


## Article

# The Influence of Seasonality on the Sustainability of Livelihoods of Households in Rural Tourism Destinations

Zhen Su <sup>1,2</sup> , Ruyi Wen <sup>1</sup>, Yanyu Zeng <sup>1,\*</sup>, Kai Ye <sup>1</sup> and Tanaporn Khotphat <sup>3</sup><sup>1</sup> Department of Tourism Management, School of Business, Guangxi University, Nanning 530004, China<sup>2</sup> Guangxi Development Strategy Institute, Nanning 530004, China<sup>3</sup> Airline Business Program, School of Tourism and Hospitality Management, Suan Dusit University, Bangkok 10300, Thailand

\* Correspondence: 2002302043@st.gxu.edu.cn; Tel.: +86-130-1800-1033

**Abstract:** Even though seasonality is an important concern in tourism research, only a few scholars have focused on the seasonality of rural tourism. Therefore, this study examines seasonality in rural tourism destinations. We adopt a mixed research approach to explore the sustainable livelihoods of households in rural tourism destinations from a seasonality perspective, using the case of rural tourism destinations in Yulong River basin, Guangxi, China. First, in-depth interviews and grounded theory are used to construct a sustainable livelihood model for households in rural tourism destinations under the influence of seasonality. Second, the model is tested using the data envelopment analysis model and statistical analysis. We find that (1) psychological capital, a previously neglected livelihood capital, is an important component of rural households' livelihood capital in rural tourism destinations under the influence of seasonality; (2) rural tourism does not significantly improve rural livelihoods due to seasonal influences; and (3) participating in tourism work in the off-season and combining it with other work practices are the main livelihood strategies of rural households to cope with seasonality; however, over-dispersing resources reduces the livelihood efficiency. This study's findings will prove useful for policy formation by governments to deal with seasonality in rural tourism.

**Keywords:** seasonality; rural tourism destinations; sustainable livelihoods; mixed research method



**Citation:** Su, Z.; Wen, R.; Zeng, Y.; Ye, K.; Khotphat, T. The Influence of Seasonality on the Sustainability of Livelihoods of Households in Rural Tourism Destinations. *Sustainability* **2022**, *14*, 10572. <https://doi.org/10.3390/su141710572>

Academic Editors: Wei Shui, Xianhui Feng, Feng Yue and Qiang Zou

Received: 4 July 2022

Accepted: 21 August 2022

Published: 24 August 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/>).

## 1. Introduction

Sustainable livelihoods in rural tourism destinations is the current focus of the field of sustainable livelihoods research. Scholars have conducted numerous studies on the linkages among livelihood capital, livelihood strategies, and the livelihood outcomes of rural households in rural tourism destinations [1–3]. The development of rural tourism has changed the livelihood capital and original livelihood strategy combinations of local rural households [4]. In areas where rural tourism has flourished, many local households have participated in tourism as one of their livelihood strategies to diversify and de-farm their household's livelihoods [5–7]. However, while rural tourism brings considerable benefits to rural areas, it can also widen the gap between local rich and poor [8], disrupt the original rural ecosystem, and subconsciously change local cultural values [9]. At the same time, tourism has significant seasonal characteristics due to holidays, residents' leisure time, and disposable income, with overcrowding in the peak season and sparseness in the off-season [10]. The development of rural tourism will undoubtedly make the farmers involved in rural tourism vulnerable, becoming an unresolvable business risk [11].

Seasonality is an important factor affecting the sustainable development of rural tourism [12] and puts tremendous pressure on the balance between supply and demand in the rural tourism market. On the tourism demand side, seasonality can cause a short-term concentration of tourism flows, thus reducing the quality of consumers' tourism experience.

On the tourism supply side, seasonality increases resource supply pressure and environmental pressure in tourism destinations [13]. It can also reduce the return on investment of tourism operators and lead to unsustainable tourism livelihoods [14]. Seasonality has long been an important concern in tourism research. Much of the existing literature focuses on analyzing the causes of seasonality [15], exploring the impact of seasonality on tourism [16], expanding methods for measuring and decomposing seasonality [17], and forecasting tourism demand in specific regions under the influence of seasonality [18]. However, few researchers have focused on the seasonality of rural tourism and have rarely considered the mainstay of rural tourism, farmers, and the seasonal challenges that their livelihoods face [19]. In the sustainable livelihoods framework, seasonality is one of the main vulnerability factors that threaten the livelihoods of rural households [20] and can affect farmers' livelihood capital, livelihood strategies, and livelihood outcomes to varying degrees [21]. Some scholars have confirmed through quantitative studies that seasonality is the main livelihood risk faced by rural households [22] but have not explored in-depth the issues that cause it. At present, scholars have not conducted systematic studies on the livelihoods of rural households in rural tourism destinations under the influence of seasonality. Moreover, there is a lack of exploration of the pathways through which seasonality affects the sustainable livelihoods of rural households in rural tourism destinations. Similarly, the quantitative assessment of the level of sustainable livelihoods of rural households in rural tourism destinations under the influence of seasonality has also not been performed by scholars.

Therefore, to better understand the impact of seasonality on the livelihoods of households in rural tourism destinations, this study combines qualitative and quantitative research methods. First, this study uses grounded theory to construct a theoretical model of sustainable livelihoods of rural households in rural tourism destinations under the influence of seasonality. Then, a quantitative index system is constructed based on the theoretical model. Referring to previous studies, the concept of livelihood efficiency is introduced [23] to quantitatively assess the sustainable livelihood level of rural households. Meanwhile, the study conducts a comparative analysis of the livelihood capital and livelihood efficiency of rural households with different livelihood types in the Yulong River basin. The impact of seasonality on the livelihood capital, livelihood strategies, and livelihood outcomes of rural households involved in tourism operations is also empirically examined. This study attempts to answer the following questions: (1) What elements are included in the framework of sustainable livelihoods of rural households in rural tourism destinations under the influence of seasonality? (2) What are the linkages between the livelihood capital, livelihood strategies, and livelihood outcomes of households in rural tourism destinations? What are the differences in livelihood capital and livelihood efficiency of rural households with different livelihood types? (3) How is the impact of seasonality on rural tourism reflected in rural household livelihoods? What are the differences in livelihood capital, work practices, and livelihood outcomes of rural households involved in tourism operations during tourism off and peak seasons? With important theoretical and practical implications, this study aims to promote rural tourism to better benefit local villagers and achieve the sustainable development of rural household livelihoods and rural tourism.

The remainder of this research is organized as follows. Section 2 is a literature review on sustainable livelihoods and seasonality in rural tourism. Section 3 is the research methodology and data sources. Section 4 builds theoretical models using grounded theory. Section 5 is empirical analysis, including measuring efficiency and validating theoretical models. Section 6 discusses the findings, and Section 7 concludes.

## 2. Literature Review

### 2.1. Rural Tourism and Sustainable Livelihoods

Livelihood is defined as a way of earning a living based on a combination of capabilities, assets, and activities [24]. Livelihoods are considered sustainable when they can withstand and recover from external pressures and shocks and can maintain or up-

grade their capabilities and assets without destroying the natural resource base [25]. The Sustainable Livelihood Framework (SLF) is a tool proposed by the UK Department for International Development (DFID) to analyze and understand the livelihoods of the poor and the effects of poverty alleviation [20]. The framework consists of five components—vulnerability context, livelihood capital, transforming structures and processes, livelihood strategies, and livelihood outcomes—and clarifies the logical relationship between the elements. It argues that people make livelihoods in the context of vulnerability, using the five major capitals they possess, which are natural capital, social capital, financial capital, human capital, and physical capital. Under the influence of institutions, organizations, and processes, they seek the best combination of livelihood strategies to pursue positive livelihood outcomes. As tourism has become an effective means to achieve poverty alleviation and the revitalization of rural areas, scholars have begun to integrate rural tourism into the study of sustainable livelihoods. Current research on sustainable livelihoods in tourism contexts has focused on quantitatively analyzing the impact of tourism development on the components of the sustainable livelihoods framework from social, economic, and human perspectives, especially on livelihood capital [26], livelihood strategies [4], and livelihood outcomes [27]; analyzing the sustainable livelihoods of rural households in different types of tourism communities, such as ethnic and heritage tourism sites [7,28]; the improvement and refinement of sustainable livelihoods framework in tourism context [5,29]; the analysis of external effects of rural tourism livelihoods [30], etc. Based on previous studies, it is clear that the sustainable livelihoods framework has become an effective tool for analyzing the economic and social situation of rural households in rural tourism destinations [31].

The development of rural tourism has a significant impact on the sustainable livelihoods of local households [32], as it changes their original livelihood patterns. However, this impact has two sides. On the one hand, rural tourism, as an emerging livelihood strategy, has low entry barriers [33], and villagers living in rural tourism destinations can easily access a new non-farming livelihood, which is conducive to promoting livelihood diversity, reducing dependence on natural resources, and reducing livelihood vulnerability [6]. The development of rural tourism drives the construction of local infrastructure and public services [34] and increases employment opportunities while improving the environmental appearance of the community [5]. In addition to direct economic effects, such as raising villagers' income levels, rural tourism development can increase government tax revenues, feed the people through redistribution in the form of subsidies and dividends [35], and increase farmers' capacity through free vocational training [36], exerting indirect effects. On the other hand, the development of rural tourism provides farmers with more livelihood capital and opportunities for participating in rural tourism operations, causing differences in income distribution [37], widening the gap between rich and poor within rural communities, and accelerating the phenomenon of rural stratification [38]. Compared to poverty, villagers are more worried about the uneven distribution of wealth and resources, which will further damage the civilization of the countryside and neighborhood relations [28] and reduce the social capital of rural households. With the involvement of rural elites and external capital, tourism revenue is concentrated in the hands of a small number of people, even causing an outflow of local tourism income [37]. Therefore, some scholars argue that participation in rural tourism is a livelihood strategy for farmers to supplement their income, rather than a substitute for traditional livelihoods [39]. High reliance on tourism livelihoods will reduce the sustainability of farmers' livelihoods [7].

The development of rural tourism is essential to benefit residents. However, scholars do not have a unanimous opinion on whether rural tourism is beneficial for the sustainable livelihood of local farmers. Measuring the livelihood levels of households in rural tourism areas and identifying the barriers that disrupt the positive benefits of rural tourism for sustainable livelihoods can help answer this question.

