

Alpine airports as gateways for growing incoming ski tourism: relevance and spatial impacts

Tobias Behnen

Abstract

More and more ski tourists travel by plane to the Alps, most of which are from the British Isles, Scandinavia, the Netherlands, Germany and Russia. They not only fly to circumalpine hubs and perialpine airports but especially to intraalpine airports. This paper will discuss first results from expert interviews and passenger surveys that were conducted at the international airports in Salzburg and Innsbruck. During the winter weekends these airports must manage temporary overloading at the airside and at the landside. The increase in air and land traffic also leads to protests by local residents and to communication problems. Another remarkable result of the empirical research is that flights for ski tourists not only substitute for other means of transportation, but induce entire new journeys.

Keywords: airports, incoming tourism, ski tourism, Salzburg, Innsbruck

1 Introduction

During the last decades many airports in the Alps have had a significant increase in the number of passengers (Behnen 2008). The incoming ski tourism has always been a special push factor. Cars will continue to be the dominant mode of transport to reach the Alps (Lemper & Schröder 2011) but more and more tourists arrive with scheduled flights by Full Service Carriers (FSC) and Low Cost Carriers (LCC) and with charter flights. Some airports have shown a booming development while other sites have not had a share of this market segment, especially those airports with runway lengths below 2,000 m, where aircraft which are preferred by LCC (like Boeing 737 or Airbus 320) are not allowed to operate without restrictions (Figure 1).

Naturally, circumalpine hubs like Munich or Zurich handle large amounts of incoming tourists travelling to the Alps, but perialpine airports, such as Geneva, also traditionally play a vital role. Meanwhile, smaller competitors near the margin of the Alps, such as Friedrichshafen and Memmingen, are trying to establish themselves as destination airports for ski tourists. Only for some intraalpine airports is this market segment of outstanding importance. Innsbruck and especially Salzburg are both major gateways, not only for Austria. They serve to connect an astonishing number of European areas of origin, with many nearby and far-off skiing areas in the Eastern Alps. To a lesser extent, the French intraalpine airports, Grenoble and Chambéry, play this role for parts of the Western Alps (Bernier 2010). Evidence of the high profitability of this market is illustrated by charter flights in winter to airports which are otherwise rarely used for commercial air transport (e.g. to Sion which is served by the specialised British tour operator 'Snowjet') and by efforts to extend airports

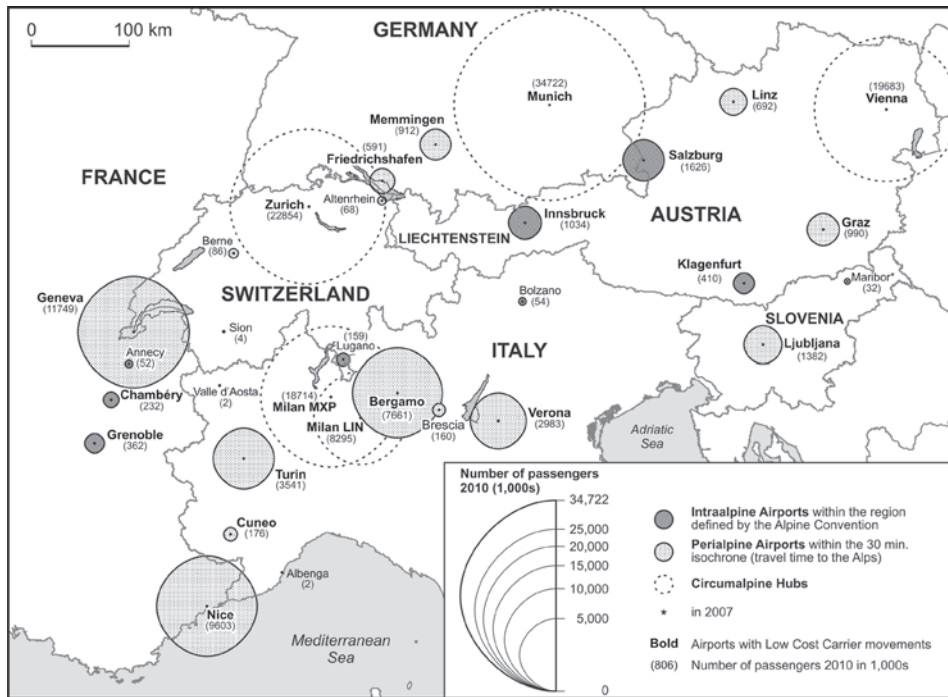


Figure 1: Numbers of passengers at Alpine airports. Cartography: S. Pohl; Data: ADV/DESTATIS (D), BFS (CH), UAF (F), ENAC (I), SI-STAT (SLO), STATISTIK AUSTRIA (A).

