Appendix 1. Resilience / Vulnerability context: Internal drivers on local capitals.

Internal drivers influencing economic capital

Tourism is the overarching economic activity in Obergurgl, directly as an employer, but also for indirectly supplying enterprises and firms (e.g., renovation and extension during the off-season and souvenir shop). Technical perfection of lifts, low waiting times, and snow security due to altitude are the strong points for attracting families and upper-class winter tourists. The attractiveness of the summer season is reduced by construction and maintenance works for big hotels. Construction work and the expansion of touristic facilities are thereby regulated by the local spatial planning of the municipality of Sölden. Lifts run only for two months in summer and make an economic loss because the number of visitors is low and there are only a few hotels open. There are three lift companies, each of which operate independently from the municipality and the tourism association. Their development goals are in line with their shareholders who are big hotel owners.

Although tourism developed out of a symbiosis with farming, today this connection is less prominent. Farmers benefit from the money they receive as compensation for touristic use of their land (e.g., transit rights, rights of use and easement agreements). This helps them to invest in farm implements. Direct marketing into tourism is mainly restricted to the use of products in its accommodation. Although many farmers offer accommodations, they are not tied to the farm; no farm offers 'Urlaub am Bauernhof' accommodation (farm holidays) (see also Stotten et al. 2019). Thus, farmers in Obergurgl profit from tourism more as landowners than as food producers or agri-tourism providers.

Economically, Vent has nearly balanced summer and winter seasons because it is mainly visited by mountaineers. Generally, the financial investments into new tourism infrastructure have been low. There are several alpine huts, often operated by local farmers, who use their own produce. One farmer is also offering accommodation and other farm activities through 'Urlaub am Bauernhof'. Public transfer payments and local payments for touristic use of land are also important parts of farm income. Overall, the synergies between agriculture and tourism are more intense than in Obergurgl; the touristic value of the cultural landscape also seems to be more visible for summer tourism. Therefore, the importance of farming for tourism is strongly recognized by the local population. Further, the symbiosis of tourism and agriculture enables short local food chains; this thinking is based more on closed economic cycles. For example, the inhabitants do not aim for economic expansion since it does not benefit the local population but rather attracts external workers. Among all the villages in Sölden municipality, Vent is regarded as the pioneer of sustainability and eco-tourism. However, this is also caused by the fact that they have been left behind for a long time in the collective marketing strategies of the municipality.

Internal drivers influencing social capital

The village life in Obergurgl is shaped by seasonal closures of hotels, restaurants, and infrastructure, as well as a seasonal outmigration of residents. This negatively influences the social cohesion and social services such as medical care. Further, professionalization in tourism prevents social interactions. Due to digitization and improved logistics, only a few local contacts are needed for professional hotel management such as marketing, procurement of food, or labor. However, social associations, especially the men's choir, play an important role in social cohesion. Women are weakly integrated into associations such as the fire

brigade, ski club, and mountain rescue, so integration for them functions only via informal ways.

The population size of Vent has a critical size to actively shape village life. Since the 1990s, the church has not had a priest; however, it is still a central meeting point in Vent. The school had a critical size for many years, but it was closed in 2019. Also, associative life is becoming difficult in Vent. Few associations exist, but the members are often the same. In particular, residents want to take on less mandatory responsibility, making it more difficult to fill functions. With increased mobility and networking, younger people, in particular, commute to Sölden for specific associations (e.g., soccer), which also weakens local associations.

Internal drivers influencing cultural capital

The prevailing cultural identity in Obergurgl is a hybrid of farmer and tourism operator. The economic function of farming is strongly reduced, but it still has an important identification function, which contributes to the maintenance of traditional farming practices. Traditional festivities are not marketed to tourists and are still embedded in their religious context. Church activities, apart from social events like processions in spring, are more important for women because they are less represented in social associations. While the present generation that actively shapes economic activities still exhibits a traditional habitus, the next generation is more oriented towards economic growth and, thus, more inclined toward tourism. There is a tendency to shift the identity from being farmers to landowners who can counterbalance the power of lift operators.

In Vent, social identity as farmers is still strong; farming plays an important role in the prevailing type of eco-tourism, even if Vent is far from being a farming village. In Vent, the attachment to farming is also decreasing among youth. For farming identity, sheep breeding and relationship to South Tyrol play a major role. The local practice of transhumance of sheep from South Tyrol to their summer pastures is classified as a UNESCO intangible cultural heritage and is actively valued as a living tradition. This is also marketed as a tourist event on a small scale. The symbolic meaning of the church and Christianity, rather than the everyday practices of faith, still play a relatively large role in Vent.

Internal drivers influencing political capital

During 2016-2019, 4 of 15 members of the municipal council of Sölden came from Obergurgl, all of which were farmers. Obergurgl farmers are active in farming associations (e.g., gray cattle breeding association and the Haflinger World Association) and occupy official functions both historically and currently. This gives individual farmers access to specific knowledge, for example, regarding trends, new technologies, and good contacts outside the Ötztal Valley, such as the regional chambers of agriculture. The representation in the tourism association is restricted to few interrelated families who own large hotels and have shares on the lift operations (but do not own much land).

In Vent, two members are on the municipal council of Sölden, representing the group "Lebenswerte Heimat" that favors environmental aspects. The decision-making within the village mainly lies with the lift company, which is criticized by those running smaller bed and breakfasts who are not included in the decision-making processes. In contrast, the local committee of Ötztal Tourismus is open to suggestions and requests. Thus, the perceptions of a fair and democratic decision-making process differ among groups in the community. Within the village, the collectives of farmers (Agrargemeinschaften; see van Gils et al. 2014) organize the use of the alpine commons democratically. However, some farmers do not belong to the collective and cannot participate in decisions and discussions.

Internal drivers influencing natural capital

Obergurgl is less exposed to natural hazards and, as a consequence, there are few avalanches or flood hazards in the village. Also, the access road is less exposed to avalanche risk. Although there is no prevailing discourse on global warming, the first consequences of climate change are perceived, such as the breaking away of paths due to the decline in permafrost. However, due to the high altitude, the ski area of Obergurgl is still snow reliable. The maintenance of cultural landscape is considered important to avoid scrub encroachment of ski slopes and for summer tourism; however, the summer season is not strongly developed in the village. Further, the rural character in the village has been largely suppressed by the expansion of settlement areas at the expense of farmland and agricultural building structures in the village center. Additionally, the high volume of individual traffic also leads to additional construction (e.g., parking garages) and traffic in the village. Construction activities and, therefore, soil sealing are regulated by local spatial planning strategies.

Vent, in contrast to Obergurgl, has always been disadvantaged for skiing tourism; the steep slopes are threatened by avalanches and the access road to the village often needs to be closed due to high avalanche risk. However, the inhabitants have learned to see the low skiing infrastructure more of an opportunity than an obstacle; they have integrated 'sustainability' into their tourism approach. In the 1980s, for example, a connection of the skiing area with the neighboring valley was prevented by the local population for reasons of nature conservation. Today, the expansion of tourist facilities, such as bike trails, is viewed critically, concerning possible negative effects on the fauna. On an individual level, single hoteliers implement smaller ecological measures, such as avoiding waste (e.g., no single coffee cream or sugar packages), house sources of drinking water, and use of local meat products. In Vent, the consequences of global warming are perceived by the decline in permafrost. This triggers rock falls or landslides that affect the network of hiking trails, for example. So far, however, climate change has not been a major problem for Vent. It is still snow-reliable in winter but has only one small ski area. Concerning natural hazards, such as avalanches, Vent's access road is better protected today by avalanche barriers.

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