## 2.2. The Impact of Seasonality on Rural Tourism

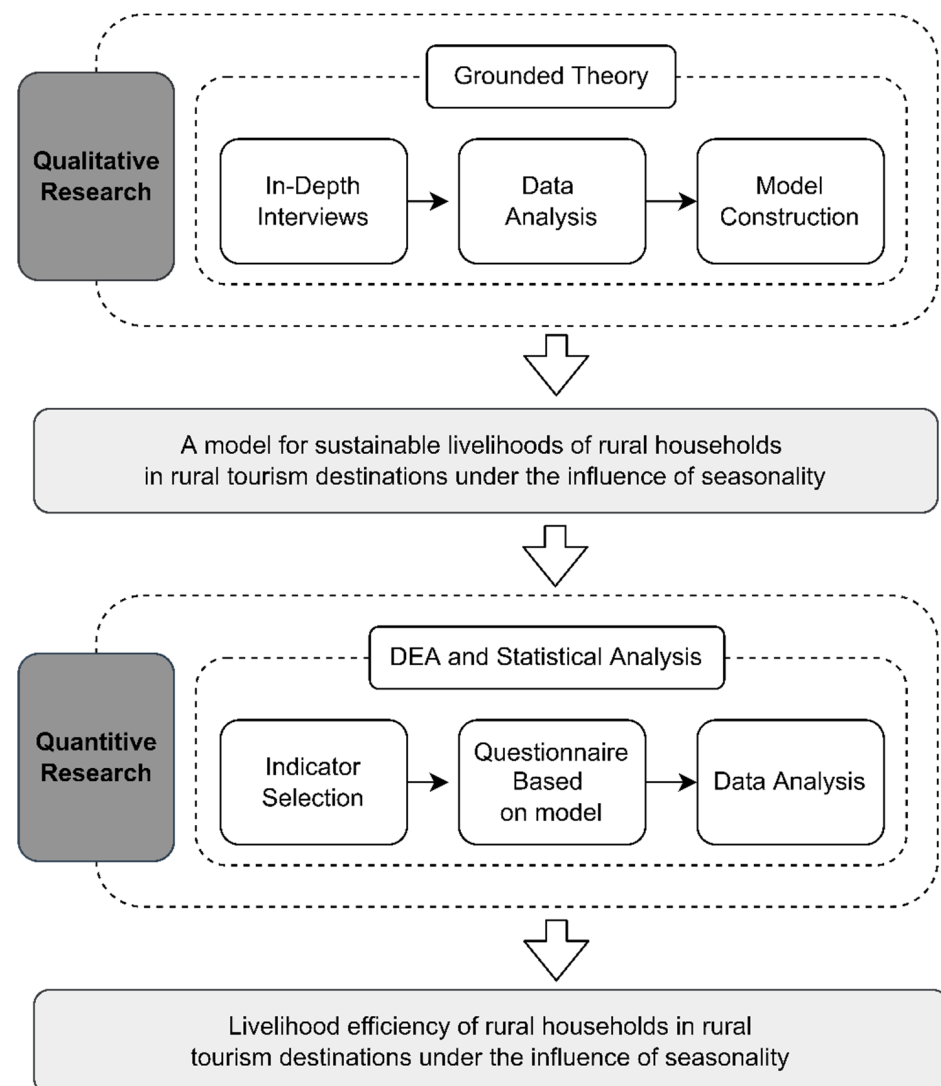
Seasonality is one of the intrinsic features of tourism. It refers to the temporary imbalance of the tourism phenomenon, taking the changes in the supply and demand of the tourism market as specific performance, such as the number of people working in tourism, flow of attractions, trend of passenger flows, and consumption of tourists [40], etc. Seasonality is considered to be the most specific and difficult to change characteristic of tourism. In general, tourism seasons are divided into three types: peak, off, and shoulder, according to the level of tourist flows at that time [41]. Seasonality arises as a result of a combination of natural and social factors [42]. The tourism industry is highly dependent on natural resources and climatic conditions. The environment and climate are important natural factors that shape seasonality. Social factors that impact seasonality include the holiday system, travel inertia or tradition, and social pressure or fashion [43]. The characteristics of tourism seasonality bring many negative effects to rural tourism destinations. On the economic side, the instability of tourist flows leads to inefficient use of fixed assets, inefficient tourism investments, and unstable tourism employment [44]. On the ecological side, the temporal polarization of tourism flows leads to spatial polarization, with the influx of tourists in the peak season exceeding the carrying capacity of the local ecological environment, resulting in traffic congestion, ecological degradation, and other consequences [43]. In terms of community development, the peak season brings about price increases and the utilization of community public resources by tourists, which can reduce the quality of life of residents [45]. The current research on tourism seasonality focuses on the following four aspects: (1) conducting tourism demand forecasting and seasonality measurement in time and space, proposing seasonality measurement indices, and developing tourism demand forecasting models [18,46]; (2) the seasonal characteristics of tourist flows in specific tourism regions are empirically studied and their causes, mechanisms of action, and influencing factors are analyzed [47]; (3) strategies to cope with tourism seasonality are proposed at the macro policy and micro tourism enterprise governance levels [48]; and (4) the segmentation and characteristics of the tourist market in off and peak seasons are studied [49].

There is spatial heterogeneity in tourism seasonality. Compared with urban tourism, the seasonality of tourism in rural and remote areas is more obvious [50], and its impact is also stronger. Tourism seasonality is considered to be a situation of vulnerability that rural households face when earning their livelihoods in rural tourism areas, which can increase the livelihood risk of rural households and affect the livelihood security of villagers [11]. Farmers' participation in tourism operations is often characterized as "small-scale, informal, and family-run" [51], which serves a highly seasonal market, resulting in a low return on investment and a low contribution to the income of rural residents [52]. During the low tourism season, when the number of tourists decreases, tourism demand declines, and there is an oversupply of rural lodges, agritainment resorts, and other tourism infrastructure [50]. Idle assets and equipment result in a low return on investment for farmers participating in tourism. In addition, employment opportunities for farmers employed in tourism are unstable. They face the risk of being laid-off during the off-season. Further, most farmers employed in tourism are temporary workers during the peak season [53]. Even though the sustainable livelihoods of farm households in rural tourism destinations under the influence of seasonality is a topic worthy of research, only a few studies have addressed it [21]. In previous studies, some scholars mentioned that the cyclical fluctuations of tourism during off and peak seasons can challenge the livelihoods of rural households [21]; however, they did not elaborate on the specific impact of tourism seasonality on various aspects of farmers' livelihoods. The current seasonal fluctuations in tourism have become a bottleneck, affecting the sustainability of farmers' tourism livelihoods in rural tourism destinations. It is necessary to conduct an in-depth and detailed study on this topic.

### 3. Research Methodology and Design

#### 3.1. Mixed Research Method

This study adopts a mixed research approach, combining qualitative and quantitative methods to investigate the livelihood efficiency of farmers in rural tourism destinations under the influence of seasonality. The research method and process are shown in Figure 1. First, data are collected through in-depth interviews, and the rooting theory is applied to construct a model of sustainable livelihoods of rural households in rural tourism destinations under the influence of seasonality. Second, based on the theoretical model, evaluation indicators are selected, and questionnaires are designed to collect relevant data, and the livelihood efficiency of rural households in rural tourism destinations under the influence of seasonality is analyzed by data envelopment analysis (DEA) and statistical analysis.



**Figure 1.** Research methods and process.

#### 3.1.1. Grounded Theory

Grounded theory, first proposed by American sociologists Strauss and Glaser, is one of the most widely used and classic qualitative research methods. This method advocates collecting original materials from daily life and social phenomena, conducting systematic in-depth analysis and generalization, abstracting concepts, categories, and relations, and developing theories from bottom to top [54]. Grounded theory is a necessary step in developing theoretical models with localized connotations and high credibility [55], and



its application in the field of tourism research has become commonplace [56–58]. The reasons for selecting grounded theory as the research method in this study are: first, the research on sustainable livelihoods of rural households in China has just started, and the elements contained in the SLF of rural tourism destinations are yet to be explored and improved. Second, as the impact of seasonality on rural tourism livelihoods has not been explored by scholars in China, the use of grounded theory can better uncover the specific logical relationship between tourism seasonality and rural tourism livelihoods based on the original text and derive the theoretical model from the bottom up. Third, most studies on sustainable livelihoods worldwide have adopted the SLF. However, in the context of rural tourism, the SLF does not provide a detailed analysis of the impact of seasonality on households' sustainable livelihoods. Constructing a new theoretical model based on grounded theory will help improve the SLF from a seasonality perspective. In this study, the qualitative analysis is based on the coding procedures and principles of grounded theory proposed by Strauss and Corbin, which are divided into three stages: open coding-spindle coding-selective coding [59], and the qualitative analysis and statement coding of original materials is carried out by using the tool, Nvivo 11.

### 3.1.2. Efficiency Assessment of Rural Households' Livelihoods

Livelihood efficiency is the extent to which a rural household can maximize output per unit of capital factor invested in the process of adopting single or multiple livelihood strategies in a given period, using the rural household as the production unit [60]. It is an important indicator of the level of sustainable livelihoods of rural households, which integrates the degree of rational allocation and effective use of rural household livelihood capital, as well as the degree of correct decision-making and the efficient combination of livelihood strategies [23]. To compare the differences in livelihood efficiency among different villages and rural households with different livelihood strategies in the study area, this research uses a DEA model for analysis. DEA is a nonparametric method that addresses the relative efficiency of decision-making units (DMUs) in the context of multiple inputs and outputs [61], created by Charnes, Cooper, and Rhodes (CCR) in 1978, and is currently widely used in various fields of efficiency evaluation [62]. It uses its model to form an envelope of the calculated points in the form of a dashboard, and the boundary line formed is the data envelope. When the calculated data points fall on the data envelope, the DMU is considered to have the most efficient input–output combination with an efficiency value of 1; otherwise, the DMU is DEA invalid, and its relative efficiency value is greater than 0 and less than 1. The comprehensive technical efficiency (TE) calculated in this study based on the output-oriented CCR model can be further decomposed into pure technical efficiency (PTE) and scale efficiency (SE) based on the Banker, Charnes, and Cooper (BCC) model. Concerning the actual participation of rural households in production and business activities related to the study area [60,63,64], this study uses the sample rural households as DMUs. Further, it uses natural capital, physical capital, human capital, social capital, financial capital, and psychological capital of the SLF as input indicators, and average annual rural household income as output indicators.

### 3.2. Study Area

The Yulong River is located in the western–central part of Yangshuo County, Guilin City, Guangxi Zhuang Autonomous Region of China (Figure 2). It covers an area of about 32 km<sup>2</sup>, with the core scenic area involving four townships, seven village committees, 64 natural villages, and approximately 24,000 people, according to the official website of Yulong River National Tourist Resort (<http://www.ylhjdj.com/aboutus.html> (accessed on 15 December 2021)). Among them, Jima and Jiwodu villages in the watershed are listed as the key villages of national rural tourism. The characteristic of local rural tourism is bamboo rafts, which is a new form of tourism that integrates sightseeing and cultural experience (Figure 3). After years of development, the river basin has gradually transformed from a “tourist destination” to a “residence destination,” forming not only a cluster of attractions

combining beautiful landscapes and idyllic rural scenery with unique humanities but also creating a group of high-end boutique homestays, which has gained recognition. The Ministry of Culture and Tourism has identified it as the first national tourism resort in Guangxi.

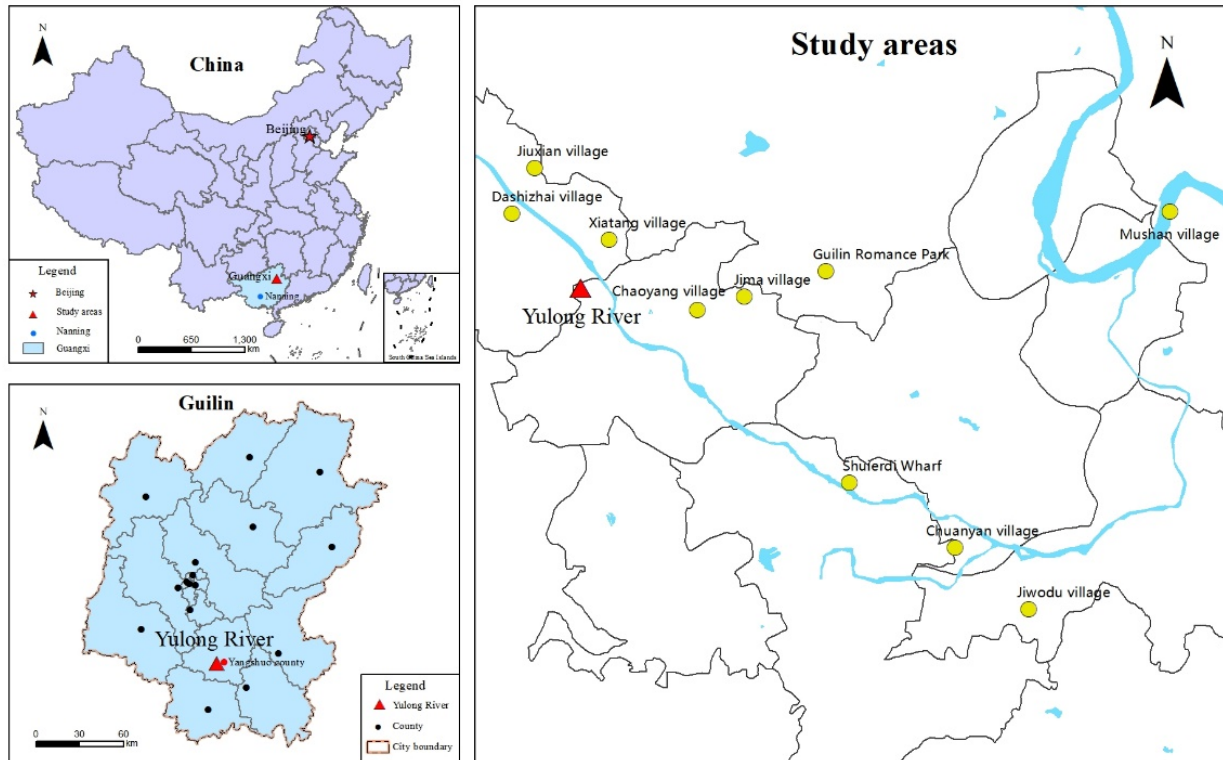


Figure 2. Geographical location of the study area (drawn by authors).