with runways which hitherto were too short for viable charter or LCC flights (e.g. at Bolzano). All of these processes should be seen in context with such global trends as air transport growth in both absolute and relative numbers, the boom of LCC's and the 'Newcomer airports' phenomenon (Behnen 2004).

Many valuable results of research on the 'local-global transport impacts' of airports (see Keeling 2009) and the manifold transport challenges in the Alps (see Schleicher-Tappeser 2008) have been published, but only a few papers concerning air transport in the Alps exist (Bernier 2010; Maystre & Zimmermann 1994).

The aim of this paper is to characterise and discuss the current development on the basis of first results of ongoing research referring to typical airports. The main goal is the identification of the spatial impacts of the growing traffic for the vulnerable Alpine regions by involving such relevant stakeholders as airports, airlines, passengers, residents and local authorities. This corresponds with recent research concerning the airport-airline-relationship (Francis et al. 2004), the genesis of traffic and travel behaviour (Scheiner 2007), the sustainability of transport (Holden 2007) and the sustainability of (ski) tourism (Luthe et al. 2008).

2 Survey design

2.1 Methodology

In the winter season 2010/2011 the author started quantitative and qualitative empirical research at the international airports in Salzburg and Innsbruck. This work was conducted within the project 'The accelerated change of Alpine air transport: spatial relevance in relation to the principles of sustainable transport and regional development' which is funded by the German Research Foundation (DFG). Two methods of empirical social research were applied: quantitative passenger surveys (Salzburg: $n = 1,000$, February 2011; Innsbruck: $n = 523$, March 2011) and qualitative expert interviews, that were not only conducted with relevant institutional players but also with local residents. Five main relevant categories of stakeholders with divergent interests and opinions were identified:

- airports which aspire to raise revenue and profit by higher passenger numbers and more air traffic;
- municipal administrations which benefit from the airports, but must also integrate them into urban development and planning;
- neighbouring communities which are affected by the growing industry but have no influence on it;
- local action groups which try to save the residents from aircraft noise;
- enterprises like airlines or tour operators which use the airports as customers.

Qualitative interviews with experts from these categories were conducted according to the methodological principles of empirical social research (Gläser & Laudel 2009). They were guideline-based, digitally recorded and transcribed followed by extraction and evaluation. The central questions were:

- Is the location of the airports in Alpine valleys located within close proximity of the cities of importance for the spatial relevance of growth processes which are induced by ski tourism?
- What role is played by regional topography in constraining any increase in the number of flights for a particular airport?
- Which regions, institutions and persons profit from the incoming ski tourism and which are adversely affected?
- Which role does aircraft noise play within the local debates?
- What about the quality of the communication between the airports, the local authorities, the residents and other involved parties?

The interviews with passengers were conducted face-to-face in the landside area of each airport, after the check-in but before the security control. In order to draw an adequate sample, the passengers were chosen as randomly as possible concerning traveller types, days, times and destinations. The sample size at both airports was more than 1‰ of the number of outbound passengers in 2010. Nevertheless, the representativity of the survey and the transferability of the results are both limited by the fact that the surveys were only conducted for a period of one week.



Figure 2: Salzburg Airport seen from the Untersberg (© T. Behnen, 2011).

2.2 Objects of study

Despite a decline in the amount of passengers since 2007, the Salzburg Airport is the largest airport (approx. 1.5 Mio.) within the region defined by the Alpine Convention (Figure 2). Since the runway (2,750 m x 45 m) is large enough to accommodate most types of passenger planes, the airport offers a wide variety of European destinations with all types of airlines (FSC, LCC, Charter). Due to the increase of the incoming segment it was necessary to build a second terminal, which is only used during winter weekends. The airside capacity of this airport is sometimes almost exhausted, especially on ‘Ski-charter-Saturdays’ in winter. The airport has a unique location with its vicinity to the city, the mountains (esp. in the south) and the Austrian-German-border, which leads to several problems.

