Insights into sustainable tourists in Austria: a data-based a priori segmentation approach

S. Dolnicar
University of Wollongong, sarad@uow.edu.au

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Insights into sustainable tourists in Austria: a data-based *a priori* segmentation approach

Sara Dolnicar
School of Management, Marketing and Employment Relations
University of Wollongong, Australia
sara_dolnicar@uow.edu.au

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Abstract

An excellent market-driven way to successfully implement sustainable tourism in a destination is to find a segment of tourists or potential tourists interested in the unique natural beauty of the destination, willing to preserve it and who are also highly attractive in terms of high expenditures, long stays, high return rate, high recommendation rate etc. The first step in seeking these visitors is thorough investigation of sustainable market segments. So far, only a few studies have systematically searched for "eco-segments" or sustainable tourist groups and described them. This paper reviews the usefulness of such approaches, examines past studies investigating potential target segments and describes the group of summer tourists in Austria who care about maintaining the natural environment. The results suggest that this group of visitors has some highly attractive characteristics and is very large, thus offering a sound basis for additional sustainable niche segment creation.

Introduction

Both a destination and a firm within the tourism industry have two options in the competitive marketplace. Either they "see what develops" and hope that everything will work out or they engage in systematic strategic planning. For a firm, the difference might be to survive or not to survive in the marketplace. For a destination, it could irreversibly damage the natural environment (setting nature versus tourism revenues) or alternatively retain a sustainable foundation for long-term flourishing tourism (nature working with tourism revenues). One of the key issues of strategic marketing is market segmentation. Since the emergence of this concept (Haley, 1968; Frank, Massy & Wind, 1972) uncountable segmentation studies have been conducted both in industry as well as in academia. Optimally, segmentation leads to the identification of one group of tourists or potential tourists that are homogeneous in terms of their country of origin, personal characteristics, their behaviour, their attitudes, etc. Not only should the segment that is ultimately chosen as the target segment for a firm or a destination be homogeneous, it should also harmonize well with the product. The firm's or destination's strengths should thus be perceived as desirable by the consumers within this segment. Identifying such a segment, and choosing it as a target for future marketing action, leads to a strong competitive advantage. Turning the attention to sustainable tourism, the unique selling proposition of some destinations is their natural beauty and the optimal target segment for such a destination would be a group of tourists that not only seeks to experience natural beauty but also wishes to preserve it. Interestingly enough, although the importance and acceptance of sustainable tourism has increased dramatically in the past decades, few studies have investigated the characteristics of ecotourists or tourists that care about the natural resources in the country visited. Palacio & McCool (1997) conducted both a literature review of segmentation studies within the field of sustainable tourism and a data driven segmentation study for Belize. A literature review illustrates that the segment descriptions or segmentation studies conducted almost never focused on sustainability. The only exception is provided by Eagles (1995), who conceptually differentiated between ecotourism, wilderness travel, adventure tourism and car camping. Pearce & Wilson (1995) as well as Bradford (1993, cited in Palacio & McCool (1997) segmented wild-life viewing tourists by activities and benefits respectively and McCool & Reilly (1993) found four sub-groups of visitors to natural parks in Montana by means of benefit segmentation. The benefit segmentation study by Palacio & McCool (1997) in Belize resulted in four ecotourism segments: the natural escapist, the ecotourist, the comfortable naturalist and the passive players. Ryan and Huyton (2000) segment the tourists visiting the Northern Territory in Australia and (although the main emphasis of the paper was on aboriginal tourism) identified two segments that are highly nature-oriented in their interests. While both segments share the interest of visiting National Parks, one group represents tourists with the highest interest in Aboriginal culture. This segment is strongly dominated by female travelers and almost half of this group is aged under 30 years. The second nature-oriented segment is not interested in Aboriginal culture and consists of equally many males as females as well as domestic and overseas visitors. Blamey & Braithwaite (1997) segmented 3500 Australian citizens according to their social values. As the focus is on the investigation of attitudes, little can be deducted for product development and marketing in tourism. The authors clearly state that "little is known about the profile of individuals who are ... driving this apparently lucrative market" (p. 29) and "Individual operators will clearly need to complement the results of broad-based segmentation studies ... with studies that are more specific to the particular experiences they offer" (p. 43), thus pointing out the importance of understanding the market segment that cares about nature and sustaining the environment.

