Getting to know the online booker

An exploratory study of online travel purchase behavior

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Contents

1 Abstract

Travel industry is rapidly entering the online market. Three studies have been conducted to analyze the general booking process and the customers that purchase travel services online. Furthermore, we identified specific types of online travel bookers and examined their profiles. With the description of tangible customer profiles we laid the groundwork for travel suppliers and intermediaries who want to design an optimized online travel portal. In a first study, we observed the travel booking process in traditional travel agencies in a qualitative way. Afterwards, two online surveys were conducted to analyze the importance of different travel factors. Additionally, the online surveys showed problems that prevent customers from purchasing more travel services online. It can be shown that online bookers differ from non-online bookers in important ways. Through cluster analysis, online bookers could be divided into different online booker profiles, based on their travel behavior, preferences and booking-related problems.

2 Introduction

In the past decade the Internet has become a fast and accessible marketing and distribution channel. This development makes it an important tool for business and the Internet's influence on commerce is growing rapidly. It is therefore essential to make full use of the Internet's potential in highly competitive industries.

During the last years, the travel industry faced an ongoing period of economic difficulties. Like no other business, it was badly affected by terrorism, natural disasters, war and recession (Porres, 2003). In addition, competition in the travel market is growing due to the increasing globalization (Bloch \& Segev, 1997).

Driven by the growing influence of the Internet on marketing and commerce on the one hand and economic difficulties on the other hand, the travel industry is altering its structure very fast. More and more, customers are able to deal directly with travel product suppliers instead of intermediaries. Travel bookers are becoming their own travel planners and are no longer dependent on middlemen to contact different service providers. For this reason, the travel industry is one of the most suitable industries for making use of the Internet as a commerce platform (Bloch \& Segev, 1997; Werthner \& Ricci, 2004).

Numerous consumer surveys confirm that travel services rate among the top three products purchased via Internet (Heichler, 1997; Tweney, 1997; Yoffie, 1997). Furthermore, the Internet nowadays is an important source for travel or destination related information search (Weber \& Roehl, 1999).

A key factor in creating an online portal that generates high turnover is understanding what the advantages of online channels are and how customers make use of them. Little is known about people who buy travel products and services online. However, previous research shows that online shoppers in general differ from people who don't shop online and are a heterogeneous group where products should be carefully adapted to specific segments rather than to a general shopper population (Swinyard \& Smith, 2003; Lingenfelder \& Loevenich, 2003). Other results show that many Internet users have problems using online shops to their full satisfaction (Jarvenpaa \& Todd, 1997). Usability issues have also been left unaddressed by the travel industry.

In this study, we explore different types of online bookers by analyzing the products they purchase. In addition, we want to identify factors that are important to travel-booking and discover problems customers have with existing travel websites. We conducted a qualitative analysis of the booking process in travel agencies as well as two quantitative online surveys to gain insight into travel habits and preferences.

Our goal was to lay the groundwork for developing an online travel shop that reflects the users approach to purchasing travel products and does not enforce a workflow on users that conflicts with their mindset.

3 Theoretical background

3.1 Networked Industry

Services and products of the travel industry are themselves bundles of several basic products that have to be connected with each other, the distribution channel and the consumer. Thus, the travel industry is a network of many closely interlinked components. Production and distribution is based on strong cooperation between suppliers, intermediaries and demand side. Furthermore, the travel industry also relates to other sectors such as culture and sports. Therefore, the industry relies strongly on communication, information processing and products that interface well with the distribution channel and consumers (Werthner \& Ricci, 2004; Lewis, Semeijn \& Talalayevsky, 1998).

Increasing influence of Information technology, specially the Internet, on general business and marketing situation is therefore affecting the travel industry even more than other industries (Bloch \& Segev, 1997). Figure 1 illustrates that the traditional centralized structure of the travel market, where consumers use a single or very few travel agents, while travel agents have access to a lot of travel service providers, is slowly being changed into a decentralized system, where travel service providers start approaching their customers directly via Internet (Werthner \& Ricci, 2004). This disintermediation saves time and transaction costs for suppliers and consumers alike. Traditional travel agencies, however, lose a large part of their market share.

Figure 1. The structure of the travel industry is getting decentralized (Lewis, Semeijn \& Talalayevsky, 1998).

