

## Article

# Different Forms of Accommodation in Agritourism: The Role of Decoupled Farmer-Based Accommodation in the Ötztal Valley (Austria)

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**Abstract:** The general decline of mountain farming all over Europe suggests encouraging farmers to adapt their farm management and to diversify their activities into tourism. Therefore, this paper aims to investigate the impact of different types of farmer-based provision of accommodation on the preservation of the farm and the identification of farmers with farming activities. For our investigation in the case study area of Ötztal valley, Tyrol, Austria, we applied a mixed method approach. First, we developed a heuristic concept for categorizing the types of farms that offer farmer-based accommodation. The term ‘farmer-based’ refers to entities who are active in accommodation services and farming. We collected quantitative data in an online survey and carried out a qualitative focus group. Results reveal the importance of farmer-based accommodation even if decoupled from farm activities within the case study area. This type also supports, next to the ‘authentic’ form of farm-based tourism, the existing agricultural structure and contributes to the positive impact of mountain farming such as for the maintenance of multifunctional cultural landscapes, the provision of ecosystem services, and the viability of rural communities. Therefore, we suggest considering decoupled forms of farmer-based accommodation as agritourism.

**Keywords:** mountain farming; Alps; farm diversification; typology of agritourism

## 1. Introduction

Agriculture in Europe, especially in mountain regions, has evolved from mono-functionality by focusing solely on food production, into multifunctionality that contributes to diverse objectives of farming such as provision of ecosystem services and a decentralized settlement [1,2]. Mountain farms especially help maintain multifunctional landscapes, protective forests, and the management of Alpine pastures, which are sensitive ecosystems [3]. However, across European mountain regions, we see a decline in the number of farms, abandonment of land, and a turn away from traditional farming practices [4,5] Klicken Sie hier, um Text einzugeben. Mountain farming, with its function for food production but increasingly for leisure, recreation, and tourism as well as other economic activities, has an impact on maintaining vital rural areas. At the same time, the decline in the importance of food production stimulates, or even forces, farmers to adapt their farm management [6]. With this change, new possibilities to diversify farming structures and to generate additional income also arises [7], which can help preserve active farms and the viability of rural communities.

With the shift from productivism to multifunctional agriculture, which means moving from maximizing food production in quantity to shifting toward sustainable quality farming [8], the income from food production is decreasing in (European) developed countries. Compensation for the provision of ecosystem services makes up for the loss in income among European farmers. In addition,

pluri-activity and off-farm employment is on the rise to support farm income, especially on small farms [9]. Of this, activity related to tourism in all forms has become an important part of farm diversification in some regions, which is understood as the reorganization of farm resources to generate additional income [10], to battle the cost-price squeeze and to stem income fluctuation from food production [7]. Thus, findings from the Pyrenees indicate that farms shift their resources in time and labor away from agriculture in an effort to remain resilient [11].

The paper evaluates the phenomena of agritourism, especially at farmer-based accommodation on a regional scale. We use the term ‘farmer-based accommodation’ instead of ‘farm-based accommodation’ to indicate that the crucial element is, that a farmer provides the accommodation regardless of whether the guests are hosted on the farm itself or in other premises belonging to the farmer. In this case, different forms of farmer-based accommodation emerge, based on different strengths in coupling with farming. While other studies focus on an integrated (coupled) form of farmer-based accommodation, often referred to as agritourism [12–14], where tourism is closely intertwined with farming, we aspire to highlight the importance of a decoupled form of farmer-based accommodation, where farming and tourism are practiced in parallel without much interaction. We further argue that this type of agritourism has a significant impact on preserving the agricultural structures, especially in mountain regions and needs to be recognized as an important form of agritourism.

The paper starts with an overview on tourism and agricultural development followed by developing the heuristic concept applied. After providing an overview over the study site and its agricultural and touristic characteristics, the next section describes the methods used in the empirical analysis. The last section presents the results and discusses conclusions.

## 2. Tourism and Agricultural Development

Tourism is broadly perceived as an economic tool for regional development, especially in remote areas where other economic investment is difficult. Even if the aims of regional development differ, the main objective is to increase employment, technology, and development within a certain area. The phenomenon of rural tourism is not new as such, but an increase in the number of tourists since the 1970s has marked a new rural tourism [15]. Those rising numbers have contributed to the transformation of villages and rural societies. The tourism industry as a labor-intensive sector mainly creates a number of low paying, seasonal jobs and less qualified employment opportunities. However, the economic activity in tourism also impacts the employment pattern in other labor sectors of a region since enterprises and jobs are created and, with them, income [16,17]. About the effects on structural development, George et al. [17,18] state that tourism in rural areas constitutes a possibility to apply conservation and sustainability strategies to keep the rural character of an area, rather than being an urbanizing and development tool. Additional benefits of rural tourism are the provision of a supplementary income in farming, trade, and general economic growth as well as the opportunity to valorize specific quality-based food products and heightened social contact, especially in remote areas, plus a re-evaluation of heritage [19]. Furthermore, the integration of agriculture into tourism is just one facet of rural tourism since there are also rural areas not based on farming with a well-developed tourism industry [18].

With the lessening importance of food production, particularly in mountain areas, farm diversification became more important. A multifunctional farming system provides complementing products and services, which support a diversified, and, thus, less vulnerable, rural economy [4]. Especially along the Alpine Arc, tourism contributes significantly to rural livelihoods. The symbiosis of farming and tourism is generally expected to stabilize the ongoing structural change in rural areas [20,21] and to create public awareness of the values of farming in general [22]. In Alpine regions like Tyrol, Salzburg (Austria) and South Tyrol (Italy), agritourism helps maintain farming in mountain areas. The high proportion of agritourism goes hand in hand with a lower rate of farm abandonment (compared to similar regions without agritourism) [23–25]. The additional income generated through agritourism allows the modernization of farm infrastructure

as well as keeping the farm active [26] and able to absorb short-term shocks. On the contrary, in Norway (Oppdal), where cabins are rented out completely decoupled from the farm, income from tourism seems to encourage farm decline, as it seems economically more attractive than farming [5,24]. However, diversification serves as a strategy to increase household income and to reduce farm household risk [27], which makes it more resilient to the volatility of agricultural prices. Nevertheless, many studies [28–31], looking on the phenomenon and impact of agritourism, investigate it as a source of additional income, with the main focus of the farm still on agricultural production.

Simultaneously, agritourism has a positive impact on the empowerment of farm women [12], since they are most often in charge of the accommodation activity [32]. Nevertheless, tourism activities are not a panacea, since tourism in Austria happens mostly in agriculturally less-favored areas while intensive agriculture is mostly situated in touristic less favored areas [33,34]. According to Barbieri and Mahoney [35], farmers' main motivation of risk and uncertainty reduction is complemented by various other drivers of on-farm income diversification, such as retaining and expanding their markets, improving the financial situation of the farm household, increasing revenues by means of additional income sources, individual aspirations, and the pursuit of personal interests and hobbies, maintaining family connections, and keeping household labor on the farm. However, a lack of skills, competencies, and endowment might impede the adoption of on-farm diversification [27]. Moreover, the diversification into new non-farming activities affects the social identity of a farm family, alienates them from traditional farm culture [36], and demands a service-oriented identity [37]. Tourist's expectations, often based on the romantic image of rural life, further complicate matters because they do not always correspond to reality on the farms [38].

### 3. Heuristic Concept

Even if various studies have elaborated on a typology of agritourism [12–14], a holistic definition of agritourism is missing [13,39]. As demonstrated in Figure 1, the characterization of agritourism highlights the degree of linkage between tourism and farming activity, ranging from direct to indirect interaction, and refers to the authenticity of the experience for the tourist in terms of any engagement with actual farming activity [13]. In this demand-side focused typology, farm-based accommodation is just one manifestation of agritourism, which is simply defined as “where visitors reside” ([40]:257). Whereas Nicholas Evans and Brian Ilbery [41] highlight that, for the majority (65%) in an English case study, farm-based accommodation generated less than 10% of the general farm income. They argue that, over time, the accommodation strategy enables farm households to accumulate financial capital. They observed a quest for professionalization and/or quality improvement of the facilities in farm-based accommodation [40].

