

Article



## Farmers' Perception of Tourism in Sustainable Development of Forests and Their Decisions in China: The Sustainability of the Prism Model and SEM Model

Xiafang Hong <sup>1,\*</sup> and Cheng He <sup>2</sup>

- <sup>1</sup> School of Culture & Tourism, Yuzhang Normal University, Nanchang 300103, China
- <sup>2</sup> Department of Criminal Investigation, Nanjing Forest Police College, Nanjing 210023, China
- \* Correspondence: wuer1234@126.com

Abstract: The sustainable development of forests involves a combination of environmental protection and economics. Ecotourism is a new and growing sustainable economic model for forests, compared with the traditional utilization and protection of forests. The purpose of this study was to explore the applicability of the Prism model and SEM model in seeking to understand farmers' perceptions and decision-making regarding tourism, so as to fully understand farmers' thinking and behavior around forest tourism, and to truly make them in harmony with the sustainable development of forests. In this study, based on a field investigation of 392 farmers living in 11 national forest parks in Jiangxi Province, China, three hypotheses were constructed using the SEM model; and then six first-level indicators and 15 s-level indicators were constructed based on the Prism model, to verify the cognition and influencing factors for farmers, regarding sustainable forest tourism. The results showed that (1) the formation process of farmers' willingness to adapt to forest tourism follows the path of "individual cognition  $\rightarrow$  individual behavior". (2) Economic influences, social culture, environmental cognition, and institutional cognition all have significant positive effects on their adaptive willingness. (3) Farmers' cognition of economic life, environmental protection, and social culture lead to significant differences in their cognition and adaptability to forest tourism. These findings highlight the importance of the perceived value of tourism in assessing how tourism develops, as well as whether it is sustainable for the forest and its impacts. This study provides a better understanding of the factors that influence farmers' attitudes towards tourism and highlights the importance of valuing local communities as important players in sustainable development, especially as this boosts the economy in forests.

**Keywords:** sustainable development of forests; Prism model; structural equation model; sustainabilitydirected farmers' perceptions and decisions

## 1. Introduction

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015, as a universal call to action to end poverty, protect the planet, and ensure that, by 2030, all people enjoy peace and prosperity. Our common future should be committed to a mode that combines environmental protection with economic development. In order to better protect the earth, many national forest ecological protection policies have been tightened in recent years; within which the use of forest resources has been so restricted that farmers depending on them have been affected to a certain extent, resulting in a "short board" of regional poverty alleviation [1]. In the process of forest tourism development, if the relationship between humans and the forest is not properly handled, the natural ecosystem may be affected, thus affecting the sustainable development of the forest, which reflects the important role of humans in forests. Therefore, whether the development of forests is sustainable depends entirely on the relationship between people and forests. In this context, the development of forest tourism has become



Citation: Hong, X.; He, C. Farmers' Perception of Tourism in Sustainable Development of Forests and Their Decisions in China: The Sustainability of the Prism Model and SEM Model. *Sustainability* 2022, *14*, 16324. https:// doi.org/10.3390/su142416324

Academic Editors: Zhongke Feng and Zixuan Qiu

Received: 16 October 2022 Accepted: 5 December 2022 Published: 7 December 2022

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). an important choice for the rational utilization of resources in forest areas, reforming the traditional livelihoods of forest farmers. This has become a new growth area of the forestry economy and plays an important role in increasing the forms of employment of farmers and improving their incomes.

Tourism is one of the world's largest economic sectors, its importance to the global economy is undeniable, and it has been an important contributor to the United Nation's Sustainable Development Goals (SDGs) [2]. Tourism, as practiced in developed countries, is essentially an economic endeavor; whereas, in developing countries it is mainly developed as leisure consumption [3,4]. Pablo-Romero and Molina [5] concluded, in their literature review about the relationship between tourism and economic growth since 2002, that it is inconclusive and certainly open to discussion; however, there is evidence of a bidirectional causality, both in the short term and long term [6].

In striving to prevent a disordered development in forests and successfully overcome the daily changes that occur in turbulent surroundings, sustainability is increasingly becoming a priority issue in tourism development in the modern world, due to its environmental, social, and economic impacts [7]. Numerous studies have discussed sustainable tourism from various aspects, offering a variety of interpretations. Regardless the level of inter-dependency, it was concluded that it is essential to understand this principle on the relationship, in order to ensure the development of sustainable tourism [8–10]. Sustainable tourism is an important strategy in ensuring the future well-being of local communities, while making rational use of natural resources and preserving nature [11]. A proper understanding of the interrelationships between tourism, the underlying economy, and the social and natural environment is critical when formulating effective sustainable tourism policies that aim at maximizing the economic benefits from tourists, while minimizing the associated adverse impacts on the environment. By means of ecological restoration and natural landscape reconstruction, afforestation and the construction of forest parks should be promoted, to create a good tourism environment and provide favorable conditions for the sustainable development of forests and their tourism [12].

Most importantly, the success of sustainable development rests, in part, on support from and the participation of the parties involved in the business of tourism. While not all stakeholders need be equally involved in the decision making process associated with sustainable development, all their interests should be identified and understood [13]. If the interests of a key group of stakeholders are not recognized, then the work may fail [14]. Tourism yields many benefits for local communities experiencing an influx of visitors, while also affecting their quality of life. With the transformation of the historical functions of local communities, the analysis of the interactions between tourism and community life has become increasingly important, and the "quality of life" of local communities has been given more attention and respect [15]. Carrying capacities are regarded as key sustainability indicators in the tourism research community, which was also supported by the Delphi panel of tourism experts in the study by Tsaur et al. [16,17].

A very large amount of literature exists on sustainable development. Its application to tourism is a fairly new trend, only dating back to the late 1980s, in a variety of different contexts [18,19]. It is frequently argued that sustainable tourism can considerably contribute to a country's economic and environmental income, and they should receive the main focus, while more attention is needed in the areas of social engagement and development [20], mostly for the support of community members [21]. Forest tourism has become a new growth area for forest economies and plays an important role in increasing the employment and income of peasant households. The role of local community engagement and the need to engage such communities in the process of tourism sector development have been analyzed [22], and the discrepancies between the idea of sustainable tourism development and its practical implementation were also focused on. The rate of progress in sustainable tourism development has slowed down in recent years [23]; however, in the literature, the fact that the local community must be involved in the planning process and the development of tourism, especially when it comes to the development of those segments of

tourism that will bring benefits for the community, has been discussed. For example, the predictive effect and degree of influence of four dimensions of sustainability on farmers' satisfaction [24]; as well as farmers' perceptions and attitudes, affected by a variety of factors, including social demographic characteristics, the degree of dependence on tourism, community interpersonal relations, community belonging, the degree of tourism destination development, and the leading forces of development, spatial factors, etc. have been considered [25]. This is particularly so in the context of rural economies, because they are essential building blocks for long-term sustainable global development, poverty alleviation, and the global transition to a green economy (FAO, 2011). Climatically vulnerable, but naturally attractive, rural and mountainous forestry destinations have become popular for international tourism and are also essential for global sustainable development as bearers of crucial ecosystem goods and services; however, serious socioeconomic and environmental side effects undermine the development potential associated with tourism [26]. Therefore, it is critically important to understand the influence and implications of tourism for the economy and the environment, if tourism is to be established as a low-impact, non-consumptive development option in forest areas.