3.2 Information-based product

The travel product is a "confidence good" and its qualities are hard to assess, because the product is intangible and has to be consumed totally outside of the customer's daily environment. At the time of purchase, consumers only have an idea of the product in so far as they were able to collect information about it. Analysis of e-commerce shows that products where consumers need to know a lot about are among the most revenue generating ones (Tweney, 1997). While most of the not travel-related e-commerce sites on the Internet are mainly transaction-oriented (e.g., the consumer sends credit card information and receives a CD), the tourism industry benefits from important experience-related features of the Internet because of the information-basedness of travel products. The web is a medium of curiosity, communities and having fun. It allows travelers to share holiday pictures and travel experiences with each other on the same infrastructure where they can purchase their next travel service, 24 hours a day, 7 days a week (Werthner \& Ricci, 2004; Heung 2003). The Internet can therefore help travel bookers establishing an abstract model of the product.

3.3 Classification of online and offline shoppers and bookers

Research shows that online shoppers differ substantially from exclusive offline

shoppers. Online shoppers are younger, have higher incomes, occupations with a higher status and are better educated. Throughout research in this field, offline shoppers express security concerns, mostly related to credit card information or personal data, a lot more than online shoppers do. Security concerns seem to be the biggest barrier to shopping on the Internet (Swinyard \& Smith, 2003; Weber \& Roehl, 1999).

Furthermore, differences exist not only between online and offline shoppers but also among different types of online shoppers, as well as among different types of offline shoppers. While focusing on specific target audiences is a common marketing practice in traditional retail, most online shops follow a non-selective way of distribution. Recent research shows that homogeneous segments can be identified also among online-shopping customers (Swinyard \& Smith, 2003; Lingenfelder \& Loevenich, 2003).

Weber and Roehl (1999) analyzed travel bookers regarding differences between people who use the Internet and people who don't use the Internet for travel puchase and travel-related information gathering. They found that people who are younger than 25 years or older than 55 years are less likely to purchase travel services online than people in other age groups. Users with higher incomes, occupations with higher status and more Internet experience are more likely to purchase travel services online.

4 Research questions

Non-electronic intermediaries, e.g. traditional travel agencies, have to adapt themselves to the influences of electronic technologies on the travel market by focusing on specific services that don't benefit from the Internet and analyzing what advantages a physical travel agency may have over electronic travel providers. Alternatively, electronic services like Internet terminals or other information platforms could be integrated into the booking process in traditional travel agencies to let customers explore destinations, products and travel services.

We wanted to identify services that are more suitable for online sale and services that people prefer to purchase in traditional travel agencies. Therefore it is important to know differences between online and offline bookers in respect to the services they purchase, the travel factors that are important to them and possible reasons that prevent them from booking online. For electronic intermediaries on the other hand (e.g., travel portals) it is important to know the booking process of travel purchasers in order to adapt their interfaces to the customers' mindset instead of just providing a clickable travel brochure.

To identify possible entrance points for the most important types of online bookers, we also wanted to classify them by means of a cluster analysis based on the frequency of purchase of certain travel-services. The description of such clusters yields tangible profiles that can be used in a user-centered design process of online travel portals and thus lead to optimization of travel e-commerce.

5 Qualitative analysis of booking in travel agencies

To analyze traditional travel agencies and the travel booking process in a qualitative way, we conducted an observation of consultations involving customers and travel agents. Five travel agencies and one call center, all part of the Kuoni group, have been visited for a first analysis of the booking process. Kuoni, with over 6'900 employees worldwide, is one of Europe's leading tourism companies. A total of 86 customer consultations were observed. As soon as it became apparent that a customer who had entered the agency intended to seek detailed consultation, an observer joined the travel agents desk and briefly explained the aim of the observation and asked for permission to record and listen to the conversation. All customers gave their agreement to the presence of a passive observer. After that, there was no further interruption of the ongoing consultation on the part of the observer. Shorter consultations were simply logged on paper.

The logs and recordings of booking consultations have been analyzed by outlining their basic steps of progress comparing the resulting patterns. We found five reoccurring patterns. These reflect five basic types of situations that typically occur when a customer comes into a travel agency:

- *Brochure.* The customer wants to get travel brochures.
- *Flight.* The customer wants to book a flight.
- *All-inclusive.* The customer wants to purchase an all-inclusive travel offer. These customers usually already know what they want. Either they purchase the same offer as the year(s) before, or they elaborated their choice in advance and want to book it now.
- *Specific consultation.* The customer wants an in-depth consultation about a small set of possible travel offers/services.
- *Open consultation.* The costumer is at the beginning of the decision process and needs general consultation to find out what services to purchase.