Farm-based accommodation, in the sense of what Streifeneder [12] calls ‘authentic agritourism,’ is tourism like that promoted by the Austrian national organization *Urlaub am Bauernhof* (Holidays on the Farm, UaB). The association aims to facilitate a cooperation of small farms and to strengthen the values of the farming community to position themselves as holiday farm operators within the tourism market [42]. Membership in the association is voluntary, however, since it is only a figurative brand (rights regulate the use of the logo, but not the wording). Farm-based accommodation in Austria is widely called *Urlaub am Bauernhof*. Thus, on the practitioners as well as on the public side, the phrase *Urlaub am Bauernhof* is applied to member farms and non-members alike. The association UaB applies for and receives project-based financial support at different levels: from the European Union (50%), the national government (30%), and the federal states (20%) (personal information, chairman *Urlaub am Bauernhof* Tyrol). Additional public financial resources are available for member farms (however, also for non-member farms) who apply for support to diversify into non-agricultural activities like (1) activities in the leisure industry and gastronomy, for example, structural investment in their holiday apartments, (2) improving the processing and marketing of agricultural products and services, e.g., new equipment for processing or sale, (3) local and social activities like investment in the construction of a school on the farm, and (4) structural and technical investment in traditional craftsmanship [43].

However, in Tyrol, only around 330 farms are a member of the association (personal information, *Urlaub am Bauernhof* Tyrol), which is only a fraction of the farms offering accommodation.

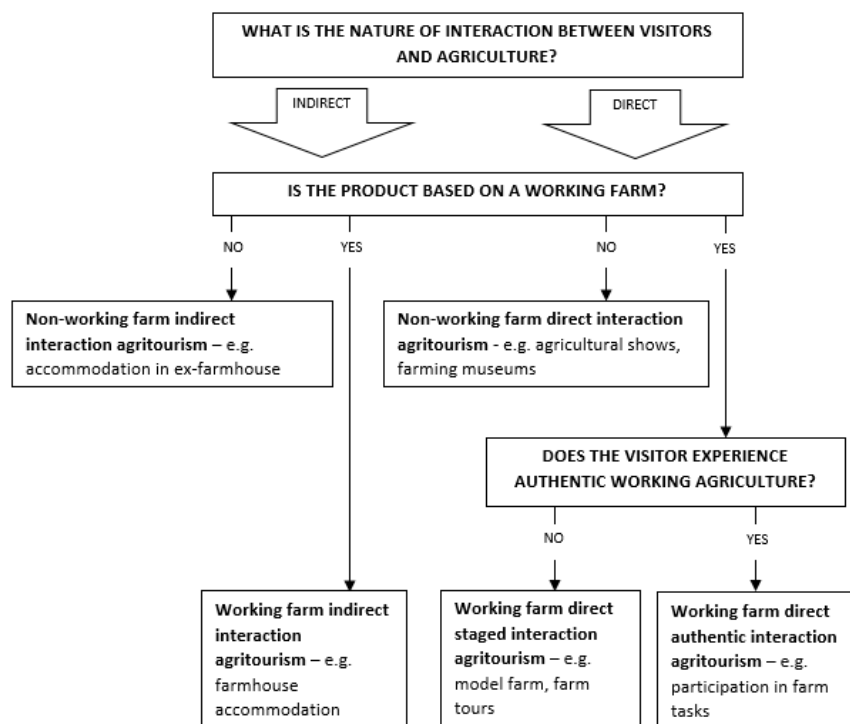


Figure 1. A revised typology for defining agritourism (after 13: 399).

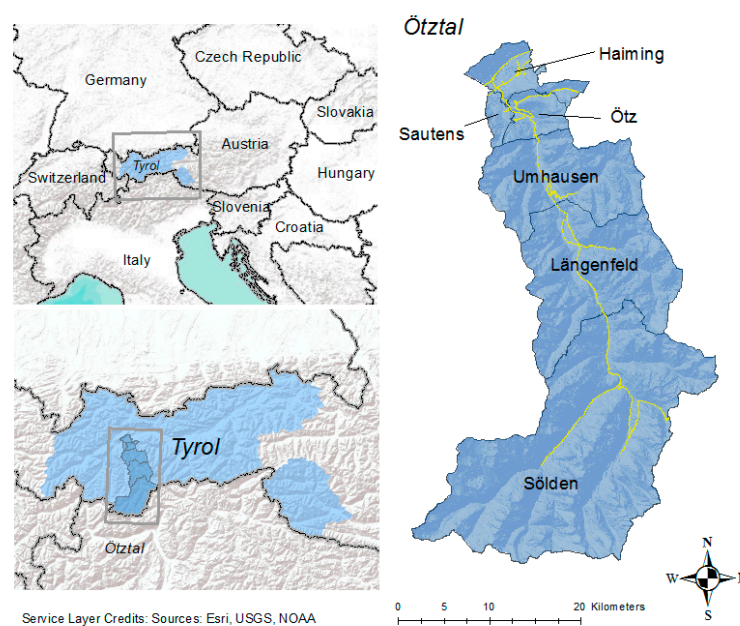
For our research, in contrast to Figure 1, which categorizes the demand side, we focus on the provider side. We examine which forms of farmer-based accommodation are present in the case study area. We use the term ‘farmer-based accommodation’ instead of ‘farm-based accommodation’ to indicate that guests may not only be hosted on the farm itself but also in other premises as long as the owner is a farmer. We further differentiate farmer-based accommodation, where guests are accommodated in the farm building, from farmer-based accommodation, where guests may also be hosted in other premises as long as the owner is a farmer. Thus, in the following, we use “farmer-based” as the more general term. This is understood as entities who are active in accommodation services and farming (registered on the same address). Thus, we focus only on farmer-based accommodation and exclude all other manifestations of agritourism, such as farm tours, agricultural entertainment, or participation. However, we include the provision of farmer-based accommodation not coupled to agricultural activity.

#### 4. Study Site

Our empirical study on farmer-based accommodation was conducted in the Ötztal valley in Tyrol (Austria). In the federal state of Tyrol, tourism is an important economic sector (17.5% of the gross regional product) [44,45]. Located in the Alpine arc, it is a winter as well as a summer tourism destination. However, agriculture in Tyrol still plays an important role, even if its economic weight is small. It is a fundamental part of the Tyrolean culture and essential for the maintenance of the cultural landscape. After a decline of farming units in recent decades, Tyrol has approximately 15,000 farms, of which approximately 4200 are operated as full-time farms and approximately 9200 part-time (other farms are managed as juridical entities, associations, or cooperatives) [46]. Farming is mostly based on animal husbandry (57.9% of agricultural production value), which is mainly dairy farming and raising breeding stock (especially in the mountainous areas). Agricultural diversification like agritourism and direct marketing make up a significant share of the total agricultural production value (16.5%) [46].

The Ötztal valley is located in southwestern Tyrol (Austria, Eastern Alps) and is surrounded by high mountain ranges (see Figure 2). The valley is 65 km long. Around 19,700 people live in its six municipalities (Sölden, Längenfeld, Umhausen, Ötz, Sautens, and Haiming) [47]. Livelihood for the local population is mainly based on tourism. Of around 8900 gainfully employed people, 6200 work in the service sector. Of these, almost 1900 work directly in accommodation or catering establishments (21%) [47]. Tourism started in Tyrol and in the Ötztal in the late 19th century [48]. The crisis of mountain farming caused by industrialization forced the population of the Ötztal to think about new options to sustain their livelihoods [49]. After the Second World War, tourism became a mass phenomenon. In 1965 and 1966, the villages of Sautens, Ötz, Umhausen, Längenfeld, and Sölden already counted 465,045 overnight stays in winter and 591,414 stays in summer [49]. Nowadays (2017), the Ötztal offers about 28,000 beds to guests in the winter and around 25,000 in the summer. In the winter season of 2017 to 2018, there were more than 2.8 million guests and, in the summer of 2018, more than 1 million overnight stays were registered [50]. Although the winter season is economically more important in the Ötztal, summer tourism plays a crucial role, mainly for those municipalities in the lower parts of the valley that do not have extensive skiing areas. Various hiking, biking, and climbing options, as well as numerous classic Alpine hiking routes, such as the Wildspitze, Austria's second highest peak, and, in general, the aesthetic value of the landscape, increase the popularity of summer tourism in the valley. Moreover, the famous iceman 'Ötzi,' which is the oldest natural human mummy in Europe, was found in 1991 on the Hauslabjoch near Vent (Upper Ötztal) [51].

