

The role of farm diversification and peasant habitus for farm resilience in mountain areas: the case of the Ötztal valley, Austria

Farm
diversification
and peasant
habitus

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Abstract

Purpose – By examining a case study in Tyrol, Austria, the paper aims to demonstrate the role of farm diversification and the influence of the peasants' habitus on social-ecological resilience.

Design/methodology/approach – Drawing on a field study conducted in two remote villages of the Ötztal valley, Austrian Alps, this study provides insights into the interplay of tourism and farming and its impact on farm resilience. Qualitative narrative interviews, the so-called farm biographies, served to investigate these issues. Interpretations of data are based on qualitative content analysis.

Findings – The results highlight that farming and tourism are highly enmeshed in the case study area and that the additional income creates room for manoeuvre for the farms to activate their adaptive capability. At the same time, peasant values guide the farming activities. The farms in this study demonstrate a strong farm resilience that is enabled by farm diversification and rooted in their peasant habitus. This positively affects the social-ecological resilience.

Originality/value – In contrast to other studies, which have mainly applied the concepts of social or community resilience to investigate the resilience and vulnerability of rural areas, this study highlights the resilience of farms in mountain areas.

Keywords Tourism, European Alps, Social-ecological resilience

Paper type Research paper

Introduction

Mountain farming in Europe is under severe pressure, for instance from out-migration of young people, loss of agricultural land to construction and infrastructure, continued afforestation of agricultural land, integration into the globalized market and other factors, which put its continued existence at high risk (López-i-Gelats *et al.*, 2011). These mountain farms areas are mostly family-owned and family-operated (Blekesaune, 1996), and these, in particular, have to cope with growing uncertainty caused by these pressures (Darnhofer *et al.*, 2016). And even if the economic importance of farming has decreased, rural life is still substantially shaped by farming activities (van der Ploeg *et al.*, 2000). Furthermore, farms contribute to the social-ecological resilience of rural areas. To counterbalance pressure, farm adjustment strategies served to restructure farms during the 20th century (Marsden *et al.*,

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1989) and to increase their resilience towards disruptions and long-term changes. Here, the resilience approach serves to examine this phenomenon through a conceptual lens. It understands systems as complex and adaptive, which applies also to farming systems (Darnhofer *et al.*, 2011, 2016). Therein, different capabilities influence the degree of resilience of a farm. However, so far, the concepts of social or community resilience have been applied to examine the resilience and vulnerability of rural areas (e.g. Wilson *et al.*, 2018; Imperiale and Vanclay, 2016; Steiner and Markantoni, 2014). Nevertheless, the focus on farm resilience might also contribute to the question of social-ecological resilience in rural areas.

To address this gap, this study will analyze the question of how farm diversification into tourism enables family farms to activate different farm resilience capabilities. Further, it will examine the role of peasant habitus for the resilience of family farms. To explore these issues, the paper is structured as follows: the context of farming in the Alpine area, as well as farm diversification into tourism, leads to the research question of this study. Building on that, the theoretical and conceptual frame is elaborated. The presentation of the methodological approach of the empirical case study then leads to results and the discussion, to end with a conclusion.

Farming in the Alpine area

Farming in the European Alps is based on family farming and provides not only livelihoods for individual families but also shapes the aesthetically appreciated cultural landscape for recreational and touristic uses (Flury *et al.*, 2013) and is further an asset of cultural heritage (Bjørkhaug, 2006). Further, it preserves several types of ecosystem services that are defined as beneficial flows arising from natural capital stocks that fulfil human needs (Dominati *et al.*, 2010). Furthermore, farming has an impact on social cohesion, the provision of energy from renewable resources and viable rural regions (Renting *et al.*, 2008). However, the declining importance of food production encourages, not to say forces, farmers to adapt their farm management to be resilient. For the Pyrenees, for instance, López-i-Gelats *et al.* (2011) found, as a spillover effect of farm diversification, a shift in livestock farming (from herded sheep to less-guarded cattle to unguarded horses and goats), or from mowing to grazing. Those changes represent a gradual simplification and reduction of traditional farming practices until finally the farm loses its central role for food production and shifts its resources gradually away from agriculture. Nevertheless, due to these pressures, farms diversify farming structures and generate additional income (Markantoni *et al.*, 2014). However, others close down, for example, in Austria, farms declined 6.5% between 2016 and 2018 (Bundesministerium für Nachhaltigkeit und Tourismus, 2019). In contrast, the utilized agricultural area decreased only 3.4% in the same time. This general trend is explained by the takeover of farmland by other farms (Flury *et al.*, 2013). In Austria, nearly 60% of farmland is managed by 147,313 family farms (other farmland is cultivated by group holdings [owned by a group of natural persons] or by corporate farms [where the holder is a legal entity]) (Bundesministerium für Nachhaltigkeit und Tourismus, 2019). They differ from other types of farming by focusing not just on the economic aspect of agriculture (Friedmann, 2012), as it “is not only an occupation in which capital, land and labour are used to produce agricultural output, but also a lifestyle based on and involving beliefs about living and working on the farm” (Calus and van Huylenbroeck, 2010, p. 654). Most of the smaller farms in mountain areas have been family-run for generations (FAO, 2013). Given the unfavourable natural conditions, they lack alternative production possibilities, such as arable farming or fruit growing. For several reasons, family farms were particularly affected by the decline in the agricultural sector. Technical modernization and breeding progress to improved productivity exceed the financial scope of many family farms. Thus, to maintain the farm, many farmers had to look for off-farm employment and

became part-time farmers (e.g. in 2016: 59.3% part-time farms in Tyrol, 55% in Austria) (Amt der Tiroler Landesregierung, 2019; Bundesministerium für Nachhaltigkeit und Tourismus, 2019).

