainability are positively related to their perceived economic benefits of sustainable tourism.*

Hypothesis 4 (H4): *Residents' attitudes toward environmental sustainability are negatively related to their perceived social costs of sustainable tourism.*

Hypothesis 5 (H5): *Residents' attitudes toward environmental sustainability are positively related to their support for sustainable tourism.*

2.3. Sustainable Tourism and Stakeholder Theory

Sustainable tourism is defined as the consideration of the current and future impacts of economic, social, and environmental conditions to meet the needs of tourism, businesses, the environment, and local communities [43]. Sustainable tourism is also a paradigm that focuses on residents,

and their participation is the foundation for success in sustainable tourism development [44–46]. Sustainable tourism is realized in a balance of the concerns of tourism businesses, tourism, and residents [47].

Stakeholder theory (ST) can describe the various elements of tourism in the island, the history of island tourism development, and the procedures and policies related to tourism development and management in the island. ST has recently been applied in the study of tourism, with a concentration on the identification of stakeholders and increasing collaboration in the process of tourism planning and development [48–51].

Based on ST, island residents are identified as being important stakeholders. Island residents' participation plays an important role, and they must participate and be involved in the planning and management of sustainable tourism to reduce conflict [48]. Nelson, Butler, and Wall [52] also noted that residents' participation is a crucial indicator of successful sustainable tourism. The study infers that residents with a higher degree of involvement or higher participation attitudes will have higher levels of support for sustainable tourism, and they will demonstrate higher perceived economic benefits of sustainable tourism and demonstrate lower perceived social costs of sustainable tourism [28].

Past research has focused on residents' participation in tourism development [24,28,29]. Sautter and Leisen [51] used ST as a model to discuss sustainable tourism planning among multiple stakeholders. Byrd [48] asserted that the linkages between stakeholder theory and sustainable tourism development are indivisible, and the study emphasized how stakeholder participation promotes sustainable tourism success. Nicholas et al. [29] applied ST to examine the structural modeling of resident participation attitudes toward sustainable tourism development.

Based on ST and the study by Choi and Murry [31], community participation is the foundation of successful sustainable development [53,54], and sustainable tourism attitudes toward maximizing community participation include participation in tourism development and planning and the close relationships between residents and businesses with regard to business opportunities. Island residents who are more involved in the process of tourism development will perceive more economic benefits of tourism; however, few studies have examined the relationships between residents' attitudes toward community participation and support for tourism development and perceptions of tourism impact [38]. The relationships between residents' attitudes toward community participation and support for sustainable tourism have been less examined and have generally remained undefined [30]. Based on the effects of the residents' participation in sustainable tourism and the results of prior studies, to compensate for the research gap, this study presents the following three research hypotheses:

Hypothesis 6 (H6): *Residents' attitudes toward maximizing community participation are positively related to the perceived economic benefits of sustainable tourism.*

Hypothesis 7 (H7): *Residents' attitudes toward maximizing community participation are negatively related to the perceived social costs of sustainable tourism.*

Hypothesis 8 (H8): *Residents' attitudes toward maximizing community participation are positively related to their support for sustainable tourism.*

This study integrated SET and ST as a conceptual framework to explain island residents' attitudes toward sustainable island tourism. The relationships between support for sustainable tourism and the island residents' attitudes toward sustainable tourism attitudes were explored by using an integrated framework of SET and ST (Figure 1). Four major sustainable tourism attitude variables—perceived economic benefits, perceived social costs, environmental sustainability, and maximizing community participation—were added to the framework to combine the application of SET and ST.

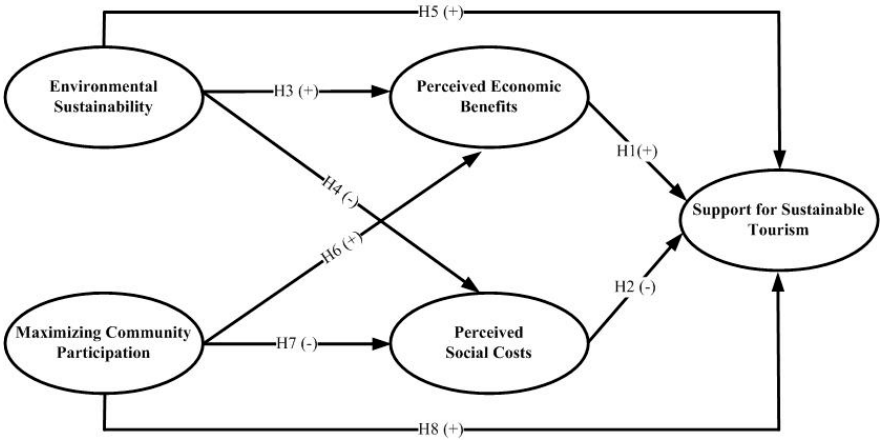

Figure 1. Proposed research model.

3. Methodology

3.1. Participants and Procedure

This study employed a quantitative approach to obtain the residents' perspectives, and data was collected from Qimei Island. The island is one island of the Penghu archipelago located west of Tainan. The tourism resources of Qimei Island include its natural and cultural heritage. Its natural resources include the island's landscape and local geology, which includes basalt deposits, as well as its coastal topography, coral reefs, and marine ecosystems [55].

There are six administrative areas in the island, with all six areas being visited during data collection. Starting in randomly selected locations within each area, every third household was visited by the researchers. If no one answered the door, the researchers visited the next immediate house, and the second-house sequence was started over. One resident of the household was asked to participate in the survey, and if the resident agreed, a questionnaire was left with the participant and picked up later that day by the researchers [56].