The aim of this paper is to describe the group of summer tourists in Austria that care about maintaining the natural environment in order to understand the segment and provide a sound basis for future sustainable product development and marketing action.

Looking at the general attitude of summer tourists in Austria reveals that there has been a slight decrease in sustainable attitudes, as given in Table 1 (comparable data from the summer Austrian National Guest Surveys of 1994 and 1997). The measure used as an indicator was the agreement of the respondents to the following statement: "On holiday the efforts to maintain unspoiled surroundings play a major role for me." The respondents could answer the question by stating one of four answer categories: "applies to me (1) greatly, (2) mostly, (3) slightly and (4) not at all".

Table 1: Importance of efforts to maintain unspoiled nature

	1994	1997
absolutely agree	44% (3444)	39% (2572)
agree strongly	31% (2444)	27% (1786)
agree	19% (1461)	12% (816)
do not agree	6% (485)	4% (283)
TOTAL	100 % (7834)	100 % (5457)

Unfortunately the question format changed in the summer 2000 survey, making the evaluation of a further trend impossible. In 2000, 43 percent agreed absolutely, 38 percent agreed, 13 percent slightly disagreed and 5 percent absolutely disagreed with the statement[1].

The sustainable summer guests in Austria

Data Set and Method

The data basis for the investigation was the Austrian National Guest Survey conducted in Austria during the summer season of 2000. 3575 respondents were included in the data set for this study. These respondents had answered the question mentioned before by either strongly agreeing or disagreeing with the given statement implying sustainable tourist attitude. Among these 3575, 2524 strongly agreed and were thus classified as "sustainable tourists", the remaining 1051 were classified as "non-sustainable tourists". The data was collected

[1] All percentages are computed on the basis of valid answers to the questions. Respondents not answering the question were excluded from all three data sets. Valid sample sizes for the three consecutive guest surveys amount to 7834 in summer 1994, 5457 in summer 1994 and 5807 in summer 2000.

disproportionately to include all tourist groups of interest. Representativity of the results of this study was achieved by weighting the original data according to Austrian tourism statistics on country of origin, kind of accommodation and province.

The methodological approach chosen for this study was data based *a priori* segmentation (for a definition of *a priori* segmentation see Mazanec, 2000) where the groups of tourists visiting Austria in the summer season of 2000 were split up into two groups based on their attitude towards maintaining unspoilt surroundings. The groups were compared with regard to numerous pieces of information relevant to the development of marketing activities by conducting ANOVA for metric and Chi-square tests for non-metric variables. To avoid possible mistakes due to multiple testing of the same data base, the p-values were Bonferroni-corrected. Both values are given in the results section for each test conducted.

