

## **Tourist Behaviour in Alpine Regions of Switzerland**

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## **Tourist Behaviour in Alpine Regions of Switzerland**

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## Abstract

Within the framework of the National Research Programme 48 “Landscapes and Habitats of the Alps” the Institute for Transport Planning and Systems is working on the research project “Transport Infrastructure, Tourist Behaviour and Spatial Structure in the Landscapes and Habitats of the Alps” which aims at analysing the relationships between the land use, the transport system and the tourist facilities, and their usage by tourists.

The approach of the project is to look at these relationships at two different levels, namely at the national and at the regional level. At the regional level six different tourist regions within Switzerland are chosen as case study areas, which include the Aletsch-area, Verbier, St. Moritz, Scuol, Wengen and Engelberg. These areas are selected to represent contrary characteristics concerning location, national and regional accessibility, style, price level, etc.

At both levels the transport infrastructure and spatial structure are analysed by their provision of large scale and small scale accessibility. The behaviour of tourists is at the national level characterised by destination and mode choices as well as frequencies of visits. At the regional level tourists and their actual behaviour at the destination are described.

In order to collect data about tourist behaviour a survey was carried out in collaboration with the tourism organisations on location. A pretest took place in Engelberg during the winter 2003 whereas the main survey in all six case study areas took place during the following winter season. The survey concentrated on overnight tourists staying in hotels, guesthouses and holiday homes. Through their accommodation the tourists received a self-completion written questionnaire and a self-addressed envelope. The questionnaire consisted of different parts. On the one hand demographic, socio-demographic and socio-economic characteristics of the respondents were collected. On the other hand people were asked to give general information about the ongoing stay at the location and to complete an activity-based diary for one day of this stay. Furthermore data on preferences in winter vacations and on the general travel behaviour were collected. The time required to fill in the questionnaire amounted to approximately ten to fifteen minutes. Altogether 763 questionnaires of a total of 3000 questionnaires were returned. This equals a return rate of 25.4%, which seems to be relatively low. However, it needs to be taken into account that the tourists were not contacted directly but indirectly through their accommodation.

The paper concentrates on the analysis of the tourist behaviour in alpine regions of Switzerland at the destination. In this context the data collection in form of the conducted survey is described. Furthermore the results of several statistical analyses of the data are presented.

## Keywords

Tourist Behaviour – Winter Tourism – Swiss Transport Research Conference – STRC 2005 – Monte Verità

## 1. Introduction

Within the framework of the National Research Programme 48 “Landscapes and Habitats of the Alps” the Institute for Transport Planning and Systems is working on the research project “Transport Infrastructure, Tourist Behaviour and Spatial Structure in the Landscapes and Habitats of the Alps” which aims at analysing the relationships between the land use, the transport system and the tourist facilities, and their usage by tourists.

The approach of the project is to look at these relationships at two different levels, namely at the national and at the regional level. At the regional level six different tourist regions within Switzerland are chosen as case study areas, which include the Aletsch-area, Verbier, St. Moritz, Scuol, Wengen and Engelberg. These areas are selected to represent contrary characteristics concerning location, national and regional accessibility, style, price level, etc. At both levels the transport infrastructure and spatial structure are analysed by their provision of large scale and small scale accessibility. The behaviour of tourists is characterised by destination and mode choices as well as frequencies of visits. At the regional level tourists and their actual behaviour at the destination are described. Figure 1 shows the general structure and approach used within the project.

Figure 1 Structure of the project

|                | Transport infrastructure<br>Spatial structure | Tourist behaviour            |
|----------------|---|------------------------------|
| National level | Large scale accessibility                     | Destination and mode choice  |
| Regional level | Small scale accessibility                     | Behaviour at the destination |

In the context of analysing the tourist behaviour at the destination a survey was carried out in the six case study areas in order to collect corresponding data.

The paper concentrates on the analysis of the tourist behaviour in alpine regions of Switzerland at the destination. In this context the data collection in form of the conducted survey is described. Furthermore the results of several statistical analyses of the data are presented.

## 2. Description of the case study areas

The Aletsch-area, Verbier, St. Moritz, Scuol, Wengen and Engelberg are chosen as case study areas to represent different tourist regions in Switzerland. The Aletsch-area and Verbier are located in the canton Valais, St. Moritz and Scuol in the canton Grisons, Wengen in the canton Berne and Engelberg in the canton Obwalden. Except for Verbier all considered areas are situated in the German-speaking part of Switzerland. Closely connected with the location within Switzerland is the level of accessibility.

In Table 1 different attributes describing the six case study areas are shown. They include the altitude and the size of the respective municipality. Unfortunately, the area of the municipality does not in all cases correspond exactly with the case study area. Largely related to the size is the provision of tourist facilities. As an example the number of mountain railways and lifts as well as the total length of all ski slopes is given. Furthermore to describe the price level in the area the price of a weekly pass for adults during the winter season is added.

Table 1 Case study areas in regard to size, altitude, mountain railways and lifts, ski slopes as well as prices

| Case study area | Altitude | Population 2000  | Number of mountain railways and lifts | Total length of ski slopes | Price of weekly pass for adults 2002 |
|-----------------|----------|------------------|---------------------------------------|----------------------------|--------------------------------------|
| Aletsch-area    | 1173 m   | 447 inhabitants  | 6 mountain railways<br>6 lifts        | 239 km                     | 211 CHF                              |
| Verbier         | 1218 m   | 6130 inhabitants | 29 mountain railways<br>15 lifts      | 331 km                     | 303 CHF                              |
| St. Moritz      | 1824 m   | 5084 inhabitants | 10 mountain railways<br>4 lifts       | 350 km                     | 305 CHF                              |
| Scuol           | 1227 m   | 2138 inhabitants | 4 mountain railways<br>0 lifts        | 80 km                      | 284 CHF                              |
| Wengen          | 1006 m   | 2815 inhabitants | 14 mountain railways<br>1 lift        | 213 km                     | 254 CHF                              |
| Engelberg       | 1013 m   | 3452 inhabitants | 12 mountain railways<br>4 lifts       | 82 km                      | 240 CHF                              |
| Total           | 1243 m   | 3344 inhabitants | 13 mountain railways<br>5 lifts       | 216 km                     | 266 CHF                              |

St. Moritz with above 1800 meters is noticeably the highest area. Concerning the number of inhabitants Verbier is the largest municipality. Then St. Moritz follows. The Aletsch-area is the smallest of the six case study areas. In regard to the provision of tourist facilities like mountain railways and lifts Verbier is also the largest one. Together with St. Moritz it has the most ski slopes. But also the price of an adult weekly pass is highest in these two areas.

### **3. Survey**

#### **3.1 Survey instrument**

The survey concerning the tourist behaviour was carried out by means of a self-completion written questionnaire which was tested for operability, comprehensibility and acceptance beforehand.