This study used the structural equation modeling (SEM) approach to examine the hypotheses. The sample size should be 5–10 times that of the observed variables for the SEM approach [57]. In total, 18 variables are related to the research hypotheses. Therefore, this research should require at least 180 respondents. To achieve this sample size, 400 randomly selected households in the Qimei Island were used as the sampling frame.

3.2. Instruments

The questionnaire was developed from a review of the literature pertaining to residents' attitudes and opinions toward sustainable tourism, and a survey instrument was developed for this study. The questionnaire included items that measured Perceived Social Costs (PSC), Perceived Economic Benefits (PEB), Environmental Sustainability (ES), Maximizing Community Participation (MCP), and Support for Sustainable Tourism Development (SSTD). Key background information from the respondents was also included.

The four scales of PSC, PEB, ES, and MCP were adapted from a shortened version of the Sustainable Tourism Attitude Scale (SUS-TAS) by Sirakaya-Turk and Gursoy [58]. The original SUS-TAS was integrated with social exchange theory, new environmental paradigm (NEP), and sustainability [32,58]. This study used the shorter version of SUS-TAS for reducing the respondent burden of time and increasing response rates. The labeling of the factors for the shortened version of SUS-TAS were identical to the original 2005 scale [59]. PSC assessed the host residents' perceived social costs of sustainable tourism in the local community. PEB assessed the host residents' perceived economic benefits of sustainable tourism in the local community. ES examined residents' general attitudes towards the environment sustainability in tourism. MCP measured residents' general attitudes toward

the degree of community participation in tourism. The four scales were measured based on three items on a five point Likert scale ranging from 1 for "strongly disagree" to 5 for "strongly agree".

SSTD assessed the extent of a resident's intention to support sustainable tourism development in the host community, based on the findings of Nicholas et al. [29]. The scale was measured based on six items on a five point Likert scale ranging from 1 for "strongly disagree" to 5 for "strongly agree".

The demographic variables included gender, age, education level, occupation, and income. These questions were used to create the respondents' profiles.

3.3. Quality of the Research Instrument

The original scale is in English, and the Chinese version was translated into Chinese by two Chinese professors who are fluent in both Chinese and English. Next, back-translation matching was performed to ensure the Chinese version was semantically consistent with the English version of the original scale. Then, the Chinese version of the scale was given to two tourism scholars for examination, and ten Qimei Island residents were then asked to fill out the scale for pilot testing.

Based on the sample size (N = 384), this study's survey results have a 95% confidence level. This sample size could be adequate for performing the SEM analysis [60,61]. The Cronbach's alpha scores for the latent variables of environmental sustainability, maximizing of community participation, perceived economic benefits, perceived social costs, and support for sustainable tourism development were 0.82, 0.79, 0.84, 0.84, and 0.89, respectively. All of the scores exceeded the benchmark of 0.70 [62]. Thus, these scores indicate that the instrument had an acceptable level of internal consistency for items that measured the same construct.

3.4. Data Analysis

The descriptive statistics and the profiles of the host residents were evaluated using SPSS 18.0 for Windows. The confirmatory factor analysis (CFA) and SEM were analyzed using AMOS 18.0 for Windows. First, confirmatory factor analysis was selected to test the proposed theoretical model to assess the effectiveness of the measurement model. To evaluate the quality of the assessment measurement model, the model fit, composite reliability, convergent validity, and discriminant validity of environmental sustainability, the maximizing of community participation, perceived economic benefits, perceived social costs, and support for sustainable tourism development were assessed. Second, the maximum likelihood method was used for SEM to test hypothesized relationships among the variables.

4. Results

4.1. Island Residents' Characteristics

Respondent demographics were as follows: 54.0% of the respondents were male; 29.5% were aged between 30 and 39 years; 63.7% had lived in the community for more than 16 years; 36.3% had completed a high school education; 51.0% were non-tourism laborers; and 33.6% had a monthly income of less than $20,001 (NTD) (Table 1).

Table 1. Characteristics of the respondents.

Demographics		Percentage
Gender	Male	54.0
	Female	46.0
Age	20–29	16.7
	30–39	29.5
	40–49	22.7
	50–59	20.1
	≥60	11.0
Length of Residence	1–3 years	17.5
	4–6 years	5.3
	7–9 years	1.9
	10–15 years	11.6
	≥16 years	63.7
Education	Sixth grade or less	8.3
	Junior high school graduate	22.8
	High school graduate	36.3
	College or university graduate	27.7
	Graduate degree or higher	4.9
Employment	Tourism-related job	10.3
	No tourism-related job	51.0
	Homemaker	16.5
	Students	8.1
	Not currently employed	3.7
	Retired	10.3
Income (NTD)	Under $20,000	33.6
	$20,001–40,000	31.9
	$40,001–60,000	23.3
	$60,001–80,000	6.9
	$80,001–100,000	3.1
	more than $100,001	1.2

4.2. Descriptive Analysis

The mean score of each item under the construct indicates that from a social perspective, overall, residents feel moderate social costs from tourism. Most agree that they and the community receive economic benefits. From an economic perspective, the residents mostly agree on positive economic consequences from tourism. Residents have both a higher attitude for environmental and participation and a high level of intention for supporting island sustainable tourism development (Table 2).

Table 2. Descriptive analysis of Attitudes toward sustainable tourism and supporting.