Farm diversification into tourism

Since the beginning of tourism in the Alpine arc, it has contributed significantly to rural livelihoods of a rather poor farming society. The rise of mass tourism since the 1950s was a driver of repopulation and economic revitalization in many Alpine communities (Barker, 1982). For remote mountain areas especially, tourism is the main source of income. There are essentially five options to integrate farm activities in the tourism industry. First, farms provide agritourism services, including accommodation, activities, produce and experiences, to generate additional on-farm income (Anthopoulos and Melissourgou, 2013). In addition to the traditional farm-based accommodation, several farms also run hotels or pensions decoupled from their farms (Stotten *et al.*, 2019). For both approaches, the diversification into accommodation services demands other skills, competencies and endowment (Bartolini *et al.*, 2014). This further affects the social identity of a farm family and alienates it from traditional farm culture (Brandth and Haugen, 2011). Data from 2010 indicate that 11% of guest beds in Austria were provided by farms (Bundesministerium für Nachhaltigkeit und Tourismus, 2019). As one-third of all farms in Tyrol offer accommodation services, it constitutes an important pillar of income. A second source of additional income is off-farm employment in tourism. Winter is a slack period for farming, while winter tourism is the backbone of tourism in Austria, and especially in Tyrol (Meixner, 2006). Thus, employment in tourism is synergetic in terms of labour demand. Farmers often work in slope grooming and ski lift services, as skiing instructors or in other tourism-related activities (e.g. show dairy, carriage rides). Additionally, farmers (mostly female) are involved in the hospitality service sector. However, this strategy also puts an additional burden on the farm family (McCoy and Filson, 1996). A third potential linkage is the provision of high-quality food products for high-end restaurants and tourists within the region. This deepens the relationship between food producers and food consumers in general (Sidalı *et al.*, 2013). A fourth contribution of tourism is the increased awareness of the role of farming in landscape maintenance and other cultural ecosystem services (like aesthetics) by the public (Arriaza *et al.*, 2004). This is a major justification for public transfer payments and may translate into regional compensation for farmland management. Fifth, most of the touristic winter activities, like Alpine or Nordic skiing, take place on farmland; thus, tourist associations or ski lift operators have to pay compensation for the right to use farmland for ski slopes or cross-country skiing trails (Gattermayer, 1992).

The resulting symbiosis of agriculture and tourism stabilizes somewhat the ongoing structural change in certain rural areas (Fleischer and Tchetchik, 2005; Schermer *et al.*, 2016) and contributes to the public awareness of the value of farming in general (Tew and Barbieri, 2012). Nevertheless, tourism activities are not a panacea for maintaining farming, since much tourism in Austria takes place in agriculturally less favoured areas (Gattermayer, 1992). Based on this context, the paper aims to answer the following research questions:

- (1) How does farm diversification into tourism enable family farms to activate different farm resilience capabilities?
- (2) What is the role of peasant habitus for the resilience of family farms?

Theoretical and conceptual frame

For this study, a farm is defined as a unit consisting of the farm family (with their “mental models, preferences, goals, abilities, etc., making up its social and cultural capital) and the

physical farm (with a variety of subsystems, including land, animals, crops, building, finances, etc., making up its natural and economic capital)" (Darnhofer *et al.*, 2011, pp. 187–188). This study focuses on family farms as it is the prevailing model of farm organization in the Alpine area. Generally, in this study, a farm is considered with its social as well as ecological functions, which form a social-ecological system. For family farms, the differentiation between the terms "farmer" (Landwirt/Landwirtin) and "peasant" (Bauer/Bäuerin) is of importance. Whereas this distinction has almost disappeared in the English-speaking world, in the German-speaking world, it is significant. The English definition of a farmer relies on a productivist entrepreneurial model. Peasant farming is often used as a synonym for smallholder, small-scale and family farming by scholars in critical agrarian studies (Edelman, 2013). Shanin (1973) defines peasantry by four interlinked distinguishing features:

The family farm as the basic multi-functional unit of social organisation, land husbandry and usually animal rearing as the main means of livelihood, a specific traditional culture closely linked with the way of life of small rural communities and multi-directional subjection to powerful outsiders (pp. 63–64).

Later, van der Ploeg (2009) highlights peasantry as a counter-model to industrial or "entrepreneurial" farming. Thus, peasants are rooted in the locality, striving for autonomy, reducing capital intensification and applying resource-based sustainable food production and distribution practices.

Different social groups exhibit distinct modes of action. Bourdieu (1979) explains the similarities of the "modus operandi" (Bourdieu, 1979, p. 189) within a certain social group as their habitus. He (1974) defines this term as the inherent system of dispositions that is shaped by our experiences and interaction with past events and is further influenced by current practices and structures. Such a system of dispositions manifests itself in individual or collective attitudes, which are passed through generations within families or other social groups. Therefore habitus provides the (mostly) unconscious guidelines for choosing one way of acting over another and guarantees meaning behind one's actions, or, as Bourdieu (1974) states, it is "the unintentional invention of regulated improvisation" (p. 79). Even if He (1974) does not describe habitus as static, he refers to its inertia with the hysteresis effect, as tacit habits shaped in the primary socialization hardly change later. Like every human activity, farm management is influenced by habitus (Burton *et al.*, 2008; Saunders, 2016; Stotten, 2015; Darnhofer *et al.*, 2011), which expresses itself in attitudes and practices of good farming and is transmitted by peasants of different generations on a farm, as well as by neighbours or other local institutions. Habitual actions are less guided by rationality, scientific information or objective evaluation, than by inherent guidelines of how to be a peasant. However, there are multiple forms of peasant habitus (Schallberger, 1999; Evans *et al.*, 2002) based on different experiences, anchored in diverse cultural settings. Nevertheless, one important asset of the peasant habitus relies on the activity of working the land as well as autonomy about the farming practice (Bjørkhaug, 2006).