Furthermore, we observed that the task of purchasing a travel product or service is often divided into multiple consultations, specially the more time consuming types like

“Specific Consultation” and “Open Consultation”. This is due to the fact that customers often want to wait some time to think about secondary options or just don't want to confirm a booking right away.

For many customers, travel agents are not anonymous consultants but persons they know and trust. In return, also travel agents know their returning customers very well. They often not only know the customers’ names but also their booking history as well as their likes and dislikes. We observed this relationship even in the call center, where calling customers get connected to travel agents they already know.

A problem of traditional travel agencies we could observe is that many travelers benefit from the help of competent and eager travel agents without purchasing a service after the consultation. These travelers often purchase the product or service a travel agent recommended or helped arrange directly on the online shop of the supplier. To balance the loss of revenue, travel agencies start demanding consultation fees that get reimbursed in case of a later purchase.

Figure 2 shows a typical travel booking process as a customer in a travel agency experiences it. The process loop of consultation, presenting offers and discussing can last several consultations and days.

Figure 2. A typical travel booking process.

6 First online survey – Towards online travel purchase profiles

Based on the findings from the analysis in travel agencies, we created an online survey to get quantitative data about on- and offline bookers.

6.1 Methodology

The survey consisted of questions about general Internet usage, travel-booking preferences, travel-purchasing behavior and online travel-purchasing problems. There were also demographic questions. It was conducted in German.

Most of the questions were dichotomous: Participants were asked to indicate whether they already purchased a certain travel service/product, were prevented by a specific problem or think a certain travel factor is important. This type of items was not optimal for statistical analysis and was chosen due to the planned integration of the survey with the Kuoni website and the structure of customer surveys usually used by Kuoni.

Participants had to answer 16 questions about traveling and travel purchasing behavior and 6 demographic questions. There were 6 additional questions of a different study at the end of the survey. Each question was on a separate screen. Including the start page and the final page, participants had to go through 30 pages to complete the survey.

The survey was conducted during September and October 2005. Due to organizational difficulties, the survey was advertised for only two days on the start page of Kuoni. It then had to be advertised on the homepage of the Faculty of Psychology of the University of Basel and on the newsletter of the Faculty's pool of regular test participants. As we will see later, this led to a sample artifact, because subjects were mainly students.

To extract profiles of online bookers we conducted a cluster analysis based on the frequency of purchases of different travel-services. Only participants that purchased travel services on the Internet at least once were taken into account.

6.2 Results

240 participants completed the survey (39\% male, 53\% female and 8\% preferred not to indicate their sex). 42\% indicated „University/School“ as their occupation and another 15\% declared that they were in training at the time. The average age was 28 years (\emph{SD} = 8.754). 44\% were in the lowest income category (Up to $25,000 per year). These numbers show that students were clearly overrepresented in this sample.

83\% of all participants indicated that the Internet is “very important” for them and another 16\% rated it as “rather important”. Accordingly, 46\% of all participants use the Internet for more than 10 hours per week, 38\% for 3 to 10 hours per week. 65\% of the participants found the Internet “very important for travel preparation” and 32\% “rather important for travel preparation”. Most of the participants undertake 2 to 3 travels with 2 or more overnight stays per year (see table 1) and go to a travel agency once a year (see table 2).

Table 1

Number of travels with 2 or more overnight stays per year

	Frequency	
	Absolute	Percent
None	12	5.0
1	53	22.1
2 to 3	133	55.4
4 to 10	35	14.6
More than 10	7	2.9

Table 2

Visits to travel agencies per year

	Frequency	
	Absolute	Percent
Never	74	30.8
Once	81	33.8
2 to 3 times	61	25.4
4 to 10 times	17	7.1
More than 10 times	7	2.9