Figure 3. (Photographs by authors): (a) Part of Yulong River; (b) bamboo rafters in the Yulong River.

The livelihood strategies of rural households in the Yulong River basin have also gradually changed by the development of rural tourism. In addition to the local traditional way of working and farming, local rural households have gradually begun to choose diversified tourism livelihood strategies such as bed-and-breakfast (B&B) inns, restaurant catering, bamboo rafting, tour guides, Liu Sanjie performance projects, tourism souvenir peddling, and scenic spot ticketing. As of the end of 2019, there were more than 500 hotels and B&Bs; rural households operated more than 100 Nongjiale—a restaurant serving food and beverages to tourists—and more than 6000 farmers engaged in tourism in the

Yulong River basin. Due to the early development of rural tourism in the river basin, high visibility, typical development mode, obvious tourism seasonal characteristics, and high participation of local rural households in tourism, this study selects the Yulong River's basin as a case-study site with representative significance.

### 3.3. Study Design

#### 3.3.1. Data Collection and Livelihood Types of Rural Households

To obtain the primary data, rural households were surveyed using structured questionnaires and semi-structured interviews. First, based on the recommendation of local tourism authorities, this research team conducted a three-day pre-survey in December 2020 in the Yulong River basin. Based on the pre-study and spatial distribution characteristics of the villages in the basin, this study made necessary adjustments to the interview outline and questionnaire and finally selected 10 points as data collection areas: Chaoyang Village, Jiwodu Village, Guilin Romance Park, ChuanYan Village, Mushan Village, Xiatang Village, Jiuxian Village, Jima Village, Dashi Zhai Village, and Shuierdi Wharf. These areas cover the main regions within the Yulong River Basin that entertain rural visitors. Second, the research team, composed of graduate students with professional knowledge and survey experience, carried out formal research in April 2021 and visited the study area twice to carry out data collection for qualitative and quantitative research. The questionnaires were administered mainly to the heads of the households. When an elderly person surveyed in a household was unable to complete the questionnaire, the surveyor explained and assisted in completing it.

In early April 2021, based on the principle of random sampling, the research team conducted in-depth interviews with 80 indigenous people in the study area, ensuring that the average household interview time was approximately 35–50 min. The basic information of the interviewees is shown in Table 1. The interviews focused on the following six aspects. First, the motivation and opportunity for rural households to participate in tourism as their livelihood strategy. Second, the current situation of tourism development in the Yulong River basin and the livelihood of the indigenous people. Third, the problems existing in the current development of rural tourism in the study area, the reasons for the same, whether these problems have an impact on the livelihoods of rural households, and what kind of impact they have had. Fourth, the seasonal conditions of tourism in the study area. Fifth is the impact of seasonal fluctuations on the tourism work of rural households. Sixth is the impact of seasonal fluctuations on tourism income. After all the interviews were completed, the researcher converted the interview recordings into written materials, which eventually resulted in about 100,000 words of interview transcripts.

**Table 1.** Basic characteristics of interviewees in in-depth interviews.

Term	Content	Frequency	Percentage (%)
Gender	Male	24	30.00%
	Female	56	70.00%
Age	≤25	7	8.75%
	26–45	23	28.75%
	46–60	31	38.75%
	≥61	19	23.75%
Employment in tourism	Accommodation	4	5.00%
	Dining	30	37.50%
	Ticketing	1	1.25%
	Mobile sales of tourist souvenir goods	13	16.25%
	Transportation	14	17.50%
	Other	10	12.50%
	None	8	10.00%

At the end of April 2021, eight members of the research team were divided into four teams to distribute questionnaires in the study area. The respondents were mainly the heads of households or the main labor force of families. In cases where due to old



age or low literacy level, respondents could not fill out the questionnaire personally, the investigators explained the questionnaire and assisted them to provide the responses. Finally, 221 questionnaires were distributed, and 200 valid and filled questionnaires were collected, with an efficiency rate of 90.5%. The questionnaires were divided into three parts: (1) the five livelihood capitals and output status of rural households; (2) rural households' livelihood strategies, income composition, and factors influencing the choice of livelihood strategies; and (3) the seasonal effects of rural households' participation in tourism livelihoods.

Based on the actual situation in the study area of the Yulong River basin and drawing on previous research's results on the classification of rural household types [26,27], in this study, rural households were divided based on the main source of their income. A source of income was deemed as the main source if it accounted for more than 60% of the total household income, as shown in Table 2. Among the rural households, seven samples (3.5%) were agriculture-oriented households, mainly cultivating rice, kumquats, and other food and cash crops; 99 samples (49.5%) were labor-oriented households, mainly engaged in fieldwork, temporary construction work, shopping-mall work, cab driving, etc.; and 65 samples (32.5%) were tourism-oriented households, mainly engaged in tourism catering, accommodation, ticketing, rafting, tourism snacks, and small commodities, etc. As many as 29 samples (14.5%) were of balanced households, mainly engaged in various non-agricultural operations or leasing, and their sources of livelihood were relatively scattered.

**Table 2.** Basic characteristics of rural households with four types of livelihood strategies.

Rural Households Type	Agriculture-Oriented Households	Labor-Oriented Households	Tourism-Oriented Households	Balanced Households
Sample Size (%)	3.5	49.5	32.5	14.5
Livelihood Diversity Index <sup>1</sup>	1.57	1.56	1.81	2.34
Average Household Land Area	4.71	2.28	3.45	2.3
The Average Number of Full Workforce in Households	2.57	3	2.9	2.44
Family House Area (m <sup>2</sup> )	87.71	80	88.46	85.93
Number of Educated	2.86	3.63	3.86	3
Annual Household Income (10 <sup>4</sup> CNY)	2~3	5~6	8~9	5~6

<sup>1</sup> The Livelihood Diversity Index is the number of types of livelihood activities undertaken by each farming household.

### 3.3.2. Selection and Measurement of Livelihood Capital Evaluation Indicators

Based on the SLF proposed by the DFID, this study constructed a livelihood capital measurement and evaluation index system for rural households in the Yulong River basin, considering the actual situation in the area and drawing on the research of several scholars [20,31,64]. The data were processed using range normalization and segmentation assignment methods so that all index values were distributed between (0,1), which in turn facilitated the comparison between data. Meanwhile, the entropy value method was used to determine the weights of various livelihood indicators and weighted to calculate the livelihood capital index  $T$  [4], which was calculated as follows.

$$T = \sum_{i=1}^5 \sum_{j=1}^n w_{ij} x_{ij}, \quad (1)$$

where  $w_{ij}$  refers to the weight of the  $j$ th evaluation index of the  $i$ th type of livelihood capital;  $x_{ij}$  represents the standardized value of the  $j$ th evaluation index of the  $i$ th type of livelihood capital. The weights of the indicator system and the way of assigning values are shown in Table 3.

**Table 3.** Livelihood capital indicators and values of rural households.

Indicator Level	Secondary Indicator Level	Meaning and Assignment Criteria	Weights
Natural Capital	Arable Land	Arable land area × Quality: Very fertile = 1, Neutral = 0.75, Less fertile = 0.5	4.47%
	Garden Land	Garden land area × Quality: Very fertile = 1, Neutral = 0.75, Less fertile = 0.5	15.16%
	Woodland	Wood land area × Quality: Very fertile = 1, Neutral = 0.75, Less fertile = 0.5	15.93%
Physical Capital	Housing	Distance to main road: Under 25 m = 1, 25–50 m = 0.75, 50–75 m = 0.5, 75 m and above = 0.25	0.61%
		Area occupied: More than 150 m <sup>2</sup> = 1, 100–150 m <sup>2</sup> = 0.75, 50–100 m <sup>2</sup> = 0.5, Less than 50 m <sup>2</sup> = 0.25	
		Types of housing of households: Mud and wood = 0.25, Brick and wood = 0.5, Brick and concrete = 0.75, Steel and hybrid = 1	
		Year of construction: 5 years and less = 1, 5–10 years = 0.75, 10–20 years = 0.5, More than 20 years = 0.25	
Human Capital	Consumer Durable Assets	Trucks = 1, Sedan = 0.8, Agricultural machinery = 0.6, Motorcycles/Electric vehicles = 0.4, Other appliances = 0.2	1.60%
	Population Number	Number of members in rural households	0.93%
	Educational Level	Average education level of household members, Assignment of individual member's education level: Uneducated = 0, Primary school = 0.25, Junior high school or technical secondary school = 0.5, High school or junior college = 0.75, University and above = 1	1.07%
		Labor Force Level	Able-bodied labor force = 1, Semi able-bodied labor force = 0.5, Incapacity = 0
	Social Capital	Social Relations	Relatives/friends who are village cadres or in government agencies: yes = 1, no = 0
Community Neighborhoods		Community Activities: Frequent participants = 1, Sometimes attend = 0.5, Minimal participation = 0 Neighborhood Relations: Frequent contact = 1, Average contact = 0.5, Minimal contact = 0	1.36%
Access to Relief		Getting help from both relatives and friends = 1, Getting help from either a relative or a friend = 0.5, Getting no help = 0	1.40%
Financial Capital	Access to Government Training	yes = 1, no = 0	17.13%
	Government Subsidies	yes = 1, no = 0	6.65%
	Difficulties in Obtaining Loans	Easy = 1, Neutral = 0.5, Difficulty = 0	1.79%
	Revenue Sources	4 channels = 1, 3 channels = 0.75, 2 channels = 0.5, 1 channel = 0.25, None = 0	0.97%
Psychological Capital	Life Happiness	Very low = 0.2; Low = 0.4; Neutral = 0.6; High = 0.8; Very high = 1	2.71%
	Expectation Level of Good Life	Very low = 0.2; Low = 0.4; Neutral = 0.6; High = 0.8; Very high = 1	2.79%
	Ability to Overcome Difficulties	Very weak = 0.2; Weak = 0.4; Neutral = 0.6; Strong = 0.8; Very strong = 1	1.97%
	Work Ability Performance Evaluation	Very poor = 0.2; Poor = 0.4; Neutral = 0.6; Better = 0.8; Very well = 1	4.45%

#### 4. Model Construction Based on the Grounded Theory

##### 4.1. Open Coding

Open coding is the process of establishing mechanisms for identifying core concepts and their features and dimensions through identification, tagging, and comparison [62]. The steps are: extracting valuable information from the original material word-by-word

and labeling it; comparing and merging the labels to develop the concepts; and finally discovering the categories and categorizing the initial concepts. Examples of open coding are shown in Table 4. Based on the refinement and summary of the original materials, a total of 54 concepts were obtained in this study and grouped into 17 categories, as shown in Table 5.