Understanding the perceptions and attitudes of farmers means understanding if they are supportive or exert opposition towards tourism development projects, which can allow the adoption of an adequate responsive mechanism to the negative influences that arise from tourist exchange. Past literature works, in previous decades [27–29], had a tendency to examine the factors that were likely to be influential, and partly deviated from the perception of impacts, taking into account both the dependent variables and the independent variables. The various studies that examined resident attitudes and the factors that are likely to be influential found that the locals tend to have positive attitudes, because they see tourism as an economic development tool. Comprehending local farmers' attitudes toward sustainable development is crucial for its success. An individual's attitude toward a certain behavior is mainly derived from two aspects of motivation: perception and the social norm. Attitude is the inner psychological state produced by the individual's evaluation of people or things, including cognitive components, emotional components, and behavioral components. Social norms refer to the expectations of how individuals should behave in certain social situations [30], in which individual cognition is influenced by social norms and finally forms individual behaviors.

In China, with a continuous deepening of the reform of the system of collective forest rights, there are obvious differences in the depth and breadth of farmers' participation in forest tourism, due to their different conditions, which has led to serious income disparities and is not conducive to stable regional development. A national forest park is a complex with sightseeing, holiday entertainment, ecotourism, education, scientific, and other functions, being an important representative of the tourist resources of nature. This paper hopes to provide a worthy addition to the literature, by analyzing how farmer's perceptions of sustainable tourism development in forest parks, from the perspective of citizen behavior, as expressed through economic, social, environmental, and institutional aspects, can affect their intention to support tourism. Another purpose is to determine the influencing factors on their perceptions and willingness to accept decision-making, using computing variables.

## 2. Methods and Materials

#### 2.1. Methods

## 2.1.1. Hypothesis

Famers are the micro decision-making agents in the protection of forest resources and functions; moreover, their living environments are specific community organizations, where attitudes to civic behavior are also driven by perception and social norms. The traditional paradigm of sustainable development includes three dimensions: economy, social culture, and ecological environments [31,32]. The economic dimension emphasizes meeting the material needs of human beings, especially for the long-term support of the employment and livelihood of community farmers. The environmental dimension

highlights the balance between the ecosystem and the limitations of resource utilization. The sociocultural dimension stresses the importance of human capital and quality of life. In any society, there are multiple interested subjects, and each is always playing an interest game with the others, and the institution is the power relationship between actors, who construct a same interest relationship. Therefore, to solve all stakeholder income inequality problems among the government, businessmen, interest groups, communities, and farmers, it is critical to begin with the institutional environment to be explored, on the basis of a deep understanding of the resources and the behavior targeted by the different interested subjects, and by which each goal and behavior can be directly influenced. As a result, sustainability in all three dimensions is difficult to achieve without management and regulations. The institutional dimension puts more emphasis on the level and degree of farmers' participation in political governance, and institutional sustainability refers to the adaptability to new environments, to cope with the challenges brought by changes to the social ecosystem [33]. In 2002, Spangenberg proposed the prism of sustainability model with four dimensions, which clarified the connection between the dimensions and pointed out their importance. The model has been utilized and validated in Poland [34] and in Finland [35]. As a complete framework, the sustainable Prism model helps to integrate all dimensions into the overall design, to better develop and maintain communities and systems. This article introduces the Prism model, using a structural equation model; discusses the difference in farmers' perception and attitude with different demographic characteristics (gender, age, level of education, income, etc.); the different related degree and dependent degree in forest tourism development; different frequencies of contact with tourists; and performs a deep analysis of the causative factors, by measuring the perception dimensions themselves, through profit and loss.

Therefore, three hypotheses are proposed based on the above analysis and literature.

## **H**<sub>1</sub>. Attitudes towards Behavior (*AB*) have a positive impact on farmers' willingness to adapt to forest tourism.

AB refers to the attitude towards the behavior generated by the subject after evaluation of the expected target. Farmers' willingness to adapt to forest tourism is a behavioral trend based on their attitudes, expectations, and the actual results of tourism development [36]. This is regarded as a prerequisite for sustainable development and a key factor in achieving sustainable development.

## **H**<sub>2</sub>. Institutional norms (IN) have a positive impact on farmers' willingness to adapt to forest tourism.

IN refers to the social constraints on behaviors that subjects are subject to, which reflects the external influences on individual behaviors. Farmers' willingness is a key indicator for measuring the relationship between tourism destinations and farmers, because it is a comprehensive evaluation of farmers' perception of tourism and reflects the degree to which communities meet farmers' needs [37]. When evaluating the sustainable development of tourism, Coottrell added an institutional dimension to Spangenberg's model and revealed four sustainability dimensions that are important predictors of forest tourism [38].

## **H<sub>3</sub>.** *Perceived Behavioral Control (PBC) has a positive impact on farmers' willingness to adapt to forest tourism.*

PBC refers to the degree to which an agent controls his or her behavior under the control of his or her will. From the perspective of social exchange theory, farmers' control cognition for adapting to forest tourism is based on their cognition of their own resource endowment [39] and their comprehensive evaluation of costs and benefits of tourism [40]. Therefore, farmers' high satisfaction is the premise of their willingness to participate in tourism exchange, because their satisfaction determines their behavioral attitude. The interactive mechanism between farmers' attitudes, subjective norms, and intentions is deeply

5 of 15

discussed, and the mediating role of satisfaction among the three is demonstrated [41], with satisfaction being the key to a farmers' positive response.