The dominating ski resort in the Ötztal is Sölden, which is well known for its numerous pistes in winter, glacier skiing and bike trails in the summer, as well as luxury hotels and nightlife. Development trajectories differ between the villages that form the municipality. Vent, for instance, is classified a mountaineering village with a focus on summer tourism, while Obergurgl is a skiing area with guaranteed snow. Other municipalities try to differentiate their touristic offers. Längenfeld focuses on its thermal spa *Aqua Dome*, Umhausen on the *Ötztal* (Ötzi Copper Age village), Ötz on family holidays, and Sautens on accommodation in a quiet environment, but close to the big skiing areas. Haiming, at the beginning of the Ötztal, boasts *Area 47*, which is an adventure park for outdoor and action enthusiasts [52]. Moreover, the Ötztal includes several protected areas. *Naturpark Ötztal* (Ötztal nature park) is the umbrella organization for all nature reserves in the valley. It aims to protect the flora and fauna, support tourism in a sustainable way, provide environmental education, and support research and regional development [53].

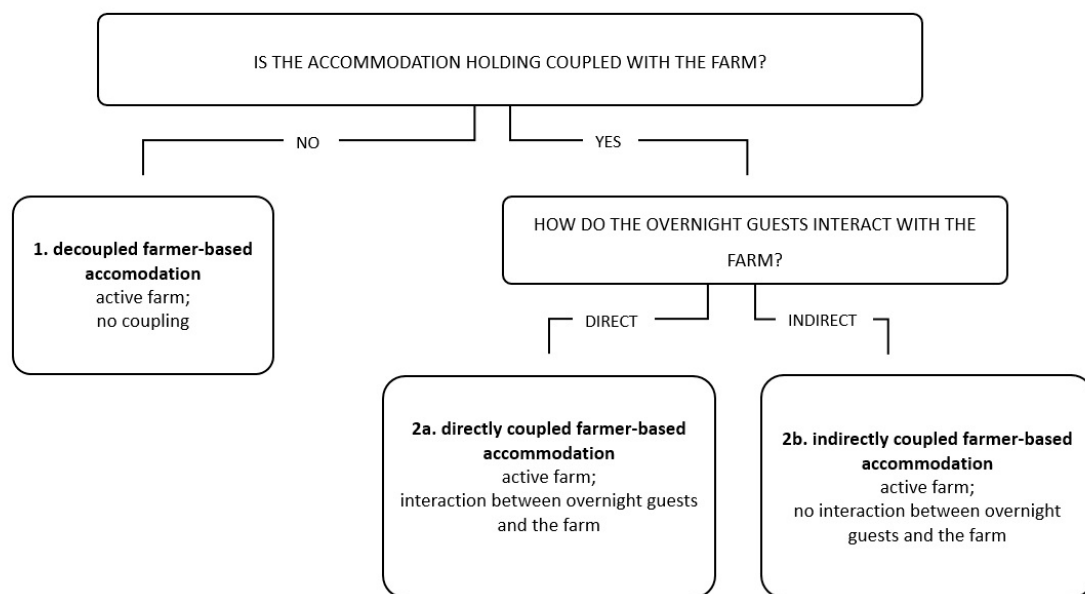


**Figure 2.** Location of the case study area Ötztal valley.

## 5. Development of a Heuristic Concept

Generally, there are two approaches to defining or classifying farmer-based accommodation holdings: one is *ex ante*, prior to the data evaluation, as a theoretical construct, like Sharon Flanigan et al. [13] (see Figure 1). We used this approach during the structural data review by defining (three) different forms of farmer-based accommodation through existing knowledge of the RESULT (RESilience through synergies between agricULTure and tourism: a comparison of two contrasting trajectories in the Tyrolean Alps) project, investigating farm resilience in Obergurgl and Vent and a literature review. The project includes a comparison of two contrasting trajectories in the Tyrolean Alps, investigating farm resilience in Obergurgl and Vent, and a literature and structural data review. Thereafter, we assigned the specific ideal types to each concrete holding via an online investigation of the providers' booking sites and websites.

A structural data review of the official agricultural report *Grüner Bericht* [46] and the statistics of the regional planning association *Planungsverband Ötztal* [47] revealed that there are no adequate official data on farmer-based tourism available, as official statistics include only those farms offering accommodation who are members of the Urlaub am Bauernhof (UaB) association. By crosschecking the addresses and names from the list of accommodation providers (made available by the tourism association Ötztal) with the list of agricultural holdings from the European transparency database (<https://www.transparenzdatenbank.at>; 20190210), which is open to the public online, we identified the entire basic population of 215 farms offering accommodation in the Ötztal valley (due to the new General Data Protection Regulation, we could not get detailed access to agricultural data). Via an online survey of their homepages, we developed a first categorization. For our case study, we created ideal types of farmer-based accommodation, according to the relation between farm activity and touristic activity. We assigned farmer-based accommodation holdings to three different ideal types defined a priori: 1. decoupled farmer-based accommodation, 2a. Directly coupled farmer-based accommodation, and 2b. Indirectly coupled farmer-based accommodation (see Figure 3). By an online search of the websites of all 215 farmer-based accommodation providers, we identified type 1, decoupled farmer-based accommodation, for 33 farmer-based accommodation holdings (15.3%), according to our heuristic concept. We assigned farms to this type when the website did not provide any clear link to a farm. Five of these decoupled farmer-based accommodation holdings interact indirectly with agriculture (2.3% of all agritouristic holdings) in the form of products, activities, or architecture (e.g., old farm houses) offered to the overnight guests, they are decoupled but utilize agriculture for valorization. There are 127 operators who offer a coupled type (2a or 2b) of farmer-based accommodation (59.1%). From these 127 coupled farms, 46 are indirectly coupled (2b), which means there is no further interaction between the overnight guests and the farm on which they stay. This form represents 36.2% of all active, coupled farms and 21.4% of all farmer-based accommodation holdings. The remaining 89 holdings are type 2a, directly coupled farmer-based accommodation, which means there is an interaction between the overnight guests and the farm, e.g., in the form of activities on the farm, such as barn visits.



**Figure 3.** A typology for defining farmer-based accommodation holdings. Source: authors' design.

In the following, we refer to the decoupled form as type 1, while the two coupled forms will be called type 2a and 2b.

## 6. Methodology

Our research was guided by the following three questions: Which forms of farmer-based accommodation are apparent in a tourism-intensive mountain valley? How do different forms of farmer-based accommodation contribute to total farm income and, thus, to farm survival in less favored areas? What is the difference in farmers' identity between the decoupled and the coupled type? The research design, which we applied, is presented in the next subsection. Subsequently, the data collection tool and the data analysis are outlined.

### 6.1. Research Design

To investigate farmer-based accommodation in the study site, we choose a mixed method approach combining elements of quantitative and qualitative research to reveal a "breadth and depth of understanding and corroboration" ([54]:123). We collected data through an online survey among the entire basic population identified as described above. We applied the heuristic concept to categorize the farm types and we validated the analysis of the results by a focus group.

### 6.2. Data Collection Tool

We administered a quantitative cross-sectional survey with mainly closed questions using the software program *Lime Survey*. It consisted of 62 questions and it took approximately 25 min to complete. The link for the online survey was sent by email to all 215 identified farms offering accommodation, which equal the entire basic population. The chance to win one of three gift vouchers served as an incentive for participation. After three weeks, we started to contact farms who had not yet participated via telephone to encourage them to fill in the questionnaire. The reasons for conducting the survey online were practical ones, as it presents a fast and cost-efficient solution without the need for an interviewer [55], although we were aware of the negative consequences of unit-non-response. We aimed to reduce those weaknesses by the following strategies [55]: the problem of false or non-active mail addresses was bypassed through contact via telephone, as well as the personal invitation, which we used to increase the number of participants. The potential participants explained on the telephone that their lack of interest in participating in the survey was mostly due to

lack of time since they suffer from multiple workloads. We reduced the difficulties of a short survey phase, typical for online research, by conducting two waves of the survey. The first ran from May to August 2018 and the second from October to November 2018. Lastly, the response rate was 37.2% or 80 farmer-based accommodation holdings. We are aware of the relatively low response rate. However, Baur and Florian (2009) also state that, even in written postal questionnaires, the response rate is typically under 50% [55]. The mixed method approach is an additional precaution to minimize the deficiencies of the response rate.