Construct Item	Mean	SD
Perceived Social Costs (PSC)		
I often feel irritated because of tourism in my community. (PSC1)	2.80	0.94
Tourists in my community disrupt my quality of life. (PSC2)	3.02	0.98
My community is overcrowded because of tourism development. (PSC3)	2.99	0.94
Perceived Economic Benefits (PEB)		
I believe that tourism is a strong economic contributor to the community. (PEB1)	3.74	0.87
Tourism diversifies the local economy. (PEB2)	3.81	0.8
I believe that tourism is good for our community's economy. (PEB3)	3.81	0.8

Table 2. *Cont.*

Construct Item	Mean	SD
Environmental Sustainability (ES)		
Tourism must protect the environment. (ES1)	4.43	0.74
Proper tourism development requires that wildlife and natural habitats be protected at all times. (ES2)	4.32	0.79
Community resources must be protected now and for the future. (ES3)	4.26	0.78
Maximizing Community Participation (MCP1)		
A community's residents should have opportunities to be involved in tourism decision making. (MCP1)	4.06	0.76
The tourism industry must embrace the values of the community residents. (MCP1)	4.01	0.76
Community residents should be given more opportunities to invest in tourism development. (MCP1)	3.99	0.72
Support for Sustainable Tourism Development (SSTD)		
I support the development of community-based tourism initiatives (SSTD1)	3.95	0.8
I support local participation in tourism planning and development (SSTD2)	4.05	0.74
I support cultural exchanges between local residents and visitors (SSTD3)	4.03	0.69
I support cooperation and unity in tourism planning and development (SSTD4)	4.03	0.73
I support regulatory environmental standards to reduce the negative impacts of tourism (SSTD5)	4.15	0.74
I support the promotion of environmental education and conservation (SSTD6)	4.3	0.72

4.3. Confirmatory Factor Analysis (Measuring Model)

First, we examined whether the residents' attitudes and opinions toward sustainable tourism that were borrowed from the sustainable tourism literature revealed sound levels of normality. We followed Kline [63] recommendations that the skew and kurtosis indices should not exceed an absolute value of 3 and 10, respectively, and this study used Mardia's multivariate kurtosis as the test statistic for normality [64]. The data in this study were regarded as normal for the purposes of structural equation modeling.

CFA with the maximum-likelihood method was used to evaluate the reliability and validity of the observed variables' responses for the latent variables [65]. The CFA report revealed the goodness-of-fit indices of the measurement model to be as follows: χ^2/df = 3.23, GFI = 0.88, AGFI = 0.88, TLI = 0.90, CFI = 0.92, SRMR = 0.05, and RMSEA = 0.07. The measurement model has an acceptable model fit [63,66,67].

Next, the model was tested for evidence of convergent and discriminant validity. All composite reliability values exceeded 0.80, demonstrating a high level of internal consistency for the latent variables. The convergent validity derived from all the factor loadings exceeded 0.70 and was significant ($t > 1.96$, $p < 0.05$). Average variance extracted (AVE) exceeded 0.50 for each construct, and none of the squared correlations exceeded the lowest AVE score, which were all confirmed (Table 3). This study concluded that the convergent and discriminant validity was acceptable [68].

Table 3. Results of confirmatory factor analysis.

Construct Item	Standard Factor Loading	AVE	CR
PSC		0.64	0.86
PSC1	0.72		
PSC2	0.90		
PSC3	0.77		
PEB		0.64	0.84
PEB1	0.74		
PEB2	0.91		
PEB3	0.85		
ES		0.60	0.82
ES1	0.84		
ES2	0.86		
ES3	0.85		
MCP		0.57	0.80
MCP1	0.90		
MCP2	0.89		
MCP3	0.81		
SST		0.57	0.89
SSTD1	0.91		
SSTD2	0.90		
SSTD3	0.82		
SSTD4	0.89		
SSTD5	0.84		
SSTD6	0.83		

Note: AVE= average variance extracted, CR= composite reliability.

4.4. Test of the Structural Equation Model

The goodness-of-fit level of the structural model can be assessed using many of the statistics within the SEM analysis [69]. Previous studies have applied the χ^2 test in addition to other measures, such as χ^2/df, the NFI, the CFI, the RMSEA, and the SRMR, to assess model fitness [70]. In this study, a χ^2 test (χ^2/df = 3.42, $p < 0.05$) ratio of less than 5 was generally considered to be indicative of a reasonable fit between the proposed model and the data from which the model is constructed [63]. The other goodness-of-fit statistics that this study obtained included the GFI (0.89), CFI (0.91), TLI (0.90), RMSEA (0.08), and SRMR (0.072), all of which indicated an acceptable level of model fitness for the structural modeling of the data [66,70].

The path diagram and parameters showed the structural relationships (Figure 2, Table 4). The SEM analysis revealed that the perceived economic benefits directly, positively, and significantly affected support for sustainable tourism development (β = 0.314, CR = 5.559, $p < 0.001$); thus, H1 was accepted. The perceived social costs directly, positively, and insignificantly affected support for sustainable tourism development (β = 0.013, CR = 0.271, $p < 0.001$); thus, H2 was rejected.

Environmental sustainability directly, positively, and significantly affected perceived economic benefits (β = 0.443, CR = 3.945, $p < 0.001$); thus, H3 was accepted. Environmental sustainability negatively and insignificantly affected perceived economic benefits (β = −0.211, CR = −1.792, $p < 0.001$); thus, H4 was rejected.

Environmental sustainability directly, positively, and insignificantly affected support for sustainable tourism development (β = 0.112, CR = 1.261, $p < 0.001$); thus, H5 was rejected. Maximizing community participation directly, negatively, and insignificantly affected perceived economic benefits (β = −0.028, CR = −0.256, $p < 0.001$); thus, H6 was rejected.

Maximizing community participation directly, positively, and insignificantly affected perceived social costs (β = 0.190, CR = 1.591, $p < 0.001$); thus, H7 was rejected. Maximizing community participation directly, positively, and significantly affected support for sustainable tourism development (β = 0.501, CR = 5.399, $p < 0.001$); thus, H8 was accepted.