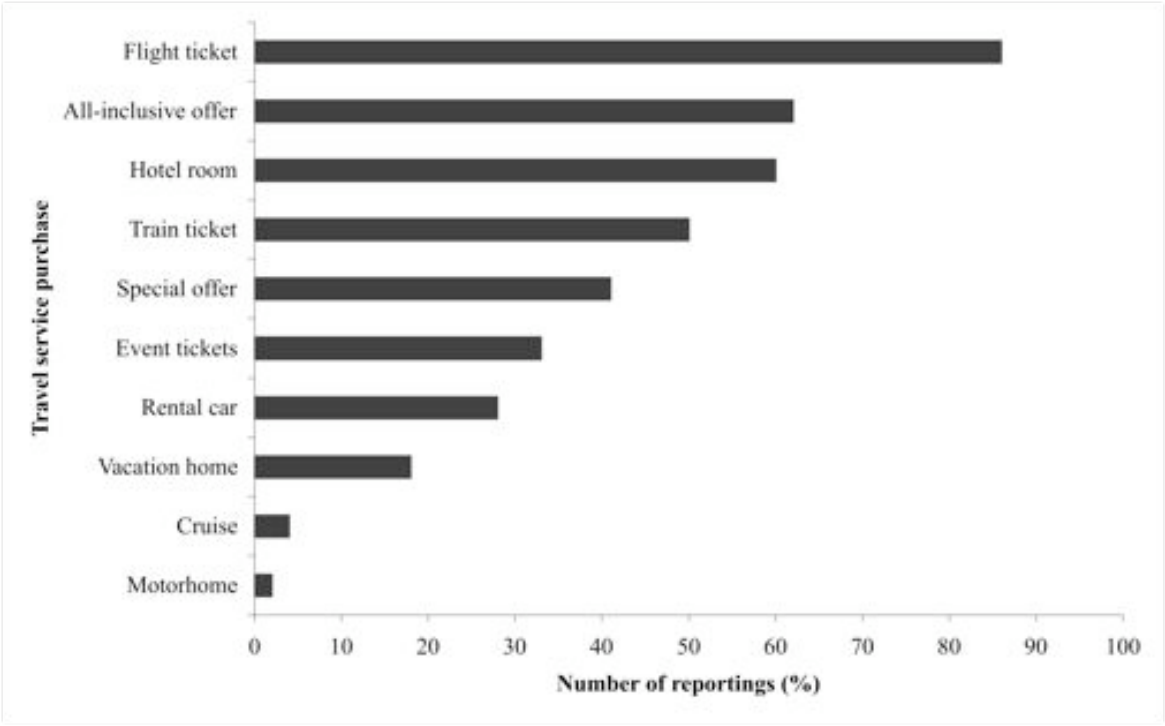

Figure 3. Purchased travel services/products (n = 240). Totals don't add to 100\% due to multiple response options.

Not surprisingly, most participants (86\%) already purchased a flight ticket once (see figure 3). All-inclusive offers (62\%) and hotel room reservations (60\%) were also among the three most purchased travel services/products.

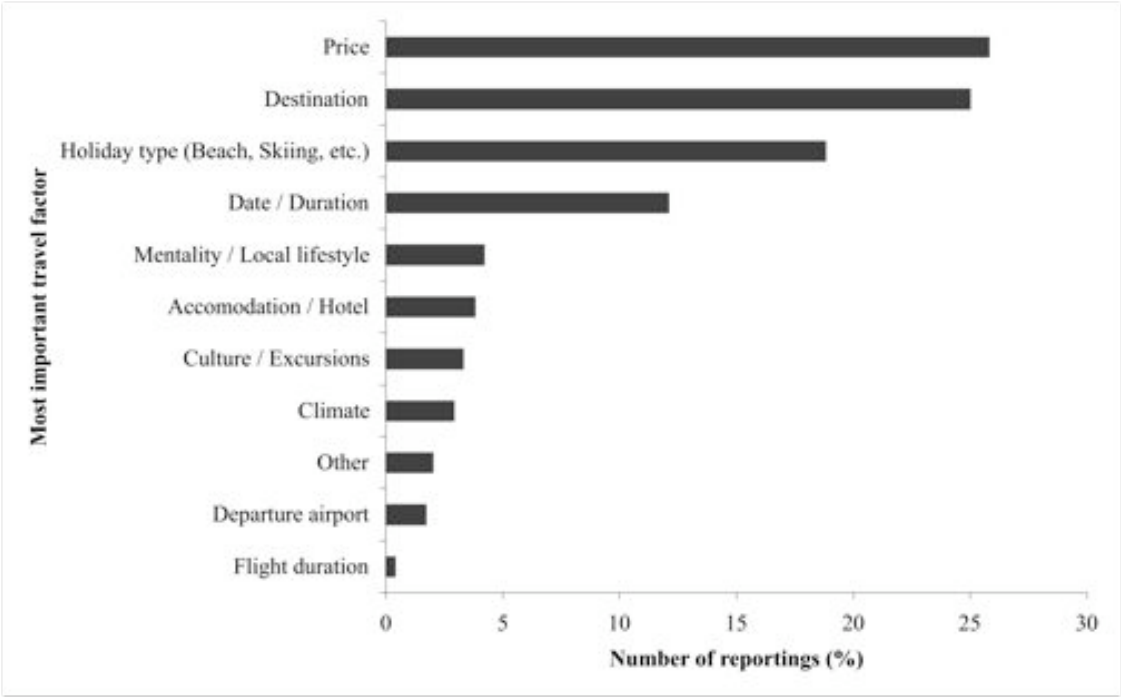

Figure 4. Most important travel factors (n = 240). Numbers add up to 100\%.