### 6.3. Data Analysis

We classified the responses to our survey through CHAID decision tree analysis. We used a CHAID decision tree on the basis of categorical data gathered through a cross-sectional survey [56] to apply our heuristic concept. CHAID is a form of multivariate analysis and consists of sequences of segmentation and summaries through cross-table analysis, where the interdependence between the input variables and output variable is evaluated through a predictor variable presented in the form of a tree [56,57]. The aim was to apply our heuristic concept to the identification of the types of farmer-based accommodation holdings through this data mining method [57]. The decision tree orders the independent variables according to their importance. Therefore, a Chi-squared test with automated detection of interaction is automatically performed. The first level shows the dependent variable. The subordinate levels in the decision tree present the ordered importance of the independent variables and the lower the level, the less important is the independent variable for the classification (Figure 4).

To get a greater insight in our study site and research interest as well as to answer our research questions, we ran an SPSS-supported descriptive analysis based on univariate, bivariate, and multivariate analyses. We conducted frequency tables for a first univariate overview. The bivariate analysis was run through the Spearman correlation to test the interdependence of interval-scaled variables and Chi-Square tests to evaluate if there are statistically significant differences between the nominal scaled variables. A multivariate analysis was conducted through CHAID decision tree, which generates cross-table analysis sequences of segmentation and summaries and is presented in the form of a tree [56,57].

To validate the interpretation of our results generated through the quantitative analysis, we held a qualitative focus group with regional experts. This approach of qualitative research is a moderated discussion of a group focused on a topic or a problem to gain information through the mutual exchange and the confrontation with perceptions, opinions, and ideas of other discussion participants. Group dynamic processes should lead to a more intensive discussion between the participants about the object of interest [58]. In addition, the in-depth discussion provided additional input for the interpretation of the results. Six representatives attended the focus group in November 2018, two representatives of the regional chamber of agriculture, three people active in agritourism, where one of them was also active in the association of *Urlaub am Bauernhof*, another one was in the village farming community (*Ortsbauernschaft*), and the third person was active in various breeding associations and other agricultural unions. The sixth participant was a representative of the regional farming community of the lower Ötztal (*Gebietsbauernschaft*), who grew up in a farmer-based accommodation holding, which was abandoned in the 1980s/1990s. The experts represented the entire valley, from lower to upper Ötztal. The record of the focus group served to extract relevant passages of discussion [59] to underpin our quantitative results as well as our heuristic concept.

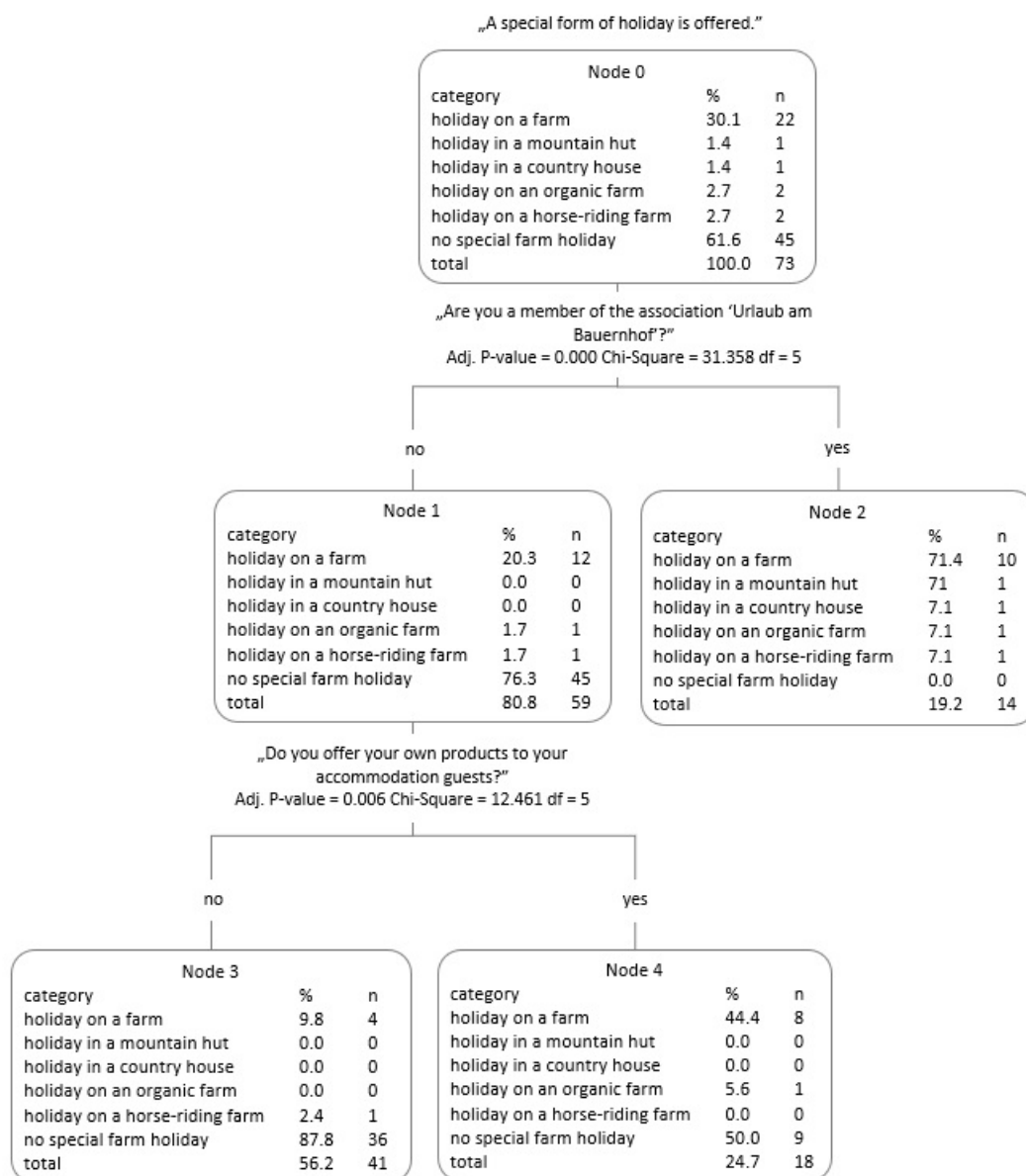


Figure 4. Classification of farmer-based accommodation through the CHAID decision tree.

## 7. Results

We will present the results clustered according to three guiding questions. First, we wanted to find out how the forms proposed by our heuristic concept are represented in our sample. Then, we were interested to see how much the different forms contribute to stabilizing the farm businesses of the participants. In addition, we wanted to know if there are differences in the identification with farming between farms that couple touristic offers with farming and those that do not.

### 7.1. Which Forms of Farmer-Based Accommodation Are Apparent in a Tourism-Intensive Mountain Valley?

The decision tree (Figure 4) shows that types 2a and 2b (coupled) as well as type 1 (decoupled forms) exist in a considerable number. The first node of the output tree shows the dependent variable ‘A form of holidays on the farm is offered’. Therefore, the most important factor for classifying types of farmer-based accommodation, according to the automated Chi-Square detection of the CHAID decision tree, is if the farmer-based accommodation holding is a member of the association *Urlaub am Bauernhof*, which is represented on the second level of the CHAID decision tree (nodes 1 and 2). Members of the

association offer a special form of holiday in significantly higher numbers, while, for non-members, the percentage of not offering a special holiday form increases up 76.3%. This illustrates that UaB members offer a variety of special forms of holiday on the farm, while non-members are more likely not to offer such a special form of holiday, or, in other words, offer type 1 of farmer-based accommodation. The third level (nodes 3 and 4) refers to those non-members of the association who offer some sort of special holiday on the farm and the automated Chi-Square detection of CHAID decision tree returned a significant difference in the products on offer. While organic farmers offer their own products to holiday guests, farms that offer horse-riding to their guests do not. The remaining 36 farmer-based accommodation holdings, which offer neither a special form of farm holiday nor products, are non-authentic agritourism, as Streifeneder [12] refers to it. Still, there is evidence that the provision of products from the farm is important for farmer-based accommodation operations since there is an indirect interaction between overnight guests and the farm through products. The CHAID decision tree indicates nine holdings, which are not members of the association and do not offer a special form of holidays but provide farm products. The focus group also stressed the potential of offering agricultural products from the farm to the accommodation guests.