### 2.1.2. Models

## Structural Equation Model

The Structural Equation Model (SEM) is a method for exploring macro laws through microscopic individual behavioral intentions, and it can observe complex relationships among variables and explain the structural relationships among variables. The farmers in the study are micro subjects, whose behavior regarding forest tourism is observable. Therefore, their behavior can be investigated, and the SEM can be used to find out the factors affecting their adaptation willingness. Furthermore, the framework of "individual cognition  $\rightarrow$  individual behavior" is used to study the relationship between the two variables of farmers' cognition and behavioral intention toward forest tourism, and this relationship path is essentially a SEM. Among them, AB, IN, and PBC are latent variables, and behavioral intentions constitutes the SEM. Considering the possible existence of multicollinearity among variables, and combined with the above analysis, a structural equation was used to analyze the survey data, in order to find out the key factors influencing farmers' willingness to adapt. The equation is shown below:

$$X = \Lambda x \xi + d \tag{1}$$

$$\mathbf{f} = \mathbf{\Lambda} \mathbf{y} \mathbf{\eta} + \boldsymbol{\varepsilon} \tag{2}$$

The regression equation of the Structural Model can be expressed as follows:

$$H = \beta \eta + \Gamma \xi + \zeta \tag{3}$$

In Equations (1)–(3), X is an exogenous variable, Y is an endogenous variable,  $\Lambda x$  and  $\Lambda y$  are factor loading matrices, d and  $\varepsilon$  are error terms,  $\xi$  is farmer's cognition of forest tourism,  $\eta$  represents the willingness of farmers to adapt,  $\beta$  is the mutual impact efficiency coefficient of endogenous latent variables, r is the effect efficiency coefficient of the exogenous latent variable, and  $\zeta$  is the residual vector of  $\eta$ . In this paper, Equation (3) is used to determine the linear relationship between behavioral attitude, subjective norm, behavioral control cognition, and adaptation intention.

#### Decision Behavior Model

How do farmers make decisions about participating in forest tourism? What factors affect their decision-making? According to the characteristics of the geographical location of the forest park, the decision-making behavior of forest farmers is assumed to be a bounded, rational type of behavior.

Since whether the dependent variable, farmers, participate in forest tourism is a qualitative dichotomous variable (that is, yes or no), a logistic model was used to analyze the factors influencing participation in decision-making when analyzing the sample questionnaire data, to determine whether they participated in the implementation of tourism behavior and to predict their decision-making.

In the logistic regression model, the value of the dependent variable Y was [0,1], and the probability of "participating" in forest tourism management was set as p (Y = 1), while the probability of "not participating" was 1 - p (Y = 0). The logistic model of P was transformed into Formula (4):

$$LogitP = In\left[\frac{p}{1-p}\right] = b_0 + \sum_{i=1}^{n} b_i X_i$$
(4)

where X<sub>i</sub> express each influencing factor.

## 2.2. Study Area and Data

The survey site of this paper was Jiangxi Province, located in the middle and lower reaches of the Yangtze River in central China, between latitude 24°29'14''~30°04'41'' north and longitude  $113^{\circ}34'36'' \sim 118^{\circ}28'58''$  east. It covers an area of 166,900 km<sup>2</sup> and has 11 cities divided into districts; a forest coverage rate of 63.1%, ranking the second in China; a storage volume of living standing trees of 445 million cubic meters; and a total number of living bamboo plants at 1.9 billion; all of which rank among the top rates in China, with rich forest resources and a developing forest tourism. In terms of the number of resources, there are 46 national forest parks in Jiangxi Province, ranking first in China and accounting for 5.6% of the total number of national forest parks in China (at the end of 2017). Among them, 30 are located in northern Jiangxi, accounting for 61.2% of the total. There are 10 in southern Jiangxi, accounting for 20.4% of the total, and nine in Central Jiangxi, accounting for 18.4% of the total. Regarding the quality of resources, there are eight national 4A level tourist areas in the province's national forest parks (http://www.forestry.gov.cn, 4 December 2022). It is necessary to study the local farmers' perceptions and attitude toward forest tourism, and to clarify its influencing factors, which could provide a basis for decision-making for a new form of sustainable development of forest parks with the background of global climate change.

On the premise of guaranteeing comprehensive survey data, and because of the influence of the pandemic, this study selected data from 2019, with a household questionnaire survey of 11 national forest parks of Jiangxi. Based on the relevant data coming from township departments and a network survey, a random sampling method was used to select 20–25 farmers in each scenic spot. Normally, the whole family is involved in forest tourism, so the main decision-maker of a household participated in the surveys, when they had time to complete the questionnaire, and so that the sample data could be quickly and accurately obtained. A total of 430 questionnaires were issued, and 392 effective samples were collected, with an effective recovery rate of 91.2%. The randomness of the survey was good, including different genders, age levels, occupations, education levels, living times, distances, incomes and tourism income ratios, community participations, understandings, and contact frequencies with tourists, etc. The respondents were mainly local farmers, 55.1% of whom had lived in the area for 10 to 35 years, and 51% were male and 49% female. The age structure was mainly young and middle-aged, with 64.8% aged 18–40, 27.6% aged 40–60, and 7.7% aged over 60. There were 50% of farmers whose tourism-related income accounted for less than 10% of the total, and 37.8% had 10-40% of their total income. While 28.6% had frequent contact with tourists, 61.2% had casual contact with tourists.

## 3. Results

## 3.1. Descriptive Analysis of Variables

According to the above three hypotheses and considering present social status, six first-level indicators were set, with the four variables of AB, IN, PBC, and BI; and then 15 s-level indicators were set based on the actual situation of each case. The first levels of indicators were economic perception  $(A_1)$ , socio-cultural perception  $(A_2)$ , environmental perception  $(A_3)$ , institutional perception  $(A_4)$ , satisfaction with tourism development  $(A_5)$ , and support for sustainable tourism development (A<sub>6</sub>). The economic benefits of forest tourism were the key to farmers' willingness to adapt, so rising living standards  $(A_1B_1)$ , more jobs  $(A_1B_2)$ , more income  $(A_1B_3)$ , more investment  $(A_1B_4)$ , high prices and living costs ( $A_1B_5$ ), and widening gap between the rich and poor ( $A_1B_6$ ) were selected as the second-level indicators of  $A_1$ . In the process of participating in forest tourism, farmers are constrained by surrounding life, which ultimately affects their willingness to adapt to the development of forest tourism. Therefore, for sociocultural perception, enhanced cohesion and regional pride  $(A_2B_1)$ , increased popularity and image  $(A_2B_2)$ , more cultural life  $(A_2B_3)$ , more opportunities for opening up (A<sub>2</sub>B<sub>4</sub>), more communication with the outside world  $(A_2B_5)$ , more commercial valorization of traditional culture  $(A_2B_6)$ , moral decay and rising crime rate  $(A_2B_7)$ , and more conflicts between farmers and tourists  $(A_2B_8)$  were acted as the