**Table 4.** Examples of open coding.

Respondent Number	Original Statement	Labeling (Definition of Phenomenon)	Conceptualization
S23	<p>There used to be a lot of tourists, but since the government unified control, there are not so many tourists. After they monopolized all the rafting, the business here is not good (aa10). In the past, when there was no unified management of the Yulong Dragon River, there were at least 20–30 small bosses here. Each small boss had 40–50 bamboo rafts. At that time, the river was full of bamboo rafts. The county government collects management fees every day (aa13). Now, there are not many people working on bamboo rafts. Earlier, there used to be at least thousands of people engaged in this work, but now they are not allowed to work if they are over 60 years old (aa45). Only local people are allowed to work on bamboo rafts, not out-of-towners (aa46).</p> <p>There are more people here in July and August. The two full months of July and August are the peak season (aa24). In addition, weekends and Golden Week are also peak seasons (aa25). Business here is well less than four months a year, the rest of the year is very hard. You see, out of twelve months of the year, we can only do at most four months of tourism business (aa26). During the two months of the summer vacation, sometimes business is good, and sometimes bad. Nonetheless, summer vacation is kind of the peak season for two months (aa24). Then, the Qingming Festival, May Day, Dragon Boat Festival, Mid-Autumn Festival, National Day, and other holidays are also peak seasons. If you calculate the peak season in this way, there are only five or six holidays plus weekends (aa27). I am free to operate, according to my annual WeChat collection amount; I will know when there are more tourists. Then, I roughly calculated that at most four months a year is the peak season (aa26).</p>	<p>aa10 Bamboo rafting is managed by the government</p> <p>aa13 Bamboo rafting was previously operated by private individuals</p> <p>aa45 Working-age limit of bamboo raft workers</p> <p>aa46 Bamboo raft workers of different river sections are managed separately</p>	a2 Management system
S15	<p>We invested CNY 100,000 to engage in tourism operations (aa19), as well as equipment and other things in the store (aa20). A lot of money was invested in this house. Like here, we have a five-story golden house next to me, which cost a lot of money to build because in tourist areas, all materials are very expensive. All these things have to be in place if you want to engage in tourism. It's also very expensive if you want to open your store (aa21).</p>	<p>aa24 Summer vacation</p> <p>aa25 Weekend</p> <p>aa26 Duration of peak season</p> <p>aa27 Holidays</p>	a9 Peak season
s15		<p>aa19 Capital investment</p> <p>aa20 Equipment input</p> <p>aa21 Tourist operation investment is large</p>	a19 Tourism operating assets

Table 4. Cont.

Respondent Number	Original Statement	Labeling (Definition of Phenomenon)	Conceptualization
S33	We hire fewer employees in the off-season. Our restaurant does good business and all the dishes taste good, so we have to hire employees. We will be too occupied if we don't hire employees (aa52). We are open every day, regardless of the off and peak season, unless something happens at home (aa53).	aa52 Hiring employees in the off-season aa53 Operating in the off-season	a44 Insisting on tourism work
S59	When business is good, I earn two or three thousand yuans a day (aa67). But in the off-season, sometimes I can't even earn a penny a day (aa68). Nevertheless, to tell the truth, I think it is better to be engaged in the tourism business than to work. If I go out to work, I have to work overtime every day. I get tired, but earn very little (aa69).	aa67 Income in the peak season aa68 Income in the off-season aa69 Income from tourism is more than income from labor	a54 Enhancement of livelihood capital

Table 5. Open coding: categorization.

Conceptualization	Subcategory	Explanation
a1 Policy environment	A1 Policy and institutional environment	The tourism sector supports the government's policies and organization of rural tourism destinations. Moreover, it provides a management system for scenic spots, markets, and land. It also provides a forum to local villagers to voice their concerns.
a2 Management system		
a3 Operational types of tourism	A2 Market environment of rural tourism	The development of the current tourism market in rural tourism destinations
a4 Market disorder		
a5 Competitive environment		
a6 Ecological environment	A3 Natural environment	The ecological environment and natural disasters suffered in rural tourism destinations.
a7 Natural disasters	A4 Off-season and peak season times	The time difference between the off and peak seasons of tourism in rural tourism destinations.
a8 Off-season		
a9 Peak season	A5 Travel market demand during off and peak seasons	Temporary imbalance in tourism market's demand in rural tourism destinations.
a10 Business situation		
a11 Willingness to consume	A6 Fluctuations in tourist flow during off and peak seasons	Temporary imbalance in the trend of tourist flow in rural tourism destinations.
a12 Trend of tourist flow in off-season		
a13 Trend of tourist flow in peak season	A7 Physical capital	Housing, production assets, and other material equipment used by rural households for living and tourism operations.
a14 Location of housing		
a15 Number of housing		
a16 Size and number of floors of housing		
a17 Housing owned storefront		
a18 Productive capital		
a19 Tourism operation assets		
a20 Skills training opportunities	A8 Social capital	Social resources such as relatives and neighbors, social networks, and social insurance owned by rural households.
a21 Insurance purchases		
a22 Relationship between relatives, friends, and neighbors		
a23 Social network	A9 Financial capital	Annual income, government subsidies, and loans of rural households.
a24 Participation in community activities		
a25 Household receipt of subsidies and dividends from the government or scenic spots		
a26 Borrowing and lending		
a27 Annual household income		
a28 Age of the household		
a29 Education level of the household members	A10 Human capital	Knowledge, skills, abilities, and health status of farm households' labor force.



**Table 5.** *Cont.*

Conceptualization	Subcategory	Explanation
a30 Labor force of the household	A11 Natural capital	Natural resources, such as farmland, arable land, and livestock owned by rural households.
a31 Livestock breeding		
a32 Land cultivation		
a33 Land ownership		
a34 Optimism	A12 Psychological capital	The positive psychological state of farmers who believe they can improve their livelihoods.
a35 Resilience		
a36 Hope		
a37 Self-efficacy		
a38 Agriculture-oriented	A13 Livelihood types	Classification due to the different combinations of livelihood strategies adopted by rural households.
a39 Labor-oriented		
a40 Tourism-oriented		
a41 Balanced	A14 Off-season working methods	Different work practices adopted by rural households during the off-season due to the seasonality of tourism.
a42 Labor to supplement income		
a43 Agriculture to supplement income		
a44 Persistence in tourism work		
a45 Rest		
a46 Increase in working hours	A15 Peak season working methods	Different work practices adopted by rural households during the peak season due to the seasonality of tourism.
a47 Employment status		
a48 Increase in assets' investment		
a49 Increase in prices	A16 Sustainable development of rural tourism	Degree of sustainability of local rural tourism.
a50 Development of tourism in different river sections		
a51 Farmers' participation in tourism		
a52 Farmers' recognition of rural tourism		
a53 Satisfaction of livelihoods	A17 Livelihood sustainability	Farmers' satisfaction with their current livelihoods and the extent to which existing livelihoods are sustainable to maintain and enhance their livelihood assets.
a54 Enhancement of livelihood assets		

**4.2. Axial Coding**

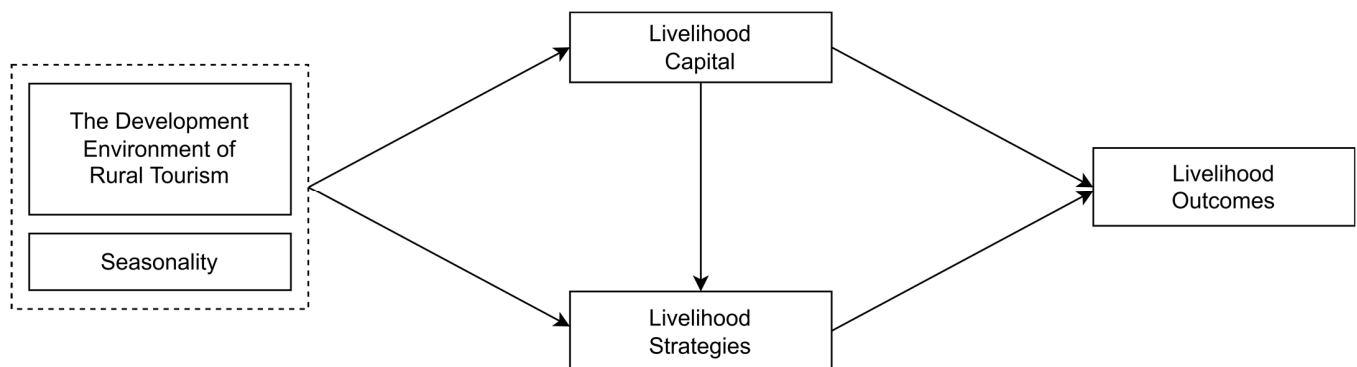
Axial coding is the process of establishing connections and distinctions among categories based on open coding and eventually developing main categories by deeply analyzing the attributes and dimensions [65]. After open coding, a total of 17 subcategories were obtained in this study, and after repeatedly comparing, generalizing, and clustering the subcategories and analyzing the logical relationships between them, five main categories were finally obtained, as shown in Table 6.

**Table 6.** Axial coding: main categories.

Subcategories	Main Category
A1 Policy and Institutional Environment	AA1 Development Environment of Rural Tourism
A2 Market Environment of Rural Tourism	
A3 Natural Environment	
A4 Off-season and Peak Season Times	
A5 Travel Market Demand During Off and Peak Seasons	AA2 Seasonality
A6 Fluctuation of Tourist Flow During Off and Peak Seasons	
A7 Physical Capital	AA3 Livelihood Capital
A8 Social Capital	
A9 Financial Capital	
A10 Human Capital	
A11 Natural Capital	
A12 Psychological Capital	AA4 Livelihood Strategies
A13 Livelihood Types	
A14 Off-season Working Methods	
A15 Peak Season Working Methods	AA5 Livelihood Outcomes
A16 Sustainable Development of Rural Tourism	
A17 Livelihood Sustainability	

#### 4.3. Selective Coding

Selective coding is based on sorting, summarizing, and refining main categories; digging out core categories that can summarize all categories; and developing storylines around core categories to further illustrate the logical relationships between main categories [66]. By repeatedly reviewing the original materials, open coding, axis coding, and analyzing their relationships in-depth, we finally obtained the core category of this study, “A model of sustainable livelihoods of rural households in rural tourism destinations under the influence of seasonality.” The storyline of this study can be summarized as follows: The development environment of rural tourism and inherent seasonality of tourism impact the allocation of livelihood capital and choice of livelihood strategies of farmers, which eventually leads to different livelihood outcomes. Among them, the seasonality of tourism becomes the main factor influencing the SLF of rural households in rural tourism destinations. Under the influence of seasonality, the SLF of households in rural tourism destinations is significantly different from those of rural households who are not in rural tourism destinations. There are significant differences in livelihood capital, livelihood strategies, and the livelihood outcomes of rural households in off and peak seasons. Based on this, the study constructs the following theoretical model (Figure 4).



**Figure 4.** A model for sustainable livelihoods of rural households in rural tourism destinations under the influence of seasonality.

#### 4.4. Theoretical Saturation Test

To test whether theoretical categories reached saturation, this study carried out three-level coding on 10 original interview materials reserved through theoretical sampling. In general, theoretical saturation is considered to be reached when no new categories or new properties of core categories can be extracted from the new information [67]. The results showed that no new categories or relationships emerged during the coding process, and the newly extracted concepts were covered within the existing categories. Therefore, it can be concluded that the model is theoretically saturated.