The questionnaire consisted of different parts. On the one hand demographic, socio-demographic and socio-economic characteristics of the respondents were collected, such as place of residence, gender, age, family status, household size, occupation and income as well as ownership of mobility tools. On the other hand people were asked to give general information about the ongoing stay at the location and to complete an activity-based diary for one day of this stay. The activity-based approach was chosen instead of the trip-based approach due to its greater generality concerning the behaviour of tourists (McNally, 2000). Additionally data on preferences in winter vacations in regard to importance and appraisal by the tourists were collected. To further describe the respondents questions about the general travel behaviour as for instance the number of journeys within the last year were incorporated. Appendix 1 shows the questionnaire used in the main survey.

The time required to fill in the questionnaire amounted to approximately ten to fifteen minutes.

The questionnaire was in each case distributed in two languages. Depending on the predominant language in the particular case study area there was a German or a French version. Besides this an English version was added in each of the six areas.

#### **3.2 Survey administration**

The survey of the tourist behaviour at the destination was carried out in collaboration with the tourism organisations on location to establish local references.

A pretest took place in Engelberg during the winter 2003 whereas the main survey in all six case study areas took place during the following winter season. Based on experiences gathered during the pretest the main survey concentrated on overnight tourists staying in hotels, guesthouses and holiday homes. Two reasons were crucial for this decision. On the one hand day tourists were very difficult to reach and on the other hand no further data about this group are available to describe them overall. The overnight tourists received the questionnaire and a self-addressed envelope through their accommodation. All hotels and

guesthouses in each study area were contacted and asked to pass on the questionnaire to their guests. Regarding the holiday homes a random sample of addresses was selected to which the questionnaires were delivered via letterbox.

### 3.3 Survey response

In the above described way 500 questionnaires were distributed in each of the six case study areas. The number of questionnaires per accommodation was determined according to the number of available beds.

Of the total of 3000 questionnaires 763 questionnaires were returned. This equals a return rate of 25.4%. In Table 2 the corresponding numbers in the selected areas are shown separated for the different types of accommodation.

Table 2 Number of distributed and returned questionnaires

| Case study area | All accommodations |       | Hotels and guesthouses |       | Holiday homes |       |
|-----------------|--------------------|-------|------------------------|-------|---------------|-------|
| Aletsch-area    | distributed:       | 500   | distributed:           | 250   | distributed:  | 250   |
|                 | returned:          | 174   | returned:              | 59    | returned:     | 115   |
|                 | return rate:       | 34.8% | return rate:           | 23.6% | return rate:  | 46.0% |
| Verbier         | distributed:       | 500   | distributed:           | 300   | distributed:  | 200   |
|                 | returned:          | 67    | returned:              | 41    | returned:     | 26    |
|                 | return rate:       | 13.4% | return rate:           | 13.7% | return rate:  | 13.0% |
| St. Moritz      | distributed:       | 500   | distributed:           | 275   | distributed:  | 225   |
|                 | returned:          | 89    | returned:              | 45    | returned:     | 44    |
|                 | return rate:       | 17.8% | return rate:           | 16.4% | return rate:  | 19.6% |
| Scuol           | distributed:       | 500   | distributed:           | 250   | distributed:  | 250   |
|                 | returned:          | 183   | returned:              | 69    | returned:     | 114   |
|                 | return rate:       | 36.6% | return rate:           | 27.6% | return rate:  | 45.6% |
| Wengen          | distributed:       | 500   | distributed:           | 400   | distributed:  | 100   |
|                 | returned:          | 175   | returned:              | 137   | returned:     | 38    |
|                 | return rate:       | 35.0% | return rate:           | 34.3% | return rate:  | 38.0% |
| Engelberg       | distributed:       | 500   | distributed:           | 350   | distributed:  | 150   |
|                 | returned:          | 75    | returned:              | 34    | returned:     | 41    |
|                 | return rate:       | 15.0% | return rate:           | 9.7%  | return rate:  | 27.3% |
| Total           | distributed:       | 3000  | distributed:           | 1825  | distributed:  | 1175  |
|                 | returned:          | 763   | returned:              | 385   | returned:     | 378   |
|                 | return rate:       | 25.4% | return rate:           | 21.1% | return rate:  | 32.2% |

The return rates vary from study area to study area as well as depending on the accommodation type. Scuol, Wengen and the Aletsch-area show responses above average. At the same time tourists staying in holiday homes returned noticeably more questionnaires than tourists staying in hotels and guesthouses. This is probably due to the indirect way of distribution through the accommodation in the latter group.



## 4. Results

### 4.1 Description of persons and households

Persons and accordingly households which participated in the survey of the tourist behaviour at the destination are described below in regard to different attributes. In Table 3 the proportions of tourists disaggregated for the country of origin are shown. For the missing proportion up to the complete 100 percent there are no data available.

Table 3 Persons in regard to nationality

| Case study area | CH    | D     | GB    | NL   | B     | F     | I    | Others |
|-----------------|-------|-------|-------|------|-------|-------|------|--------|
| Aletsch-area    | 84.5% | 9.8%  | 0.0%  | 1.1% | 0.0%  | 0.0%  | 0.6% | 1.1%   |
| Verbier         | 31.3% | 6.0%  | 10.4% | 3.0% | 13.4% | 17.9% | 0.0% | 11.9%  |
| St. Moritz      | 52.8% | 28.1% | 2.2%  | 0.0% | 2.2%  | 0.0%  | 1.1% | 6.7%   |
| Scuol           | 85.2% | 8.7%  | 0.5%  | 0.5% | 0.0%  | 0.5%  | 0.0% | 0.0%   |
| Wengen          | 41.7% | 10.9% | 30.3% | 4.6% | 2.3%  | 0.0%  | 0.6% | 3.4%   |
| Engelberg       | 54.7% | 29.3% | 5.3%  | 5.3% | 0.0%  | 0.0%  | 1.3% | 2.7%   |
| Total           | 63.6% | 13.5% | 8.8%  | 2.2% | 2.0%  | 1.7%  | 0.5% | 3.1%   |

CH = Switzerland; D = Germany; GB = Great Britain; NL = Netherlands; B = Belgium; F = France; I = Italy

The composition of tourists concerning the nationality varies very strongly in the six case study areas. Scuol and the Aletsch-area show a high proportion of Swiss tourists, followed by a considerably smaller proportion of German tourists. Other nationalities are nearly not represented there. A similar distribution but with less Swiss and more German tourists occurs in Engelberg and St. Moritz. In Wengen just under one third of the tourists are from Great Britain. Verbier is in obvious opposition to the other five areas. The higher proportions of tourists from France and Belgium are probably influenced by the French version of the questionnaire.

Table 4 shows the shares of male and female persons, the average age as well as the size and the overall gross income per month of the households.

In terms of the gender the six areas are quite similar. Altogether more men than women participated in the survey. However, with respect to the age of the respondents significant differences occur. Thereby it is possible to identify two groups. Verbier, Engelberg, the Aletsch-area and Scuol form one group whereas Wengen and St. Moritz belong to a second

group in which persons are a little older. The average values for both the household size and the household income are also significantly distinctive for the different areas. For the number of persons per household these varieties are based on differences in the number of children rather than in the number of adults. The highest income is determined for St. Moritz. Engelberg shows a noticeably lower than the average value. The other four areas lie in the middle range. And again for the missing percents apply that no data is available.