The concept of resilience was derived from mathematical sciences to describe dynamic systems and was adapted to natural systems by ecologists (Davidson, 2010). In recent decades, it has also become popular among social scientists (e.g. Wilson *et al.*, 2018; Adger, 2000). Based on Holling's (1973) notion that the capability of a system to manage or cope with change is crucial, Walker *et al.* (2004) define resilience as "the capacity of a system to absorb disturbance and reorganise [itself] while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks" (p. 2). Referring to these ideas, Darnhofer (2014) distinguishes "buffer capability, adaptive capability and transformative capability" (p. 467) of farms. She argues that a farm is resilient when it is able to navigate adaptive cycles by employing these three capabilities. These cycles are not necessarily triggered by an

occasional event; rather, they are ongoing processes (Darnhofer, 2014). The buffering capability refers to the absorption of shocks and turbulences. Therefore, a farm must be able, for example, to fall back on financial resources in times of low income, without changing the farm's structure. The adaptive capability is expressed in the adaptation of the system while staying in the same regime. An example would be changes in farm management (e.g. diversification into tourism activities) which are not provoked by a shock or by disturbances but applied as a proactive resilience strategy (DeVerteuil and Golubchikov, 2016). This might be the adaptation of livestock farming, workload, land use, the introduction of new technologies or the exploration of new sales channels. However, the basic functions of the system remain. Another expression of farm resilience according to Darnhofer (2014; see also Darnhofer *et al.*, 2016) is the transformative capability, when, in reaction to a disturbance, a radical change is implemented and a transition is made into a new system, for example, the conversion from conventional to organic farming. This transformation includes changes in the perceptions and values of the farm family and its integration into social networks (Lamine, 2011). Considering social-ecological systems, some might be resilient from a social perspective but are ecologically vulnerable, and vice versa (Folke, 2006). Here it is of importance that social resilience is highly dependent on intact social relations (e.g. within the community, family), institutions (e.g. support through agricultural policy), identities (e.g. practised in farming communities) and economic mechanisms (e.g. enabling local food supply chains) (Milestad and Hadatsch, 2003).

Farms of this study (see empirical evidence as well as Table 1) rely on low-intensive animal husbandry, where a change from conventional to organic farming would not include major changes in the system (López-i-Gelats *et al.*, 2011). Other radical changes, such as to arable farming, are not possible in this area due to topographic and climatic restrictions. However, as most of the farms have diversified into tourism, a transformation into a system solely based on tourism is obvious, though radical, as it entails a new equilibrium of the social-ecological system. Therefore, for this study, a farm is considered as non-resilient when it has undergone the transformation into a completely new system (e.g. from part-time farming into full-time tourism provider) as a reaction to a disturbance, a shock or as a proactive strategy. This is because the social system will have completely changed to other set of values and other integration into social networks (e.g. tourism association). In contrast, most of the releasing farmland would be taken over and continue to be farmed by other farms in the village so that, from the ecological perspective, it does not affect the resilience.

Empirical investigations on farm resilience highlight that several strategies may make a farm resilient and thus positively influence rural development. According to Ashkenazy *et al.* (2018), there are three groups of resilience strategies: “[1] finding new product niches within the agricultural sphere, [2] creating new ways to structure supply chains, and [3] initiating new activities that may build on farmers’ existing assets but go beyond traditional agricultural activities” (p. 214). Whereas the first two groups refer to agricultural activities or the sales channels of agricultural produce, the third mentions the diversification into off-farm income. In these strategies, multiple incomes support farms to sustain their livelihood and to minimize risk. However, there is no one option to achieve resilience, nor one strategy to enhance resilience for one farm or one community, which could be a panacea that leads to resilience in general. To develop a resilience strategy, the local context as well as the prevailing understandings and values have to be considered (Ashkenazy *et al.*, 2018; Darnhofer *et al.*, 2016).

Empirical evidence

A field study in the Ötztal valley (Tyrol, Austrian Alps) provides empirical insights into the interplay of tourism and farming and its impact on farm resilience. Agriculture in Tyrol

Table 1.
Participating farms

Farm	Location	Livestock unit	Farm	Farm size (ha)			Additional income of the household ^d	Division of household income (self-estimation) In %	
				1990	2010	2010 ^b			
1	Vent	Full-time	Horse breeding, suckler cows	23.7	22.8	1,198	640	34	100 farming
2	Vent	Part-time	Cattle, pigs, sheep	5.6	8.9	28	26	6	8 farming, 80 additional income on-farm, 1 transit rights, rights of use, easement agreements, 11 other compensation
3	Obergurgl	part-time	Goats, sheep, bees	6.2	3	19	19	4	10 farming, 10 additional income on-farm, 65 additional income off-farm
4	Obergurgl	Part-time	Cattle, chicken	11.7	13.4	34	8	7	10 farming, 80 additional income on-farm, 10 transit rights, rights of use, easement agreements, 5 other compensation
5	Obergurgl	Part-time	Cattle, sheep, pigs, alpaca	9.2	14.8	20	20	7	9 farming, 60 additional income on-farm, 10 additional income off-farm, 20 transit rights, rights of use, easement agreements, 1 other compensation
6	Obergurgl	Part-time	Highland cattle	-	7.2	-	-	10	0 farming, 35 additional income on-farm, 45 additional income off-farm, 15 transit rights, rights of use, easement agreements, 5 other compensation
7	Vent	Part-time	Cattle, sheep, goats, horses	32.9	35.6	42	16	22	20 farming, 50 additional income on-farm, 30 additional income off-farm
8	Vent	Part-time	Horses, goats, suckler cows	16.8	14.9	26	29	6	5 farming, 90 additional income on-farm, 5 transit rights, rights of use, easement agreements
9	Obergurgl	Part-time	Sheep, goats	11.1	-	41	40	-	100 bed and breakfast
						2.2	1.6	10.6	