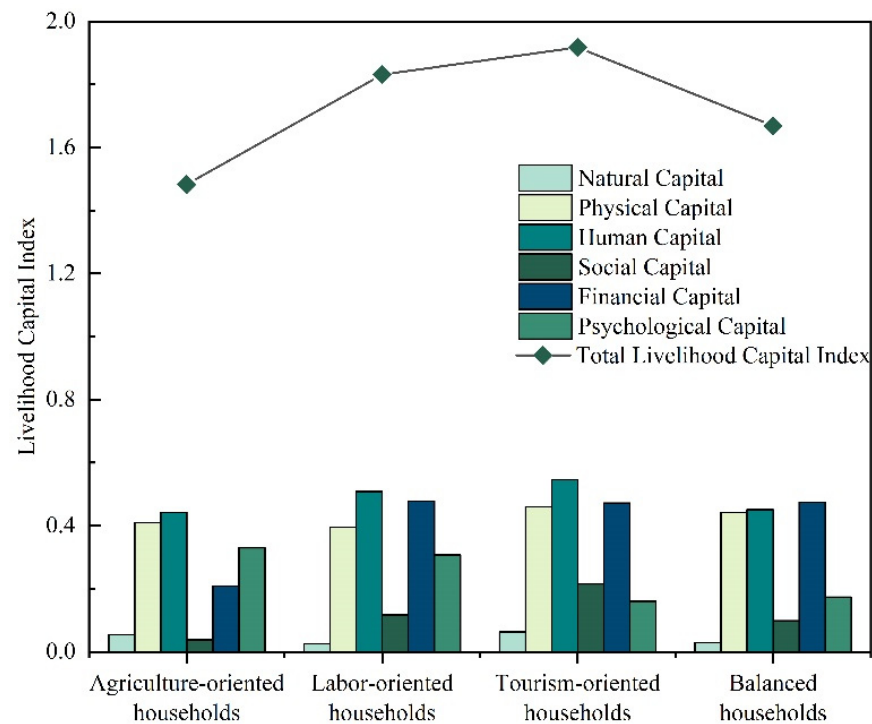
### 5. Empirical Analysis

#### 5.1. Relationship between Livelihood Capital, Livelihood Strategies, and Livelihood Output

##### 5.1.1. Livelihood Capital and Livelihood Strategies

The classification of different livelihood strategies showed significant differences in their livelihood capital indices. The mean value of the livelihood capital index is from high to low: tourism-oriented households > labor-oriented households > balanced households > agriculture-oriented households (Figure 5). Among them, the highest livelihood capital index was 1.91 for tourism-oriented households, which have a strong ability to accept new things, adjust their livelihood strategies rapidly, and have abundant livelihood capital in all categories, except for psychological capital. Seasonality and unexpected events are typical characteristics of tourism business; therefore, rural households involved in tourism business tend to underestimate the expected income of this livelihood mode and lower their psychological expectations. The middle of the livelihood capital index is 1.83 and 1.67 for

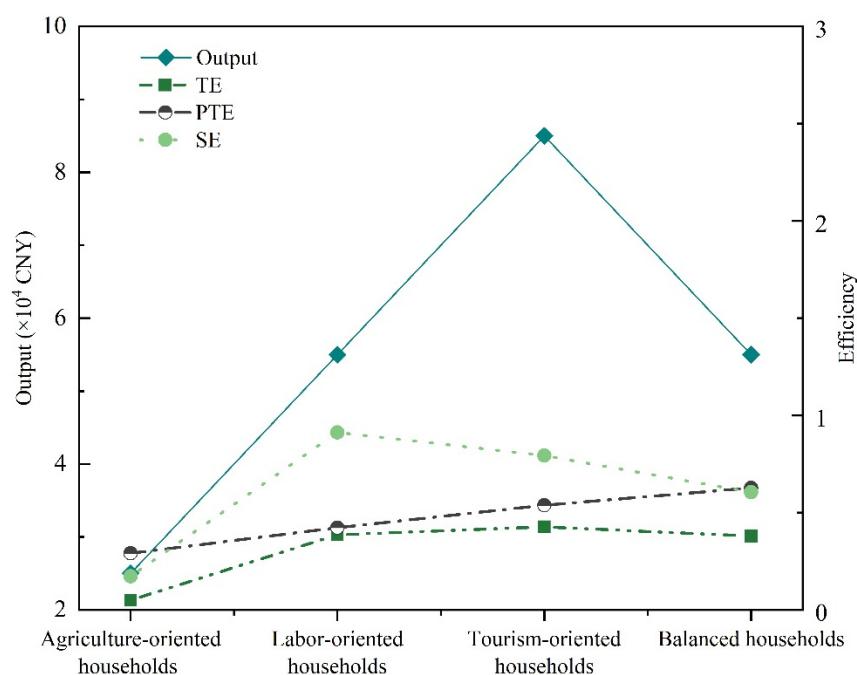
labor-oriented and balanced households, respectively; the labor-oriented households are mainly divided into long-term and short-term employment. Long-term working farmers go mainly to Guangdong Province, one of the most economically developed regions in China; short-term working farmers mainly look for local job opportunities; their nature of work is temporary and occasional, and their income is fluctuating. Some balanced households supplement their livelihood income with seasonal farming work and tourism business, while others rent out their land or houses year-round and engage in other livelihood activities. Agriculture-oriented households have relatively abundant natural capital and high psychological capital; however, the rest of their capital is in a low range. They lack relevant skills, financial and physical capital, and conditions related to tourism activities, and rely more on natural capital for traditional farming.



**Figure 5.** Livelihood capital characteristics of rural households with different types of livelihood strategies.

### 5.1.2. Livelihood Strategies and Livelihood Output

As shown in Figure 6, rural households with different livelihood categories in the Yulong River basin have significant differences in household output, with the average difference between the highest and lowest output reaching CNY 70,000. Tourism-oriented households (CNY 80,000–90,000) > labor-oriented households = balanced households (CNY 50,000–60,000) > agriculture-oriented households (CNY 20,000–30,000). Except for agriculture-oriented households, the difference in the livelihood efficiency of the rural households with other livelihood categories is small, and they are all in the middle to low level. Specifically, the pattern of livelihood efficiency for each type of rural household is tourism-oriented households (0.4267) > labor-oriented households (0.3860) > balanced households (0.3795) > agriculture-oriented households (0.0505). It implies that the higher the degree of non-farming livelihood strategy, the higher the livelihood efficiency and livelihood output of rural households. This is directly related to local land-use fragmentation, outdated farming techniques, and poor agricultural infrastructure.



**Figure 6.** Livelihood efficiency and output of rural households with different livelihood types.

### 5.1.3. Livelihood Capital and Livelihood Output

Livelihood efficiency is a measure of how rural households allocate and use capital for economic outcomes [9]. The mean TE values of household production activities in the study area (0.3705) are at a low level, where the SE value (0.7752) is significantly higher than the PTE (0.4779), as shown in Table 7. This result indicates that technical efficiency is more constrained by pure technical efficiency, and the actual output of households' livelihood capital utilization only accounts for 37.05% of the ideal output, and there is still much room for improvement. From the grounded theory results, it is clear that most households have not received professional training and guidance when choosing livelihood capital inputs, and the technical threshold for engaging in production activities is not high. This in turn exhibits a very limited level of production management and technology, resulting in suboptimal livelihood output results.

**Table 7.** Average and distribution of rural households' livelihood efficiency.

Grouping of Efficiency Values	TE			PTE			SE		
	Average Efficiency	Number	%	Average Efficiency	Number	%	Average Efficiency	Number	%
Low-efficiency group ( $0 \leq m \leq 0.5$ )	0.3694	88	44	0.1567	70	35	0.0442	10	5
Medium efficiency group ( $0.5 \leq m \leq 0.7$ )	0.5997	37	18.5	0.5622	23	11.5	0.6074	14	7
High-efficiency group ( $0.7 \leq m \leq 0.99$ )	0.8282	28	14	0.8079	22	11	0.9059	129	64.5
Ultra-high Efficiency Group ( $0.99 \leq m \leq 1$ )	1	47	23.5	1	85	42.5	1	47	23.5
Average value		0.3705			0.4779			0.7752	
Yulong River *	Midstream				0.2790			0.6859	
	Downstream				0.5037			0.8852	

\* According to the field investigation, rural households participating in tourism business activities in the Yulong River basin are mainly distributed in the middle and downstream; therefore, only the data of rural households in the middle and downstream are collected.

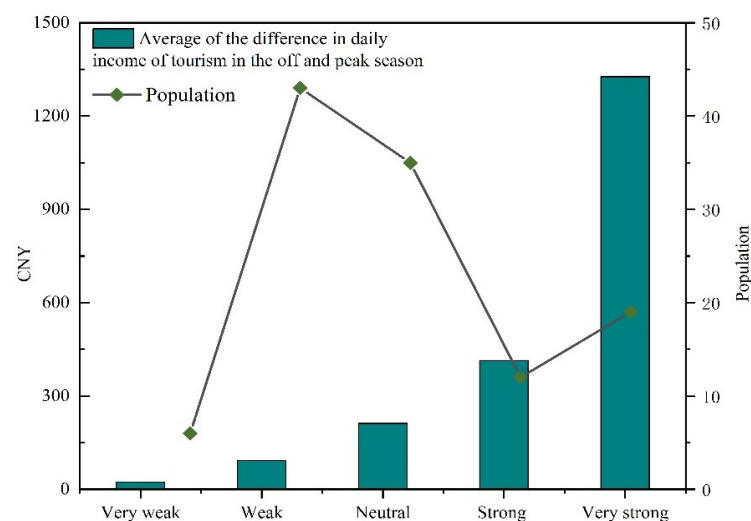
In terms of the spatial distribution pattern and characteristics of household livelihood efficiency, the TE value (0.5691) and SE value (0.8852) of rural households in the downstream of the Yulong River basin are higher than those in the middle reaches, implying that there are significant differences in the livelihood efficiency of rural households in the middle and lower reaches. This result corroborates the conclusion of the qualitative analysis. Accordingly, it can be seen that the difference is due to a combination of reasons, such



as geographic location and environment, policy winds, and market operating conditions. In terms of geographic location and environment, the distribution of tourist attractions in the middle reaches of the river is relatively scattered, the flow of tourists is low, and tourism as a livelihood is not very appealing, which leads to rural households preferring labor or farming livelihood strategies in this river segment. However, the downstream river segment is rich in tourist attractions, the flow of tourists is more abundant, rural households are optimistic about the prospects of rural tourism, and the concentration of tourism operations is high. From the perspective of market operation, the rafting rights of different river sections in the Yulong River scenic sites are owned by different villages and managed by different operating companies with unified pricing and divided interests. The difference in natural scenery of various river sections and different operating capacities of companies lead to differences in the economic benefits of tourism and degree of tourism development, which affects the income and welfare of local villagers. In addition, policy and the level of economic development also have an impact on livelihood efficiency. For example, the village of Jiwodu in the downstream river section is a national demonstration site for rural revitalization. Moreover, the policy supports village renovation and attracts social capital, which helps the village gain higher livelihood efficiency.

### 5.2. Seasonality Affects Livelihood Capital and Livelihood Strategies

Seasonality is one of the typical characteristics of tourism [49], and its impact on the livelihood outcomes of rural households is mainly reflected in the difference between their off and peak season's daily income from tourism. In this study, the statistical analysis of the questionnaire data divided the difference between rural households' off and peak seasons' daily income from tourism into five groups, including CNY 0~50, CNY 51~150, CNY 151~300, CNY 301~600, and more than CNY 600, as shown in Figure 7. The difference between off and peak seasons' daily tourism income of rural households involved in tourism business in the study area is mainly concentrated in CNY 51~300, with the number of people accounting for 68% of the total. In addition, 27% of rural households can reach CNY 400~1300 in terms of the difference between off and peak seasons' daily tourism income. This indicates that seasonality not only has a significant impact on households' livelihood outcomes but also shows obvious differences in the degree of impact for different rural households. The difference between the off and peak seasons' daily income of rural households who chose tourism practices, such as catering and accommodation, was greater than that of rural households who chose tourism practices, such as ticketing, retailing of small goods, and bamboo rafting.



**Figure 7.** Group distribution of the difference between off and peak seasons' daily tourism income of rural households involved in tourism operations.

The difference between off and peak seasons' daily tourism income is also the most direct manifestation of rural households' perception of tourism seasonality. For this reason, this study uses five clusters of rural households' off and peak seasons' daily tourism income to characterize the subjective perceptions of seasonality among rural households involved in tourism operations, corresponding to five major perceptual dimensions: very weak, weak, neutral, strong, and very strong (Table 8).

**Table 8.** Comparison of differences in livelihood capital of rural households with different seasonal perceptiveness (M  $\pm$  SD).