Table 4 Persons in regard to gender and age as well as households in regard to size and income

| Case study area | Gender       | Age          | Number of persons per household | Monthly income per household |
|-----------------|--------------|--------------|---------------------------------|------------------------------|
| Aletsch-area    | 57.5% male   | 46.6 years   | 3.0 persons                     | 9671 CHF                     |
|                 | 42.5% female | (12.6 years) | (1.3 persons)                   | (4307 CHF)                   |
| Verbier         | 58.2% male   | 45.5 years   | 2.7 persons                     | 9406 CHF                     |
|                 | 38.8% female | (14.7 years) | (1.7 persons)                   | (4797 CHF)                   |
| St. Moritz      | 59.6% male   | 53.9 years   | 2.6 persons                     | 11098 CHF                    |
|                 | 36.0% female | (13.4 years) | (1.3 persons)                   | (4296 CHF)                   |
| Scuol           | 56.3% male   | 47.6 years   | 2.7 persons                     | 9434 CHF                     |
|                 | 43.2% female | (15.0 years) | (1.4 persons)                   | (4507 CHF)                   |
| Wengen          | 61.7% male   | 50.9 years   | 2.7 persons                     | 9921 CHF                     |
|                 | 36.0% female | (14.3 years) | (1.2 persons)                   | (4556 CHF)                   |
| Engelberg       | 52.0% male   | 46.4 years   | 3.2 persons                     | 8189 CHF                     |
|                 | 46.7% female | (13.9 years) | (1.4 persons)                   | (4264 CHF)                   |
| Total           | 57.9% male   | 48.5 years   | 2.8 persons                     | 9658 CHF                     |
|                 | 40.5% female | (14.2 years) | (1.3 persons)                   | (4491 CHF)                   |

Values in brackets: standard deviation

## 4.2 Description of stays

Table 5 illustrates the average duration of the ongoing stay in the different case study areas. Furthermore the number of persons in the travelling party and the number of rooms which are available in the accommodation are included.

All three variables show significant differences for the six areas. Concerning the duration of the stay two groups are distinguished. In Engelberg, Scuol, the Aletsch-area and Wengen the duration averages to nearly ten days whereas tourists in St. Moritz and Verbier tend to stay longer than two weeks. The size of the travelling party is greatest for Engelberg with an average of six persons and a standard deviation of eleven persons. In the other five areas the party comprises three to four persons. The number of rooms available in the accommodation

is very strongly related to the number of persons as well as to the type of accommodation, whether it is a hotel or a guesthouse or a holiday home.

Table 5 Stays in regard to duration, party size and accommodation size

| Case study area | Duration  |             | Party size  |                | Accommodation size |             |
|-----------------|-----------|-------------|-------------|----------------|--------------------|-------------|
| Aletsch-area    | 9.9 days  | (3.8 days)  | 4.3 persons | (5.0 persons)  | 2.5 rooms          | (1.0 rooms) |
| Verbier         | 16.5 days | (33.0 days) | 4.2 persons | (6.3 persons)  | 2.1 rooms          | (1.1 rooms) |
| St. Moritz      | 14.4 days | (13.3 days) | 3.0 persons | (2.1 persons)  | 1.9 rooms          | (1.1 rooms) |
| Scuol           | 9.1 days  | (4.4 days)  | 3.3 persons | (1.8 persons)  | 2.2 rooms          | (1.1 rooms) |
| Wengen          | 10.0 days | (7.8 days)  | 3.9 persons | (4.0 persons)  | 1.9 rooms          | (1.1 rooms) |
| Engelberg       | 8.2 days  | (5.2 days)  | 6.0 persons | (10.9 persons) | 2.4 rooms          | (1.2 rooms) |
| Total           | 10.7 days | (12.0 days) | 4.0 persons | (5.1 persons)  | 2.2 rooms          | (1.1 rooms) |

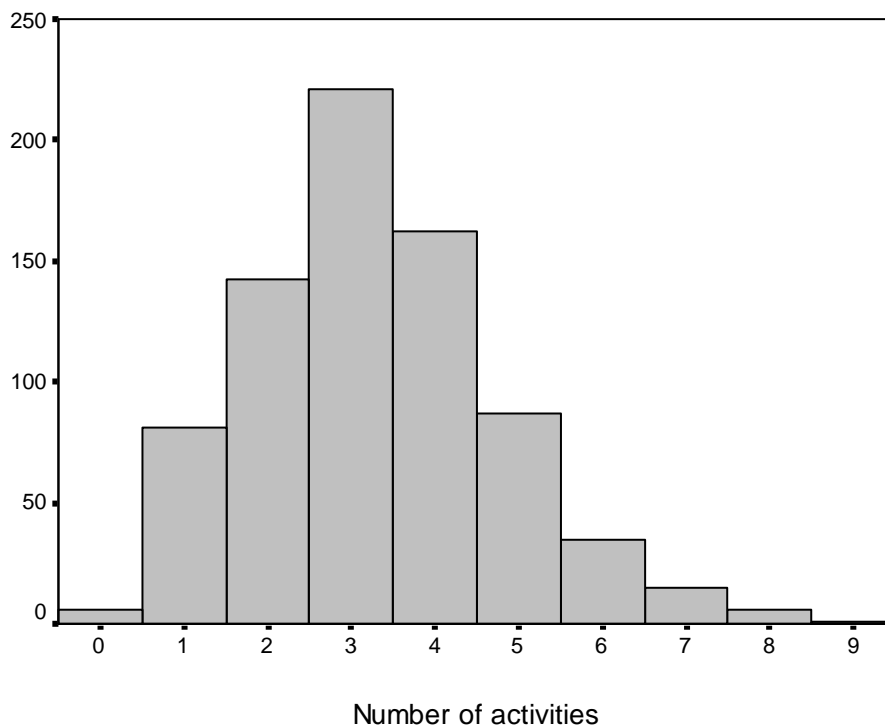
Values in brackets: standard deviation

### 4.3 Description of activities

The activities were recorded by means of an activity-based diary for one day of the ongoing stay. The respondents were asked to fill in every activity in which they participated outside of the accommodation. Figure 2 shows the distribution of the number of activities per person.

The mean value amounts to 3.3 activities per person and the standard deviation to 1.5 activities.

Figure 2 Number of activities per person



Concerning the number of activities a model using the Poisson regression for discrete variables is estimated. In Table 6 the results are shown. Significant variables are marked depending on the particular level.

Men show less activity than women whereas persons in education tend to be more active. The ownership of a car increases activity. Skier and snowboarder also show on average higher numbers. The number of holiday journeys within the last year has a positive influence. Furthermore the extent of facilities is of some importance. The size of the municipality encourages activity as well as the number of passengers of mountain railways and lifts during the winter season. The price of the weekly pass shows likewise a positive effect. The same applies for the total length of all ski slopes in the area. The adjusted Rho-squared is relatively low but the Chi-squared test indicates that the model overall is significant.