Due to the small sample, it was not possible to divide the respondents into all three types of farmer-based accommodation as our heuristic concept (see Figure 3). We distinguish only generally between two types of farmer-based accommodation type 1 (decoupled) and type 2 (coupled as 2a or 2b) by splitting the dataset by the variable 'A form of holidays on the farm is offered,' which means that the participants specified the offer of some sort of agricultural experience for their guests. This clustering was strongly verified by the experts of the focus group. They argued that there are two types of farmer-based accommodation in the Ötztal valley: farmers who own hotels with professionalized accommodation and farmers who offer accommodation on their farm. Among the respondents, seven farmer-based accommodation providers could not be assigned to one of those two forms because of missing data (questionnaires not completed). Lastly, 45 holdings fall into type 1 (decoupled) and 28 could be assigned to type 2 (coupled) but without distinguishing between direct (2a) or indirect coupled (2b) because of the small sample size. For the Risk and Classification matrix of the CHAID decision tree, see Appendix A Table A1.

Tables 1 and 2 show that the majority of farmer-based accommodation providers practice small-scale farming, which can be explained by the topographic conditions of the Ötztal valley.

**Table 1.** Farmed area by place of residence for type 1.

Municipality	Type 1 (Decoupled) Size of Farmed Area			
	Less than 10 ha	10–20 ha	20–30 ha	Above 30 ha
	N	N	N	N
Haiming	2	1	0	0
Sautens	0	0	0	0
Ötz	3	0	0	0
Umhausen	4	0	0	0
Längenfeld	6	0	0	0
Sölden	13	2	0	1
Total	28	3	0	1
Total in %	87.5	9.4	0.0	3.1

**Table 2.** Farmed area by place of residence for type 2.

Municipality	Type 2 (Coupled) Size of Farmed Area			
	less than 10 ha	10–20 ha	20–30 ha	Above 30 ha
	N	N	N	N
Haiming	0	1	0	0
Sautens	1	0	0	0
Ötz	1	0	0	0
Umhausen	7	1	0	0
Längenfeld	6	1	0	1
Sölden	3	0	1	0
Total	18	3	1	1
Total in %	78.3	13.1	4.3	4.3

### 7.2. How do Different Forms of Farmer-Based Accommodation Contribute to Total Farm Income and to Farm Survival in Less Favored Areas?

The provision of accommodation services is crucial for household income and for farm maintenance. For around 9% of the providers (type 1 and 2), it is the only source of income mentioned and makes up to 100% of the income. For the majority, the accommodation services generate 20% to 50% of the household income. However, an additional job is another important income factor. Nevertheless, agriculture makes up the smallest part of income and, for 90% of the farms, generates less than 20% of the household income (see Table 3). In both forms, the greatest portion of income is generated through accommodation services and/or an additional job.

The majority of type 1 (see Table 4) operations generate 20–30% of their income by offering accommodation. The majority of these participants have no income from an additional job or from product marketing. The biggest number of participants make up to 10% of their income from agriculture.

For type 2 (see Table 5), the majority of participants put their income from accommodation at 40–50%. Most of the respondents have an income of 20–30% from an additional job and up to 10% from product marketing. For more than 60% of the responding farms of type 2, agriculture generates 10% or less of the household income.

Additional jobs provide a higher share of income for type 1 than for type 2 (see Tables 4 and 5), while it is vice versa for product marketing. Type 1 farms also generate a higher share of income from accommodation services than type 2. About 76% of type 1 farms generate their additional off-farm income in the tourism sector, while only about 36% of type 2 work in the tourism sector. However, for both forms, agriculture contributes a maximum of 30% to the total income among the respondents.

**Table 3.** Distribution of income sources type 1 and type 2 farmer-based accommodation.

All Forms of Farmer-Based Accommodation (Type 1 and Type 2)											
Source of Income	Share of Income in Percent of Total Income										
	No Share	Less than 10%	10–20%	20–30%	30–40%	40–50%	50–60%	60–70%	70–80%	80–90%	90–100%
Accommodation	2.1	2.1	12.8	17.0	10.6	17.0	4.3	6.4	12.8	6.4	8.5
Agriculture	19.1	42.6	29.8	6.4	0.0	0.0	2.1	0.0	0.0	0.0	0.0
Additional job	31.9	6.4	12.8	10.6	10.6	10.6	8.5	0.0	6.4	2.1	0.0
Other income sources	48.9	44.7	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
Product marketing	48.9	40.4	8.5	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 4.** Distribution of income sources for type 1 farmer-based accommodation.

Type 1 (Decoupled)											
Source of Income	Share of Income in Percent of Total Income										
	No Share	Less than 10%	10–20%	20–30%	30–40%	40–50%	50–60%	60–70%	70–80%	80–90%	90–100%
Accommodation	0.0	3.8	11.5	26.9	11.5	11.5	3.8	0.0	11.5	11.5	7.7
Agriculture	23.1	38.5	29.6	7.7	0.0	0.0	3.8	0.0	0.0	0.0	0.0
Additional job	34.6	3.8	7.7	0.0	19.2	15.4	7.7	0.0	7.7	3.8	0.0
Other income sources	53.8	42.3	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Product marketing	53.8	38.5	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 5.** Distribution of income sources for type 2 farmer-based accommodation.

Type 2 (Coupled)											
Source of Income	Share of Income in Percent of Total Income										
	No Share	Less than 10%	10–20%	20–30%	30–40%	40–50%	50–60%	60–70%	70–80%	80–90%	90–100%
Accommodation	0.0	0.0	16.7	5.6	11.1	22.2	5.6	16.7	16.7	0.0	5.6
Agriculture	5.6	50.0	38.9	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additional job	22.2	11.1	16.7	27.8	0.0	5.6	11.1	0.0	5.6	0.0	0.0
Other income sources	44.4	50.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Product marketing	38.9	50.0	5.6	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Another interesting fact is that the additional off-farm income corresponds to the development of labor-extensive holiday apartments, which allows taking an off-farm job in the first place (see Appendix A). The highest investments made by the farmer-based accommodation holdings in the last 20 years were in accommodation and agricultural infrastructure. For type 1, the highest investment is 17.6%, which is similar to type 2 with 20.0% and targeted in the following order: accommodation, agriculture, private premises, and other areas (see Appendix A). The investments made by type 1 and type 2 are targeted to a similar distribution to the different areas. For type 1, there is a statistical significance for the income generated through accommodation and the investments made into accommodation. This implies that the income contributes to the farm's survival (see Tables 6 and 7), while there is no statistical significance for type 2 (see Appendix A).

**Table 6.** Income from accommodation\*Investments into accommodation in the last 20 years Type 1 (decoupled).

Income from Accommodation*Investments into Accommodation in the Last 20 Years Type 1 (Decoupled)					
			Investments into Accommodation in the Last 20 Years		
			No	Yes	Total
Income from accommodation	up to 10% of total income	N	0	1	1
	% within investments		0.0	4.2	3.8
	up to 20% of total income	N	1	2	3
	% within investments		50.0	8.3	11.5
	up to 30% of total income	N	0	7	7
	% within investments		0.0	29.2	26.9
	up to 40% of total income	N	0	3	3
	% within investments		0.0	12.5	11.5
	up to 50% of total income	N	0	3	3
	% within investments		0.0	12.5	11.5
Total	up to 60% of total income	N	1	0	1
	% within investments		50.0	0.0	3.8
	up to 80% of total income	N	0	3	3
	% within investments		0.0	12.5	11.5
	up to 90% of total income	N	0	3	3
	% within investments		0.0	12.5	11.5
	up to 100% of total income	N	0	2	2
	% within investments		0.0	8.3	7.7

**Table 7.** Chi-Square-test Income from accommodation\*Investments into accommodation in the last 20 years Type 1 (decoupled).

Chi-Square-Test Income from Accommodation*Investments into Accommodation in the Last 20 Years Type 1 (Decoupled)			
	Value	df	Asymptotic Significance (Both-Sided)
Chi-Square after Pearson	16.611	8	0.034
Likelihood-Quotient	10.283	8	0.246
related to linear chi-square	0.314	1	0.575
number of valid accounts	26		

Furthermore, we identified a higher share of challenges, such as mail correspondence, 24/7 availability, and meeting guest perceptions, from the accommodation services for type 2 than for type 1, as Table 8 indicates.