The Innsbruck Airport is located even closer to both the city and the mountains (Figure 3). It handles about 1 million passengers per year. The runway (2,000 m x 45 m), which was extended by moving the Inn river in 2009, is long enough for narrowbody jets like those from the Boeing 737- or Airbus A320-families. The number of destinations of FSC and LCC is smaller than in Salzburg but the incoming-flights are also of great importance. Due to technical capacity problems and political restrictions, ‘Ski charter’-flights are scheduled on both Saturdays (with as many as 200 flights per day) and Sundays.



Figure 3: 'Ski charter' at Innsbruck Airport (© T. Behnen, 2011).

3 Results

3.1 Expert interviews

The phenomenon of the 'Ski charter' was one of the topics discussed with relevant experts, but it became apparent that it also plays a prominent role within the local and often emotional debates around the airports.

3.1.1 Airports (Experts: CEOs and/or press officers)

For the airports in Salzburg and Innsbruck, ski tourism represents a significant portion of the total market. Airports have adapted to peak-season overloads by constructing new infrastructures (such as the second terminal in Salzburg), and by requiring employees to work weekends in winter (as is done at the Innsbruck airport). The airports admit that the high number of flights on busy 'Ski charter' days leads to an increase of the continuous sound level (thus to problems with local residents), but they point out the varied restrictions concerning aircraft type, the number of flights or hours of operation as well as that imposed by the local topography. Additionally, they underline their environmental management. For these reasons, the experts from the airports do not see much potential for future quantitative growth in the ski tourism segment. For both airports, the regular 'Round table' sessions are seen as a good way to communicate with other relevant players and to solve conflicts.

3.1.2 Municipal administrations (Experts: executives from the planning departments)

In both cases the municipalities hold shares in the operating companies of the airports. In Innsbruck the city indirectly owns the majority, while in Salzburg the share is 25%. However, the interviewed experts from the municipal planning departments denied any direct influence. They claim to treat the airports as normal objects of urban planning and say that they merely try to balance the aircraft noise problem with the promotion of the economy. Due to the fact that each of these airports is located near high mountains and within densely populated cities, this task is a permanent challenge. A main instrument is the optimisation of the flight paths (incl. the glide slopes and angles). From the experts' point of view, communication with residents is of prime importance, but its quality is variable. Concerning the landside transport of ski tourists, the municipalities do not see the necessity nor the possibility to enhance public transport.

3.1.3 Neighbouring communities (Experts: mayors)

Both airports are located within the boundaries of their respective cities, but settlements in the vicinity of each airport are substantially affected by air traffic. In the case of the Salzburg airport, the city of Freilassing, Germany is especially affected, while in the case of Innsbruck airport, the municipality of Völs is most affected. The mayors of both municipalities underline that the communication with the neighbours is good but they admit that they have no legal influence on the airports. Due to the growing degree of suffering from aircraft noise in Freilassing and other Bavarian communities, the Federal Government of Germany, represented by the Minister of Transport, Peter Ramsauer, who comes from the affected region, threatened the Austrian authorities in 2011 with a restricted fly zone over German territory, similar to that imposed upon air-traffic travelling to and from the Zurich airport (BMVBS 2011).

3.1.4 Action groups (Experts: chairwomen)

Especially due to the recurrent traffic peaks in winter, the local action groups in Salzburg ('Anrainerschutzverband Salzburg Airport' and 'Verband zum Schutze der Bevölkerung des Rupertiwinkels gegen die Gefahren des Flughafenbetriebes Salzburg') and Innsbruck ('Anrainerschutzgemeinschaft Innsbruck Airport') are very active and often angry. Their main goals relate to noise problems and, to a lesser extent, to emissions and air safety. They ask for better noise protection (incl. financial support for new windows), for strict compliance with the hours of operation, for more information from the airports concerning flight paths, for much better communication and for a reduction of landside traffic. They also criticise the support of the LCC by the airports and local authorities. To make their concerns known to the public and the decision makers, they have been releasing their news more and more through electronic media channels, e.g. twitter has proved to be effective for public relations.