Table 6 Poisson regression for number of activities

| Influencing variable  | Coefficient | Significance |
|---|-------------|--------------|
| Place of residence in Switzerland                                 | + 0.055     | 0.277        |
| Gender: male  | - 0.088 *   | 0.056        |
| Age   | + 0.003     | 0.144        |
| Person in education   | + 0.243 *   | 0.062        |
| Partnership / marriage  | + 0.123     | 0.104        |
| Monthly household income  | + 0.000     | 0.192        |
| Driving licence ownership   | - 0.202     | 0.192        |
| Car ownership   | + 0.216 **  | 0.050        |
| Skier and snowboarder   | + 0.140 **  | 0.017        |
| Duration of stay  | + 0.001     | 0.540        |
| Days in winter holidays in the year 2003                          | - 0.007     | 0.187        |
| Number of holiday journeys in the year 2003                       | + 0.047 *** | 0.008        |
| Population of the municipality 2000                               | + 0.000 *** | 0.002        |
| Number of mountain railways and lifts                             | - 0.005     | 0.493        |
| Number of passengers of mountain railways and lifts during winter | + 0.000 *   | 0.074        |
| Total length of ski slopes  | + 0.000     | 0.138        |
| Price of weekly pass for adults during the season 2002            | + 0.003 *** | 0.000        |

N = 683 persons

$\rho^2 = 0.076$  (Pearson)

$\rho^2 = 0.071$  (adjusted)

Table 7 illustrates the proportions of activities which are assigned to different categories.

As expected, the highest proportion with approximately 41% is connected to winter sport activities. Then meals and breaks follow with about 27%. Furthermore hiking and walking show a share of 12% and shopping a share of 9%. All other categories lie under 5%. Regarding this distribution of activities the six case study areas are relatively similar.

Table 7 Categories of activities

| Activity  | Aletsch-<br>Area | Verbier | St.<br>Moritz | Scuol | Wengen | Engel-<br>berg | Total |
|---|------------------|---------|---------------|-------|--------|----------------|-------|
| Winter sport activities<br>with ski and snowboard | 40.7%            | 38.5%   | 34.1%         | 36.3% | 41.7%  | 29.2%          | 37.9% |
| Other<br>winter sport activities                  | 2.3%             | 1.4%    | 1.5%          | 2.9%  | 4.2%   | 4.7%           | 2.9%  |
| Hiking and walking                                | 14.7%            | 7.8%    | 17.0%         | 8.9%  | 10.8%  | 12.7%          | 11.8% |
| Trips and excursions                              | 0.5%             | 0.0%    | 1.1%          | 1.6%  | 3.1%   | 2.1%           | 1.6%  |
| Accompanying services                             | 1.1%             | 0.0%    | 0.0%          | 0.5%  | 0.9%   | 2.5%           | 0.8%  |
| Meals and breaks                                  | 25.6%            | 30.3%   | 28.0%         | 26.7% | 26.2%  | 27.5%          | 26.9% |
| Shopping  | 10.2%            | 8.7%    | 9.5%          | 8.1%  | 6.3%   | 11.4%          | 8.7%  |
| Wellness  | 1.1%             | 3.2%    | 4.2%          | 12.4% | 1.6%   | 3.8%           | 4.8%  |
| A. with other persons                             | 0.9%             | 0.9%    | 0.4%          | 0.6%  | 0.5%   | 2.1%           | 0.8%  |
| Cultural activities                               | 0.5%             | 0.5%    | 1.5%          | 0.6%  | 3.3%   | 0.8%           | 1.3%  |
| Nightlife   | 2.5%             | 8.7%    | 2.3%          | 1.3%  | 1.6%   | 2.1%           | 2.5%  |
| Other activities                                  | 0.0%             | 0.0%    | 0.4%          | 0.0%  | 0.0%   | 0.8%           | 0.1%  |

In Table 8 the average duration of the activities disaggregated for the different categories is shown. There are always two values given, one for the single activity and one for the activity summarised over the whole day. In addition the number of respective activities is shown.

The durations are significantly different from one another. There are three groups. The winter sport activities besides being the most frequent ones are also the longest ones. The shortest activities with one to one and a half hour are shopping, accompanying services as well as meals and breaks. The other activities take up about two hours. For the whole day the sequence is quite the same.

Table 8 Durations of activities

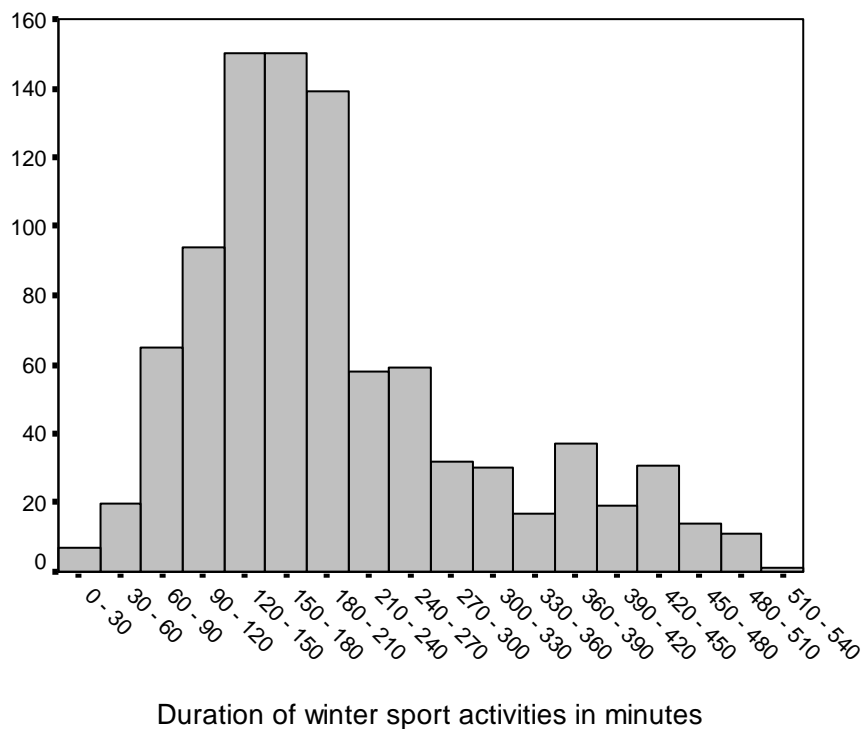
| Activity  | Duration of the single activities |                                 | Duration of the summarised activities |                                |
|---|-----------------------------------|---------------------------------|---------------------------------------|--------------------------------|
| Winter sport activities<br>with ski and snowboard | 190 minutes                       | (105 minutes)<br>940 activities | 294 minutes                           | (91 minutes)<br>607 activities |
| Other<br>winter sport activities                  | 120 minutes                       | (78 minutes)<br>73 activities   | 139 minutes                           | (94 minutes)<br>63 activities  |
| Hiking and walking                                | 109 minutes                       | (78 minutes)<br>293 activities  | 135 minutes                           | (92 minutes)<br>237 activities |
| Trips and excursions                              | 109 minutes                       | (84 minutes)<br>39 activities   | 150 minutes                           | (102 minutes)<br>28 activities |
| Accompanying services                             | 58 minutes                        | (50 minutes)<br>20 activities   | 72 minutes                            | (54 minutes)<br>16 activities  |
| Meals and breaks                                  | 85 minutes                        | (53 minutes)<br>667 activities  | 113 minutes                           | (72 minutes)<br>501 activities |
| Shopping  | 51 minutes                        | (30 minutes)<br>215 activities  | 56 minutes                            | (35 minutes)<br>196 activities |
| Wellness  | 129 minutes                       | (61 minutes)<br>119 activities  | 132 minutes                           | (65 minutes)<br>116 activities |
| Activities<br>with other persons                  | 127 minutes                       | (58 minutes)<br>20 activities   | 127 minutes                           | (58 minutes)<br>20 activities  |
| Cultural activities                               | 107 minutes                       | (81 minutes)<br>33 activities   | 114 minutes                           | (81 minutes)<br>31 activities  |
| Nightlife   | 139 minutes                       | (112 minutes)<br>61 activities  | 152 minutes                           | (112 minutes)<br>56 activities |
| Other activities                                  | 120 minutes                       | (60 minutes)<br>3 activities    | 180 minutes                           | (170 minutes)<br>2 activities  |

