

Winter Sport Tourism – Victim under Conditions of Climate Change?!?

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Introduction

In many Austrian regions winter tourism is an important source of income. Therefore they are highly dependent on sufficient snow conditions. In the past, some winters' lack of snow gave the alpine ski destinations a first idea of the impacts of climate change. The question arises: how do different types of winter sportsmen react to changing skiing conditions caused by climate change and how sensitive are they to snow independent substitutes? To follow this question an inquiry of 1000 Viennese skiers and boarders was conducted using an online questionnaire. The application of a Discrete Choice Experiment secures an individual oriented approach that takes the various preferences of skiers and boarders into account and helps to identify destination choice determining attributes. The result of the inquiry aims to show future options for winter (sport) tourism management.

Methods

There are some studies dealing with climate change impact assessment and the adaptation strategies of winter sport destinations, but only a few consider the adaptation strategies of winter sport tourists and their impacts on their activity and destination choice. This survey follows an individual oriented approach to survey the adaptation processes of winter sport tourists under conditions of climate change.

The inquiry of active skiers and boarders comprises the following topics:

- skiing biographies and reasons for changes in the destination choice;
- travel motives and the preferences in winter sport;
- destination choice determining attributes and the potentials of snow independent substitutes (part of the DCE);
- expectations according to climate change.

The inquiry centres on a discrete choice experiment (DCE). Hypothetical profiles of ski destinations are combined to choice sets of two. Each profile is described by eight attributes concerning the performance of ski destinations with two to four levels. Four of these choice sets are offered to the respondents. From each of these choice sets the respondents have to choose the most preferred alternative (Louviere & Woodworth 1983, Louviere et al. 2000).

The DCE has three sequences aiming to survey the trade offs (see figure. 1):

- between profiles of ski destinations to learn about the preferences concerning the ski related performance of winter sport destinations (1st Sequence);
- between snow sureness and other ski related aspects of the destination to learn about the significance of snow sureness(2nd Sequence);
- between snow sureness and additional free and snow independent attractions, to learn about the acceptance of substitutes(3rd Sequence).

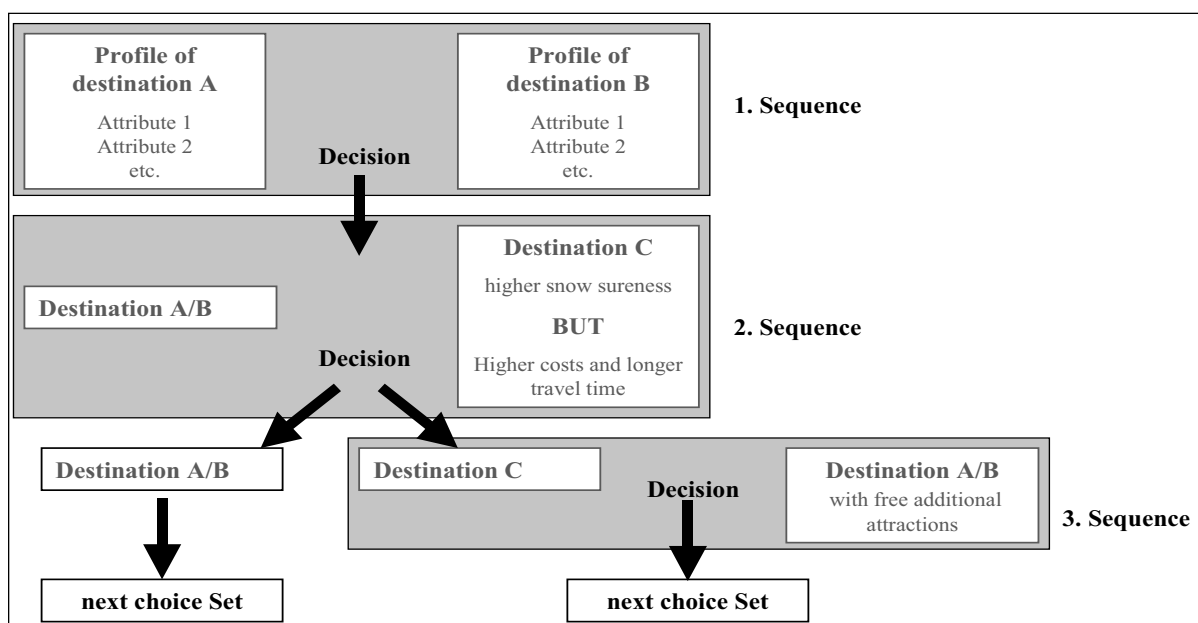


Figure 1: DCE's three sequences.

The DCE takes the multi-attributive nature of destination choice into account and allows also an exploration of non-existing alternatives that supports the scenario conduction (Haider 2002, Timmermans 1984, Timmermans & Golledge 1990). Thereby attributes are considered in the context of each other. But the analysis allows estimating the part worth utility for each attribute level and therefore its relevance for the decision. Because of its decompositional character the DCM allows to generate every possible profile out of the eight attributes and to calculate the probability of every possible profile to be chosen. This information will be used in a decision support system (DSS) that helps estimate further development potentials of winter sport destinations and supports the trade off of further development goals and investments.

Results

The survey shows that skiers develop their own adaptation strategies to deal with changed skiing conditions. These strategies are as various as the types of winter sportsmen are. In winters, lack of snow destinations in high altitudes become more important and travel distances lose relevance. Obviously compensation measures of the destinations also influence the destination choice. Especially in context with this year's strong winter the survey shows that there are other requirements besides snow

sureness concerning the quality of the destinations' performance. The DCE proved to be a qualified method to cover the complexity of the activity and destination choice of winter sport tourists.

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