Note(s): ^aIn brackets earlier occupations of the farmers

^bThe decline in mountain pastures from 2010 goes back to a change in capturing mountain forage areas. Prior to 2010, the areas submitted within the agricultural structure survey had always been those of the cadastral map of mountain pastures

continues to play an important role, even if its economic weight is small. It is an integral part of the Tyrolean culture and indispensable for maintaining the cultural landscape. Following a decline in agricultural units in recent decades, Tyrol has about 15,000 farms, of which about 4,200 are full-time and about 9,200 are part-time family farms (other farms are listed as legal entities, associations or cooperatives). Agriculture is largely based on animal husbandry (57.9% of agricultural output), which is mainly dairy farming and raising breeding stock (especially in mountain areas). Agricultural diversification, such as agritourism and direct marketing, accounts for a significant proportion of total agricultural output (16.5%) ([Amt der Tiroler Landesregierung, 2017](#)).

The integration of tourism and farming was examined in two remote villages, Vent and Obergurgl (both part of the municipality of Sölden), at the head of the Ötztal valley. The valley of Vent is very narrow and flanked by steep slopes. It leads to a valley floor in the village of Vent (1895 m). The valley leading to the village of Obergurgl (1907 m) is wide, with gentler slopes than in the valley of Vent. Originally, both were typical Alpine agrarian communities based on livestock farming. Tourism started as early as in the 19th century. In the beginning, tourists were attracted by glaciers and the proglacial lakes. Even then – forced by the crisis in mountain farming caused by industrialization – farmers hosted tourists in their houses and served as mountain guides to sustain their livelihood ([Scharr, 2013](#)). Ski tourism in Obergurgl evolved in the mid-20th century, and it developed into an internationally recognized skiing destination, with significantly lower numbers of tourists in the summer season. In contrast, the skiing facilities of Vent are relatively small. However, the village focuses on mountaineering activities and is today classified as a mountaineering village ([ÖAV, 2017](#)), which results in an economic balance of summer and winter seasons. Thus, both villages depend heavily on tourism, as other economic activity is of little importance in the whole valley. In 2019, Obergurgl had little more than 500 inhabitants, among them 15 active farmers. The population in Vent is around 140, with eight active farmers ([STATISTIK AUSTRIA, 2017](#)). Even if part-time farming is dominant in the Ötztal as a whole, there are still some full-time farmers (see [Table 1](#)). Farming is mostly based on animal husbandry, with the majority in sheep and cattle breeding, as the natural conditions are not favourable for arable farming. Also forests, which mainly serve for protection at this altitude ([Tasser et al., 2020](#)), are of little importance in the two villages (2015 Obergurgl: 6.3%, Vent: 2.4% of total area, ([Huber et al., 2020](#)), see also [Table 1](#)).

Methodology: farm biographies

To obtain information about farm resilience, narrative or biographical interviews ([Küsters, 2009](#)), called farm biographies for this study, were conducted with farmers. The purpose of such interviews is to enable the participant to narrate their experiences around the study theme ([Allen, 2017](#)). With a narrative generating introductory question, the interviewer stimulates the participant to express his or her orientation patterns through descriptions. After a narrative phase, the interviewer asks immanent questions, relying on aspects mentioned by the participant, to initiate a continuing narration and to clarify uncertainties. Prepared exmanent issues of interest might be addressed during the last part of the interview ([Küsters, 2009](#)).

The focus of this study is on the “biography” of the farm rather than on that of the farmer. Farms for deeper investigation were selected from a list of registered farm managers (all male) suggested during previous expert interviews conducted in the same project with a focus on community resilience among local stakeholders (e.g. chairmen the collectives of farmers, tourism representatives) of both villages. Additional farmers, whose names had been suggested during other farm biographies, were contacted for interviews (snowball method of sampling ([Przyborski and Wohlrab-Sahr, 2009](#))). The opening question asked for a

narration on the farm development, especially during the last 40–50 years. Thereupon, immanent questions were posed. As exmanent issues of interest, questions on aspects of resilience, such as (additional) income, investments, participation in local cultural associations and change in land use, had been prepared. A timeline made of carton and starting in the 1970s helped the farmers to express and accentuate specific moments for their farm, which were noted directly on paper arrows during the interview. This helped to visualize the development of the farm for the farmers and to trigger a deeper reflection. In total, nine interviews were conducted (5 in Obergurgl, 4 in Vent, see [Table 1](#)). The farm biographies with the farmers were done between November 2017 and June 2018 at their respective farms and lasted between 30 and 90 min. For this paper, case summaries were produced (see [Appendix](#)).

A verbatim transcript of narrative interviews serves to transform spoken material into a written form. In this process, data were anonymized. For data analysis, the qualitative content analysis serves to systematically describe the meaning of qualitative data. This rule-guided and theoretically grounded step-by-step approach to qualitative text analysis is based on the inductive development of categories close to the given text material and a deductive verification of those categories in terms of the research questions and theory ([Mayring, 2007](#)). For the development of the categories, the software ATLAS.ti was used to organize and code the text material ([Konopásek, 2011](#)). In total, the six categories were developed: farm diversification, disturbances, buffering, adaptation, transformation strategies and habitus.