Project	Natural Capital	Physical Capital	Human Capital	Social Capital	Financial Capital	Psychological Capital
1. Very weak ( <i>n</i> = 6)	3.33 $\pm$ 3.15	3.54 $\pm$ 0.64	12.13 $\pm$ 3.52	2.17 $\pm$ 0.68	3.33 $\pm$ 0.68	2.27 $\pm$ 1.15
2. Weak ( <i>n</i> = 43)	2.62 $\pm$ 2.90	4.06 $\pm$ 0.76	9.88 $\pm$ 3.02	1.88 $\pm$ 0.74	3.06 $\pm$ 0.95	2.43 $\pm$ 0.92
3. Neutral ( <i>n</i> = 35)	1.97 $\pm$ 1.71	4.03 $\pm$ 0.70	10.36 $\pm$ 3.32	2.01 $\pm$ 0.92	3.03 $\pm$ 0.95	2.37 $\pm$ 1.09
4. Strong ( <i>n</i> = 12)	3.20 $\pm$ 2.61	4.53 $\pm$ 0.87	12.04 $\pm$ 3.91	1.88 $\pm$ 0.61	3.08 $\pm$ 1.14	3.05 $\pm$ 1.30
5. Very strong ( <i>n</i> = 19)	3.42 $\pm$ 2.62	4.75 $\pm$ 0.73	11.12 $\pm$ 3.14	2.16 $\pm$ 0.78	2.34 $\pm$ 1.09	3.23 $\pm$ 1.31
F	1.334	5.126	1.615	0.55	2.284	2.898
<i>p</i>	0.262	0.001 **	0.176	0.699	0.065	0.025 *
Multiple Comparison		4 > 3, 1 5 > 3, 1, 2			5 > 2 5 > 3	

\*: 95% significance, \*\*: 99% significance.

Tourism seasonality is one of the important factors that causes rural households' livelihood vulnerability [49], and exploring the path of seasonality's influence on households' livelihood capital and livelihood strategies is a key step to finding scientific and reasonable ways to avoid seasonal risk for rural households' livelihood. The first step is to conduct a differential analysis of rural households' livelihood capital with different seasonal perceptions. The ANOVA revealed that there were significant differences ( $p < 0.05$ ) in physical capital and psychological capital in different seasonal perceptiveness groupings, and no significant differences ( $p > 0.05$ ) in natural capital, human capital, social capital, and financial capital dimensions. After multiple comparisons, the mean scores of groups with significant differences in physical capital dimensions were "strong > neutral; very strong > neutral; strong > weak; very strong > weak; very strong > very weak"; while the groups with significant differences in psychological capital dimensions were "very strong > neutral; very strong > very weak". In other words, the stronger the seasonal perception, the more significant the differences between physical and psychological capital groups of rural households.

Second, a total of 97 households were screened from the sample of rural households who participated in the tourism business and also continued with it in the off-season. The rural households were divided into four categories based on different combinations of livelihood strategies: insisting on tourism business livelihood strategy in the off-season, insisting on tourism business in the off-season and supplementing their livelihoods with labor, insisting on tourism business in the off-season and supplementing their livelihoods with farming, and insisting on tourism business in the off-season and supplementing their livelihoods with both labor and farming. The statistical analysis found that there were some differences in the livelihood capital characteristics and the livelihood efficiency of rural households who adopted different combinations of livelihood strategies in coping with tourism seasonality (Table 9). Rural households who chose a combination of multiple livelihood strategies tended to have relatively abundant livelihood capital, and the psychological capital of these farmers was low. However, rural households who chose only a single livelihood strategy of tourism operation in the off-season usually had relatively good psychological expectations of livelihood outcomes and good livelihood capital status. In terms of livelihood efficiency, the livelihood efficiency of rural households with a single

tourism livelihood strategy was the lowest, and the livelihood efficiency values of rural households with multiple livelihood strategy combinations were all at a good level. Moreover, the livelihood efficiency of combinations of two livelihood strategies was greater than that of combinations of three livelihood strategies. This implies that diversified production methods are good for avoiding livelihood risks brought by tourism seasonality. However, under the optimal livelihood efficiency solution, rural households choose a limited combination of livelihood methods that suits them, as excessively diverse combinations of livelihood methods may lead to fragmented resource use and lower livelihood efficiency.

**Table 9.** Seasonal livelihood strategies and farmers' livelihood characteristics and efficiency distribution.

Types of Livelihood Strategies	Insisting on Tourism Business in the Off-Season	Insisting on Tourism Business in the Off-Seasons + Labor	Insisting on Tourism Business in the Off-Season + Farming	Insisting on Tourism Business in the Off-Season + Labor + Farming	
Number of rural households (%)	39 (40%)	41 (43%)	7 (7%)	10 (10%)	
Livelihood Index	Natural capital	0.0540	0.0276	0.1421	0.0775
	Physical capital	0.4585	0.4692	0.4796	0.4181
	Human capital	0.5385	0.5429	0.5695	0.4872
	Social capital	0.1920	0.1497	0.2382	0.2284
	Financial capital	0.4484	0.4902	0.3312	0.5869
	Psychological capital	0.1743	0.1529	0.1388	0.1175
	Total	1.8657	1.8325	1.8994	1.9155
	TE	0.3364	0.6346	0.6322	0.5893
	PTE	0.4564	0.7316	0.7261	0.6688
	SE	0.7371	0.8674	0.8707	0.8811

## 6. Discussion

The results of the grounded theory analysis show that psychological capital is an important component of the livelihood capital of rural households in rural tourism destinations. This result extends the DFID's definition of livelihood capital [20]. Few scholars have incorporated psychological capital into research on sustainable rural tourism livelihoods. In the context of sustainable livelihoods, psychological capital refers to positive psychological states that farmers rely on, including their abilities, efforts, determination, and hopes, to achieve sustainable livelihoods [68], with core structures including hope, self-efficacy, resilience, and optimism [69]. Psychological capital has a positive effect on farmers' off-farm entrepreneurial behavior [70] and is the most important subjective factor that promotes local farmers' participation in tourism operations. The results of the grounded theory analysis show that most farmers who chose to participate in tourism operations had strong expectations of creating a better life during the entrepreneurial period and held an optimistic view of the prospects of local tourism development. Surprisingly, this study finds that tourism-oriented households had the lowest psychological capital compared to other livelihood types of rural households. Based on the results of the grounded theory analysis, it can be inferred that this is caused by the uncertainty of tourism returns due to seasonality. However, psychological capital can significantly affect the organizational resilience of small tourism enterprises [71]. Under the multiple influences of seasonality, COVID-19, and natural disasters, the psychological capital of farmers participating in tourism management is relatively low. This will discourage them from taking proactive action to address and recover from livelihood risks [72]. In addition, psychological capital is the most important factor affecting the subjective well-being of rural households with non-agricultural livelihoods [73]. Under the influence of seasonality, farmers involved in tourism operations in the Yulong River basin have a lower return on investment and unstable returns. Meanwhile, farmers assume greater psychological stress and risk and have negative attitudes toward their future livelihoods, which in turn leads to lower livelihood satisfaction.

The results of the quantitative analysis show that the overall livelihood efficiency of rural households in the Yulong River basin is at a low level. In this basin, local farmers are involved in tourism work in different ways and to varying degrees, such as farm family resorts and bamboo rafting. However, their tourism business management level is limited by human capital. The lack of technology, management skills, and adequate manpower puts local farmers at a disadvantage vis-à-vis tourism elites from out of town [35]. This confirms the view of Westoby et al. [8] that realizing sustainable rural tourism livelihood requires developing human capital and improving the level of rural tourism management to promote the bottom-up development of local rural tourism [74]. Compared to the other three livelihood types, tourism-oriented households have the highest livelihood capital and higher livelihood efficiency. These results support the conclusions of many previous studies, showing that rural tourism does play a positive role in increasing employment opportunities for rural households [75], broadening their income sources [76], and improving their livelihoods [77,78]. However, the improvement in local rural household livelihoods by rural tourism is not significant due to seasonality [11]. The low level of livelihood efficiency across the region suggests that a high dependence on tourism livelihoods may undermine the sustainability of local livelihoods [79,80]. In addition, according to the interview results, COVID-19 prolonged the length of the local tourism's off-season, which affected farmers who are highly dependent on tourism for their livelihoods [81].

Farmers' perceptions of seasonality affect their allocation of livelihood capital and choice of livelihood strategies significantly. The results of the grounded theory analysis indicate that during the peak season, rural households invest more psychological, physical, financial, social, and human capital in rural tourism. In the off-season, farmers choose farming to supplement their income, and fields that were neglected or even abandoned during the peak season are reused so that natural capital is greater in the off-season than in the peak season. A new finding is that psychological capital and physical capital vary the most among farmers with different seasonal perceptiveness. This may be because farmers with stronger seasonal perceptiveness are psychologically prepared and planned to cope with seasonality [82], and their physical capital is abundant enough to withstand off-season tourism. In terms of the choice of livelihood strategies, increasing investment in personnel, working hours, and tourism management assets is the unanimous choice of farmers involved in tourism operations during the peak season [82]. In the off-season, farmers involved in tourism operations choose other work options to supplement their income while maintaining their tourism work [21]. Despite the sharp decline in tourists and oversupply in the rural tourism market during the off-season, most farmers choose to stick to their existing tourism jobs, which is consistent with the findings of previous studies [83]. In addition, this study finds that livelihood strategies with a combination of two work practices were more efficient than those with a combination of three work practices during the off-season. This result further supports the findings by Su et al. [23], suggesting that while diversified livelihood strategies help households to resist livelihood risks, such as seasonality, over-spreading resources and inefficient participation in multiple livelihoods can reduce overall livelihood efficiency.

The case of the Yulong River Basin in China, which has developed into a well-established rural tourism destination, is typical. The location of the Yulong River Basin falls within the World Heritage Property of South China Karst. It is surrounded by a wide variety of tourism resources. The large number of tourists has promoted the rapid development of local rural tourism. The proportion of local households involved in tourism is high, and the impact of seasonality on households' livelihoods is direct and significant. There's reason to believe the impact of seasonality on household's livelihoods in this region is also applicable to other rural tourism destinations of the same type and similar level of development. However, the impact of seasonality remains to be studied for rural tourism destinations in other stages of development.



## 7. Conclusions

This study applied a mixed research approach, using qualitative modeling and quantitative tests to analyze the livelihoods of rural households in rural tourism destinations under the influence of seasonality, to provide a reference for improving rural household livelihood efficiency and reducing seasonal livelihood risks through a survey of households in rural tourism destinations in the Yulong River basin, China. The results show that: (1) the sustainable livelihood model of rural households in rural tourism destinations under the influence of seasonality includes five parts: rural tourism development environment, seasonality, livelihood capital, livelihood strategies, and livelihood outcomes; (2) the overall livelihood efficiency of the Yulong River basin is at a low level, in which the scale efficiency is significantly higher than the technical efficiency, and the downstream livelihood efficiency is significantly higher than the midstream livelihood efficiency; (3) in rural tourism destinations, the livelihood capital index and livelihood efficiency of tourism-oriented households are higher than that of the other three types of rural households; and (4) the impact of seasonality on the livelihoods of households in rural tourism areas is reflected in three aspects: livelihood outcomes, livelihood capital, and livelihood strategies. First, tourism seasonality leads to a significant difference between rural households' off and peak seasons' income, which is concentrated in the range of CNY 51–1300. Second, the strength of rural households' perception of seasonality significantly affects their allocation and utilization of livelihood capital. The stronger the rural households' perception of seasonality, the more significant the differences in their physical and psychological capital groups. Finally, the strength of rural households' perception of seasonality significantly affects their work patterns during the off and peak seasons. During the peak season, rural households increase their investment in time, family laborers, and tourism business assets. In the off-season, rural households mostly stick to tourism work and use multiple livelihoods to supplement their income. Diversified livelihood strategies can improve the efficiency of rural households' livelihoods in the off-season; however, the over-diversification of resources leads to the opposite result.