Values in brackets: standard deviation

Figure 3 shows the distribution of the duration in 30-minutes-intervals for the winter sport activities with ski and snowboard.

The distribution is not clearly unimodal. Further maxima besides the range of two to three hours are observable in the range of six to seven hours. This is probably connected with the fact that part of the participating tourists did not indicate all breaks. Therefore the mean value of the single winter sport activity duration is supposedly too high.

Figure 3 Duration of winter sport activities with ski and snowboard



In Table 9 the results of a linear regression for the general duration of activities are shown. Besides the non-standardised coefficients and the standardised coefficients the level of significance is indicated.

Men tend to participate in longer activities than women. Age affects the duration in a positive way, but this influence diminishes with increasing age. A higher number of activities carried out shortens the duration of each activity. This interrelationship is very strong. As already shown in Table 8 the categories of activities influence the duration. Activities with ski and snowboard as referential category are the longest ones, therefore the negative coefficients of all other categories. The number of persons who participate in the activity increases the duration. The size of the municipality results too in longer activities whereas the number of mountain railways and lifts, the total length of ski slopes as well as the availability of a ski bus have a negative effect.



Table 9 Linear regression for duration of activities

| Influencing variable                           | Non-standardised coefficient | Standardised coefficient | Significance |
|--|------------------------------|--------------------------|--------------|
| Gender: male                                   | + 9.808 ***                  | + 0.052 ***              | 0.004        |
| Age  | + 1.076 *                    | + 0.162 *                | 0.068        |
| Age * age                                      | - 0.014 **                   | - 0.202 **               | 0.026        |
| Number of persons per household                | - 3.284 **                   | - 0.046 **               | 0.012        |
| Duration of stay                               | - 0.215                      | - 0.026                  | 0.125        |
| Number of activities                           | - 22.035 ***                 | - 0.355 ***              | 0.000        |
| Categories of activities:                      |                              |                          |              |
| Winter sport activities with ski and snowboard | Referential category         | Referential category     |              |
| Other winter sport activities                  | - 74.602 ***                 | - 0.132 ***              | 0.000        |
| Hiking and walking                             | - 68.999 ***                 | - 0.234 ***              | 0.000        |
| Trips and excursions                           | - 45.896 ***                 | - 0.058 ***              | 0.001        |
| Accompanying services                          | - 118.840 ***                | - 0.113 ***              | 0.000        |
| Meals and breaks                               | - 92.122 ***                 | - 0.435 ***              | 0.000        |
| Shopping                                       | - 123.369 ***                | - 0.366 ***              | 0.000        |
| Wellness                                       | - 65.733 ***                 | - 0.148 ***              | 0.000        |
| Activities with other persons                  | - 45.633 ***                 | - 0.043 ***              | 0.010        |
| Cultural activities                            | - 61.838 ***                 | - 0.079 ***              | 0.000        |
| Nightlife                                      | - 48.370 ***                 | - 0.076 ***              | 0.000        |
| Other activities                               | - 100.678 **                 | - 0.040 **               | 0.017        |
| Number of persons at the activity              | + 1.929 ***                  | + 0.085 ***              | 0.000        |
| Population of the municipality 2000            | + 0.017 ***                  | + 0.298 ***              | 0.000        |
| Number of mountain railways and lifts          | - 0.489 *                    | - 0.053 *                | 0.093        |
| Total length of ski slopes                     | - 0.132 ***                  | - 0.134 ***              | 0.000        |
| Ski bus  | - 39.691 ***                 | - 0.177 ***              | 0.000        |
| Constant                                       | + 270.902 ***                |                          | 0.000        |
| N = 2120 activities                            |                              |                          |              |
| $\rho^2 = 0.425$                               |                              |                          |              |
| $\rho^2 = 0.419$ (adjusted)                    |                              |                          |              |

## 5. Representativeness of the survey sample

In the course of the analyses the representativeness of the sample is verified. For this purpose the data of the tourists are compared with corresponding data of other surveys.

In this context data of the Swiss Federal Statistical Office (2003) are used which provides the number of all tourists staying in hotels during the winter season 2003 disaggregated for the land of origin. Table 10 illustrates the differences between the two samples. Thereby it is necessary to take into account that the persons who participated in the survey at the destination include tourists in guesthouses. But this proportion is very small compared to the tourists in hotels. Persons staying in holiday homes are not included in the figures. Furthermore the considered areas differ to a slight extent.

Table 10 Comparison of persons in regard to nationality

| Case study area | CH      | D       | GB      | NL     | B       | F       | I       | Others  |
|-----------------|---------|---------|---------|--------|---------|---------|---------|---------|
| Aletsch-area    | - 9.4%  | + 6.2%  | + 0.6%  | + 4.9% | + 1.2%  | + 0.9%  | + 1.3%  | - 0.6%  |
| Verbier         | + 9.6%  | + 0.7%  | + 9.9%  | + 0.9% | - 13.0% | - 11.4% | + 2.4%  | + 10.5% |
| St. Moritz      | - 9.1%  | - 9.8%  | + 1.3%  | + 1.3% | - 1.0%  | + 3.3%  | + 12.4% | + 6.1%  |
| Scuol           | - 0.3%  | + 3.4%  | + 0.3%  | + 0.4% | + 0.1%  | + 0.2%  | + 1.3%  | + 1.7%  |
| Wengen          | - 2.8%  | + 4.1%  | - 14.7% | + 3.5% | + 0.4%  | + 7.3%  | + 3.0%  | + 2.8%  |
| Engelberg       | + 34.9% | - 31.4% | - 4.7%  | - 3.7% | + 0.8%  | + 1.8%  | + 0.5%  | + 4.8%  |
| Total           | - 3.6%  | + 0.8%  | - 7.1%  | + 0.9% | - 1.3%  | + 1.6%  | + 6.1%  | + 7.8%  |

CH = Switzerland; D = Germany; GB = Great Britain; NL = Netherlands; B = Belgium; F = France; I = Italy

Overall the composition of overnight tourists in regard to the nationality is relatively similar. Some more Swiss persons participated in the survey of the tourist behaviour, probably due to the national reference of the survey. Greater deviations occur on the one hand for the British tourists. The noticeably higher share in the survey is presumably connected to the distribution of an English version of the questionnaire. On the other hand the sample of the survey includes no Italians which in general account for over 6% of the tourists. The other nationalities are also not fully represented in the survey. This fact is possibly based upon linguistic reasons and linked with this upon the lack of other foreign-language questionnaires.