Results

The categories of farm diversification, disturbances, buffering, adaptation and transformation strategies, as well as habitus, cluster the results and are presented below.

Farm diversification

Farms of this study practise different modes of farm diversification. Whereas most of them integrate their farming activities with the tourism industry, Farm 1 went into horse breeding. This niche enables the family to work the farm full-time, the only one in the case study area. Farms 2–9 integrate tourism on different levels to diversify their farm. They mainly provide accommodation, either as agritourism in relation to the farm (7), as bed and breakfast (4, 8, 9), as holiday apartments (2, 5, 6) or by managing mountain huts (8). Farm 3 consciously rejected the accommodation of tourists but interacts with the tourism industry through its little “souvenir” shop, where they sell woodcarvings made by the farmer. Several farms apply off-farm diversification through employment in the tourism industry, mainly as ski instructors (1–7) during winter, which is a low work season for farming in this area. This activity, unlike farming activities, allows farmers to be more interactive with others. Additionally, Farm 7 offers agritourism services, such as farm visits and carriage tours for external guests. Farm 5 relies to a large extent on additional income generated through land ownership, which has become highly valorized through the skiing destination in Obergurgl (transit rights, rights of use, easement agreements). All active farms (1–8) receive regional compensation for farmland management, though they mention that the amount is negligible.

The farm produce of many farms is sold directly, either to consumers, restaurants or within their own tourism facilities. Those direct marketing strategies often depend on personal contacts with customers, for example, from the Ötztal valley, and with professional providers, for example, local restaurants. Even though farms supply high-quality products, the quantity is neither steady nor sufficient (for the catering sector). The use of the produce in their own tourism structures, like in a mountain hut (8), allows farms to use less favoured cuts of meat in their mountain hut (where the clientele usually does not expect gourmet food).

For milk processing, a dairy operates as an intermediary. However, for some farms (4, 9), the sale of produce goes through professional processors, as private relations for direct marketing are missing or have been lost.

Disturbances

Generally, farmers in Vent and Obergurgl saw themselves as not connected to the globalized market and thus not concerned by the bovine spongiform encephalopathy (BSE) crisis in the 1990s, the global financial crisis in 2008 or the drop in the European milk price in 2015. The farming community (1, 2, 3, 5, 6, 7) is aware of global warming as a long-term change, and so far, it does not influence their farming activities. Farms of the study are mostly harmed by personal events, such as work accidents or health issues of the peasant (3, 5, 6, 7, 9), and natural events, such as avalanches (1, 6, 7). Farm succession is either solved (1, 7), not yet an issue (2, 3, 4, 5, 6) or unclear (8).

Buffering strategies

Buffering strategies are mostly applied in reaction to a disturbance to buffer the effects for a certain time, such as the temporary loss of manpower caused by an accident at work (3, 7), or after a natural damaging event like an avalanche on farmland (6, 7). Here, strong family and/or farm community relations provide an additional temporary workforce. Some farms rely mainly on their buffering capability for personally less important aspects of farming (1, 3; e.g. digitization, infrastructure) or even for all aspects of farming without adapting the farming system in a sustainable way (4, 9).

Adaptation strategies

Farms apply proactive adaptation strategies (1, 2, 5, 6, 7, 8, 9) to their long-term development in terms of farmland, infrastructure, workload, livestock and digitization. The farm family constantly adapts their farming activities, for example, through the maintenance and/or purchase of new infrastructures like machines or building structures, or through adjustments of farmland (abandonment of peripheral land/purchase of new land) or changes in livestock (e.g. from cattle to sheep) to extensify the workload. Proactive adaptation strategies are also applied to accommodation facilities (4, 7), with ongoing investment into accommodation infrastructure (e.g. installation of sauna). However, in case of disturbances, such as a natural phenomenon damaging farmland and/or infrastructure (e.g. destruction of the stable), farms are able to activate a reactive adaptation strategy (3, 5, 6).

Transformation strategies

The transformative capability to completely transform into another system, here tourism provider, is only considered when the buffering capability is depleted (e.g. lack of investment in farming in recent years) and adaptation is no longer possible (e.g. lack of financial resources) so that a transformation might be the only option for the farm family to sustain their livelihood (9). Even if some tourism activities of single farms would open up the option to give up farming (2, 3, 4, 5, 6, 8; household income is to a large extent generated through non-farming activities), this transformative capability is not applied.

Peasant habitus

Even if most of the farm families are active in the tourism industry, all active farms affirm their integration into the farming community (1–8), which is organized in two *Agrargemeinschaften* (the collectives of farmers, see [van Gils et al., 2014](#)) that jointly

organize the use of commons like alpine pastures. Their underlying values are rooted in the peasant culture. Peasant 5 explains his identification with being a peasant in these words:

Peasant. Yes, that's what I like most to do! [. . .] I mean, that is the good thing about being a peasant, you decide. When I say I'm mowing today, I decided that. And if everything is wet tomorrow, then I too have decided. (5)

Here, he refers to the advantage but also the responsibility of being autonomous in the farming activities. Also, being active in farming is highlighted as the most favourite activity, in relation to other duties. However, some peasants expressed a double identity (2, 6, 9), based on their peasant habitus and their tourism service provider habitus. They explain their double identity by the fact that they have always been active in both professions. The identification with being a peasant is also rooted in the heritage, as farms and farmland have been worked for centuries by their families, as the following remark highlights:

Out of idealism and passion. For reasons of sanity, one would have had to say stop a long time ago, exit. Agriculture is not sustainable in the mountain area. So, despite financial support, it is not feasible. So that's, actually, that's, you've always had that, you do not know any other way. It's always been family-handled. It's just idealism. Yes, and you're attached to it. (7)

The comment that they "always had that" to justify the farming activity, despite it being financially unattractive, underlines the strong peasant habitus. Further on, the role of the farm wife and the whole farm family is of importance for farming activities, as they represent an important pillar of manpower on the farm. Here, peasant 1 points out the identification of his wife with the farming activities:

Then we have just had guests, with room rental. But from the year 2000 onwards (. . .) nothing more. And maybe skiing courses I held two, or so [. . .] we have always been peasants (. . .), my wife peasant and I peasant. Other activities have been a minor matter. (1)

Also, other peasants underline the importance that the farm wife (mostly the incoming partner) identifies herself with the farming activities (5, 6, 7, 8).

Discussion

How does farm diversification into tourism enable family farms to activate different resilience capabilities?

The additional income generated through farm diversification activities into tourism relieves family farms from disturbances at global or national level, such as a financial crisis or changes in the Common Agricultural Policy (CAP) of the European Union. Therefore, the farms mainly rely on their proactive adaptation strategies to ensure their survival. Disturbances that impact on farm resilience and require adaptation or buffering mainly occur on an individual level, such as loss of workforce or damage to farmland. The local resilience strategy (see [Ashkenazy et al., 2018](#)) in the upper Ötztal valley is integrating farming with tourism. In this way, multiple incomes raise the total income of the farm household and fund adaptation strategies. The farms of this study, however, demonstrated a variety of options and shades of farm diversification into tourism. By applying adaptation strategies, the investigated farms continuously optimize their farmland and their workload. As a double burden appears with farm diversification strategies, farms tend to intensify the farming activities to reduce the workload (see also [López-i-Gelats et al., 2011](#)). Further, farms of this study would be able to apply the transformative strategy as Farm 9 did. In this case, the buffering strategy was depleted and the farm was not resilient anymore. However, the transformative capability enabled the farm family to sustain their livelihood and allowed them to continue as a tourism provider. With a majority of the household income generated in

farm diversification activities, most of the farms under investigation could apply such transformative capability in case the resilience of their individual farms came under pressure.

All investigated farms apply selected options to integrate farm activities with the tourism industry. Mostly, diversification strategies rely on accommodation services and off-farm employment in tourism. Interestingly, accommodation services are not obviously linked to farming activities or peasant culture, so the farm itself is not necessary to keep a classic agritourism accommodation service running (see [Stotten et al., 2019](#)). Applied resilience strategies also make use of Obergurgl's assets as a skiing resort. Here, the property rights are valorized through building rights agreements (e.g. ski lift station or restaurants on alpine pastures), and easements for the slopes that are depending on the surface made available for skiing, which create financial benefits for the farm. Certain peasants are aware of the potential value of certain plots for the tourism destination, which makes them a lucrative source of income (especially as prices are fixed by negotiation, which opens up room for speculation). Within skiing areas, there are usually few or no favourable areas for infrastructure, and peasants as the landowners nowadays make use of this (historically grown) dependency. Thus, in Obergurgl, the meaning of "land" is changing; once it was a resource for food production, but today it is a source for financial revenues. Some farms in Obergurgl can make a living on such revenues. In contrast, farms in Vent rely rather on local food supply chains. Direct marketing strategies often depend on personal contacts with customers, for example, from the Ötztal valley, and professional providers, for example, local restaurants. Even though farms supply high-quality products, the available quantity is neither steady nor sufficient for the restaurants. Sourcing produce from local farms thus requires an additional effort on the part of the customers. They are prepared to make this effort because they are rooted in a strong social network with the farms. Besides, direct marketing in the farm's own tourism structures is important for local added value. It enables farms to make use, for instance, of less sought-after parts of meat in their mountain cabins.

What is the role of peasant habitus for the resilience of family farms?

Participants of this study identify themselves as peasants, that is, *Bauer* and *Bäuerin*. Their farming is less directed at producing food for the market and more on producing food for their own consumption (see [Shanin, 1973](#)), for the wider family and for their own or nearby hotels or mountain cabins. The farm family, consisting mainly of the peasant couple with their children as well as the parent generation, is considered an entity of social organization and brings in all manpower for the farming activities (see [Shanin, 1973](#)). Sales within the local and/or regional community are based on personal contacts, either to direct consumers or the catering sector. Social capital needs to be integrated in local supply chains, which functions well in Vent with several relations to mountain cabins and local hotels. Thus, the social network is stronger in Vent than in Obergurgl, where tourism has already turned more into professionalization and rationalization. Even if most of the farms rely on tourism activities for generating the main income, and they show a second identity as a tourism service provider, they continue their farming activities, which, they argue, help them maintain their strong ties to farming and the peasant community. Investments in farming are mainly sourced from tourism income, which cross-subsidizes farming infrastructure. However, in general, an extensive way of farming is performed (see [Shanin, 1973](#)), which demands lower financial capital investments.

The habitus of the participants is anchored in the values of farming, such as working the land and the autonomy of farming practice (see [Bjørkhaug, 2006](#)). Here, also, the strong relation to land as a resource and the respect for heritage are of importance for the persistence of farming activities.

Conclusion

Agriculture and tourism are highly intertwined in the case study area. All previously mentioned forms of farm diversification into tourism are found and contribute to the different strategies of farm resilience. The additional income generated in tourism creates room for manoeuvre for the farms so that adaptation strategies become possible and financially affordable, also in response to any disturbance and, more importantly, as a proactive strategy to keep the farm resilient. Buffering is applied when the room for manoeuvre is limited and/or for issues of less interest for the farm. Adaptation and buffering strategies come along with an extensification of farming activities and result in a gradual loss of the traditional meaning of farming, which is the production of food.