observational index of A<sub>2</sub>. The control cognition of farmers' adaptation to forest tourism is based on their cognition of their own environmental resource endowment. Therefore, strengthen regional protection  $(A_3B_1)$ , improve infrastructure  $(A_3B_2)$ , protect cultural relics  $(A_3B_3)$ , enhance environmental awareness  $(A_3B_4)$ , promote regional ecological resource protection (A<sub>3</sub>B<sub>5</sub>), local natural environmental damage (A<sub>3</sub>B<sub>6</sub>), increased household pollution and environmental degradation  $(A_3B_7)$ , and traffic and public overcrowding  $(A_3B_8)$  were considered as observational indicators of A<sub>3</sub>. The influence of the system determines the willingness of farmers to participate. Therefore, non-participation in development decisionmaking  $(A_4B_1)$ , tourism encouragement  $(A_4B_2)$ , better sustainable development  $(A_4B_3)$ , and participation in facility construction  $(A_4B_4)$  were used as the observation indicators of A<sub>4</sub>. In theory, behavioral attitudes, subjective norms, and behavioral control cognition all have an impact on tourism intention. Therefore, combined with the actual situation of each case, enjoy tourism dividend  $(A_5B_1)$  and willing to invest in forest tourism  $(A_5B_2)$ were selected as the observation index for  $A_5$ . The advantages of sustainable forest tourism development outweigh the disadvantages  $(A_6B_1)$  and supporting sustainable development of forest tourism  $(A_6B_2)$  were selected as an observational index for  $A_6$ .

A Richter scale was used for the measurement, in which five options were set for respondents to choose from. For the descriptive statistical analysis, the values were assigned as follows: strongly agree = 5, agree = 4, unsure = 3, disagree = 2, strongly disagree = 1. The results of descriptive statistics for each variable are shown in Table 1.

Level 1 A	Larval 2 P	Normalized	The Mean	Indicators	Composite	Mean Variance	The Mean	<b>Covariance Analysis</b>	
Level I A	Level 2 D	Factor Load	Indicators	of Variance	Reliability	Extraction	Dimension	F	Р
	$A_1B_1$	0.80	4.08	1.121					
	$A_1B_2$	0.81	4.03	0.879					
٨	$A_1B_3$	0.83	4.11	1.023	0 702	0.010	4 1 4	1 154	0.220
$\mathbf{A}_1$	$A_1B_4$	0.79	4.03	0.674	0.793	0.912	4.14	1.156	0.329
	$A_1B_5$	0.82	4.05	0.681					
	$A_1B_6$	0.84	4.12	1.043					
	$A_2B_1$	0.71	3.98	0.871					
Aa	$A_2B_2$	0.82	3.95	0.965		0.864			
	$A_2B_3$	0.88	3.93	0.885					
	$A_2B_4$	0.82	3.82	0.798	0.870		2.04	0 221	0 741
$\Lambda_2$	$A_2B_5$	0.75	3.83	0.624	0.879	0.004	3.94	0.521	0.741
	$A_2B_6$	0.75	3.82	0.764					
	$A_2B_7$	0.74	3.75	0.699					
	$A_2B_8$	0.79	3.79	0.698					
	$A_3B_1$	0.77	3.76	0.674		0.729		12.24	0.521
	$A_3B_2$	0.82	3.74	0.685					
	$A_3B_3$	0.72	3.81	0.691					
٨	$A_3B_4$	0.79	3.82	0.897	0 728		2.86		
A3	$A_3B_5$	0.76	3.78	0.751	0.728		5.80		
	$A_3B_6$	0.77	3.76	0.723					
	$A_3B_7$	0.79	3.81	0.817					
	$A_3B_8$	0.82	3.78	0.738					
	$A_4B_1$	0.82	3.47	0.579					
Δ.	$A_4B_2$	0.85	3.51	0.587	0.807	0 (52	2.61	6 522	0.257
14	$A_4B_3$	0.81	3.52	0.601	0.897	0.000	5.01	0.525	0.337
	$A_4B_4$	0.79	3.49	0.543					
Δ -	$A_5B_1$	0.78	3.54	0.697	0.000	0 574	2 50	1 769	0.214
A5	$A_5B_2$	0.75	3.49	0.639	0.802	0.374	5.59	1.700	0.214
Δ	$A_6B_1$	0.83	3.72	0.732	0.824	0.654	2.62	1 1 2 4	0.100
116	$A_6B_2$	0.85	3.78	0.786	0.024	0.034	3.03	1.124	0.109

Table 1. Results of the variables and confirmatory factor.

## 3.2. Verification for SEM of Farmers' Perception of Forest Tourism

3.2.1. Data Detection

To test the validity of the data, reliability and validity tests were first performed. In order to obtain scientific results, this paper used the reliability analysis of SPSS23.0 to test the reliability of the questionnaire. The KMO value and Bartlett sphericity test were applied for validity analysis. The results showed that the KMO value was greater than 0.7, and the

Bartlett sphericity test rate was less than 0.05, indicating that the survey data could be used for factor analysis. At the same time, the intrinsic structural fitness of the model was tested, and the results showed that the standardized factor loads of the model were all greater than 0.5 and were all significant when p was less than 0.01, while the total variance explained was 85%. The combined reliability was greater than 0.6, and the AVE of the extracted average variation was greater than 0.5, indicating that the convergent validity of the scale was good and suitable for structural equation analysis. Reliability is the test of measurement reliability, which is tested using Cronbach's alpha (Cronbach's alpha, namely the threshold value of internal reliability) coefficient. Based on the data results, the Cronbach's  $\alpha$  of the total scale was 0.89. The Cronbach's alpha coefficient of the four dimensions was between 0.718 and 0.897, all greater than 0.7, indicating that the survey data had good reliability, shown in Table 2.

Latent Variables	KMO Value	Bartlett Sphericity	Suitable for Factor Analysis	Cronbach's Alpha
A <sub>1</sub>	0.781 > 0.7	< 0.05	suitable	0.728 > 0.7
A <sub>2</sub>	0.807 > 0.7	< 0.05	suitable	0.855 > 0.7
A <sub>3</sub>	0.781 > 0.7	< 0.05	suitable	0.897 > 0.7
$A_4$	0.721 > 0.7	< 0.05	suitable	0.819 > 0.7
$A_5$	0.709 > 0.7	< 0.05	suitable	0.718 > 0.7
A <sub>6</sub>	0.712 > 0.7	< 0.05	suitable	0.724 > 0.7

Table 2. Reliability and validity test of the scale.

## 3.2.2. Results of the SEM Path Coefficients

After the descriptive analysis, and based on the research methods and analysis framework discussed above, AMOS17.0 software (SEM software) was used to verify the SEM of farmers' willingness to adapt to forest tourism. The path coefficients of the whole model were obtained. The results show that the normalized coefficient did not exceed 1 and the estimated variance was not negative. The covariance of AB, IN, and PBC were 0.58, 0.29 and 0.36, respectively, indicating that each observed variable of the model can reflect its corresponding latent variable. The standardized path coefficient of PBC  $\rightarrow$  BI was 0.29, and AB  $\rightarrow$  BI was 0.07. First, the reliability and validity of the survey data were tested. Second, the research model was tested. Finally, the data measured by the model were analyzed, to determine the influencing factors on farmers' adaptation willingness.