Price, destination and holiday type were rated as the most important travel factors (see figure 4).

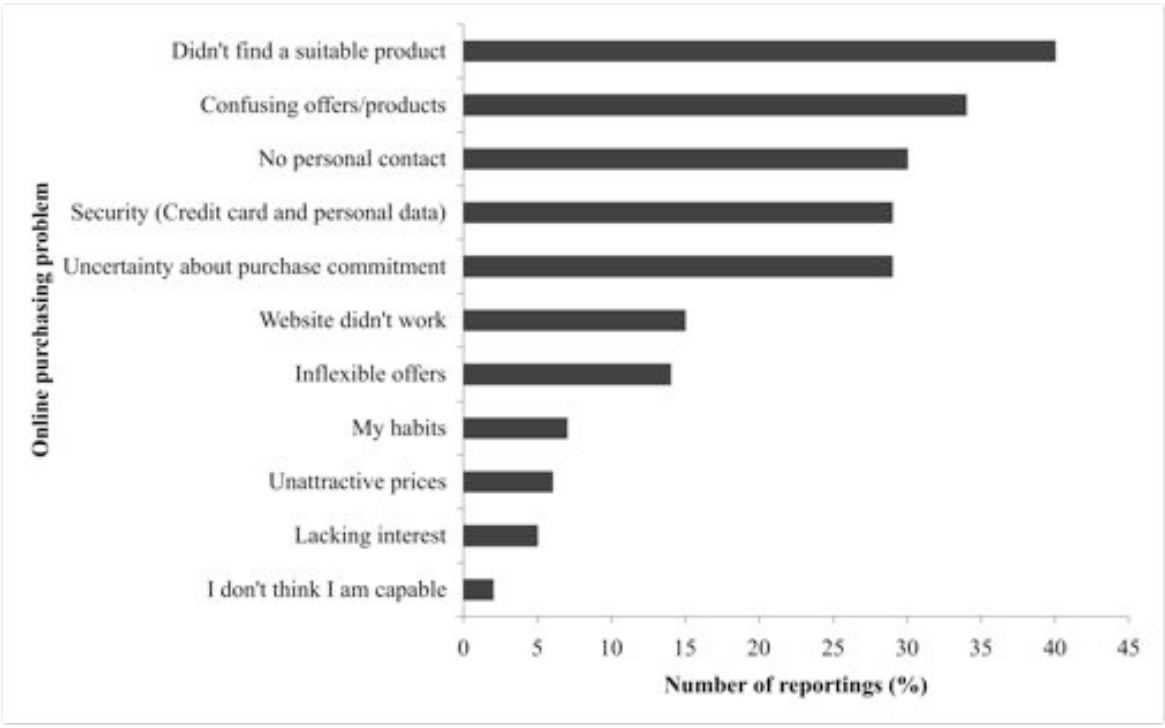

Figure 5. Problems that prevented people from purchasing more travel services/products online (n = 240). Totals don't add to 100\% due to multiple response options.

Participants reported problems that prevented them so far from purchasing travel services/products online more often (see figure 5). Four of the top five problems were related to usability issues. Only lacking personal contact can't be addressed easily by interface design. This underlines the importance of analyzing online bookers as a basis for travel e-commerce and is consistent with research done by Jarvenpaa \& Todd (1997).

6.2.1 Differences between online and offline bookers

Following the approach of Weber \& Roehl (1999) we divided the participants into online bookers (people who purchased a travel service/product online at least once) and offline bookers (never purchased a travel service/product online). 193 (80\%) of the 240 participants were online and 57 were offline bookers. Due to the unequal group sizes we decided to use Mann-Whitney U-Tests to analyze the differences between the groups.
Surprisingly, online bookers didn't rate the Internet as being more important than did offline bookers. For travel preparation however, they rated the Internet as more important than offline bookers did (\emph{U}(193, 57) = 2857, *\emph{p} $<$* .01).