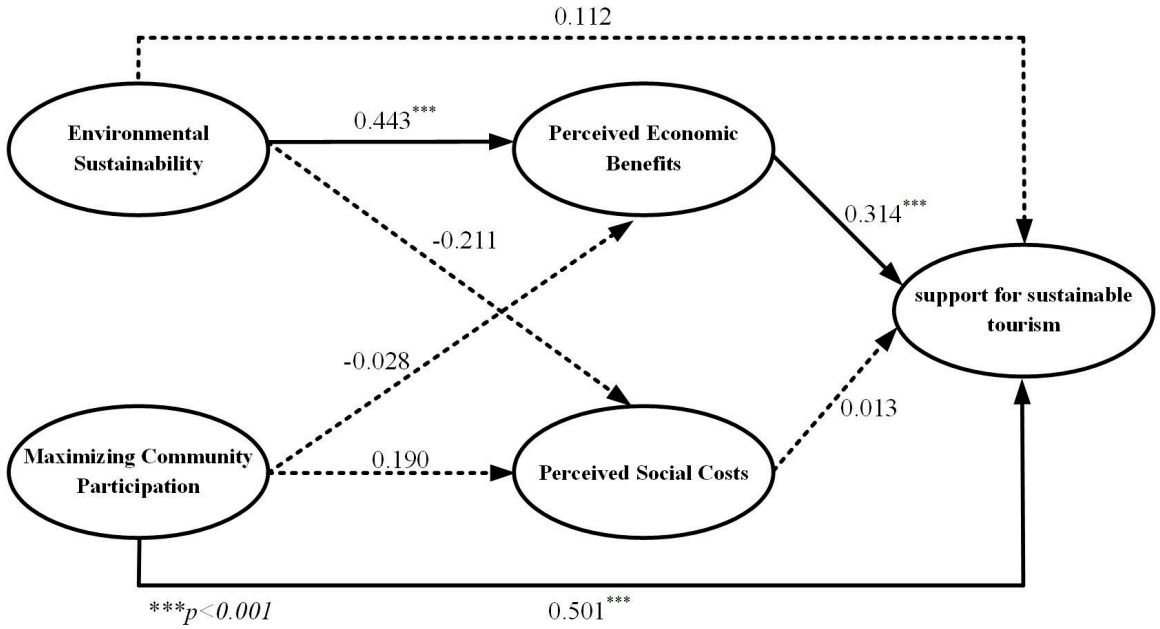

Figure 2. Final model of the proposed research model.

Table 4. Standardized coefficient (β) of structural parameters and critical ratio (CR).

Hypothesis	β	CR	SE
Direct Effect			
H2: perceived social costs → support for sustainable tourism development	0.013	0.271	0.038
H3: environmental sustainability → perceived economic benefits	0.443***	3.945	0.113
H4: environmental sustainability → perceived social costs	−0.211	−1.792	0.142
H5: environmental sustainability → support for sustainable tourism development	0.112	1.261	0.088
H6: maximizing community participation → perceived economic benefits	−0.028	−0.256	0.148
H7: maximizing community participation → perceived social costs	0.190	1.591	0.191
H8: maximizing community participation → support for sustainable tourism development	0.501***	5.399	0.122
Indirect Effect			
environmental sustainability → perceived economic benefits → support for sustainable tourism development	0.139***		

*** $p < 0.001$.

5. Discussion

Three of eight hypotheses were supported, and five were rejected. First, based on social exchange theory, the variable of perceived economic benefits was found to have a significant directly positive effect on support for sustainable tourism, and the proposed H1 was found to be statistically significant. This finding corresponds with the results from previous studies [24,25,28–30,71–73]. This means that the greater the variable of the perceived economic benefits of sustainable tourism, the more positive the island residents' behavioral intention toward support for sustainable tourism will be. Therefore, the type of tourism that island residents will support still depends on how great its benefits are perceived to be. Compared with investigations in other areas, perceived economic benefits is a stable factor in a SET framework, and the residents demonstrated the intention to support types of tourism development based on perceived economic benefits in Taiwan island as well as other areas.

The proposed H2 was not found to be statistically significant, and this finding has been confirmed by previous studies that find that cultural differences exist in different contexts; therefore, a new empirical study is necessary. Perceived social costs was not found to have a significant directly negative effect on support for sustainable tourism, and this finding corresponds with the results of previous

studies [23,38]. Based on SET, the residents demonstrated the intention to support types of tourism based on perceived social costs. The results of previous studies that have been based on SET, such as Choi and Murray [32], Gursoy et al. [24], and Nunkoo and Ramkissoon [73], showed that the factor of perceived negative impacts is negatively related to support for tourism, and the results of Lee's [30] study showed that perceived negative impacts are negatively related to support for sustainable tourism. Comparing the findings of previous studies with the current study, a relationship between perceived negative impact and support for tourism is found in some fields but not in others. According to Gursoy and Rutherford [24], the relationship between perceived social costs and support for tourism is not significant, which may be explained by the economic situation in which the investigation was conducted; the area in which Gursoy and Rutherford [24] performed their investigation was experiencing a severe economic recession and had attempted to transfer a traditional agricultural model to a mixed model of traditional agriculture and tourism. The study also denoted that residents would consider tourism to be a main method to improve economic conditions without considering the social and cultural costs in an area that experienced an economic recession [13,74,75]. The island in the current study under investigation experienced economic recession and emigration, and the stone weir that had previously been used as a fishing facility had become a sightseeing spot. Moreover, a national marine park was established to protect the island's ocean resources. This finding shows that on the island that is under study, the residents' income changed from fishing to tourism, and the island's environmental economy clearly depends on tourism.