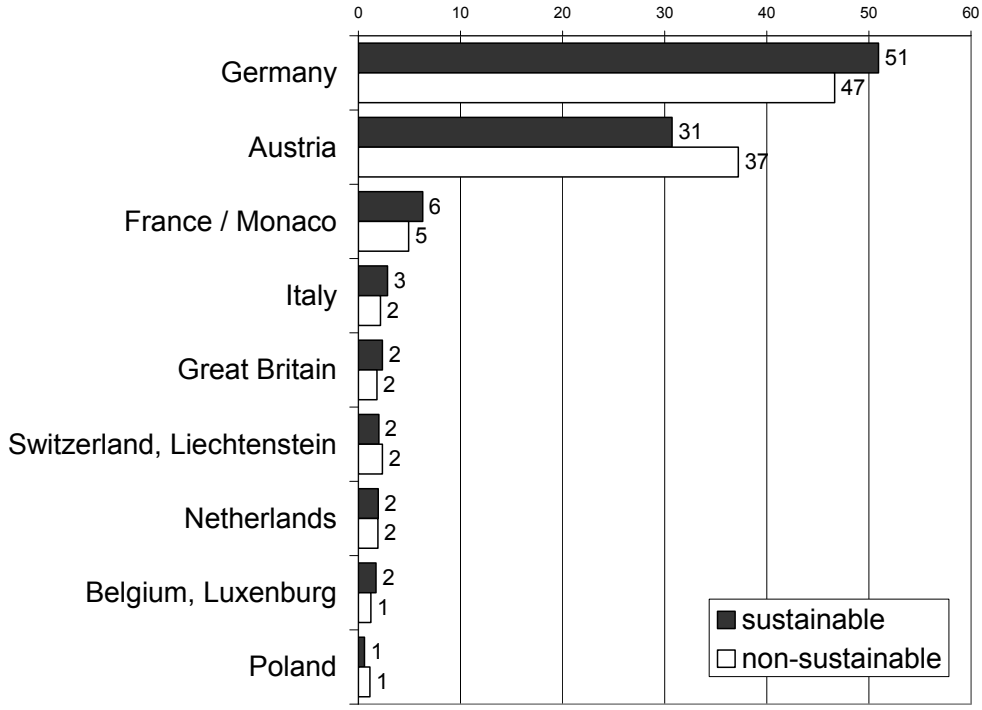
Socio-demographic Characteristics

First of all, a significant age difference (ANOVA p-value of 0.000, Bonferroni-corrected 0.000) between the two groups constructed for comparison can be found. Within the sustainable segment the mean age is 49 years, whereas the group less concerned about the sustainability of tourism is 5 years younger on average. This age difference is also mirrored by the significant difference in average net income (ANOVA p-value 0.000, Bonferroni-corrected 0.000) with the older groups earning 15 percent more on average.

Male and female tourists do not differ in their attitude towards the importance of maintaining unspoiled environment.

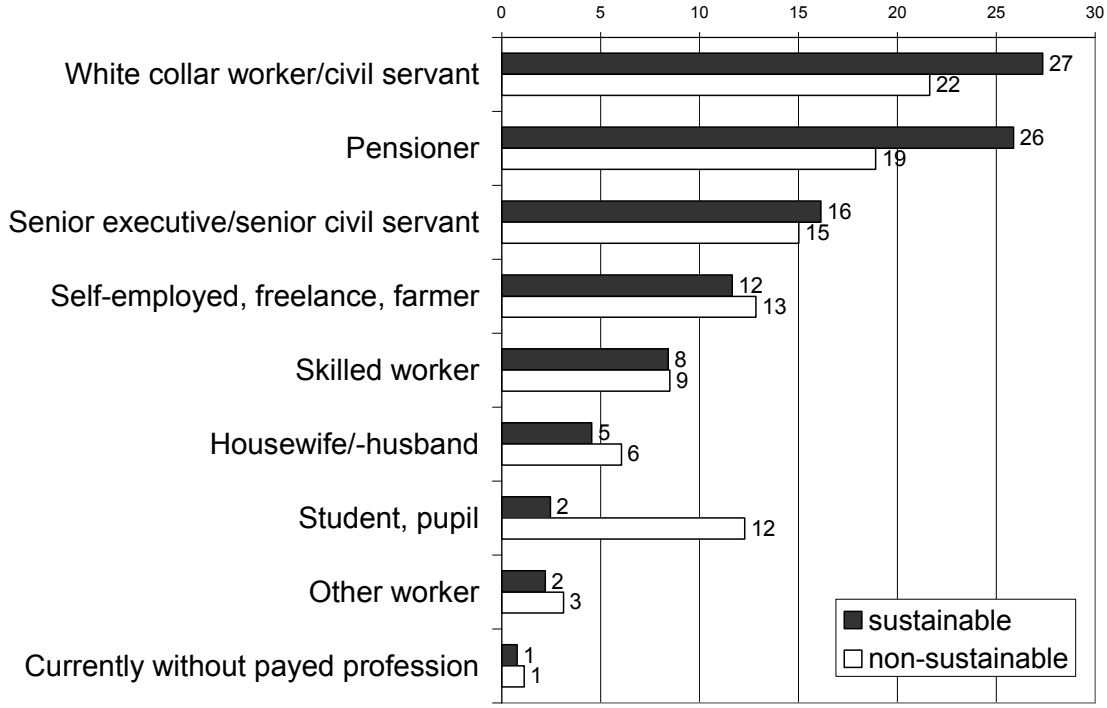
Another hypothesis that comes to mind when thinking of socio-demographic characteristics and possible reasons for attitude differences, is that tourists from different countries of origin feel significantly different about the importance of maintaining unspoiled nature. The country of origin distribution of the two segments under investigation does differ significantly (Chi-square p-value = 0.012, Bonferroni-corrected n.s.). The exact proportions are given in Figure 1. A very interesting finding is that German visitors are more strongly represented in the sustainable group than in the non-sustainable segment whereas the opposite is true for Austrian citizens spending their vacation in their own country.