In particular case study areas the differences are considerably higher. This especially applies for Verbier where the influence of the language of the questionnaires which included a French and an English version, is quite obvious. There are less Swiss and German persons in the

sample whereas French and Belgian tourists are overrepresented. In St. Moritz higher proportions of Swiss and Germans occur because of the absence of Italians in the sample. Engelberg also shows large deviations for Swiss and German tourists.

Further on the data from the tourist survey are compared with the Swiss National Travel Survey of the year 2000 (Beige and Axhausen, 2005). These two data sets differ very strongly from one another, especially concerning the age structure of the respondents. Persons from the survey at the tourist destinations are on average ten years older. Hence, a lower proportion of persons in education as well as a higher proportion of employed persons and retired persons occur. Correspondingly the household income in the sample of the tourist survey is considerably higher.

A comparison with the Travel Market Switzerland indicates that the tourists surveyed show higher journey frequencies than the respondents of the Travel Market Switzerland (Bieger and Laesser, 2002). This is presumably based upon the way the tourist survey was carried out. Since the questionnaires were distributed at the destination instead of at the place of residence the probability of reaching persons with a disposition for travelling is much higher. Contacting the tourists in Switzerland also explains the higher proportion of holiday journeys with Swiss destinations in the sample of the survey concerning the tourist behaviour.

Altogether, statements about the representativeness of the survey sample are only to a small extent possible. One reason is the lack of comparable data, especially about activities of tourists at the destination.

In regard to the composition of the tourists concerning the nationality the influence of the different languages of the questionnaire becomes obvious. However, it is not clear whether this bias in the sample affects the other results as well or whether those are relatively independent of the respective country of origin.

## References

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- McNally, M. G. (2000) The activity-based approach, in D. A. Hensher and K. J. Button (Eds.) *Handbook of Transport Modelling*, 53-69, Elsevier Science Ltd, Oxford.
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## **Appendixes**

### **A 1 Questionnaire**

## Part 1: Your Stay in Engelberg

Please write down the dates of your journey to and from Engelberg.

Date of arrival

Date of departure

Which means of transport do you mainly use for your journey to and from Engelberg?

| To                       | From                     |                              |
|--------------------------|--------------------------|------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Car                          |
| <input type="checkbox"/> | <input type="checkbox"/> | Motorbike                    |
| <input type="checkbox"/> | <input type="checkbox"/> | Train and Bus                |
| <input type="checkbox"/> | <input type="checkbox"/> | Coach                        |
| <input type="checkbox"/> | <input type="checkbox"/> | Aeroplane                    |
| <input type="checkbox"/> | <input type="checkbox"/> | Others: <input type="text"/> |

Please provide a short description of all persons accompanying you on your trip. How are they related to you?

| Person | Age   | Relationship of this person to you | Examples of relationships of a person to you |
|--------|-------|------------------------------------|--|
| 1      | years |                                    | Wife / Husband                               |
| 2      | years |                                    | Partner                                      |
| 3      | years |                                    | Children                                     |
| 4      | years |                                    | Parents                                      |
| 5      | years |                                    | Grandparents                                 |
| 6      | years |                                    | Other relatives                              |
| 7      | years |                                    | Friends                                      |
| 8      | years |                                    | Fellows                                      |
| 9      | years |                                    | Colleagues                                   |
| 10     | years |                                    | ...  |
| 11     | years |                                    |  |
| 12     | years |                                    |  |

How many rooms do you and your party occupy in your accommodation?

1 room

2 rooms

3 rooms

more rooms

## Part 2: Your Activities in Engelberg

The following pages contain an activity diary in which we would like to ask you to record all activities in which you participate outside of your accommodation during one day of your stay in Engelberg.

If you stay more than three days, please fill in the activity diary for the third day of your stay in Engelberg.

If you stay less than three days, please fill in the activity diary for the second day of your stay in Engelberg.

You will find an example of a completed activity diary on the page following your activity diary.

Please fill in first the date of the day for which the activity diary is completed.

|      |                      |
|------|----------------------|
| Date | <input type="text"/> |
|------|----------------------|

If you did not leave your accommodation on this particular day, please give the reasons here.

|  |                      |
|--|----------------------|
| <input type="checkbox"/> I did not leave my accommodation, because | <input type="text"/> |
|--|----------------------|

### Diary of activities taking place outside of your accommodation

|   |                              |                               |                                |                              |   |   |                                  |
|---|------------------------------|-------------------------------|--------------------------------|------------------------------|---|---|----------------------------------|
| <b>1<sup>st</sup> activity:</b>   | <input type="text"/>         | with                          | <input type="text"/>           | other persons                |   |   |                                  |
| What time did you start and finish this activity?                             | from                         | <input type="text"/>          | to                             | <input type="text"/>         |   |   |                                  |
| Where did this activity take place?   | <input type="text"/>         |                               |                                |                              |   |   |                                  |
| Which means of transport did you mainly use to get to and from this activity? |                              |                               |                                |                              |   |   |                                  |
| To:   | <input type="checkbox"/> Car | <input type="checkbox"/> Taxi | <input type="checkbox"/> Train | <input type="checkbox"/> Bus | <input type="checkbox"/> Mountain railways, Lifts | <input type="checkbox"/> Ski, Snowboard | <input type="checkbox"/> On foot |
| From:   | <input type="checkbox"/> Car | <input type="checkbox"/> Taxi | <input type="checkbox"/> Train | <input type="checkbox"/> Bus | <input type="checkbox"/> Mountain railways, Lifts | <input type="checkbox"/> Ski, Snowboard | <input type="checkbox"/> On foot |

|   |                              |                               |                                |                              |   |   |                                  |
|---|------------------------------|-------------------------------|--------------------------------|------------------------------|---|---|----------------------------------|
| <b>2<sup>nd</sup> activity:</b>   | <input type="text"/>         | with                          | <input type="text"/>           | other persons                |   |   |                                  |
| What time did you start and finish this activity?                             | from                         | <input type="text"/>          | to                             | <input type="text"/>         |   |   |                                  |
| Where did this activity take place?   | <input type="text"/>         |                               |                                |                              |   |   |                                  |
| Which means of transport did you mainly use to get to and from this activity? |                              |                               |                                |                              |   |   |                                  |
| To:   | <input type="checkbox"/> Car | <input type="checkbox"/> Taxi | <input type="checkbox"/> Train | <input type="checkbox"/> Bus | <input type="checkbox"/> Mountain railways, Lifts | <input type="checkbox"/> Ski, Snowboard | <input type="checkbox"/> On foot |
| From:   | <input type="checkbox"/> Car | <input type="checkbox"/> Taxi | <input type="checkbox"/> Train | <input type="checkbox"/> Bus | <input type="checkbox"/> Mountain railways, Lifts | <input type="checkbox"/> Ski, Snowboard | <input type="checkbox"/> On foot |