AMOS17.0 software was used to verify the model of farmers' willingness to adapt to forest tourism. The results show that the standardized coefficients did not exceed 1, and the variance estimates were not negative. The *p* values of the covariance analysis of perception for economic impact, social impact, environmental impact, and institutional impact were 0.329, 0.741, 0.521, and 0.357, respectively, indicating that each observed variable of the model could reflect the situation of its corresponding latent variable.

### 3.2.3. Model Parameter Test and Fitting Evaluation

The purpose of model validation was to test whether the hypothesis of the relationship between each latent variable was reasonable, and to investigate whether the measured item of the latent variable fully explained the comprehensive reliability and validity of the questionnaire. Referring to evaluation indexes from relevant literature, the absolute fitness index, value-added fitness index, and parsimonic fitness index were selected to evaluate the goodness of fit of the model. The results are shown in Table 3, indicating that the model was established.

Indexes	Inspection Items	General Standards	Optimum Standards	Actual Fitted Values	Results
d 1 1	X2/df	<3	<2	2.78	Close
the absolute	OFI	[0,1]	>0.9	0.92	Ideal
fitness index	RMSEA	< 0.1	< 0.05	0.04	Ideal
37.1 1.1 1	NFI	[0,1]	>0.9	0.96	Ideal
Value-added	CFI	[0,1]	>0.9	0.97	Ideal
fitness index	IFI	[0,1]	>0.9	0.98	Ideal
Simplified	PGFI	[0,1]	>0.5	0.64	Ideal
fitness index	PNFI	[0,1]	>0.5	0.69	Ideal

Table 3. Evaluation index system and fitting results of the overall model fitness.

3.2.4. Analysis of the SEM Path Coefficients

Verification of the Hypotheses

According to the path coefficient of SEM and the test results of the hypothesis (Table 4), it can be seen that the research hypotheses  $H_1$  and  $H_3$  were confirmed, while  $H_2$  was not. AB and PBC have a significant influence on farmers' BI. PBC is the main factor, while AB is the second. The influence of IN on farmers' BI was not significant, which indicates that the choice of farmers' willingness to adapt to forest tourism was made on the basis of comprehensive research and a judgment of the positive and negative impacts of this behavior, combined with their own resource endowment characteristics, which conformed to the path of "individual cognition  $\rightarrow$  individual behavior".

Table 4. Path coefficients and the two tests of SEM.

Paths	The Standardized Path Coefficients	Hypotheses	Test Results
$\mathrm{PBC}  ightarrow \mathrm{BI}$	0.09 ***	$H_1$	Confirmed
$AB \rightarrow BI$	0.21	H <sub>2</sub>	Unconfirmed
$\mathrm{IN}\to\mathrm{BI}$	0.29 ***	H <sub>3</sub>	Confirmed

\*\*\*, the significant level of parameter estimation results at a 0.01 probability level.

## The Effects of PBC on BI

The standardized path coefficient of PBC  $\rightarrow$  BI was 0.29, which was the largest among the three influencing factors, indicating that PBC was the most important factor affecting willingness. Compared with traditional forestry activities, the transformation of identity and realization of individual value brought by participating in forest tourism are first recognized by farmers in terms of cognition, which shows that most farmers have a subjective willingness to adapt to forest tourism. However, due to the high participation threshold and the opacity of the relevant policies, they are unable to move from their existing livelihood and directly adapt to tourism activities. Therefore, forest tourism managers should lower the market access threshold, improve publicity and policy support, and provide good guarantees and supports for farmers to adapt to the development of forest tourism, which is also an inevitable choice for the sustainable development of forest tourism.

## The Effects of AB on BI

The standardized path coefficient of  $AB \rightarrow BI$  was 0.09, which indicates that AB had a significant impact on the BI of farmers. The increase of income brought by forest tourism is the primary driving force for farmers to adapt to tourism activities. Only by making them feel an improvement in income can they dispel their concerns and devote themselves to tourism activities. Therefore, relevant departments and managers should, according to this selection characteristics of farmers, focus on the increase of income brought by forest tourism in the process of promoting forest tourism, and provide a differentiated and customized adaptation path selection, according to farmers' resource endowment conditions (such as labor force, woodland area, housing conditions, etc.), so as to achieve

a smooth adaptation process and eliminate the worries of farmers. In addition, farmers also pay attention to the role of forest tourism development in solving the contradictions in the forest area, and they attach importance to the protection of the forest environment and resources, which is consistent with the original intention of sustainable forest tourism development.

## The Effects of IN on BI

The standardized path coefficient of IN  $\rightarrow$  BI was 0.21, showing that its influence was not significant. The subjective specification did not pass the significance test and H<sub>2</sub> was not verified. This is inconsistent with TPB's belief that subjective norms have a direct and important impact on BI. Farmers who stay in forest areas for a long time and have a single way of living have conservative ideas and inherent vulnerability, and their cognition and choices in a certain matter are often made carefully, on the premise of their own conditions and gains and losses of interest. Moreover, after the development of forest tourism, farmers will have closer contact with the outside world, and their cognition level will progressively improve. The farmers' willingness to adapt to forest tourism is individual and not easily affected by the surrounding environment. In the process of guiding farmers toward participating in forest tourism, we should pay attention to the individual cognition of forest farmers, and provide them with personalized, reasonable, and low-risk adaptation paths, on the basis of a comprehensive evaluation of their own conditions.

# 3.3. *Results of Influencing Factors on Farmers' Participation Behavior Decision-Making* 3.3.1. Parameter Results for the Decision Behavior Model

The SPSS22.0 Logistic regression method was used to analyze the sample data. First, the influence of each factor on decision-making was identified, and the entry method was used to put each predictive variable into the model for regression analysis. The chi-square value of the running results was 1413.968 and the probability value was 0.000, which was significantly less than the significance level of 0.01. The log-likelihood value of -2 was 204.201, and the values of Cox & INell R2 and Nagelkerke R<sup>2</sup> were 0.671 and 0.932, respectively. The comprehensive prediction level was 97.7%, which is suitable for establishing a Logistic regression model. According to the significance level of each factor, the model also had a strong interpretation of the influencing factors, as shown in Table 5.