3.1.5 Residents (Place of residence: <0.5 km from the airport)

The sample of residents affected by the airports was small and not representative, but in the short interviews it became obvious that they do not necessarily share the opinion of the action groups. For this reason, their unfiltered statements were a valuable part of the empirical research. Their opinions showed the emotional dimension of the discussions and revealed astonishing results, e.g. in cases where the interviews could not be conducted due to aircraft noise in which the interviewees denied any disturbance by air traffic. Nevertheless it was obvious that the personal suffering of those people living directly under the flight path was exceptionally high but within a relatively short distance it decreased significantly, especially when buildings had a protective effect against noise. When criticism was offered, the residents focused on the burdening number of flights during winter weekends.

3.1.6 Enterprises (Experts: executives)

The intensive ski tourism industry generates substantial revenue for the regional economy. Many companies depend on this industry, which ensures several permanent or seasonal jobs. At the airports this becomes visible by the bus and taxi drivers or by the 'reps' who guide the package tourists. Worth mentioning are also the administrative employees of the domestic and foreign tour operators, who play an import role in the organisation of the trouble-free transfer of tourists to the many small valleys. Additionally, the interviews showed that the hotels play a key role concerning the overload problem on Saturdays in winter. The demand is still on such a high level that they have no motivation to react to the wishes of the tour operators and airports to alter their '7-day-system'.

A special economic effect has developed at Innsbruck airport, where the Welcome Aviation Group profits from the lucrative segment of ambulance flights. In winter regular flights are offered with special or converted planes ('Gipsbomber'), for injured ski tourists (e.g. to the Netherlands). On this basis, the subsidiary Tirol Air Ambulance has become one of the global leaders in its sector.

3.2 Passenger surveys

The standardised questionnaire contained more than 30 closed, hybrid and open questions. They covered different aspects of the passengers' travel behaviour including: airport choice, the schedule and the substitution of other modes of transportation, while distinguishing between two different types of travellers (ski-tourists and other passengers). In order to assess their awareness of noise problems, the interviewed passengers were asked for their opinion concerning the location of the airport near the city – without mentioning the term 'aircraft noise' within the question.

The similarity between the results of the passenger surveys conducted in Innsbruck and Salzburg was unexpected. One difference could be stated concerning the relevance of ski tourists for the airlines within the survey period. LCC and FSC, which serve Innsbruck, both depend on ski tourists for, on average, more than 80% of their total revenue. In Salzburg ski tourists are of lesser importance for these types of airlines (48% and 21% respectively).

Table 1: Selected results for ski tourists.

	Salzburg	Innsbruck
a: "How often have you travelled by plane for skiing in the Alps?" (categorised afterwards, n = 409/350)		
0–1	29%	23%
2–5	45%	42%
6–10	16%	18%
> 10	10%	18%
b: "Have you previously used other means of transport to get to the Alps for skiing?" (n = 461/375)		
no	45%	44%
yes, car	42%	38%
yes, train	9%	15%
yes, bus	4%	4%
c: "If there had been no possibility of travelling by plane to the Alps for skiing anyway what would you have done instead?" (categorised afterwards, n = 82/69)		
other destination for skiing	40%	32%
other means of transport	5%	7%
other holiday trip	18%	19%
no holiday trip	37%	32%
d: "Please give a mark to the airports' suitability for ski tourists." (n = 514/418)		
good	80%	74%
rather good	17%	22%
rather bad	2%	2%
bad	2%	1%

Approximately three quarters of the ski tourists that were interviewed are regular customers of Alpine airports (Table 1a), while the share of those passengers who travelled more than ten times by plane to the Alps is particularly higher in Innsbruck (18%) than in Salzburg (10%). The current flight was the first or second time that a plane was used to travel to the Alps for roughly only one quarter of those interviewed. This could be a sign of growing market saturation.

More than 40% of the ski tourists have only ever travelled by plane to the Alps (Table 1b). For the rest, the flight substituted for other modes of transport. Approximately 40% previously came by car and only a few by coach. In Innsbruck the train lost more passengers than in Salzburg to the benefit of the plane.