|   |                              |                               |                                |                              |   |   |                                  |
|---|------------------------------|-------------------------------|--------------------------------|------------------------------|---|---|----------------------------------|
| <b>3<sup>rd</sup> activity:</b>   | <input type="text"/>         | with                          | <input type="text"/>           | other persons                |   |   |                                  |
| What time did you start and finish this activity?                             | from                         | <input type="text"/>          | to                             | <input type="text"/>         |   |   |                                  |
| Where did this activity take place?   | <input type="text"/>         |                               |                                |                              |   |   |                                  |
| Which means of transport did you mainly use to get to and from this activity? |                              |                               |                                |                              |   |   |                                  |
| To:   | <input type="checkbox"/> Car | <input type="checkbox"/> Taxi | <input type="checkbox"/> Train | <input type="checkbox"/> Bus | <input type="checkbox"/> Mountain railways, Lifts | <input type="checkbox"/> Ski, Snowboard | <input type="checkbox"/> On foot |
| From:   | <input type="checkbox"/> Car | <input type="checkbox"/> Taxi | <input type="checkbox"/> Train | <input type="checkbox"/> Bus | <input type="checkbox"/> Mountain railways, Lifts | <input type="checkbox"/> Ski, Snowboard | <input type="checkbox"/> On foot |

|   |                              |                               |                                |                              |   |   |                                  |
|---|------------------------------|-------------------------------|--------------------------------|------------------------------|---|---|----------------------------------|
| <b>4<sup>th</sup> activity:</b>   | <input type="text"/>         | with                          | <input type="text"/>           | other persons                |   |   |                                  |
| What time did you start and finish this activity?                             | from                         | <input type="text"/>          | to                             | <input type="text"/>         |   |   |                                  |
| Where did this activity take place?   | <input type="text"/>         |                               |                                |                              |   |   |                                  |
| Which means of transport did you mainly use to get to and from this activity? |                              |                               |                                |                              |   |   |                                  |
| To:   | <input type="checkbox"/> Car | <input type="checkbox"/> Taxi | <input type="checkbox"/> Train | <input type="checkbox"/> Bus | <input type="checkbox"/> Mountain railways, Lifts | <input type="checkbox"/> Ski, Snowboard | <input type="checkbox"/> On foot |
| From:   | <input type="checkbox"/> Car | <input type="checkbox"/> Taxi | <input type="checkbox"/> Train | <input type="checkbox"/> Bus | <input type="checkbox"/> Mountain railways, Lifts | <input type="checkbox"/> Ski, Snowboard | <input type="checkbox"/> On foot |

**5<sup>th</sup> activity:**  with  other persons

What time did you start and finish this activity? from  to

Where did this activity take place?

Which means of transport did you mainly use to get to and from this activity?

To:  Car  Taxi  Train  Bus  Mountain railways, Lifts  Ski, Snowboard  On foot

From:  Car  Taxi  Train  Bus  Mountain railways, Lifts  Ski, Snowboard  On foot

**6<sup>th</sup> activity:**  with  other persons

What time did you start and finish this activity? from  to

Where did this activity take place?

Which means of transport did you mainly use to get to and from this activity?

To:  Car  Taxi  Train  Bus  Mountain railways, Lifts  Ski, Snowboard  On foot

From:  Car  Taxi  Train  Bus  Mountain railways, Lifts  Ski, Snowboard  On foot

**7<sup>th</sup> activity:**  with  other persons

What time did you start and finish this activity? from  to

Where did this activity take place?

Which means of transport did you mainly use to get to and from this activity?

To:  Car  Taxi  Train  Bus  Mountain railways, Lifts  Ski, Snowboard  On foot

From:  Car  Taxi  Train  Bus  Mountain railways, Lifts  Ski, Snowboard  On foot

**8<sup>th</sup> activity:**  with  other persons

What time did you start and finish this activity? from  to

Where did this activity take place?

Which means of transport did you mainly use to get to and from this activity?

To:  Car  Taxi  Train  Bus  Mountain railways, Lifts  Ski, Snowboard  On foot

From:  Car  Taxi  Train  Bus  Mountain railways, Lifts  Ski, Snowboard  On foot

**9<sup>th</sup> activity:**  with  other persons

What time did you start and finish this activity? from  to

Where did this activity take place?

Which means of transport did you mainly use to get to and from this activity?

To:  Car  Taxi  Train  Bus  Mountain railways, Lifts  Ski, Snowboard  On foot

From:  Car  Taxi  Train  Bus  Mountain railways, Lifts  Ski, Snowboard  On foot



Please fill in first the date of the day for which the activity diary is completed.