Of the three hypotheses about community participation in this study, only maximizing community participation was found to have a significant directly positive effect on support for sustainable tourism, and the proposed H8 was found to be statistically significant. The other two hypotheses, H6 and H7, were not supported. While this finding is not based on SET, it is confirmed by ST; the participation of the residents directly related to the level of support for sustainable tourism, which affected the type of island tourism development. The result also shows that the Taiwan island residents' intention to support sustainable tourism was not only evaluated based on perceived economic benefits, but wass also directly related to their participation intention. The findings correspond with ST; many studies have denoted the importance of residents' participation, but there have been few empirical quantitative studies that have provided support [31]. In a previous empirical study about residents' attitudes toward participation and support for sustainable tourism, Nicholas et al. [29] proposed that the residents' participation level is positively related to support for sustainable tourism, but the result was not supported. Lee [30] found that the residents' participation level is indirectly related to support for sustainable tourism through perceived benefits. The results of the current study diverge from the results of previous studies [29,30] in that the results confirmed that residents' attitudes toward participation is significantly, directly, and positively related to support for sustainable tourism. This result strengthens the importance of stakeholders for sustainable tourism as proposed by ST. Moreover, previous studies denoted that although SET is frequently used to explain the relationship of the level of residents' support for tourism, the integration of other theories will contribute to an improved understanding and may be able to predict the relationships between residents' support for sustainable tourism with other variables [76,77].

Of the three hypotheses about environmental attitude in this study, only environmental sustainability was found to have a significant directly positive effect on perceived economic benefits, and the proposed hypothesis H3 was found to be statistically significant. The other two hypotheses, H4 and H5, were not supported. The findings indicate that the relationship between the local residents' attitudes toward environmental sustainability and support for sustainable tourism was indirectly related through perceived economic benefits. The result corresponds with the conclusion of Nicholas et al. [29], and it is in line with the viewpoint of SET, whereby residents would evaluate their level of support for sustainable tourism through their attitudes toward environmental sustainability through perceived benefits. The result of the current study corresponds with that of Choi and Murray [31] that residents' attitudes toward environmental sustainability indirectly and positively

affected support for tourism development through the perceived positive impact of tourism. Compared with Choi and Murray [31], the current study employed the variable support for sustainable tourism, and the result was in line with Nicholas et al. [29], which shows that residents who have higher attitudes toward environmental sustainability will not necessarily oppose tourism development, depending on the type of tourism that is used [27].

6. Conclusions

This study develops new insights into the residents' attitudes toward sustainable tourism in an island context. The comprehensive model shows the relationships between the residents' attitude, including social, economic, environmental, and participation, with their support for sustainable tourism development. The theoretical implications, managerial implications, and further research suggestions are as follows.

6.1. Theoretical Implications

First, this study adopted an integrated approach that has been recommended by former studies to confirm the relationships between sustainable tourism attitudes and support for sustainable tourism under the integrated framework of SET and ST [76,77]. Although SET can be used to explain residents' perceptions and attitudes to a certain degree, a crucial role in the sustainable paradigm, i.e., resident participation, has not received as much attention in the sustainable tourism research. The results corroborated that ST can be used to reconcile the limitations of SET, and the factor of maximizing community participation is directly related—although not through the perception of socially exchanged interactions—with the factor's support for sustainable tourism. Maximizing community participation was found to have the strongest relationship with residents' attitudes toward support for sustainable tourism. Stakeholder theory emphasizes that stakeholder involvement is the critical element of sustainable tourism development [30], and the perception of resident involvement should be considered preferentially in the sustainable tourism planning process of a small island state.

Second, the results of this study confirm that perceived economic benefits are also a crucial factor in the support for sustainable tourism; however, perceived social costs have no relationship to support for sustainable tourism. Social Exchange Theory predicts residents' intentions through the interactions of a tourism cost-and-benefit perspective. In this study, only the perception of economic benefits has a relationship to attitudes for the support of sustainable tourism on the island due to economic dependence on tourism; thus, the economic benefit is more tangible [1,2,32]. Third, consistent with previous studies, the factor of environmental sustainability is related through the perception of economic benefits to support for sustainable tourism [30,32]. The island residents were willing to maintain environmental sustainability for economic reasons because the natural environment and their heritage are the main attractions for island tourism while the island is in the tourism development stage. In conclusion, residents' attitudes are a type of subjective indicator to evaluate how they will react to tourism development, and residents play an important role in sustainable tourism. Such subjective indicators can reflect the residents' thoughts toward the achievement of sustainability goals in the island context, and the integrated approach is a better way to understand residents' attitudes toward sustainable tourism.

6.2. Managerial Implications

This study makes several contributions to the understanding of island residents' attitudes toward sustainable tourism and the support for sustainable tourism. These findings suggest managerial implications. First, sustainable island tourism should be developed by civic self-government groups that are organized by island residents, which provides them with the opportunity to be either directly or indirectly involved in planning and decision-making. As a priority, the government should set the investment of island residents and the generation of local investment opportunities that are based on sustainable tourism development [76]. Second, environmental norms and conservation regulations

should also be established. Further, such norms and regulations should be connected to the economic benefits from sustainable tourism, which will thus increase the level of residents' support for sustainable tourism. When a community conserves its local environment and culture, it will bring the economic benefits of tourism, and sustainable tourism will demonstrate its value.