The theoretical contributions of this study are as follows: First, it focuses on seasonality, a new perspective in sustainable livelihoods research, and concentrates on the impact of seasonality as a factor that makes rural households' livelihoods vulnerable. Through qualitative and quantitative research methods, we systematically explore the sustainable livelihoods of rural households under the influence of tourism seasonality, which enriches and expands the existing research. Second, based on the grounded theory, we innovatively construct a model of sustainable livelihoods for rural tourism households under the influence of seasonality and develop the SLF proposed by DFID. At the same time, the connotation of livelihood capital is expanded, and it is found that psychological capital is an important component of the livelihood capital of rural tourism households. Third, an innovative concept of "livelihood efficiency" is introduced to measure the sustainable livelihoods of rural households, and the linkages among livelihood capital, livelihood strategies, and livelihood outcomes of rural tourism households are systematically analyzed from the perspective of efficiency.

Seasonality has become one of the key factors affecting the business performance of tourism enterprises and one of the central themes in the development of tourism policy concerns by government departments [48]. The findings of this research aim to provide practical references for rural households in watershed-based rural tourism destinations to enhance their livelihood efficiency and reduce seasonal livelihood risks. First, to enhance the livelihood capital of rural households and strengthen the capacity building of livelihood dynamics and endogenous participation cultivation, this study finds that the level of production technology is the main factor that restricts the overall livelihood efficiency in the study area. Skills, financial capital, and physical capital are the main constraints for rural households' participation in tourism. Therefore, the government should organize free vocational skills training to enhance the tourism hospitality service capacity of rural households and provide intellectual support for tourism operations. The government

should establish a financial support mechanism to provide financial support for small and micro rural tourism enterprises operated by local rural households to solve their financing dilemmas. Second, the authorities should strengthen the integration of culture and tourism to promote the sustainable development of rural tourism. Studies have shown that culture is one of the more effective means to offset the effects of seasonality [84]. While vigorously developing natural landscapes, watershed-based rural tourism destinations should also focus on discovering characteristic vernacular cultures, promoting rural civilization, and enhancing the cultural capital of tourism sites to reduce the impact of seasonality on the sustainability of local tourism and livelihoods. Finally, the government should encourage local rural households to continuously innovate tourism patterns, enrich rural tourism programs, and create novel festivals and events in the off-season to stimulate tourism demand. Moreover, rural households should be encouraged to engage in online marketing and maintain revenue during the off-season through room promotions, dining discounts, and the online sales of tourism specialties.

There are some limitations of this research. Due to the limitation of data collection, this research only conducted a static study. Therefore, in the future, we will consider collecting data from multiple time points to make a dynamic observation of the livelihood sustainability of rural households in the study area under the influence of seasonality. The livelihood development level of rural households in watershed-based rural tourism destinations is affected by geographical location, and there may be significant differences in the upper, middle, and lower reaches. The future comparative analysis of rural households' livelihoods levels at the spatial level can be conducted by combining geographic methods.

**Author Contributions:** Conceptualization, Z.S.; methodology, Y.Z. and R.W.; validation, Z.S., Y.Z., and R.W.; formal analysis, Y.Z. and R.W.; investigation, Y.Z., R.W. and K.Y.; resources, Z.S., Y.Z. and R.W.; data curation, R.W. and Y.Z.; writing—original draft preparation, R.W. and Y.Z.; writing—review and editing, Z.S. and T.K.; visualization, Z.S. and R.W.; supervision, Z.S.; project administration, Z.S., Y.Z. and R.W.; funding acquisition, Z.S. All authors have read and agreed to the published version of the manuscript.

**Funding:** The National Natural Science Foundation of China, grant number 71764003; and Humanities and Social Science Foundation of Ministry of Education of China, grant number 19YJA790020 and 17YJCZH150; and Key Research Base of Humanities and Social Sciences in Guangxi Universities, grant number 2022GDSIQM12.

**Institutional Review Board Statement:** Ethical review and approval were waived for this study, due to no existing ethical concerns or conflicts of interests.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The data presented in this study are available on request from the corresponding author. The data are not publicly available due to privacy restrictions.

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

## References

1. Xue, L.; Kerstetter, D. Rural Tourism and Livelihood Change: An Emic Perspective. *J. Hosp. Tour. Res.* **2019**, *43*, 416–437. [[CrossRef](#)]
2. Ma, X.; Wang, R.; Dai, M.; Ou, Y. The influence of culture on the sustainable livelihoods of households in rural tourism destinations. *J. Sustain. Tour.* **2021**, *29*, 1235–1252. [[CrossRef](#)]
3. Huang, L.; Yang, L.; Tuyền, N.T.; Colmekcioglu, N.; Liu, J. Factors influencing the livelihood strategy choices of rural households in tourist destinations. *J. Sustain. Tour.* **2022**, *30*, 875–896. [[CrossRef](#)]
4. He, A.L.; Yang, X.J.; Chen, J.; Wang, Z.Q. Impact of Rural Tourism Development on Farmer's Livelihoods—A Case Study of Rural Tourism Destinations in Northern Slope of Qinling Mountains. *Econ. Geogr.* **2014**, *34*, 174–181. (In Chinese)
5. Su, M.M.; Wall, G.; Wang, Y.; Jin, M. Livelihood sustainability in a rural tourism destination—Hetu Town, Anhui Province, China. *Tour. Manag.* **2019**, *71*, 272–281. [[CrossRef](#)]
6. Bires, Z.; Raj, S. Tourism as a pathway to livelihood diversification: Evidence from biosphere reserves, Ethiopia. *Tour. Manag.* **2020**, *81*, 104159. [[CrossRef](#)]
7. Su, M.; Wall, G.; Xu, K. Tourism-Induced Livelihood Changes at Mount Sanqingshan World Heritage Site, China. *Environ. Manag.* **2016**, *57*, 1024–1040. [[CrossRef](#)]

8. Praptiwi, R.A.; Maharja, C.; Fortnam, M.; Chaigneau, T.; Evans, L.; Garniati, L.; Sugardjito, J. Tourism-Based Alternative Livelihoods for Small Island Communities Transitioning towards a Blue Economy. *Sustainability* **2021**, *13*, 6655. [CrossRef]
9. Xu, Z.; Sun, B. Influential mechanism of farmers' sense of relative deprivation in the sustainable development of rural tourism. *J. Sustain. Tour.* **2020**, *28*, 110–128. [CrossRef]
10. Senbeto, D.L.; Hon, A.H.Y. A Dualistic Model of Tourism Seasonality: Approach–Avoidance and Regulatory Focus Theories. *J. Hosp. Tour. Res.* **2019**, *43*, 734–753. [CrossRef]
11. Lasso, A.; Dahles, H. Are tourism livelihoods sustainable? Tourism development and economic transformation on Komodo Island, Indonesia. *Asia Pac. J. Tour. Res.* **2018**, *23*, 473–485. [CrossRef]
12. Qiang, M. Does climate drive tourism seasonality in cultural destinations? A comparative study. *Curr. Issues Tour.* **2020**, *23*, 2756–2761. [CrossRef]
13. Cuccia, T.; Rizzo, I. Tourism seasonality in cultural destinations: Empirical evidence from Sicily. *Tour. Manag.* **2011**, *32*, 589–595. [CrossRef]
14. Ridderstaat, J.; Oduber, M.; Croes, R.; Nijkamp, P.; Martens, P. Impacts of seasonal patterns of climate on recurrent fluctuations in tourism demand: Evidence from Aruba. *Tour. Manag.* **2014**, *41*, 245–256. [CrossRef]
15. Ridderstaat, J.; Croes, R. A Framework for Classifying Causal Factors of Tourism Demand Seasonality: An Interseason and Intra-season Approach. *J. Hosp. Tour. Res.* **2020**, *44*, 733–760. [CrossRef]
16. Saito, H.; Romão, J. Seasonality and regional productivity in the Spanish accommodation sector. *Tour. Manag.* **2018**, *69*, 180–188. [CrossRef]
17. Duro, J.A. Seasonality of tourism: A new decomposition. *Tour. Econ.* **2018**, *24*, 615–621. [CrossRef]
18. Ferrante, M.; Lo Magno, G.L.; De Cantis, S. Measuring tourism seasonality across European countries. *Tour. Manag.* **2018**, *68*, 220–235. [CrossRef]
19. Pham, L.D.Q.; Driml, S.; Walters, G. Managing seasonality in rural destinations: A case study of South Gippsland—Australia. *Tour. Recreat. Res.* **2018**, *43*, 445–455. [CrossRef]
20. DFID. *Sustainable Livelihoods Guidance Sheets*; Department for International Development, DFID: London, UK, 1999; p. 445.
21. Su, Z.; Aaron, J.R.R.; Guan, Y.; Wang, H. Sustainable Livelihood Capital and Strategy in Rural Tourism Households: A Seasonality Perspective. *Sustainability* **2019**, *11*, 4833. [CrossRef]
22. Liu, Y.; Shi, H.; Su, Z.; Kumail, T. Sustainability and Risks of Rural Household Livelihoods in Ethnic Tourist Villages: Evidence from China. *Sustainability* **2022**, *14*, 5409. [CrossRef]
23. Su, F.; Chang, J.; Shang, H. Coupling Coordination Analysis of Livelihood Efficiency and Land Use for Households in Poverty-Alleviated Mountainous Areas. *Land* **2021**, *10*, 1115. [CrossRef]
24. Chambers, R.; Conway, G. *Sustainable Rural Livelihoods: Practical Concepts for the 21st Century*; Institute of Development Studies (UK): Brighton, UK, 1992. Available online: <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/775> (accessed on 15 May 2022).
25. Scoones, I. *Sustainable Rural Livelihoods: A Framework for Analysis*. Institute for Development Studies Working Paper 72. 1998. Available online: <https://www.ids.ac.uk/publications/sustainable-rural-livelihoods-a-framework-for-analysis/> (accessed on 15 May 2022).
26. Wang, R.; Dai, M.L.; Ou, Y.H.; Ma, X.L. Measurement of rural households' livelihood assets with cultural capital intervention: A case study of Likeng village in Wuyuan. *Tour. Trib.* **2021**, *36*, 56–66. (In Chinese)
27. Cui, X.; Chen, J.; Yang, X. Research on Sustainable Livelihoods Impacted by Rural Tourism A Case Study of Ankang in Qinling and Bashan Mountainous Areas. *Mt. Res.* **2017**, *35*, 85–94. (In Chinese)
28. Ya-juan, L.L.; Hu, Y.U.; Tian, C.; Jing, H.U.; Hai-yang, C. Livelihood changes and evolution of upland ethnic communities driven by tourism: A case study in Guizhou Province, southwest China. *J. Mt. Sci.-Engl.* **2016**, *13*, 1313–1332.
29. Shen, F.; Hughey, K.F.D.; Simmons, D.G. Connecting the Sustainable Livelihoods Approach and Tourism: A Review of the Literature. *J. Hosp. Tour. Manag.* **2008**, *15*, 19–31. [CrossRef]
30. Nyaupane, G.P.; Poudel, S. Linkages among biodiversity, livelihood, and tourism. *Ann. Tour. Res.* **2011**, *38*, 1344–1366. [CrossRef]
31. Guo, H.; Yang, Y.X. Research review of sustainable livelihood of rural tourism. *Tour. Trib.* **2020**, *35*, 134–148. (In Chinese)
32. Kheiri, J.; Nasihatkon, B. The Effects of Rural Tourism on Sustainable Livelihoods (Case Study: Lavij Rural, Iran). *Mod. Appl. Sci.* **2016**, *10*, 10–22. [CrossRef]
33. Muresan, I.C.; Oroian, C.F.; Harun, R.; Arion, F.H.; Porutiu, A.; Chiciudean, G.O.; Todea, A.; Lile, R. Local Residents' Attitude toward Sustainable Rural Tourism Development. *Sustainability* **2016**, *8*, 100. [CrossRef]
34. Hall, C.M. Pro-Poor Tourism: Do 'Tourism Exchanges Benefit Primarily the Countries of the South'? *Curr. Issues Tour.* **2007**, *10*, 111–118. [CrossRef]
35. Scheyvens, R. Exploring the Tourism-Poverty Nexus. *Curr. Issues Tour.* **2007**, *10*, 231–254. [CrossRef]
36. Lapeyre, R. Community-based tourism as a sustainable solution to maximise impacts locally? The Tsiseb Conservancy case, Namibia. *Dev. S. Afr.* **2010**, *27*, 757–772. [CrossRef]
37. Mbaiwa, J.E. Enclave tourism and its socio-economic impacts in the Okavango Delta, Botswana. *Tour. Manag.* **2005**, *26*, 157–172. [CrossRef]
38. Manyara, G.; Jones, E. Community-based Tourism Enterprises Development in Kenya: An Exploration of Their Potential as Avenues of Poverty Reduction. *J. Sustain. Tour.* **2007**, *15*, 628–644. [CrossRef]
39. Tao, T.C.H.; Wall, G. Tourism as a sustainable livelihood strategy. *Tour. Manag.* **2009**, *30*, 90–98. [CrossRef]