Figure 1: Country of origin distributions compared (% of the respective segments)



Highly significant differences (Chi-square p-value = 0.000, Bonferroni-corrected 0.000) between the two groups with differing attitudes towards maintaining unspoilt nature are observed when comparing the professions of the two segments under consideration, as illustrated in Figure 2. The proportion of tourists that care about maintaining and protecting the natural environment at the travel destination in general reaches its highest values among white-collar workers and pensioners. At the same time, sustainable attitudes dominate in these occupational categories, as compared to the group of students and pupils, who have a far higher proportion of members in the non-sustainable group than in the sustainable one.

Figure 2: Occupational category distributions compared (% of the respective segments)



Travel Behavior

The first hypothesis one might instantly develop is that sustainable tourists would certainly tend to use more environmentally friendly means of transportation. This proves not to be the case. Significant differences do exist (Chi-square p-value = 0.000, Bonferroni-corrected 0.000) but not in the direction that is expected. Instead, three percent more members of the sustainable group (75 percent of the segment) use their private car than the non-sustainable tourists. Private camping vans are also used as transportation more often by the sustainable group (six percent as compared to four).

Significant differences in the average daily expenditures per person are detected between the sustainable and the non-sustainable group of travelers (ANOVA p-value = 0.001, Bonferroni-corrected 0.041), a very important finding, as this fact clearly makes the sustainable segment a more attractive one for targeting as they spend about 13 percent more per person per day in Austria. The same is true in terms of the number of overnight stays. The environment-conscious tourists stay significantly longer, which means two days on average (ANOVA and Bonferroni-corrected p-value = 0.000). Again, this is a very attractive feature of the segment.

Detailed information is available from the Austrian National Guest Survey about the vacation activities of the respondents. A number of leisure activities differ greatly between the segments under consideration, but others do not at all. Table 2 provides the percentage of sustainable and non-sustainable tourists who engage in each particular leisure time activity during their vacation. Both the p-value resulting from the Chi-square test as well as the Bonferroni-corrected values are given. Activities significantly discriminating between the two a priori groupings are highlighted in bold letter.