6.3. Issues and Future Research Suggestions

The present study has several limitations. First, based on ST, the stakeholders in sustainable tourism include local residents, tourism businesses, and government officers, and the study only investigated the opinions of the local residents. Future studies should involve the collaboration of the three stakeholders according to sustainable tourism development theory; therefore, tourism business and government issues should be investigated in future studies. Second, the study only focused on Taiwan island residents, and different island residents in the other region may hold differing opinions regarding sustainable tourism development [78]. To overcome this limitation, future studies should conduct similar surveys across the islands in different countries. Finally, the study was conducted using cross-sectional data; thus, it could not obtain an understanding of the long-term changes in residents' attitudes toward sustainable tourism. Thus, future studies should adopt a longitudinal approach to observe changes in residents' attitudes.

Author Contributions: Conceptualization and research design, C.-Y.H. and M.-Y.C.; data acquisition and statistical analysis, C.-Y.H. and S.-C.Y.; original draft, C.-Y.H. and S.-C.Y.; refined and edited by C.-Y.H. and M.-Y.C.

Funding: This research received no external funding.

Acknowledgments: This work was supported by the National Taiwan Normal University (NTNU) within the framework of the Higher Education Sprout Project by the Ministry of Education (MOE) in Taiwan.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Chen, C.M.; Chen, S.H.; Lee, H.T. The destination competitiveness of Kinmen's tourism industry: Exploring the interrelationships between tourist perceptions, service performance, customer satisfaction and sustainable tourism. *J. Sustain. Tour.* **2011**, *19*, 247–264. [CrossRef]
2. Cheng, T.M.C.; Wu, H.; Huang, L.M. The influence of place attachment on the relationship between destination attractiveness and environmentally responsible behavior for island tourism in Penghu, Taiwan. *J. Sustain. Tour.* **2013**, *21*, 1166–1187. [CrossRef]
3. Lankford, S.V.; Chen, J.S.; Chen, W. Tourism's impacts in the Penghu national scenic area, Taiwan. *Tour. Manag.* **1994**, *15*, 222–227. [CrossRef]
4. Ribeiro, M.A.; Pinto, P.; Silva, J.A.; Woosnam, K.M. Examining the predictive validity of SUS-TAS with maximum parsimony in developing island countries. *J. Sustain. Tour.* **2018**, *26*, 379–398. [CrossRef]
5. Cusick, J. At the Intersection of Resident, Research and Recreation Stakeholder Interests: East Maui, Hawai'i, as a Sustainable Tourism Destination. *Isl. Stud. J.* **2009**, *4*, 183–202.
6. Parra-López, E.; Martínez-González, J.A. Tourism research on island destinations: A review. *Tour. Rev.* **2018**, *73*, 133–155. [CrossRef]
7. Sun, X.; Chi, C.; Xu, H. Developing destination loyalty: The case of Hainan Island. *Ann. Tour. Res.* **2013**, *43*, 547–577. [CrossRef]
8. Chang, R.C.; Mak, A.H. Understanding gastronomic image from tourists' perspective: A repertory grid approach. *Tour. Manag.* **2018**, *68*, 89–100. [CrossRef]
9. Campón-Cerro, A.; Folgado-Fernández, J.; Hernández-Mogollón, J. Rural destination development based on olive oil tourism: The impact of residents' community attachment and quality of life on their support for tourism development. *Sustainability* **2017**, *9*, 1624. [CrossRef]
10. Hsieh, C.M.; Tsai, B.K.; Chen, H.S. Residents' attitude toward aboriginal cultural tourism development: An integration of two theories. *Sustainability* **2017**, *9*, 903. [CrossRef]