40. Butler, R.W. Seasonality in Tourism: Issues and Problems. In *Tourism: State of the Art*; Seaton, A.V., Ed.; Wiley Chichester, Wiley & Sons: Hoboken, NJ, USA, 1994; pp. 332–339.
41. Feng, X.G.; Sun, X.D.; Yu, Q.Y. Anti-season Tourism and Tourism Seasonality Mitigation: Current Research and Relevant Implications. *Tour. Trib.* **2014**, *29*, 92–100. (In Chinese)
42. Rudihartmann. Tourism, seasonality and social change. *Leis. Stud.* **1986**, *5*, 25–33. [[CrossRef](#)]
43. Butler, R.W. Chapter 2—Seasonality in Tourism: Issues and Implications. In *Seasonality in Tourism*; Baum, T., Lundtorp, S., Eds.; Pergamon: Oxford, UK, 2001; pp. 5–21.
44. Baum, T.; Lundtorp, S. Chapter 1—Seasonality in Tourism: An Introduction. In *Seasonality in Tourism*; Baum, T., Lundtorp, S., Eds.; Pergamon: Oxford, UK, 2001; pp. 1–4.
45. Deery, M.; Jago, L.; Fredline, L. Rethinking social impacts of tourism research: A new research agenda. *Tour. Manag.* **2012**, *33*, 64–73. [[CrossRef](#)]
46. Song, H.; Li, G. Tourism demand modelling and forecasting—A review of recent research. *Tour. Manag.* **2008**, *29*, 203–220. [[CrossRef](#)]
47. Zhong, J.; Zhang, J.; Li, D.H.; Lu, S.; Zhao, Y.; Chen, Y.J. A Comparative Research on Seasonality Characteristics of Tourist Flows to the Historic Culture Village (Town)—Examples of Xidi and Zhouzhuang. *Hum. Geogr.* **2007**, *22*, 68–71. (In Chinese)
48. Koenig-Lewis, N.; Bischoff, E.E. Developing Effective Strategies for Tackling Seasonality in the Tourism Industry. *Tour. Hosp. Plan. Dev.* **2010**, *7*, 395–413. [[CrossRef](#)]
49. Kastenholz, E.; Lopes De Almeida, A. Seasonality in rural tourism—the case of North Portugal. *Tour. Rev.* **2008**, *63*, 5–15. [[CrossRef](#)]
50. Butler, R. Seasonality in tourism: Issues and implications. *Tour. Rev.* **1998**, *53*, 18–24. [[CrossRef](#)]
51. Wang, J.H.; Liu, S.Q. Behavior influence mechanisms for household investment in homestays in ethnic villages: The case of Muti village, Sichuan province. *Tour. Trib.* **2021**, *36*, 43–55. (In Chinese)
52. Sharples, R. Rural tourism and the challenge of tourism diversification: The case of Cyprus. *Tour. Manag.* **2002**, *23*, 233–244. [[CrossRef](#)]
53. Tosun, C. Host perceptions of impacts: A Comparative Tourism Study. *Ann. Tour. Res.* **2002**, *29*, 231–253. [[CrossRef](#)]
54. Glaser, B.; Strauss, A. Strategies For. Qualitative Research. *Discov. Grounded Theory* **1967**, *3*, 2–6.
55. Anne, S.T.; Zhang, Z.X. Management and Building Theory: The Strategies of Research on Chinese Native Management. *J. Chongqing Univ. Soc. Sci. Ed.* **2011**, *17*, 1–7. (In Chinese)
56. Hyde, K.F.; Olesen, K. Packing for touristic performances. *Ann. Tour. Res.* **2011**, *38*, 900–919. [[CrossRef](#)]
57. Yaqing, G. Evaluation of agricultural cultural heritage tourism resources based on grounded theory on example of ancient torrey grandis in Kuaiji mountain. *J. Environ. Prot. Ecol.* **2018**, *19*, 1193–1199.
58. Chen, Q.P.; Wu, J.J.; Ruan, W.Q. What fascinates you? Structural dimension and element analysis of sensory impressions of tourist destinations created by animated works. *Asia Pac. J. Tour. Res.* **2021**, *26*, 1038–1054. [[CrossRef](#)]
59. Strauss, A.; Corbin, J.M. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*; Sage Publications, Inc: Thousand Oaks, CA, USA, 1990; p. 270.
60. Li, H.Q.; Xu, N.; Xie, X.L. On the Efficiency and Influencing Factors of Farmers' Tourism Livelihoods in World Heritage Sites: A Case Study of Danxia Mt.in Guangdong Province. *Sci. Technol. Manag. Land Resour.* **2020**, *37*, 41–51. (In Chinese)
61. Cook, W.D.; Tone, K.; Zhu, J. Data envelopment analysis: Prior to choosing a model. *Omega* **2014**, *44*, 1–4. [[CrossRef](#)]
62. Charnes, A.; Cooper, W.W.; Rhodes, E. Measuring the efficiency of decision making units. *Eur. J. Oper. Res.* **1978**, *2*, 429–444. [[CrossRef](#)]
63. Shao, Y.; Yuan, X.; Yang, Y.; Ma, R. Impact of farmers'livelihood capital characteristics on agricultural production efficiency in Loess Hilly region. *J. Arid. Land Resour. Environ.* **2020**, *34*, 8–15. (In Chinese)
64. Li, Y.; Huang, D.; Zhu, Y.; He, W.; Li, J. Economic efficiency of farmer participation in tourism-led village poverty alleviation: A case study of key poverty-stricken villages in the Qinling-Daba Mountains. *Resour. Sci.* **2020**, *42*, 1827–1836. (In Chinese)
65. Corbin, J.M.; Strauss, A. Grounded theory research: Procedures, canons, and evaluative criteria. *Qual. Sociol.* **1990**, *13*, 3–21. [[CrossRef](#)]
66. Dillon, D.R. Grounded Theory and Qualitative Research. In *The Encyclopedia of Applied Linguistics*; Wiley-Blackwell (USA): Malden, MA, USA, 2012.
67. Shafiee, S.; Rajabzadeh Ghatari, A.; Hasanzadeh, A.; Jahanyan, S. Developing a model for sustainable smart tourism destinations: A systematic review. *Tour. Manag. Perspect.* **2019**, *31*, 287–300. [[CrossRef](#)]
68. Li, W.; Shuai, C.; Shuai, Y.; Cheng, X.; Liu, Y.; Huang, F. How Livelihood Assets Contribute to Sustainable Development of Smallholder Farmers. *J. Int. Dev.* **2020**, *32*, 408–429. [[CrossRef](#)]
69. Luthans, F.; Avolio, B.J.; Avey, J.B.; Norman, S.M. Positive Psychological Capital: Measurement and Relationship with Performance and Satisfaction. *Pers. Psychol.* **2007**, *60*, 541–572. [[CrossRef](#)]
70. Wang, J.; Cai, Z.J.; Ji, X. A Study on the Impact of Livelihood Capital on Rural Household Entrepreneurship- A Heterogeneous Farm Household Perspective Based on the Household Life Cycle. *World Agric.* **2022**, *3*, 109–122. (In Chinese)
71. Jalil, M.F.; Ali, A.; Ahmed, Z.; Kamarulzaman, R. The Mediating Effect of Coping Strategies Between Psychological Capital and Small Tourism Organization Resilience: Insights From the COVID-19 Pandemic, Malaysia. *Front. Psychol.* **2021**, *12*, 766528. [[CrossRef](#)]
72. Fang, S.E.; Prayag, G.; Ozanne, L.K.; de Vries, H. Psychological capital, coping mechanisms and organizational resilience: Insights from the 2016 Kaikoura earthquake, New Zealand. *Tour. Manag. Perspect.* **2020**, *34*, 100637. [[CrossRef](#)]
73. Yuan, D.B.; Chen, M.Q.; Liao, C.R.; Xie, X.X.; Liao, X.B.; Yao, D.L. Analysis of Subjective Well-being of Farmers with Land Transfer and Its Influencing Factors: From the Perspective of Livelihood Capitals. *China Land Sci.* **2019**, *33*, 25–33. (In Chinese)
74. Zhang, C.Q.; Min, Q.W.; Zhang, H.Z.; Zhang, Y.X.; Tian, M.; Xiong, Y. Analysis on the rural households livelihoods aiming at the conservation of agricultural heritage systems. *China Popul. Resour. Environ.* **2017**, *27*, 169–176.

75. Li, H.; Nijkamp, P.; Xie, X.; Liu, J. A New Livelihood Sustainability Index for Rural Revitalization Assessment—A Modelling Study on Smart Tourism Specialization in China. *Sustainability* **2020**, *12*, 3148. [[CrossRef](#)]
76. Su, M.M.; Wall, G.; Jin, M. Island livelihoods: Tourism and fishing at Long Islands, Shandong Province, China. *Ocean Coast. Manag.* **2016**, *122*, 20–29. [[CrossRef](#)]
77. Yi, X.; Xixi, T.; Lu, P.; Bhardwaj, A. Difference of Farmers' Livelihood Capital before and after Rural Tourism Development. *Comput. Intell. Neurosci.* **2022**, *2022*, 4138220. [[CrossRef](#)]
78. Qian, C.; Sasaki, N.; Jourdain, D.; Kim, S.M.; Shivakoti, P.G. Local livelihood under different governance of tourism development in China—A case study of Huangshan mountain area. *Tour. Manag.* **2017**, *61*, 221–233. [[CrossRef](#)]
79. Su, M.M.; Wall, G.; Xu, K. Heritage tourism and livelihood sustainability of a resettled rural community: Mount Sanqingshan World Heritage Site, China. *J. Sustain. Tour.* **2016**, *24*, 735–757. [[CrossRef](#)]
80. Pham, T.T.T. Tourism in marine protected areas: Can it be considered as an alternative livelihood for local communities? *Mar. Policy* **2020**, *115*, 103891. [[CrossRef](#)]
81. Spenceley, A. Pro-Poor Tourism's Evolution and Implications Arising from the COVID-19 Pandemic. *Tour. Plan. Dev.* **2022**, *19*, 13–25. [[CrossRef](#)]
82. Getz, D.; Nilsson, P.A. Responses of family businesses to extreme seasonality in demand: The case of Bornholm, Denmark. *Tour. Manag.* **2004**, *25*, 17–30. [[CrossRef](#)]
83. Goulding, P.J.; Baum, T.G.; Morrison, A.J. Seasonal Trading and Lifestyle Motivation. *J. Qual. Assur. Hosp. Tour.* **2005**, *5*, 209–238. [[CrossRef](#)]
84. Zhang, J.; Yu, Z.; Miao, C.; Li, Y.; Qiao, S. Cultural Tourism Weakens Seasonality: Empirical Analysis of Chinese Tourism Cities. *Land* **2022**, *11*, 308. [[CrossRef](#)]