The scheduled flights to the Alps induce a considerable number of complete new journeys for winter sports. More than one third of the interviewed ski tourists at both airports said that they would not have come without this offer. When this group was asked what they would have done instead, about one third would have chosen an alternative destination for skiing in Europe, about 20% would have travelled to another type of destination (esp. to 'warm water regions') and one third would not have travelled at all (Table 1c).

Table 2: Selected results for both passenger types.

	Salzburg		Innsbruck	
	Ski tourists	Other	Ski tourists	Other
a: "Which means of transport did you use to get here?" (n = 1,000/423)				
Shuttle bus	31%	5%	47%	7%
Taxi	23%	21%	29%	22%
Car	22%	55%	8%	38%
Public transport	13%	19%	10%	23%
Other	0%	1%	0%	2%
b: "How long did it take you to get here?" (n = 998/423)				
up to ½ h	7%	58%	14%	33%
up to 1 h	32%	20%	21%	20%
up to 1.5 h	29%	8%	41%	24%
up to 2 h	16%	6%	14%	13%
up to 2.5 h	7%	2%	4%	0%
up to 3 h	5%	3%	3%	4%
> 3 h	6%	3%	3%	4%
c: "How many days did your journey/is your journey going to last?" (n = 998/423)				
Daily trip	1%	10%	1%	0%
2 to 6 days	38%	55%	32%	69%
7 to 13 days	56%	27%	64%	27%
> 13 days	5%	8%	3%	4%
d: "The airport is located near the city, what do you think about this fact?" (n = 739/301; categorised afterwards)				
Positive	83%	61%	72%	72%
Ambivalent	5%	19%	6%	14%
Negative	1%	8%	6%	3%
Indifferent	9%	11%	14%	11%
Other answer	1%	1%	2%	0%

Despite temporary congestions in the terminals, most of the interviewees found the airports to be suitable for their needs. At both airports 95% answered 'Good' or 'Rather good' to the related question (Table 1d).

Shuttle buses are the main landside means of transport for ski tourists (Table 2a). The high rates for taxis are a bit misleading, since these are often shared transports in minibuses and part of a package holiday. Cars (own car, brought by car, or hired car) which are the dominant means of transport for other passengers, are only relevant for ski tourists in Salzburg. Due to the fact that only few ski resorts offer excellent access by public transport, such an option plays a minor role.

Both airports serve more than their nearby ski resorts (Table 2b). In Innsbruck, roughly one-quarter of ski tourists travel more than 1.5 h to or from their winter

sport destination (e.g. to Italy), while in Salzburg the share is even greater, at one-third (e.g. to Slovenia). The catchment areas of the other passengers are also large but the majority come from within a 1 hour-isochrone.

The typical length of stay for ski tourists is one week, in most cases from Saturday to Saturday, which induces overloads at both the airports and on the roads to the ski resorts (Table 2c). Other passengers stay for shorter periods of time.

In order to assess the passengers' sensitivity regarding the special location of the airports, they were asked a consciously open-formulated question (Table 2d). At both airports the large majority of the interviewees said that this is positive, especially for the reason of accessibility. At least some passengers also regarded the residents by mentioning negative aspects, but this largely depended on their type of travel. At both airports ski tourists appeared to be less sensitive than other passengers.

4 Conclusion and forecast

The first results of the research project are not representative for all Alpine airports, but they show that ski tourism in the Alps features all of the typical effects of mass tourism, especially in airports. The processes around this type of incoming tourism demonstrate exemplarily that the spatial impacts of growing air transport in a high mountain region contradict the principles of sustainable transport and regional development. As a result, the planning challenges here are considerably bigger than in other European regions. Additionally, there is need for action concerning the reduction of peak loads and several technical aspects, but also concerning the communication between the relevant institutions and parties.