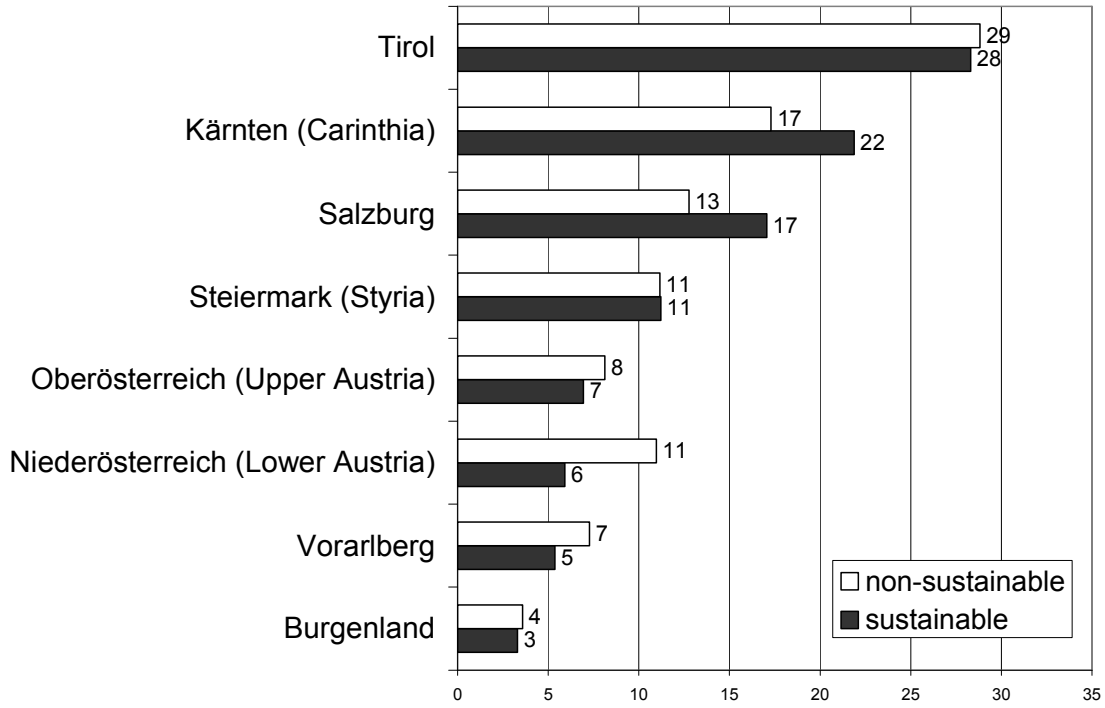
Table 2: Activity profiles compared

	sustainable	non-sustainable	p-value	Bonferroni-corrected
going for walks	**93**	**84**	**0.000**	**0.000**
relaxing	87	85	0.020	0.836
hiking	**82**	**65**	**0.000**	**0.000**
going out for dinner in the evening	79	77	n.s.	n.s.
non-organised excursions	**74**	**65**	**0.000**	**0.000**
swimming	73	71	n.s.	n.s.
sightseeing	**72**	**58**	**0.000**	**0.000**
shopping	72	69	n.s.	n.s.
museums / exhibitions	**45**	**35**	**0.000**	**0.000**
local / regional events	44	40	0.008	0.315
cycling	42	39	0.024	0.984
tyrolean evenings	**27**	**18**	**0.000**	**0.000**
boating	26	27	n.s.	n.s.
organised excursions	25	21	0.001	0.060
disco	**23**	**39**	**0.000**	**0.000**
spa	23	22	n.s.	n.s.
festivals / concerts	**19**	**24**	**0.001**	**0.045**
theatre / musical / opera	16	19	0.043	1.779
tennis	15	16	n.s.	n.s.
golf	8	7	n.s.	n.s.
horseback riding	7	6	n.s.	n.s.
sailing / surfing	**5**	**9**	**0.000**	**0.000**

Highly interesting results could be found concerning the region within Austria in which the tourists stayed during their vacation. Although there would be no strong a priori hypothesis saying that sustainable tourists should be unequally distributed (except maybe for the capital Vienna), highly significant differences in the choice of the region can be revealed by a simple cross-tabulation (Chi-square p-value = 0.000, Bonferroni-corrected 0.000). According to these results that are illustrated in Figure 3, a strong interrelation exists between sustainable tourist frequency and spending a vacation in either Kärnten (Carinthia) or Salzburg. Both regions are known and valued for their lakes and hills with Carinthia, lying in the southern part of the country neighbouring Slovenia and Salzburg, lying in the northern part of Austria neighbouring Germany. While these results are less surprising, it was not expected that there are so few environmentally conscious tourists in Niederösterreich (Lower Austria), the north-

eastern part of Austria, a region that has been advertising cycling vacations in a pleasant environment around the Danube. One of the reasons for this result is the difference in guest mix amongst the provinces. Lower Austria has a very high proportion of Austrian guests visiting the region and the Austrian guests have been identified as over-represented in the non-sustainable group. However, the finding with regard to Lower Austria will certainly require further investigation, especially as the positioning aimed at might not include the optimal appeal to attract guests.

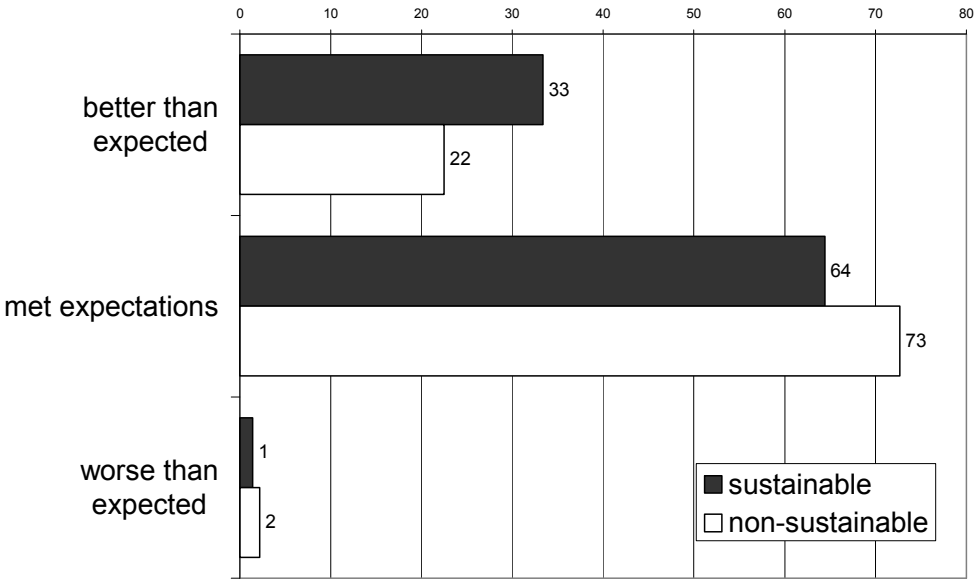
Figure 3: Regional distribution of sustainable summer tourists in Austria (in percentof the respective segments)