11. Yu, C.P.; Cole, S.; Chancellor, C. Resident support for tourism development in rural midwestern (USA) communities: Perceived tourism impacts and community quality of life perspective. *Sustainability* **2018**, *10*, 802. [CrossRef]
12. Liu, Y.D. Event and sustainable culture-Led regeneration: Lessons from the 2008 European Capital of Culture, Liverpool. *Sustainability* **2019**, *11*, 1869. [CrossRef]
13. Keogh, B. Resident recreationists' perceptions and attitudes with respect to tourism development. *J. Appl. Rec. Res.* **1990**, *15*, 71–83.
14. Kuščer, K.; Mihalič, T. Residents' Attitudes towards Overtourism from the Perspective of Tourism Impacts and Cooperation–The Case of Ljubljana. *Sustainability* **2019**, *11*, 1823. [CrossRef]
15. Ku, G.C.; Mak, A.H. Exploring the discrepancies in perceived destination images from residents' and tourists' perspectives: A revised importance–Performance analysis approach. *Asia Pac. J. Tour. Res.* **2017**, *22*, 1124–1138. [CrossRef]
16. Andereck, K.L.; Vogt, C.A. The relationship between residents' attitudes toward tourism and tourism development options. *J. Travel Res.* **2000**, *39*, 27–36. [CrossRef]
17. Davis, D.; Allen, J.; Cosenza, R.M. Segmenting local residents by their attitudes, interests, and opinions toward tourism. *J. Travel Res.* **1988**, *27*, 2–8. [CrossRef]
18. Muresan, I.; Oroian, C.; Harun, R.; Arion, F.; Porutiu, A.; Chiciudean, G.; Todea, A.; Lile, R. Local residents' attitude toward sustainable rural tourism development. *Sustainability* **2016**, *8*, 100. [CrossRef]
19. Nunkoo, R.; Smith, S.L.; Ramkissoon, H. Residents' attitudes to tourism: A longitudinal study of 140 articles from 1984 to 2010. *J. Sustain. Tour.* **2013**, *21*, 5–25. [CrossRef]
20. Peters, M.; Chan, C.S.; Legerer, A. Local perception of impact-Attitudes-Actions towards tourism development in the Urlaubsregion Murtal in Austria. *Sustainability* **2018**, *10*, 2360. [CrossRef]
21. Andereck, K.L.; Valentine, K.M.; Knopf, R.C.; Vogt, C.A. Residents' perceptions of community tourism impacts. *Ann. Tour. Res.* **2005**, *32*, 1056–1076. [CrossRef]
22. Teye, V.; Sirakaya, E.; F Sönmez, S. Residents' attitudes toward tourism development. *Ann. Tour. Res.* **2002**, *29*, 668–688. [CrossRef]
23. Dyer, P.; Gursoy, D.; Sharma, B.; Carter, J. Structural modeling of resident perceptions of tourism and associated development on the Sunshine Coast, Australia. *Tour. Manag.* **2007**, *28*, 409–422. [CrossRef]
24. Gursoy, D.; Jurowski, C.; Uysal, M. Resident attitudes: A structural modeling approach. *Ann. Tour. Res.* **2002**, *29*, 79–105. [CrossRef]
25. Gursoy, D.; Kim, K.; Uysal, M. Perceived impacts of festivals and special events by organizers: An extension and validation. *Tour. Manag.* **2004**, *25*, 171–181. [CrossRef]
26. Yoon, Y.; Gursoy, D.; Chen, J.S. Validating a tourism development theory with structural equation modeling. *Tour. Manag.* **2001**, *22*, 363–372. [CrossRef]
27. Friedman, A.L.; Miles, S. Developing stakeholder theory. *J. Manag. Stud.* **2002**, *39*, 1–21. [CrossRef]
28. Jamal, T.B.; Getz, D. Collaboration theory and community tourism planning. *Ann. Tour. Res.* **1995**, *22*, 186–204. [CrossRef]
29. Nicholas, L.N.; Thapa, B.; Ko, Y.J. Residents' Perspectives of a World Heritage Site: The Pitons Management Area, St. Lucia. *J. Travel Res.* **2009**, *36*, 390–412.
30. Lee, T.H. Influence analysis of community resident support for sustainable tourism development. *Tour. Manag.* **2013**, *34*, 37–46. [CrossRef]
31. Choi, H.C.; Murray, I. Resident attitudes toward sustainable community tourism. *J. Sustain. Tour.* **2010**, *18*, 575–594. [CrossRef]
32. González, J.A.M.; Parra-Lopez, E.; Buhalis, D. The loyalty of young residents in an island destination: An integrated model. *J. Destin. Mark. Manag.* **2017**, *6*, 444–455.
33. Diedrich, A.; García-Buades, E. Local perceptions of tourism as indicators of destination decline. *Tour. Manag.* **2009**, *30*, 512–521. [CrossRef]
34. McGehee, N.G.; Andereck, K.L. Factors predicting rural residents' support of tourism. *J. Travel Res.* **2004**, *43*, 131–140. [CrossRef]
35. Ap, J. Residents' perceptions research on the social impacts of tourism. *Ann. Tour. Res.* **1990**, *17*, 610–616. [CrossRef]
36. Deccio, C.; Baloglu, S. Nonhost community resident reactions to the 2002 Winter Olympics: The spillover impacts. *J. Travel Res.* **2002**, *41*, 46–56. [CrossRef]