**Table 8.** Challenges for type 1 and coupled type 2.

Challenges from Accommodation Services		
	Type 1	Type 2
	%	%
Online presence	31.1	28.6
Mail correspondence	20.0	32.1
Social media (e.g., Facebook)	11.1	3.6
Availability 24/7	31.1	35.7
Overlapping of labor-intensive periods	28.9	21.4
Meeting guest perceptions	6.7	35.7

The reasons mentioned most often by farmers of both types for establishing or continuing accommodation provision are additional income, followed by income generation from home, and maintenance of the farm. The preservation of the farm is a more important reason for type 2 with 50%, in comparison to type 1 with around 36% (see Appendix A). Currently, there are 572 active farms in the Ötztal. Out of these, 215 offer accommodation. Table 9 presents farms offering non-commercial and commercial accommodation within the municipalities.

**Table 9.** Number of farmer-based accommodation in the Ötztal. Source: adapted and complemented after Muth, 1990.

Farmer-Based Accommodation			
Municipality	1975	1988	2018
	N	N	N
Haiming	n.i. <sup>a</sup>	n.i.	12
Sautens	40	28	7
Ötz	43	43	16
Umhausen	69	81	30
Längenfeld	118	121	70
Sölden	103	97	80
Total	373	370	215

<sup>a</sup> No information.

As Table 9 shows, the number of farms offering accommodation has declined over time. This indicates a professionalization, where, initially, a large number of farms offered very basic accommodation. Over time, some dropped out while others raised their standards in response to changing consumer demand [32]. Quite a high number of farmer-based accommodation holdings, around 70%, are still non-commercial. A special regulation in Austria allows offering a maximum of 10 beds without a business registration. We refer to these farmers as non-commercial, the others are referred to as commercial.

Table 10 highlights that most farms of type 2 started in the 1960s, while the farms of type 1 were established in or after the year 2000. This indicates that both types contribute to the stabilization of the agricultural structure, on the one hand, through maintenance of the long-established farmer-based accommodation holdings and, on the other, by establishing new farmer-based accommodation. We can assume that, among the later established operations, the degree of professionalization is higher, as indicated by a higher share of type 1 providers.

Most of the commercial providers of farmer-based accommodation started in or after 2000. The experts in the focus group explained this with the foundation of the tourism association Ötztal in 2006, which was a further step toward professionalization of tourism in the valley (see Reference [60]). The commercial providers (more than 10 beds) more often offer rooms rather than labor-extensive

apartments in both types (see Appendix A). Furthermore, 31.8% of type 1 provide accommodation on a commercial basis, while only 25% of type 2 providers do.

**Table 10.** Length of provision of accommodation by type 1 and type 2.

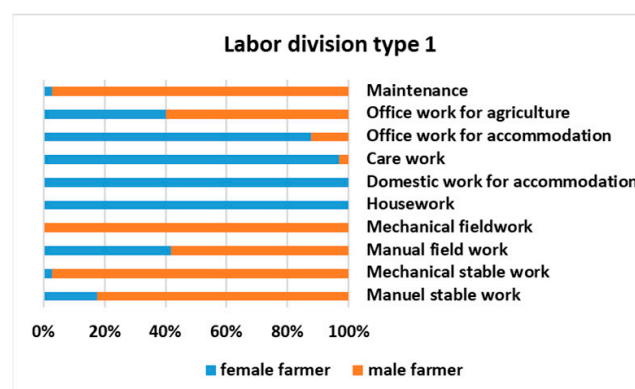
Provision of Farmer-Based Accommodation		
	Type 1	Type 2
	%	%
For generations	18.2	7.4
Since the 1960s	13.6	37.0
Since the 1970s	18.2	18.5
Since the 1980s	15.9	7.4
Since the 1990s	13.9	7.4
Since/after 2000	20.5	22.2

### 7.3. What is the Difference in Farmers' Identity between the Two Types?

Among the respondents, around 98% of type 1 holdings are operated as part-time farms, with an additional off-farm employment, while the percentage for type 2 holdings is 89%. Therefore, the share of part-time farms in our study is higher than the Tyrolean and the district average, which can be explained by the topographic conditions in the Ötztal.

Of the respondents, 91.1% provide farmer-based accommodation as a farming couple. In type 1, 6.7% is provided by a single person, while this is higher at 11.1% for type 2 of farmer-based accommodation. Farmer-based accommodation run by single persons in type 1 is exclusively male, while there is one female single provider among type 2. The majority of the female providers of type 1 and type 2 is 50 to 59 years old, but the variance in age for type 2 is much higher. The male providers are 40 to 59 years old at type 1 and 50 to 59 years at type 2. In addition, 45% of the survey respondents of type 2 were female and around 60% of respondents were female for type 1. More than half of the participating households include two generations, while three or more generation households make up 29.6% for type 1 and 33.3% for type 2.

Farmer-based accommodation providers are either a single person, without a partner living in the same household, or a couple (with or without a wider family), who lives together. Results highlight that labor division between the male and female partner (as most of the farmer-based accommodation are run by a couple) is unevenly shared by gender. Figures 5 and 6 demonstrate that some male farmers are integrated into private care work in farmer-based accommodation holdings of type 1, while male farmers are rather integrated in domestic work for accommodation services in type 2. In both forms, the majority of accommodation-related tasks (office work and domestic work for accommodation) is performed by the female partner. Additionally, the female farmers are more integrated in farming activities itself at type 2 farms.



**Figure 5.** Labor division between the provider couple (type 1).

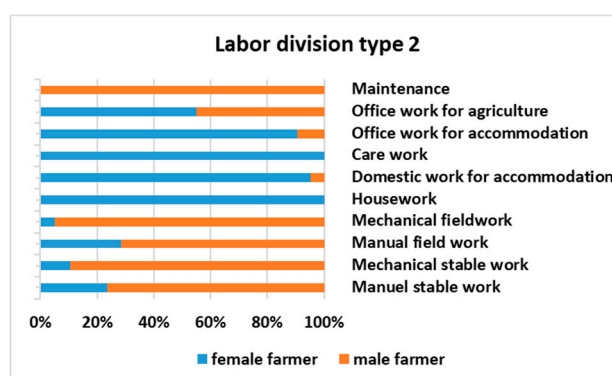


Figure 6. Labor division between provider couple (type 2).

A high identification with the task of landscape preservation is also a result of the fact that food production plays a minor role under given topographic and climate conditions. Both types of farmer-based accommodation identify strongly with the task of landscape preservation (see Table 11).

Table 11. Identity and identification with a role and its associated tasks by type 1 and type 2.

	Identification with the Task			
	Type 1		Type 2	
	Yes	No	Yes	No
	%	%	%	%
Food production	38.9	61.1	44.0	56.0
Landscape preservation	88.4	11.6	92.0	8.0
Service provision	58.5	41.2	56.5	43.5

The focus group highlighted that the term *Landschaftspfleger* (landscape preserver) has a negative connotation associated with direct payments from the federal and state government and the EU and related external perception of the farmers as recipients of benefits. Nevertheless, the identification with the task of landscape preservation highlights the self-attribution of the farmer-based accommodation providers and their awareness of the importance of their performance, but it is not their sole identity. The experts of the focus group highlighted that the 'animal breeder' would be a better designation than food producer, as the term food producer seems inadequate in less favored regions, where productivity is naturally low. Food producer often signifies direct marketing of food products. The focus group participants argued that farming is mostly practiced for idealistic and traditional reasons and not for economic purposes, and that the farmers are aware of the importance of preserving the cultural landscape to gain income from tourism and ensure their own livelihood.

Farm succession is one important aspect for the survival of farms in less favored areas. Among the respondents, around 10% (see Table 12) more of type 2 claimed that they already had a successor, which suggests that farms of type 2 are more resilient than farms relying on decoupled forms of farmer-based accommodation. For type 1, having a successor was more often negated or mentioned as not currently relevant. This is not surprising considering that, at 53.5%, the percentage of children under 18 living in the same household is over 10% higher than for type 2 farms (40.7%).