Guest satisfaction and recommendation rate

The sustainable tourist segment in Austria was found to feel significantly (both p-values = 0.000) more often that the vacation had been better than expected, as Figure 4 illustrates.

Figure 4: Guest satisfaction compared (in percent of the respective segments)

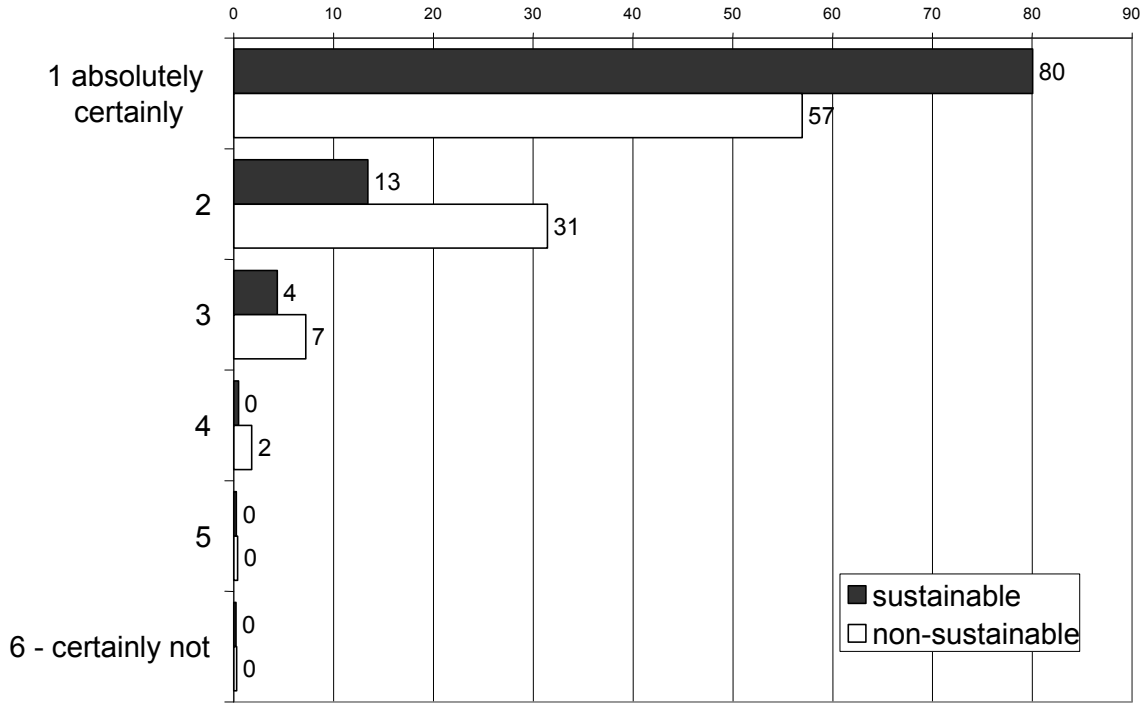


The questionnaire of the Austrian Guest Survey also investigated visitors' satisfaction with single factors of their vacation. Most of the factors are evaluated in a significantly different manner by the two segments under consideration, with the pattern always mirroring their feelings about the entire vacation. This means that the sustainable segment is more often pleasantly surprised. The non-sustainable group more frequently felt that their expectations had been met. This kind of difference in evaluation has been found to be significant at the 99.9% level (both non-corrected and corrected) for the following vacation components: landscape / scenery, beauty of town / village, peacefulness / quietness in town, furnishing and pleasantness of accommodation, service in the accommodation, cuisine / catering, friendliness of the local people, walking and hiking paths, cleanliness of the village / town, public transportation, cultural offer, shopping facilities and alternative programs in case of bad weather. The assumption, that the sustainable groups might be more familiar with the destination than the non-sustainable group is proven to be wrong. The higher level of satisfaction with these vacation components therefore cannot be accounted for by an increased level of familiarity.