## 3.3.2. Correlation Analysis of the Influencing Factors

Next, the correlation analysis method was used to analyze the correlation of factors at the index level that affected farmers' participation behavior. The results showed (Table 6) that the Pearson correlation coefficients between decision-making and economic impact, social culture impact, environmental impact, institutional impact, and decision-making were 0.614, 0.578, 0.509, and 0.562, respectively, indicating that the decision-making was not completely correlated with these four factors and was positively correlated. The bilateral significance values were all <0.01, indicating that there was a significant correlation. The correlation between factors affecting carbon offsets was further analyzed. Table 7 shows that the Pearson correlation coefficients between the decision-making behavior and  $A_1B_2$ ,  $A_1B_3$ ,  $A_2B_4$ ,  $A_2B_7$ ,  $A_3B_2$ ,  $A_3B_6$ ,  $A_4B_2$ , and  $A_4B_4$  were 0.456, 0.435, 0.426, 0.386, 0.389, 0.421, 0.406, and 0.414, respectively. This indicates that decision-making was not completely correlated with the following eight factors and was positively correlated, while the two-sided significance value was <0.01, indicating that there was a significant correlation.

*7 • 11		Ir	itial Regress	sion Re	sults			Fir	al Regressi	ion Res	sults	
Variables	В	S.E	Wals	df	Sig.	Exp (B)	В	S.E	Wals	df	Sig.	Exp (B)
$A_1B_1$	0.834	0.234	20.821	1	0.000 ***	2.302	0.832	0.198	19.996	1	0.000 ***	2.289
$A_1B_2$	0.721	0.253	10.968	1	0.028 **	2.163						
$A_1B_3$	1.321	0.241	34.961	1	0.243	3.301	1.334	0.221	41.325	1	0.000 ***	3.409
$A_1B_4$	1.091	0.198	24.524	1	0.41 *	3.123	1.243	0.208	37.401	1	0.000 ***	3.328
$A_1B_5$	0.563	0.251	7.895	1	0.147	1.924	0.671	0.158	17.981	1	0.000 ***	2.018
$A_1B_6$	0.371	0.324	2.549	1	0.007 ***	1.582						
$A_2B_1$	0.875	0.189	20.724	1	0.267	2.761	0.821	0.197	24.075	1	0.000 ***	2.387
$A_2B_2$	0.764	0.251	11.421	1	0.784	2.025						
$A_2B_3$	0.241	0.263	1.079	1	0.271	1.475						
$A_2B_4$	0.476	0.198	3.564	1	0.922	1.787						
$A_2B_5$	0.762	0.341	17.679	1	0.000 ***	2.021	0.743	0.176	17.543	1	0.223	2108
$A_2B_6$	0.394	0.209	2.765	1	0.100	1.614						
$A_2B_7$	0.283	0.325	1.213	1	0.219	1.534						
$A_2B_8$	0.974	0.246	22.512	1	0.008	2.892						
$A_3B_1$	0.478	0.209	3.792	1	0.796	1.791						
$A_3B_2$	0.389	0.107	2.671	1	0.019 **	1.571						
$A_3B_3$	0.965	0.274	22.237	1	0.291	2.756						
$A_3B_4$	1.098	0.269	25.987	1	0.001 ***	3.123	1.124	0.243	27.421	1	0.223	3.342
$A_3B_5$	0.707	0.314	17.246	1	0.000 ***	1.954	0.731	0.223	16.289	1	0.000 ***	2.091
$A_3B_6$	0.987	0.385	22.874	1	0.751	2.786						
$A_3B_7$	0.835	0.317	20.854	1	0.421	2.614	0.831	0.171	20.798	1	0.223	2.287
$A_3B_8$	0.967	0.297	22.436	1	0.359	2.689						
$A_4B_1$	0.519	0.191	7.581	1	0.006 ***	1.683	0.667	0.161	17.961	1	0.000 ***	1.942
$A_4B_2$	0.591	0.188	0.072	1	0.791	1.061						
$A_4B_3$	-0.051	0.021	5.761	1	0.018 **	0.892						
$A_4B_4$	0.133	0.409	0.111	1	0.751	1.432						
$A_5B_1$	0.821	0.231	12.072	1	0.001 ***	2.091	0.731	0.223	14.321	1	0.000 ***	2.091
$A_5B_2$	0.416	0.481	7.918	1	0.000 ***	1.987	0.691	0.167	17.309	1	0.000 ***	1.801
$A_6B_1$	0.256	0.272	0.881	1	0.351	1.301						
$A_6B_2$	0.134	0.107	1.571	1	0.207	1.121						
Constant	-25.811	2.904	81.251	1	0.000	0.000	-21.871	1.672	181.916	1	0.000	0.000
c	hi-square		1413.968	32	0.000			1401.617		6	0.000	
Likelihoo	od value of lo	og-2		2	204.198				227.3	24		
Co	x & INell R <sup>2</sup>				0.671				0.66	2		
Na	gelkerke R <sup>2</sup>				0.932				0.92	1		

Table 5. Parameter results of farmer's participation decision-making model.

\*, significant at the p < 0.05 level; \*\*, significant at the p < 0.01 level; \*\*\*, significant at p < 0.001 level.

Table 6. Correlation of influencing factor A index level.

		Decision-Making	A <sub>1</sub>	A2	A <sub>3</sub>	$A_4$
Decision (0-1)	Pearson correlation Significance (two-sided)	1 392	0.614 ** 0.000 392	0.578 ** 0.000 392	0.509 ** 0.000 392	0.562 ** 0.000 392

\*\*, significant association at 0.01 level (bilateral).

Table 7. Correlation of influencing factors at a factor level.

		Decision	$A_1B_2$	$A_1B_3$	$A_2B_4$	$A_2B_7$	$A_3B_2$	$A_3B_6$	$A_4B_2$	$A_4B_4$
	Pearson correlation	1	0.456 **	0.435 **	0.426 **	0.386 **	0.389 **	0.421 **	0.406 **	0.414 **
Decision (0–1)	Significance (two-sided)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Ν	392	392	392	392	392	392	392	392	392

\*\*, significant association at 0.01 level (bilateral).

## 4. Conclusions

In order to stabilize the dominant position of farmers in forest sustainable development, it is key to understand farmers' cognition and decision-making regarding the sustainable development of forest tourism. In this study, based on field investigation data, and from the perspective of citizenship behavior, a sustainable prism model of four dimensions was built, where variables were computed to judge the farmers' cognition in forest parks regarding forest sustainable tourism development; and a model of the factors for decision-making was computed, to analyze their decision-making.