The substitution of ski tourists' car journeys by flights have not had a significant effect on road traffic in the Alps, but the amount of travellers using special long-distance 'Ski trains' has diminished significantly. As a consequence, the Deutsche Bahn AG has cancelled many direct night trains to foreign ski regions from Hamburg, Hanover, Dortmund and Berlin since 2008. This trend could also extend to the summer season. For several years, British tour operators have been successful in their attempt to establish incoming-flights to the Alps in summer. Though the extent of this market is small in comparison to that of the winter season, there is a substantial potential for growth. In summer the airports have free capacities and the climate change will reduce the resorts with guaranteed snow (Mayer et al. 2007) and as a consequence supply and demand in winter.

References

- Behnen, T. 2008: Accelerated change of Alpine air transport. In: Borsdorf, A., Stötter, J. & E. Veulliet (eds.): *Managing Alpine Future – Proceedings of the Innsbruck Conference October 15–17, 2007*. Vienna: 145–152.
- Behnen, T. 2004: Germany's changing airport infrastructure: the prospects for 'newcomer' airports attempting market entry. *Journal of Transport Geography* 12, 4: 277–286.

- Bernier, X. 2010: Regional airports and the accessibility of mountain areas: networks, importance and contribution to development. *International Journal of Sustainable Development and Planning* 5, 2: 130–140.
- BMVBS (Federal Ministry of Transport, Building and Urban Development) 2011: *Bayerische Bürgermeister wegen Lärmproblematik am Flughafen Salzburg im BMVBS*. Press release 093/2011 (May 13th 2011).
- Francis, G., I. Humphreys & S. Ison 2004: Airports' perspectives on the growth of low-cost airlines and the remodelling of the airport-airline relationship. *Tourism Management* 25, 4: 507–514.
- Gläser, J. & G. Laudel 2010: *Experteninterviews und qualitative Inhaltsanalyse*. Wiesbaden.
- Holden, E. 2007: *Achieving Sustainable Mobility – Everyday and Leisure-time travel in the EU*. Aldershot.
- Jülg, F. 2001: *Österreich – Zentrum und Peripherie im Herzen Europas*. Gotha.
- Keeling, D.J. 2009: Transportation geography: local challenges, global contexts. *Progress in Human Geography* 33, 4: 516–526.
- Lemper, M. & V. Schröder 2011: Gletscherdestination Stubaital. In: Scharr, K. & E. Steinicke (eds.): *Tourismus und Gletscherschgebiete in Tirol: eine vergleichende geographische Analyse*: 83–102.
- Luthe, T., R. Roth & H. Elsasser 2008: Vulnerability to global change and sustainable adaption of ski tourism – an outlook on the study SkiSustain. In: Borsdorf, A., J. Stötter & E. Veuilliet (eds.): *Managing Alpine Future – Proceedings of the Innsbruck Conference October 15–17, 2007*. Vienna: 103–117.
- Mayer, M., R. Steiger & L. Trawöger 2007: Technischer Schnee rieselt vom touristischen Machbarkeitshimmel – Schneesicherheit und technische Beschneigung in westösterreichischen Skidestinationen vor dem Hintergrund klimatischer Wandlungsprozesse. *Mitteilungen der Österreichischen Geographischen Gesellschaft* 149: 157–180.
- Maystre, T. & M. Zimmermann 1994: Luftverkehr in den Alpen – Ein Boom auf Kosten von Menschen und Natur? In: CIPRA Italia (ed.): *Verkehr in den Alpen – Mehr als nur Transit*: 98–114.
- Scheiner, J. 2007: Verkehrsgenese-forschung. In: Schöller, O., W. Canzler & A. Knie (eds.): *Handbuch Verkehrspolitik*. Wiesbaden: 687–709.
- Schleicher-Tappeser, R. 2008: Prospects for transport and mobility in the Alps. In: Borsdorf, A., J. Stötter & E. Veuilliet (eds.): *Managing Alpine Future – Proceedings of the Innsbruck Conference October 15–17, 2007*. Vienna: 128–136.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [IGF-Forschungsberichte \(Instituts für Interdisziplinäre Gebirgsforschung \[IGF\]\) \(Institute of Mountain Research\)](#)

Jahr/Year: 2011

Band/Volume: [4](#)

Autor(en)/Author(s): Behnen Tobias

Artikel/Article: [Alpine airports as gateways for growing incoming ski tourism: relevance and spatial impacts 298-308](#)