Participants of this study understand themselves as peasants, rooted in the locality, and proud of their autonomy, of their less capital-intensive way of farming, of resource-based sustainable food production and of distribution practices. Their habitus is guided by peasantry values which positively influence the farm resilience and hamper any transformation strategy into a tourism provider. In the case of farm closure, the releasing farmland would be taken over and continue to be farmed by other farms in the village. However, as the number of farms is limited, every peasant leaving the farming community weakens the community. Here it is the habitus which makes peasants stick to farming activities even if all part-time farms under investigation (farms 2–8) are not economically dependent on their farming income. However, their farming activities form their identities and continue shaping their habitus and their belonging to the farming community. Finally, it is the habitus of the farm family that enables them to activate buffering and adapting strategies.

Further, the presence of social capital within the local communities supports the symbiosis of agriculture and tourism and contributes to the social resilience of farms. The networking within the community or the wider family enables direct marketing, even if it demands additional efforts on the part of customers in the catering sector (as quantities and continuity of supply are not guaranteed). However, where social capital is weakly developed, products are sold via retailers, which may not necessarily return the maximum profit for the farm. It is their social capital that enables farmers to make use of local food supply chains for their farm produce sales and to use all cuts of an animal. Here, Vent demonstrated a stronger social network to realize local food supply chains. Farm families in Obergurgl are powerful landowners. Land is not only there to be farmed, but it also generates income through land leasing. This revenue from capital enhances farm resilience.

Farms in the European Alps are a social-ecological system as they also provide ecosystem services. Were they to transform fully into tourism providers, the social-ecological system would be weakened. Even if other farms would take up the provision of ecosystem services by taking over the farmland, this would affect the social system of the farming community. However, as demonstrated in the case study, this option, while present for nearly every farm, is not taken up. Against Knickel *et al.* (2018), who deduced a “declining social-ecological resilience of farms and of rural communities” (p. 198), I argue that the local farms in the studied communities present strong a social-ecological resilience achieved through farm diversification into tourism and rooted in their peasant habitus.

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Appendix

Farm 1 was farmed part-time until the 2000s; at the time, the farmer was working as a ski instructor and his wife ran tourist accommodation on the farm. While he was able to switch easily between his duties on the farm and as a service provider outside the farm, this was much more difficult for his wife on the farm because of the spatial proximity of the tasks. After a disturbance in the 1980s, when an avalanche destroyed the stable, the farm received remarkable financial support and credit facilities encouraged by the province of Tyrol and the mayor of Sölden to replace it with a larger stable. In the late 1980s, the farmer bought first horses for breeding, which became a success in the mid-1990s. The farmer put this success down to his "sixth sense" and to good fortune.

When Austria joined the EU in 1995, organic farming also became eligible for support, so that Farm 1, with the recommendation of local farming consultants, officially turned into an organic farm. Economically this was important for the farm because of the compensation payments for agricultural land, but it mattered little for the sale of the produce, as this was sold in direct marketing to customers. Since the 2010s, the farm has changed from keeping dairy cows to suckler cows, as there was no use for the milk other than to feed the calves. Earlier (before horse breeding), milk from cows was used to produce butter sold in the region; meat was sold directly to bigger costumers. However, nowadays there is no longer a market for direct sales. Some meat is sold to customers in the region known personally to the farmer. Horse breeding is integrated, and horses sold on the international market. Main horses are award winners at international horse shows.

Farm 2 is a part-time farm, generating income from several sources directly linked to tourism. The farm family is active in livestock farming; however, additional income is generated on, as well as off, the farm. The newly built farmhouse includes two separate holiday apartments, run by the farmer's wife. The farmer himself owns a local ski school, where he also works as a ski instructor. During the high skiing season, the old farmer helps with the farm work. In the late 1980s, a new stable was built to replace an older one. Other infrastructural adaptation has gradually been added, such as an indoor crane, ventilation or a storage barn. By then, the farm family had started to farm organically. However, regulations were perceived as too strict, so they abandoned it after a while. Nevertheless, the farmer admits that organic farming might again be an option today.

The livestock changed slightly during the last 40 years. Cows and pigs remained, whereas goats were replaced with sheep. The meat of the suckling calves and pigs largely goes to a local hotel owned by a cousin of the farmer. In case the hotel does not need the meat, it is easily sold wholesale to the Tyrolean Vieh Marketing (regional cattle trade organization). Thus, the sale for the farmer is guaranteed one way or another and with good conditions. Milk and butter is consumed on the farm by the farming family and on demand given to tourists, even when hygiene regulations restrict this.

Farm 3 relies on different income sources directly linked to tourism. The farmer himself carves wooden figures, which are sold by his wife in their own little shop, mostly as souvenirs to tourists. However, the farming family has deliberately decided against providing accommodation for tourists. In the 1980s, the old farmer built a new stable, mainly for sheep, as he was active in sheep breeding. When the current farmer took over, he changed to mainly cattle farming. After the farmer suffered a serious work accident in 2010, the farming family received fundamental help with their tasks on the farm from members of the wider family and other local farmers. However, they decided to stop cattle farming and to expand goat and sheep farming, as cattle farming is more labour-intensive than extensive goat and

sheep farming. Today, they admit that if it had not been for the accident, new barn regulations would have also led them to stop cattle farming.