Through the investigation and research in this paper, the research conclusions are as follows:

- (1) The formation process of farmers' willingness to adapt to forest tourism follows the path of "individual cognition → individual behavior". AB and PBC have a significant influence on adaptive willingness, in which PBC is the main factor, AB follows, and the influence of SN is not significant. Farmers will take external suggestions as an auxiliary reference in the process of determining adaptive willingness, but they will not be directly affected. Therefore, the influence of subjective norms on behavioral intention is not significant.
- (2) Economic influences, social culture, environmental cognition, and institutional cognition all have significant positive effects on their adaptation intention. Tourism improves farmers' cognition and decision-making ability. In particular, the perception of the economic benefits brought by tourism can encourage farmers to actively adapt to it. In addition, since tourism promotes the development of the forest economy, farmers are increasingly connected with the outside world, improving their cognition and enhancing their ability to make independent decisions.
- (3) Farmers' cognition of economic life, environmental protection, and social culture leads to significant differences in their cognition and adaptability to forest tourism. The more satisfied farmers are with the development of forest tourism, the greater their confidence, the lower the participation time and hindrance costs, and the stronger the social responsibility they experience, the higher their possibility of participating in tourism development, and the more they feel the changes brought by the sustainable development of tourism.

## 5. Discussion

The results highlighted that the perceived values of tourism were important for evaluating how tourism is developed, whether it is sustainable for the forest, and how it affects the farmers. The study provided a better understanding of the factors that can have an impact on farmers' attitudes to tourism and highlighted the importance of paying attention to the local community, as a significant player for sustainable development, especially in forests, as this boosts the economy. Forests, as a tourist destination of longstanding tourism products, depend on the active participation of local farmers, so that only in fully knowing the farmers' perception and behaviors towards forest tourism can promote a harmonious relationship between them and tourism. Further efforts are needed to understand the sustainable development of forests.

(1) In the process of forest tourism development, farmers' personal income should first be improved, which is the primary concern of farmers, and they should strive to protect their legitimate rights and interests. Therefore, the benefits brought by forest tourism should be implemented as soon as possible, and the cognition and skill level of farmers in adapting to forest tourism should be improved through grassroots training, so as to guide farmers to fully understand its importance and enhance the enthusiasm of farmers to adopt it.

(2) The government should increase the support for farmers to adapt to forest tourism; establish relevant interest coordination mechanisms, such as various associations and share cooperation system; and take various actions that would promote the mutual exchange and communication between farmers and various departments, so as to consolidate farmers' willingness to adapt, and to form a virtuous cycle of capital investment and return.

(3) The rapid development of forest tourism has brought both opportunities and challenges for farmers. Farmers should adapt themselves to livelihood activities related to forest tourism as soon as possible, based on their own resources. In order to improve their adaptability, farmers should constantly improve themselves, to better cope with possible risks and challenges.

More importantly, it should be noted that the difference in farmers' tourism perception is only a side index reflecting the tourism development effect of national forest parks and the economic development difference between communities. Therefore, to comprehensively examine the practical effects of tourism development in pilot areas of China's national forest park system, other aspects should be considered, such as the driving effect of tourism on the local economy and society, the effect of ecological protection, and resource development, etc.; and an in-depth exploration should be made from multiple perspectives, in order to scientifically judge and reveal the role of tourism development in the construction of the national forest park system. First of all, the adaptive willingness of farmers is also affected by other individual factors and social factors, and the results are also unavoidably limited by the models and methods used. Moreover, the particularity of the development background and land source form in each region, especially in forests, means that the universality of these results needs to be further verified. Second, the research on the mechanism of spatial differentiation of farmers' sustainable perception was not sufficiently in-depth. In the future, visual monitoring can be used to fully reveal these mechanisms and increase the reliability of results. Most importantly, because the formation of "cognition", "adaptation", and "decision-making" of farmers is a relatively dynamic changeable process, it should be carried out over a long period of time. Only by the comparison of different scenarios in different periods can we better highlight the adaptation effect. Limited by the survey time, these results reflect the adaptation of farmers in a short period of time. Therefore, the data and analysis results obtained have certain limitations, and more longitudinal data are needed to explore this diachronic process.

**Author Contributions:** Conceptualization, X.H.; software, C.H.; investigation and resources, X.H.; writing—original draft preparation, X.H.; writing—review and editing, C.H. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research was funded by the Education department of Jiangxi province (No. GJJ203103), the National Natural Science Foundation of China (No. 31870643, No. 31901321) and the National Natural Science Foundation of Jiangsu (No. BK20201337).

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

**Acknowledgments:** The authors appreciate the anonymous reviewers for their constructive comments and suggestions that significantly improved the quality of this manuscript and all the editors.

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

## References

- 1. Gültekin, Y.S. Ecotourism through the perception of forest villagers: Understanding via mediator effects using structural equation modeling. *Environ. Sci. Pollut. Res.* 2022, 29, 70899–70908. [CrossRef] [PubMed]
- Nepala, R.; al Irsyadb, M.I.; Nepalc, S.K. Tourist arrivals, energy consumption and pollutant emissions in a developing economy– implications for sustainable tourism. *Tour. Manag.* 2019, 72, 145–154. [CrossRef]
- Lee, T.H.; Jan, F.-H. Can community-based tourism contribute to sustainable development? Evidence from residents' perceptions of the sustainability. *Tour. Manag.* 2018, 70, 368–380. [CrossRef]
- 4. Vunjak, M.N.; Vujko, A.; Dragosavac, M.; Antonijević, N.T. Descriptive statistics in corporate management and employee engagement in rural destinations. *Econ. Agric.* **2020**, *67*, 1087–1101. [CrossRef]
- 5. Pablo-Romero, M.d.P.; Molina, J.A. Tourism and economic growth: A review of empirical literature. *Tour. Manag. Perspect.* 2013, *8*, 28–41. [CrossRef]
- 6. Gautam, B.P. Tourism and economic growth in Nepal. NRB Econ. Rev. 2011, 23, 18–30.
- Kapera, I. Sustainable tourism development efforts by local governments in Poland. Sustain. Cities Soc. 2018, 40, 581–588. [CrossRef]
- 8. Harrill, R. Residents' Attitudes toward Tourism Development: A Literature Review with Implications for Tourism Planning. *J. Plan. Lit.* 2004, *18*, 251–266. [CrossRef]
- 9. Sharpley, R. Host perceptions of tourism: A review of the research. Tour. Manag. 2014, 42, 37–49. [CrossRef]