**Table 12.** Having a successor, by type 1 and type 2.

	Do You Already Have a Successor?	
	Type 1	Type 2
	%	%
Yes	25.0	34.6
No	35.0	30.8
Not relevant yet	40.0	34.6

## 8. Discussion

With our investigation, we aspire to highlight the importance of the decoupled form of farmer-based accommodation (type 1), where farming and tourism are practiced in parallel without much interaction. While Flanigan et al. [13], referring in their typology to the degree of linkage between tourism and farming activity (see Figure 1), do not include this form of accommodation, we consider it (type 1, see Figure 3) a specific manifestation of agritourism. As the results of the CHAID decision tree and the online investigation of our heuristic model verified, decoupled farmer-based accommodation (type 1) makes up a significant share in our case study area (see Figure 4). More than half of the responding farms offer a decoupled type of farmer-based accommodation. Furthermore, the focus group stressed that both forms, decoupled as well as coupled, are crucial for stabilizing the agricultural structure in the Ötztal valley. Moreover, as Table 10 illustrates, newly established farmer-based accommodation is more often decoupled, while the continued holdings are more likely of the coupled form, which indicates a shift toward being a service provider rather than a farm offering accommodation [61]. Furthermore, the data indicates that a long-term engagement in the provision of farmer-based accommodation (see Table 10) does not go along with farm abandonment, which is contrary to the example from Norway where farm diversification into tourism encourages farm abandonment (see Reference [24]). The focus group stressed that coupled as well as decoupled forms of farmer-based accommodation have a potential to strengthen the farm by offering quality-based agricultural products to accommodation guests (see Reference [19]).

As Sharpley and Vass [37] stated, touristic diversification is a response to a problematic income situation rather than an option to develop the farm (in a new direction). In our survey, the low income from farming activities is the reason for diversifying into farmer-based accommodation. This strategy serves as a source of additional household income or enables additional work from home, to raise the household income and to reduce household risk. Type 1 of farmer-based accommodation generates a higher share of income from accommodation than type 2, with the result that type 1 farms have less income from additional jobs. Generally, in our study, agricultural income is much lower than income generated in tourism, which is in contrast to other studies where the income from tourism remains subordinate [61].

The investment in the agricultural structure is similar in both forms, regardless of the income generated outside agriculture. Investment in the accommodation infrastructure is made for income reasons, especially for type 2, while investment in farm infrastructure points to a cross-subsidization of farm structures (see Appendix A). Therefore, we confirm the assumption that additional income generated through tourism serves as an enabler to modernize the farm infrastructure and to keep the farm active (see Reference [26]). The income generated through accommodation services enables the farmers to maintain their agricultural activities, as well as the accommodation, and, thus, the survival of the farm. The sale of agricultural products could potentially generate an extra income, but the productivity in the mountain area is low and irregular (see References [6,62]). The focus group stressed that farm-produce quality products influence the farmer-based accommodation positively and vice versa. The reasons for continuing or establishing farmer-based accommodation correlate to the generation of additional income and keeping household labor on the farm, but there is less evidence of individual aspirations, as Barbieri and Mahoney [35] stated. However, challenges arise too,

especially for type 2 farmer-based accommodation, as Table 8 illustrates. Tasks relating to the Internet and being available 24/7 seem to be problems of the less tourism-based professionalized coupled form of farmer-based accommodation [27]. Meeting guest perception is another bigger challenge for farms of type 2, as they have to meet a romanticized picture of peasantry, which is not necessary for farms of type 1, as agriculture is not immediately visible to the guests [38].

In our case study area, accommodation services are mostly performed by the farming woman. However, the respondents of our questionnaire of type 1 farms were mainly male, at 55%. Thus, the data on the division of labor presented in Figures 5 and 6 confirm the assumption of Rieder et al. [32] that accommodation has always been a task performed by the female partner. The farm women receive acknowledgment and, especially considering the economic impact of the accommodation service for the household income, are empowered (see Reference [63]). Nevertheless, this dual role comes along with an intensive workload, expressed in the multiple challenges (see Table 8). Especially for farms of type 2, the workload for the farming women is massive, as they are more integrated into agricultural tasks (see Figures 5 and 6). In the long-term, this might affect the social identity especially for farming women, but also for the whole farm family, away from the traditional peasant habitus. Considering that the huge majority of income of farms of our study is generated by providing accommodation services, it reverses classical role allocations that rely on the male as the breadwinner.

The multiple challenges highlighted by the respondents also refer to missing skills, competencies, and endowment that impede the adoption or professionalization of farmer-based accommodation [27]. Even if those challenges are relevant for providers of both types of farmer-based accommodation (type 1 and 2), data reveal a distinction for the ambition to fulfill the expectations of guests by type 2 farmer-based accommodation. For providers of type 1, this issue is less detrimental, which can be explained by their professionalization.

According to the focus group, the farmers identify traditionally as farming folk and are aware of their important role for maintaining and preserving the cultural landscape. Therefore, they identified most with the task of landscape preservation (see Table 11). However, they do not want to be seen as landscape preservers by the public because of the negative image of the term *Landschaftspfleger* as the recipient of benefits. The identification with farm production activities influences the construction of successor identities [64], which reflects the relevant proportion of farms with a successor in place, especially for type 2.

## 9. Conclusions

Our findings demonstrate that the two types of farmer-based accommodation do not differ significantly in the most important aspects. Both forms identify largely with the task of landscape preservation, even if this is not the sole source of identification. Furthermore, their investment behavior is similar and both types invest a higher share in agricultural structures than their agricultural income generates. Therefore, we argue that both types of farmer-based accommodation are important for the maintenance of agricultural structures, without rating one type higher than the other.

Following the agritourism typology by Flanigan et al. [13], we argue that there is a need to consider decoupled forms of farmer-based accommodation as agritourism. Our results for the Ötztal valley demonstrate the high share of farms offering this type of accommodation as well as its economic impact on the farm household income. We agree with Koutsouris et al. who remark that agritourism in most of the (Greek) cases is “practiced more as ‘tourism’ than ‘agri’” ([61]:95). Consequently, it is not necessarily the directly coupled form (type 2) of agritourism or farmer-based accommodation, which is also referred to as authentic agritourism, that contributes to a diversified farm income and, thus, to the farm survival. Decoupled forms of farmer-based accommodation need to be considered for a holistic definition of agritourism and should be included in a typology of agritourism. Looking only at ‘authentic’ providers of farm-based tourism in the Austrian national association *Urlaub am Bauernhof* fosters a romantic (and not necessarily realistic) image of agritourism.

With its impacts on the farm household income and, thus, on the stabilization of agricultural structures in mountain areas, we stress the relevance of the decoupled form of farmer-based accommodation. This type also contributes to the general positive impact of mountain farming, e.g., on maintaining multifunctional cultural landscapes, providing ecosystem services, and the viability of rural communities. It might be important to consider this fact for European, national, and federal public funding schemes.

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## Appendix A

**Table A1.** Risk and classification matrix of the CHAID decision tree.

Risk							
Estimate	Standard Error						
0.247	0.050						
Growing Method: CHAID							
Dependent Variable: A Special Form of Holiday Is Offered							
Classification							
Observed	Predicted						
	H. on a Farm	H. in a Moun-Tain Hut	H. in a Country House	H. on an Organic Farm	H. on a Horse-Riding Farm	No Special Farm h.	Percent Correct
Holiday on a farm	10	0	0	0	0	12	45.5%
Holiday in a mountain hut	1	0	0	0	0	0	0.0%
Holiday in a country house	1	0	0	0	0	0	0.0%
Holiday on an organic farm	1	0	0	0	0	1	0.0%
Holiday on a horse-riding farm	1	0	0	0	0	1	0.0%
No special farm holiday	0	0	0	0	0	45	100.0%
Overall percentage	19.2%	0.0%	0.0%	0.0%	0.0%	80.8%	75.3%

Growing method: CHAID dependent variable: a special form of holiday is offered.