Most of the produce is for consumption by the farming family. However, they rely on a range of personal contacts for direct marketing of goat meat and honey. The wool of the sheep goes to the regional sheep's wool centre, which offers guaranteed sales, albeit at a low price. The farming family does not want to be included in the promotional brochure of the regional nature park for direct sales, as they fear that they may not be able to meet the demand because of their small production.

Farm 4 is a part-time farm that generates most income from its bed-and-breakfast apartment house run by the farming wife. The farmer is responsible for the farming activities. Since he took over the farm in the 1980s, tourism has become more important. Regular financial investments have been made to improve the quality of the accommodation infrastructure and to raise the number of beds, especially after the death of the old farmer. Additional investments in farming have gone into the construction of a new stable and on further improvements, such as an indoor crane and other machinery.

The farm used to keep sheep, but concentrates today on cattle and chicken farming. Traditionally, milk and butter was sold to local hotels, as the regional dairy Tirol Milch never collected milk in Obergurgl (nor in Vent). According to the farmer, the local cooperation ended because of new hygiene regulations. Nowadays, the milk is fed to the calves, which are sold wholesale to a butcher.

Farm 5 is a part-time farm and relies on different incomes sources directly linked to tourism. The farmer himself was not meant to take over the farm, but suddenly the old farmer decided in 2005 that he should be the successor. The current farmer had originally been active in the construction industry, which enabled him to build a new farm house and a tourism apartment house. Thus, income is generated from farming, tourism accommodation, from work as a ski instructor but also through leasing income as the landowner of an area nowadays used for skiing. Where possible, he further expands the land tenure from other farmers. Their apartment house opens only in winter, as prices in summer are not profitable and the farm wife prefers the farm work which is due in summer.

To be more flexible, he intensified the farm management and quit dairy farming. He also rebuilt the stable, which enabled him at the same time to increase the livestock, based on cattle, sheep, alpaca and pigs (only during summer). His father sold the milk to hotels, and he sells the meat wholesale to a friend's hotel. They make lamb sausages for their own consumption as lamb is difficult to sell. He delivers the wool to the regional sheep's wool centre, even if he does not make any profit from that.

Farm 6 is a part-time farm and relies on different incomes related to tourism. The farmer himself grew up in Vent and the farm wife comes from outside Tyrol. The couple took over the farm in 1993, which was the farm where his mother had been raised. However, in-between the farm itself had been closed and the farmland rented out. They got permission to re-establish the old farm after years of struggling as it is located in a hazard zone. Finally, they built the new farmhouse, along with two holiday apartments, as the restrictions permitted. Both of them work at the local ski school as ski instructors. After some years of experience, they are happy not to have more apartments/guests as they like to be on their own after long days with clients at the ski school.

In the 2000s, they also got back the rented-out farmland when the leasing period ended. They decided to keep highland cattle, as their needs are in line with an extensive farm management. The sale is on pre-order to private contacts and for their own consumption. Their motivation to set up the farm again was the option to have a self-determined life where they are able to take crucial decisions.

Farm 7 as a part-time farm relies on different incomes. When the farmer took over the farm in 1989, a lot of basic investment in infrastructure, machinery, farmland and livestock was necessary. The farm, together with the existing tourist accommodation, has undergone constant adaptation. As the farmer has no access to farmland within the village, he buys it from the lower Venter valley and also from other regions. To a lesser extent, he works in the local ski school and earns extra money from a cooperation with the tourism office in Sölden for farm visits and carriage tours for tourists not just from Vent. The bed and breakfast is registered in the association "holidays on the farm" and is run by the older generation farm wife, as the farmer's wife works as a teacher in Sölden.

The farm has cattle, sheep, goats and horses. The farmer is the only dairy farmer in Vent (and Obergurgl), and around 2003, he started to deliver his milk to the regional dairy "Tirol Milch", which does not collect milk in Vent. He brings the milk to Zwieselstein, a village 14 km down the valley. Other produce, like butter, meat and cheese, is served in the bed and breakfast (with an option for dinner). Their eldest son is not interested in farming, but the youngest one is, and their three daughters also want to stay in farming, which makes it difficult to realize a fair farm succession.

Farm 8 is managed part-time and generates income from different tourism-based sources. In 1990, the farmer took over the farm with the extended farmhouse where they host guests in holiday apartments and rooms. Additionally, the farm couple manages a local mountain hut owned by the Alpine Club. In 2005, they renovated the tourism accommodation and switched rooms to apartments to respond to changing tourist demand. In the last three years, the old farm wife has become too frail to manage the tourist accommodation on-farm on her own; now they run the mountain hut and the accommodation on-farm rotationally.

The old farmer died suddenly in 2008, which forced the farm couple to reorganize the farm management and to intensify farm labour. In 2010, they switched from dairy farming to suckler cows, as hygienic regulations were unattainable for them. They also breed goats and some horses. All the meat produce is directly used in the mountain hut.

Farm 9 was taken over by the current farmer in 1991. He then rebuilt the farmhouse, including a bed and breakfast, and a stable at another place, as the old one was in the village centre with no space for extension. The farm consisted of 15 sheep and 10 cattle as well as one employee for the farming.

In the beginning, the milk and meat was directly delivered to the farmer's brother's hotel. The new hygienic regulations after entrance in the EU forced the farmer to close his own slaughter room and to stop dairy farming. He changed to sheep and goat farming and focused on endangered breeds as there is financial support for it. Since 2010, farmers have to pay tax on their land leasing income from tourism, which has meant a loss in income for Farm 9. With a steady decrease in farming, finally it was the asthma and thus the health of the farmer which forced them to close the farming activity and concentrate on their bed and breakfast.

About the author

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