37. Jurowski, C.; Uysal, M.; Williams, D.R. A theoretical analysis of host community resident reactions to tourism. *J. Travel Res.* **1997**, *36*, 3–11. [CrossRef]
38. Gursoy, D.; Rutherford, D.G. Host attitudes toward tourism: An improved structural model. *Ann. Tour. Res.* **2004**, *3*, 495–516. [CrossRef]
39. Dunlap, R.E.; Van Liere, K.D.; Mertig, A.G.; Jones, R.E. New trends in measuring environmental attitudes: Measuring endorsement of the new ecological paradigm: A revised NEP scale. *J. Soc. Issues* **2000**, *56*, 425–442. [CrossRef]
40. Uysal, M.; Jurowski, C.; Noe, F.P.; McDonald, C.D. Environmental attitude by trip and visitor characteristics: US Virgin Islands National Park. *Tour. Manag.* **1994**, *15*, 284–294. [CrossRef]
41. Jones, D.L.; Jurowski, C.; Uysal, M. Host community residents' attitudes: A comparison of environmental viewpoints. *Tour. Hosp. Res.* **2000**, *2*, 129–156. [CrossRef]
42. Lo, Y.C.; Fang, C.Y. Facebook marketing campaign benchmarking for a franchised hotel. *Int. J. Contemp. Hosp.* **2018**, *30*, 1705–1723. [CrossRef]
43. UNEP, UNWTO. Making Tourism more Sustainable: A Guide for Policy Makers. In *United Nations Environment Programme*; Division of Technology, Industry and Economics; World Tourism Organization Publications: Paris, French, 2005.
44. Butcher, J. Sustainable development or development? In *Tourism and Sustainability: Principles to Practice*; CAB International: Oxon, UK, 1997; pp. 27–38.
45. Hunter, C. Sustainable tourism as an adaptive paradigm. *Ann. Tour. Res.* **1997**, *24*, 850–867. [CrossRef]
46. Jamieson, W.; Jamal, T. Tourism Planning and Destination Management. In *International Tourism: A Global Perspective*; World Tourism Organization: Madrid, Spain, 1997; pp. 321–337.
47. Sharpley, R. Tourism and sustainable development: Exploring the theoretical divide. *J. Sustain. Tour.* **2000**, *8*, 1–19. [CrossRef]
48. Byrd, E.T. Stakeholders in sustainable tourism development and their roles: Applying stakeholder theory to sustainable tourism development. *Tour. Rev.* **2007**, *62*, 6–13. [CrossRef]
49. Easterling, D.S. The residents' perspective in tourism research: A review and synthesis. *J. Travel Tour. Mark.* **2005**, *17*, 45–62. [CrossRef]
50. Manwa, H. Wildlife-Based tourism, ecology and sustainability: A tug-of-War among competing interests in Zimbabwe. *J. Tour. Stud.* **2003**, *14*, 45–54.
51. Sautter, E.T.; Leisen, B. Managing stakeholders a tourism planning model. *Ann. Tour. Res.* **1999**, *26*, 312–328. [CrossRef]
52. Nelson, J.G.; Butler, R.; Wall, G. *Tourism and Sustainable Development: Monitoring, Planning, Managing*; University of Waterloo Heritage Resource Centre: Waterloo, ON, Canada, 1993.
53. Jones, S. Community-Based ecotourism: The significance of social capital. *Ann. Tour. Res.* **2005**, *32*, 303–324. [CrossRef]
54. Lepp, A. Residents' attitudes towards tourism in Bigodi village, Uganda. *Tour. Manag.* **2007**, *28*, 876–885. [CrossRef]
55. Qimei Township Hall. Tourism Resource. Available online: http://www.chimi.gov.tw/tw/default.aspx (accessed on 10 February 2015).
56. Boley, B.B.; McGehee, N.G. Measuring empowerment: Developing and validating the resident empowerment through tourism scale (RETS). *Tour. Manag.* **2014**, *45*, 85–94. [CrossRef]
57. Hair, J.F.; Anderson, R.E.; Tatham, R.L.; Black, W.C. *Multivariate Data Analysis with Readings*; Prentice-Hall International: London, UK, 1998.
58. Sirakaya-Turk, E.; Gursoy, D. Predictive Validity of Sustas. *Tour. Anal.* **2013**, *18*, 601–605. [CrossRef]
59. Choi, H.C.; Sirakaya, E. Measuring residents' attitude toward sustainable tourism: Development of sustainable tourism attitude scale. *J. Travel Res.* **2005**, *43*, 380–394. [CrossRef]
60. Marsh, H.W.; Hau, K.T.; Balla, J.R.; Grayson, D. Is more ever too much? The number of indicators per factor in confirmatory factor analysis. *Multivar. Behav. Res.* **1998**, *33*, 181–220. [CrossRef]
61. Westland, J.C. Lower bounds on sample size in structural equation modeling. *Electron. Commer. Res. Appl.* **2010**, *9*, 476–487. [CrossRef]
62. Garver, M.S.; Mentzer, J.T. Logistics research methods: Employing structural equation modeling to test for construct validity. *J. Bus. Logist.* **1999**, *20*, 33–57.
63. Kline, R.B. *Principles and Practice of Structural Equation Modeling*; Guilford Press: New York, NY, USA, 2005.

64. Mardia, K.V.; Foster, K. Omnibus tests of multinormality based on skewness and kurtosis. *Commun. Stat.-Theoy Methods* **1983**, *12*, 207–221. [CrossRef]
65. Bagozzi, R.P.; Yi, Y. On the evaluation of structural equation models. *J. Acad. Mark. Sci.* **1988**, *16*, 74–94. [CrossRef]
66. Gatian, A.W. Is user satisfaction a valid measure of system effectiveness? *Inf. Manag.* **1994**, *26*, 119–131. [CrossRef]
67. Hu, L.; Bentler, P.M. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Struct. Equ. Model. Multidiscip. J.* **1999**, *6*, 1–55. [CrossRef]
68. Fornell, C.; Larcker, D.F. Structural equation models with unobservable variables and measurement error: Algebra and statistics. *J. Mark. Res.* **1981**, *18*, 382–388. [CrossRef]
69. McDonald, R.P.; Ho, M.H.R. Principles and practice in reporting structural equation analyses. *Psychol. Methods* **2002**, *7*, 64. [CrossRef]
70. Hu, L.; Bentler, P.M. Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychol. Methods* **1998**, *3*, 424–453. [CrossRef]
71. Gursoy, D.; Kendall, K. Hosting mega events: Modeling locals' support. *Ann. Tour. Res.* **2006**, *33*, 603–623. [CrossRef]
72. Kaltenborn, B.R.P.; Andersen, O.; Nellemann, C.; Bjerke, T.; Thrane, C. Resident attitudes towards mountain second-Home tourism development in Norway: The effects of environmental attitudes. *J. Sustain. Tour.* **2008**, *16*, 664–680. [CrossRef]
73. Nunkoo, R.; Ramkissoon, H. Residents' satisfaction with community attributes and support for tourism. *J. Hosp. Tour. Res.* **2011**, *35*, 171–190. [CrossRef]
74. Akis, S.; Peristianis, N.; Warner, J. Residents' attitudes to tourism development: The case of Cyprus. *Tour. Manag.* **1996**, *17*, 481–494. [CrossRef]
75. Allen, L.R.; Hafer, H.R.; Long, P.T.; Perdue, R.R. Rural residents' attitudes toward recreation and tourism development. *J. Travel Res.* **1993**, *31*, 27–33. [CrossRef]
76. Nunkoo, R.; Gursoy, D.; Juwaheer, T.D. Island residents' identities and their support for tourism: An integration of two theories. *J. Sustain. Tour.* **2010**, *18*, 675–693. [CrossRef]
77. Ward, C.; Berno, T. Beyond social exchange theory: Attitudes toward tourists. *Ann. Tour. Res.* **2011**, *38*, 1556–1569. [CrossRef]
78. Kim, S.S.; Jung, J.; Wang, K.C. Hospitality and tourism management students' study and career preferences: Comparison of three Asian regional groups. *J. Hosp. Leis. Sport Tour. Educ.* **2016**, *19*, 66–84.