Date

10<sup>th</sup> of February 2004

**Diary of activities taking place outside of your accommodation**

|   |   |  |                                |   |  |  |   |
|---|---|--|--------------------------------|---|--|--|---|
| <b>1<sup>st</sup> activity:</b>   | Skiing                                  | with                                     | 3                              | other persons                           |  |  |   |
| What time did you start and finish this activity?                             | from                                    | 09:15                                    | to                             | 12:00                                   |  |  |   |
| Where did this activity take place?   | Schneehorn                              |  |                                |   |  |  |   |
| Which means of transport did you mainly use to get to and from this activity? |   |  |                                |   |  |  |   |
| To:   | <input type="checkbox"/> Car            | <input type="checkbox"/> Taxi            | <input type="checkbox"/> Train | <input checked="" type="checkbox"/> Bus | <input type="checkbox"/> Mountain railways, Lifts            | <input type="checkbox"/> Ski, Snowboard            | <input type="checkbox"/> On foot            |
| From:   | <input type="checkbox"/> Car            | <input type="checkbox"/> Taxi            | <input type="checkbox"/> Train | <input type="checkbox"/> Bus            | <input type="checkbox"/> Mountain railways, Lifts            | <input checked="" type="checkbox"/> Ski, Snowboard | <input type="checkbox"/> On foot            |
| <b>2<sup>nd</sup> activity:</b>   | Having lunch                            | with                                     | 5                              | other persons                           |  |  |   |
| What time did you start and finish this activity?                             | from                                    | 12:00                                    | to                             | 13:15                                   |  |  |   |
| Where did this activity take place?   | Alpstübli                               |  |                                |   |  |  |   |
| Which means of transport did you mainly use to get to and from this activity? |   |  |                                |   |  |  |   |
| To:   | <input type="checkbox"/> Car            | <input type="checkbox"/> Taxi            | <input type="checkbox"/> Train | <input type="checkbox"/> Bus            | <input type="checkbox"/> Mountain railways, Lifts            | <input checked="" type="checkbox"/> Ski, Snowboard | <input type="checkbox"/> On foot            |
| From:   | <input type="checkbox"/> Car            | <input type="checkbox"/> Taxi            | <input type="checkbox"/> Train | <input type="checkbox"/> Bus            | <input checked="" type="checkbox"/> Mountain railways, Lifts | <input type="checkbox"/> Ski, Snowboard            | <input type="checkbox"/> On foot            |
| <b>3<sup>rd</sup> activity:</b>   | Walking                                 | with                                     | 1                              | other persons                           |  |  |   |
| What time did you start and finish this activity?                             | from                                    | 13:30                                    | to                             | 14:45                                   |  |  |   |
| Where did this activity take place?   | Bergsee                                 |  |                                |   |  |  |   |
| Which means of transport did you mainly use to get to and from this activity? |   |  |                                |   |  |  |   |
| To:   | <input type="checkbox"/> Car            | <input type="checkbox"/> Taxi            | <input type="checkbox"/> Train | <input type="checkbox"/> Bus            | <input type="checkbox"/> Mountain railways, Lifts            | <input type="checkbox"/> Ski, Snowboard            | <input checked="" type="checkbox"/> On foot |
| From:   | <input type="checkbox"/> Car            | <input type="checkbox"/> Taxi            | <input type="checkbox"/> Train | <input type="checkbox"/> Bus            | <input checked="" type="checkbox"/> Mountain railways, Lifts | <input type="checkbox"/> Ski, Snowboard            | <input type="checkbox"/> On foot            |
| <b>4<sup>th</sup> activity:</b>   | Going to the sauna                      | with                                     | 0                              | other persons                           |  |  |   |
| What time did you start and finish this activity?                             | from                                    | 15:30                                    | to                             | 17:00                                   |  |  |   |
| Where did this activity take place?   | Hotel Edelweiss                         |  |                                |   |  |  |   |
| Which means of transport did you mainly use to get to and from this activity? |   |  |                                |   |  |  |   |
| To:   | <input checked="" type="checkbox"/> Car | <input type="checkbox"/> Taxi            | <input type="checkbox"/> Train | <input type="checkbox"/> Bus            | <input type="checkbox"/> Mountain railways, Lifts            | <input type="checkbox"/> Ski, Snowboard            | <input type="checkbox"/> On foot            |
| From:   | <input checked="" type="checkbox"/> Car | <input type="checkbox"/> Taxi            | <input type="checkbox"/> Train | <input type="checkbox"/> Bus            | <input type="checkbox"/> Mountain railways, Lifts            | <input type="checkbox"/> Ski, Snowboard            | <input type="checkbox"/> On foot            |
| <b>5<sup>th</sup> activity:</b>   | Having dinner                           | with                                     | 3                              | other persons                           |  |  |   |
| What time did you start and finish this activity?                             | from                                    | 19:15                                    | to                             | 21:00                                   |  |  |   |
| Where did this activity take place?   | Restaurant Bergblick                    |  |                                |   |  |  |   |
| Which means of transport did you mainly use to get to and from this activity? |   |  |                                |   |  |  |   |
| To:   | <input type="checkbox"/> Car            | <input type="checkbox"/> Taxi            | <input type="checkbox"/> Train | <input checked="" type="checkbox"/> Bus | <input type="checkbox"/> Mountain railways, Lifts            | <input type="checkbox"/> Ski, Snowboard            | <input type="checkbox"/> On foot            |
| From:   | <input type="checkbox"/> Car            | <input checked="" type="checkbox"/> Taxi | <input type="checkbox"/> Train | <input type="checkbox"/> Bus            | <input type="checkbox"/> Mountain railways, Lifts            | <input type="checkbox"/> Ski, Snowboard            | <input type="checkbox"/> On foot            |

## Part 3: Your Preferences in Winter Holidays

How important are the following points for your winter holidays in general?  
And to what extent were your expectations satisfied in Engelberg?

|   | Importance               |                          |                          |                          | Appraisal                |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|   | very important           | important                | less important           | not important            | very good                | good                     | bad                      | very bad                 |
| Snow reliability                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Possibilities for Skier and Snowboarder         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Variety of other possibilities for winter sport | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Diversity in the general leisure facilities     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Tranquillity and relaxation                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Beauty of the landscape                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Experiencing nature                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Activities shared with relatives and friends    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Child-friendliness of the area                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Après-Ski / Nightlife                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Cultural activities and events                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Parking supply in the area                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Prohibition of cars in the area                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Quality of public transport in the area         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Accommodation facilities                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Shopping facilities                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| General price level                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Others: <input type="text"/>                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

How often have you been so far to Engelberg during winter holidays?

|                                |  |   |  |
|--------------------------------|--|---|--|
| <input type="checkbox"/> never | <input type="checkbox"/> once or twice | <input type="checkbox"/> three to ten times | <input type="checkbox"/> more than ten times |
|--------------------------------|--|---|--|

How many days did you spend during the year 2003 in winter holidays?

|                                  |   |  |   |
|----------------------------------|---|--|---|
| <input type="checkbox"/> no days | <input type="checkbox"/> less than three days | <input type="checkbox"/> three to ten days | <input type="checkbox"/> more than ten days |
|----------------------------------|---|--|---|

Please describe the holidays (summer and winter) with more than four overnight stays that you took during the year 2003?

| Month                | Destination of the holiday | Duration of the holiday |
|----------------------|----------------------------|-------------------------|
| <input type="text"/> | <input type="text"/>       | overnight stays         |
| <input type="text"/> | <input type="text"/>       | overnight stays         |
| <input type="text"/> | <input type="text"/>       | overnight stays         |
| <input type="text"/> | <input type="text"/>       | overnight stays         |
| <input type="text"/> | <input type="text"/>       | overnight stays         |

## Part 4: About Yourself

Please fill in the country and the postal code of your place of residence.

Country and postal code of place of residence

Are you ...

male

female

In which year were you born?

Year of birth

Are you ...

in apprenticeship, education, training

full-time employed

part-time employed

job-seeking

home duties

retired

Are you married or do you have a partner?

yes

no

How many persons including you live in your household?

Persons of 18 and older

Persons under 18

How many cars are in your household?

Cars

Do you own a driving licence for cars?

yes

no

How often is a car for driving available to you?

always

frequently

infrequently

never

Do you own one or more of the following tickets of public transport?

No

Yes, namely:

General pass for all public transport modes (Generalabonnement / Jahresnetzkarte)

Discount tariff pass (Halbtaxabonnement / BahnCard / VORTEILScard)

Regional or local yearly, monthly or weekly pass

Others:

How high is the overall gross income per month of your household?

under 2'000 CHF / 1'350 €

2'001 to 4'000 CHF / 1'351 € to 2'700 €

4'001 to 6'000 CHF / 2'701 € to 4'050 €

6'001 to 8'000 CHF / 4'051 € to 5'400 €

8'001 to 10'000 CHF / 5'401 € to 6'750 €

10'001 CHF / 6'751 € and more

THANK YOU VERY MUCH FOR YOUR ASSISTANCE!

Yours sincerely, Sigrun Beige (IVT, ETH Zurich)