**Table A2.** Income from additional job\*Type of accommodation Type 1 (decoupled).

Income from Additional Job*Type of Accommodation Type 1 (Decoupled)						
			Type of Accommodation			Total
			Rooms	Apartments	Rooms and Apartments	
Income from additional job	no income	N	0	6	3	9
		% within income	0.0	66.7	33.3	100.0
	up to 10% of total income	N	0	1	0	1
		% within income	0.0	100.0	0.0	100.0
	up to 20% of total income	N	0	2	0	2
		% within income	0.0	100.0	0.0	100.0
	up to 40% of total income	N	1	2	2	5
		% within income	20.0	40.0	40.0	100.0
	up to 50% of total income	N	1	3	0	4
		% within income	25.0	75.0	0.0	100.0
	up to 60% of total income	N	1	1	0	2
		% within income	50.0	50.0	0.0	100.0
	up to 80% of total income	N	2	0	0	2
		% within income	100.0	0.0	0.0	100.0
	up to 90% of total income	N	0	1	0	1
		% within income	0.0	100.0	0.0	100.0
Total		N	5	16	5	26
		% within income	19.2	61.5	19.2	100.0

**Table A3.** Income from additional job\*Type of accommodation Type 2 (coupled).

Income from Additional Job*Type of Accommodation Type 2 (Coupled)						
			Type of Accommodation			Total
			Rooms	Apartments	Rooms and Apartments	
Income from additional job	no income	N	1	1	2	4
		% within income	25.0	25.0	50.0	100.0
	up to 10% of total income	N	0	0	2	2
		% within income	0.0	0.0	100.0	100.0
	up to 20% of total income	N	0	3	0	3
		% within income	0.0	100.0	0.0	100.0
	up to 30% of total income	N	2	3	0	5
		% within income	40.0	60.0	0.0	100.0
	up to 50% of total income	N	0	1	0	1
		% within income	0.0	100.0	0.0	100.0
	up to 60% of total income	N	0	2	0	2
		% within income	0.0	100.0	0.0	100.0
	up to 80% of total income	N	0	1	0	1
		% within income	0.0	100.0	0.0	100.0
Total		N	3	11	4	18
		% within income	16.7	61.1	22.2	100.0

**Table A4.** Rank of investments Type 1 (decoupled).

<b>Rank of Investments Type 1 (Decoupled)</b>		
	<b>N</b>	<b>%</b>
Agriculture > accommodation > other branches > private premises	3	8.8
Agriculture > accommodation > private premises > other branches	3	8.8
Accommodation > agriculture > private premises > other branches	6	17.6
Accommodation > other branches > agriculture > private premises	1	2.9
Accommodation > private premises > agriculture > other branches	3	8.8
Accommodation > private premise > other branches > agriculture	1	2.9
Other branches > accommodation > agriculture > private premises	1	2.9
Private premises > agriculture > accommodation > other branches	2	5.9
Private premises > accommodation > agriculture > other branches	1	2.9
Accommodation > agriculture > private premises	3	8.8
Private premises > agriculture > accommodation	2	5.9
Agriculture > accommodation > private premises	1	2.9
Agriculture > other branches	1	2.9
Agriculture > accommodation	2	5.9
Accommodation > agriculture	3	8.8
Private premises > agriculture	1	2.9
Total	34	100.0

**Table A5.** Rank of investments Type 2 (coupled).

<b>Rank of Investments Type 2 (Coupled)</b>		
	<b>N</b>	<b>%</b>
Agriculture > accommodation > other branches > private premises	1	5.0
Agriculture > other branches > accommodation > private premises	1	5.0
Agriculture > private premises > accommodation > other branches	2	10.0
Accommodation > agriculture > other branches > private premises	3	15.0
Accommodation > agriculture > private premises > other branches	4	20.0
Private premises > agriculture > accommodation > other branches	1	5.0
Accommodation > private premises > agriculture	3	15.0
Accommodation > agriculture > private premises	2	10.0
Agriculture > accommodation > private premises	2	10.0
Accommodation	1	5.0
Total	20	100.0

**Table A6.** Income from accommodation\*investments into accommodation in the last 20 years Type 2 (coupled).

Income from Accommodation*Investments into Accommodation in the Last 20 Years Type 2 (Coupled)					
		Investments into Accommodation in the Last 20 Years		Total	
		No	Yes		
Income from accommodation	up to 20% of total income	N	0	3	3
	% within investments	0.0	20.0	16.7	
	up to 30% of total income	N	0	1	1
	% within investments	0.0	6.7	5.6	
	up to 40% of total income	N	1	1	2
	% within investments	33.3	6.7	11.1	
	up to 50% of total income	N	1	3	4
	% within investments	33.3	20.0	22.2	
	up to 60% of total income	N	0	1	1
	% within investments	0.0	6.7	5.6	
	up to 70% of total income	N	0	3	3
	% within investments	0.0	20.0	16.7	
	up to 80% of total income	N	0	3	3
	% within investments	0.0	20.0	16.7	
	up to 100% of total income	N	1	0	1
	% within investments	33.3	0.0	5.6	
Total		N	3	15	18
		% within investments	100.0	100.0	100.0

**Table A7.** Chi-square-test income from accommodation\*Investments into accommodation in the last 20 years Type 2 (coupled).

Chi-Square-Test Income from Accommodation*Investments into Accommodation in the Last 20 Years Type 2 (Coupled)			
	Value	df	Asymptotic Significance (Both-Sided)
Chi-Square after Pearson	9	7	0.253
Likelihood-Quotient	8.949	7	0.256
Related to linear chi-square	0.512	1	0.474
Number of valid accounts	18		

**Table A8.** Reasons for offering accommodation.

Reasons for Offering Accommodation		
	Type 1 (Decoupled)	Type 2 (Coupled)
	%	%
Additional income	62.2	67.9
Maintenance of the farm	35.6	50.0
Empty buildings	15.6	14.3
Desire for variety	2.2	7.1
Income generation from home	42.2	50.0

**Table A9.** Commercial or non-commercial mode of accommodation\*Type of accommodation Type 1 (decoupled).

Commercial or Non-Commercial Mode of Accommodation*Type of Accommodation Type 1 (Decoupled)						
			Type of Accommodation			Total
			Rooms	Apartments	Rooms and Apartments	
Mode of accommodation	non-commercial	N	3	25	2	30
		% within mode of accommodation	10.0	83.3	6.7	100.0
	commercial	N	4	4	6	14
		% within mode of accommodation	28.6	28.6	42.9	100.0
Total		N	7	29	8	44
		% within mode of accommodation	15.9	65.9	18.2	100.0

**Table A10.** Chi-Square-test commercial or non-commercial mode of accommodation\*Type of accommodation Type 1 (decoupled).

Chi-Square-Test Commercial or Non-Commercial Mode of Accommodation*Type of Accommodation Type 1 (Decoupled)			
	Value	df	Asymptotic Significance (Both-Sided)
Chi-Square after Pearson	13.289	2	0.001
Likelihood-Quotient	13.216	2	0.001
Related to linear chi-square	0.851	1	0.356
Number of valid accounts	44		

**Table A11.** Commercial or non-commercial mode of accommodation\*Type of accommodation Type 2 (coupled).

Commercial or Non-Commercial Mode of Accommodation*Type of Accommodation Type 2 (Coupled)						
			Type of Accommodation			Total
			Rooms	Apartments	Rooms and Apartments	
Mode of accommodation	non-commercial	N	1	16	4	21
		% within mode of accommodation	4.8	76.2	19.0	100.0
	commercial	N	4	0	3	7
		% within mode of accommodation	57.1	0.0	42.9	100.0
Total		N	5	16	7	28
		% within mode of accommodation	17.9	57.1	25.0	100.0

**Table A12.** Chi-Square-test commercial or non-commercial mode of accommodation\*Type of accommodation Type 2 (coupled).

Chi-Square-Test Commercial or Non-Commercial Mode of Accommodation*Type of Accommodation Type 2 (Coupled)			
	Value	df	Asymptotic Significance (Both-Sided)
Chi-Square after Pearson	14.59	2	0.001
Likelihood-Quotient	16.926	2	0.000
Related to linear chi-square	0.976	1	0.323
Number of valid accounts	28		

**Table A13.** Spearman correlation subsidization through accommodation of the farm\*Farm as fundament for accommodation Type 1 (decoupled).

Correlation Type 1 (Decoupled) Spearman-Rho		To What Extent Does the Accommodation Subsidize Your Farm?	To What Extent Is Your Farm the Fundament for Accommodation?
To what extent does the accommodation subsidize your farm?	correlation coefficient	1	0.344 *
	significance (two-sided)		0.024
	N	44	43
To what extent is your farm the fundament for accommodation?	correlation coefficient	0.344 *	1
	significance (two-sided)	0.024	
	N	43	43

\* The correlation is significant at a level of 0.05 (both sides).

**Table A14.** Spearman correlation subsidization through accommodation of the farm\*Farm as fundamental for accommodating Type 2 (coupled).

Correlation Type 2 (Coupled) Spearman-Rho		To What Extent Does the Accommodation Subsidize Your Farm?	To What Extent Is Your Farm the Fundamental Aspect for Accommodation?
To what extent does the accommodation subsidize your farm?	correlation coefficient	1	0.521 **
	significance (two-sided)		0.009
	N	25	24
To what extent is your farm the fundamental aspect for accommodation?	correlation coefficient	0.521 **	1
	significance (two-sided)	0.009	
	N	24	25

\*\* The correlation is significant at a level of 0.01 (both sides).

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