No differences in guest satisfaction rates for the two segments can be identified for the judgements on sports facilities as well as on the opening hours of shops.

In summary, the survey results on guest satisfaction show that the sustainable group is in general surprised in a positive way more often than the non-sustainable tourists are. This obviously is a very pleasant characteristic that is expected to positively influence intentions to recommend Austria as a tourist destination. An assumption that turns out to be mirrored in the respective test results is that the sustainable segment has a significantly higher intention to recommend Austria as tourist destination (Chi-square p-value = 0.000, Bonferroni-corrected 0.000). As Figure 5 illustrates, 80 percent of the sustainable segment indicate that they will most certainly recommend Austria. Among non-sustainable guests, the proportion amounts to 57 percent only.

Figure 5: Intention to recommend Austria as tourist destination compared (in percent of the respective segments)



Conclusions

In Austria, the sustainable tourist segment turns out not to be a compromise that forces the tourism industry to decrease their tourism revenue targets in order to preserve nature and act responsibly. Instead, this segment turns out to spend more money per person per day at the destination than the tourists who explicitly state that maintaining the natural environment does not play a major role for them. Also, the sustainable group of tourists stays in Austria two days longer on average. Another attractive feature of the sustainable segment is that this group of tourists does not engage in one single activity. Instead, a number of leisure activities are engaged in from time to time. The product does not therefore have to be highly specialized and is less endangered by changing trends. The fact that 23 percent of the sustainable tourists are retired and that these pensioners are over-proportionately represented in this group allows interesting product offers and packages outside the main summer season. Both the last two arguments can help to avoid risks for tourism businesses through market concentration and thus might be just as sustainable for the industry as for the natural resources of the country.

Overall, with 43 percent of the Austrian summer tourists feeling very strongly about the importance of maintaining the natural environment, the size of the sustainable segment is highly attractive and even justifies further sub-segmentation endeavors for niche marketing strategies.

The main limitation of the empirical part of this study is that the operationalisation of the sustainable tourist in Austria is not optimal. The item chosen to split the respondents into sustainable and non-sustainable group was one single attitudinal item. It was the only item

available for this purpose in the Austrian National Guest Survey and it was strong enough to reveal differences between the two groups and thus illustrate the concept. However, future work – especially if a marketing strategy is to be built on the findings – should use a multi-item operationalisation of the two *a priori* segments that should include both the attitudinal and behavioural component.

In any case, even using the weak attitudinal indicator to classify tourists as more or less sustainable, it seems worthwhile to investigate the characteristics of tourists with a nature-preserving attitude for single destinations. Of course, different sustainable segments will most probably be identified in different regions of the world, but some of them might prove equally or even more attractive as target segment as it is the case for Austria. And there is certainly no better motivator for sustainable tourism than economic success.

References

Blamey R.K. & Braithwaite V.A. (1997) A Social Value Segmentation of the Potential Ecotourism Market. *Journal of Sustainable Tourism* 5(1), 29-45.

Eagles, P.F.J. (1995) Understanding the market for sustainable tourism. In Linking Tourism, the Environment and Sustainability: General Technical Report INT-GTR-323, pp. 25-33.

Frank, R.E. and Massy, W.F. and Wind, Y. (1972) *Market Segmentation.* Englewood Cliffs: Prentice Hall.

Haley, R. J. (1968) Benefit Segmentation: A Decision-Oriented Research Tool. *Journal of Marketing* 32, 30-35.

Mazanec, J. (2000) Market Segmentation. In: *Encyclopedia of Tourism*. J. Jafari, ed. London: Routledge.

McCool & Reilly (1993) Benefit segmentation analysis of state park visitors setting preferences and behavior. *Journal of Park and Recreation Administration* 11(4), 1-14.

Palacio, V. and McCool, S.F. (1997) Identifying Ecotourists in Belize Through Benefit Segmentation: A Preliminary Analysis. *Journal of Sustainable Tourism* 5 (3), 234-244.

Pearce D.G. and Wilson, P.M. (1995) Wildlife-viewing tourists in New Zealand. *Journal of Travel Research* 34(2), 19-26.

Ryan, C. and Huyton, J. (2000) Who is interested in Aboriginal Tourism in the Northern Territory, Australia? A Cluster Analysis. *Journal of Sustainable Tourism* 8(1), 53-88.