- 10. Popescu, G.H.; Sima, V.; Nica, E.; Gheorghe, I.G. Measuring Sustainable Competitiveness in Contemporary Economies—Insights from European Economy. *Sustainability* **2017**, *9*, 1230. [CrossRef]
- 11. Tosun, C. Expected nature of community participation in tourism development. Tour. Manag. 2006, 27, 493–504. [CrossRef]
- Blicharska, M.; Angelstam, P.; Giessen, L.; Hilszczański, J.; Hermanowicz, E.; Holeksa, J.; Jacobsen, J.B.; Jaroszewicz, B.; Konczal, A.; Konieczny, A.; et al. Between biodiversity conservation and sustainable forest management—A multidisciplinary assessment of the emblematic Białowieża Forest case. *Biol. Conserv.* 2020, 248, 108–119. [CrossRef]
- Donaldson, T.; Preston, L.E. The stakeholder theory of the corporation: Concepts, evidence, and implications. *Acad. Manag. Rev.* 1995, 20, 65–91. [CrossRef]
- 14. Clarkson, M.B.E. A stakeholder framework for analyzing and evaluation corporate social performance. *Acad. Manag. Rev.* **1995**, 20, 92–117. [CrossRef]
- 15. Liu, J.; Nijkamp, P.; Huang, X.; Lin, D. Urban livability and tourism development in China: Analysis of sustainable development by means of spatial panel data. *Habitant Int.* 2017, *68*, 99–107. [CrossRef]
- 16. Tsaur, S.-H.; Lin, Y.-C.; Lin, J.-H. Evaluating ecotourism sustainability from the integrated perspective of resource, community and tourism. *Tour. Manag.* **2006**, *27*, 640–653. [CrossRef]
- Mikulić, J.; Kožić, I.; Krešić, D. Weighting indicators of tourism sustainability: A critical note. *Ecol. Indic.* 2015, 48, 312–314. [CrossRef]
- Niezgoda, A.; Czernek, K. Stakeholders' relationship in the sustainable development of tourist destinations. *Econ. Probl. Tour.* 2014, 4, 39–52.
- Domínguez-Gómez, J.A.; González-Gómez, T. Analysing stakeholders' perceptions of golf-course-based tourism: A proposal for developing sustainable tourism projects. *Tour. Manag.* 2017, 63, 135–143. [CrossRef]
- Hardy, A.; Pearson, L.J. Examining stakeholder group specificity: An innovative sustainable tourism approach. J. Destin. Mark. Manag. 2017, 5, 112–120. [CrossRef]
- Demirović Bajrami, D.; Radosavac, A.; Cimbaljević, M.; Tretiakova, T.N.; Syromiatnikova, Y.A. Determinants of Residents' Support for Sustainable Tourism Development: Implications for Rural Communities. *Sustainability* 2021, 12, 9438. [CrossRef]
- Nunkoo, R.; Smith, S.L.J.; Ramkissoon, H. Residents' attitudes to tourism: A longitudinal study of 140 articles from 1984 to 2010. J. Sustain. Tour. 2013, 21, 5–25. [CrossRef]
- 23. Agyeiwaah, E.; McKercher, B.; Suntikul, W. Identifying core indicators of sustainable tourism: A path forward? *Tour. Manag. Perspect.* **2017**, *24*, 26–33. [CrossRef]
- 24. Huayhuaca, C.; Cottrell, S.P.; Raadik, J.; Gradl, S. Resident perceptions of sustainable tourism development: Frankenwald Nature Park, Germany. *Int. J. Tour. Policy* **2010**, *3*, 125–141. [CrossRef]
- 25. Peter, M.; Joanne, C. Resident's attitudes to proposed research, tourism development. Ann. Tour. Res. 2000, 27, 391-411.
- Kohler, T.; Giger, M.; Hurni, H.; Ott, C.; Wiesmann, U.; Wymann Von Dach, S.; Maselli, D. Mountains and Climate Change: A Global Concern. Mt. Res. Dev. 2010, 30, 53–55. [CrossRef]
- 27. DasGupta, R.; Shaw, R. Perceptive insight into incentive design and sustainability of participatory mangrove management: A case study from the Indian Sundarbans. *J. For. Res.* 2016, *28*, 815–829. [CrossRef]
- Gültekin, Y.S.; Gültekin, P.; Uzun, O.; Gök, H. Use of Structural Equation Modeling in Ecotourism: A Model Proposal. *Period. Eng. Nat. Sci.* 2017, 5, 145–151. [CrossRef]
- 29. Çelik, D. Determination of the most suitable ecotourism activities with the analytic hierarchy process: A case study of balamba natural park, turkey. *Appl. Ecol. Environ. Res.* **2018**, *16*, 4329–4355. [CrossRef]
- Pillutla, M.; Chen, X.P. Social norms and cooperation in social dilemmas: The effects of context and feedback. Organ. Behav. Hum. Decis. Processes 1999, 78, 81–103. [CrossRef]
- Valentin, A.; Spangenbergjh, J.H. A guide to community sustainability indicators. *Environ. Impact Assess. Rev.* 2000, 20, 381–392.
   [CrossRef]
- 32. Choi, S.H.C.; Sirakayae, E. Measuring residents' attitude toward sustainable tourism: Development of sustainable tourism attitude scale. *J. Travel Res.* 2005, 43, 380–394. [CrossRef]
- Cottrell, S.P.; Vaske, J.J.; Shen, F.; Ritter, P. Resident perceptions of sustainable tourism in Chongdugou, China. Soc. Nat. Resour. 2007, 20, 511–525. [CrossRef]
- Puhakka, R.; Sarkki, S.; Cottrell, S.P.; Siikamäki, P. Local discourses and international initiatives: Sociocultural sustainability of tourism in Oulanka National Park, Finland. J. Sustain. Tour. 2009, 17, 529–549. [CrossRef]
- Cottrell, S.P.; Raadi K, J. Benefits of protected area network status: Pilot study at Bieszcady National Park Poland. J. Tour. 2008, 9, 25–47.
- 36. Kausar, R.; Mirza, S.N.; Saboor, A.; Saleem, A.; Khalid, B. Role of ecotourism in promoting and sustaining conservation of nature: A case study of Murree forest. *Pak. J. Agric. Sci.* **2013**, *50*, 463–468.
- 37. Wang, C.Y.; Qu, H.L. Study on influencing factors of residents' protection behavior of village heritage site. *J. Econ. Manag.* 2013, 35, 121–129.
- 38. Ward, C.; Berno, T. Beyond social exchange theory: Attitudes Toward Tourists. Ann. Tour. Res. 2011, 38, 1556–1569. [CrossRef]
- Chiu, Y.T.; Lee, W.I.; Chen, T.H. Environmentally responsible behavior in ecotourism: Antecedents and implications. *Tour. Manag.* 2014, 40, 321–329. [CrossRef]

- 40. Nunkoo, R.; Ramkisson, H. Developing a community support model for tourism. Ann. Tour. Res. 2011, 38, 964–988. [CrossRef]
- 41. Ajzen, I.; Fishbein, M. Attitudinal and normative variables as predictors of specific behavior. J. Pers. Soc. Psychol. 1973, 27, 41–57. [CrossRef]