Online bookers generally indicated that they travel more (\emph{U}(193, 57) = 2971, *\emph{p} $<$* .01). However, it cannot be determined whether they start purchasing online because they travel a lot or they travel more once they discover online travel purchasing. Online bookers were more likely to have bought flight tickets ($\chi $^{2}(1, 240) = 24.772, *\emph{p} $<$* .01), hotel room reservations ($\chi $^{2}(1, 240) = 10.996, *\emph{p} $<$* .01) and special offers ($\chi $^{2}(1, 240) = 9.621, *\emph{p} $<$* .01) than offline bookers. No differences between online and offline bookers were found concerning importance of travel factors.

In line with Weber \& Roehl (1999) we found differences between on- and offline bookers in respect to the problems that prevented them from purchasing more travel services/products via Internet. In particular the offline bookers more often indicated security concerns than online bookers ($\chi $^{2}(1, 240) = 11.626, *\emph{p} $<$* .01). Additionally, offline bookers also more often indicated their habits

(“It never occurred to me yet.”) as a reason for not purchasing online ($\chi $^{2}(1, 240) = 14.635, *emph{p} $<$ .01).

6.2.2 Clustering online bookers

A cluster analysis was conducted to classify the 193 online bookers. All binary variables of the three main parts (travel-service purchases, travel-factor preferences and online-booking problems) of the survey were the basis of the analysis. Distance between subjects was measured with the Russel and Rao coefficient and the complete linkage clustering algorithm was used to group participants. The Russel and Rao coefficient was taken because sharing the presence of a feature (e.g. two participants having both rented a car) is more important to similarity than sharing the absence of a feature. The dendrogram provided by the cluster analysis showed five clusters of online bookers. To determine whether the resulting cluster solution yielded a grouping with relevant differences in respect to the examined variables, we calculated $\chi $^{2} values for the variables’ distribution, comparing each cluster with the remaining participants.

Flight purchaser. Participants in this cluster (see table 3) go to travel agencies with the goal of booking a flight. They purchase their flight tickets separately, therefore they don't purchase travel products in bundles (like all-inclusive or special offers).

Table 3

Analysis of cluster 1, the flight purchaser

	Subjects were more likely to report:	Subjects were less likely to report:
Goals in travel agency	• Purchasing flight ticket ($\chi $^{2}(1, 193) = 16.720**)	• Purchasing all-inclusive offer ($\chi $^{2}(1, 193) = 8.739**)
Travel services purchased	• All subjects in cluster 1 purchased flight tickets	• Special offers ($\chi $^{2}(1, 193) = 11.419**) • All-inclusive offers ($\chi $^{2}(1, 193) = 8.699**) • Rental cars ($\chi $^{2}(1, 193) = 6.888**)

***emph{p} $<$* .01

All-inclusive traveler. Participants in this cluster (see table 4) are complementary to flight purchasers. They purchase a lot of all-inclusive travel offers and don't need to buy a lot of single travel services.

Table 4

Analysis of cluster 2, the all-inclusive traveler

	Subjects were more likely to report:	Subjects were less likely to report:
Goals in travel agency		• Purchasing flight ticket ($\chi $^{2}(1, 193) = 8.365**)
Travel services purchased	• All-inclusive offers ($\chi $^{2}(1, 193) = 8.400**)	• Flight tickets ($\chi $^{2}(1, 193) = 8.167**) • Hotel room reservations ($\chi $^{2}(1, 193) = 16.857**) • Train tickets ($\chi $^{2} (1, 193) = 14.946**)

***emph{p} $<$* .01

Picky one. Travel purchasers of this cluster (see table 5) have difficulties finding a suitable offer on the Internet and purchase less bundled travel products that would deprive them of many choices they'd rather make themselves.

Table 5

Analysis of cluster 3, the picky one

	Subjects were more likely to report:	Subjects were less likely to report:
Goals in travel agency		• Purchasing all-inclusive offer ($\chi $^{2}(1, 193) = 15.101**) • Booking hotel room reservation ($\chi $^{2}(1, 193) = 10.707**)
Travel services purchased		• Special offers ($\chi $^{2}(1, 193) = 10.255**) • All-inclusive offers ($\chi $^{2}(1, 193) = 6.773**)
Online purchasing problems	• Didn't find a suitable offer ($\chi $^{2}(1, 193) = 19.755**)	

***emph{p}* $<$ .01

Bargain-hunter. Participants in this cluster (see table 6) purchase more special offers than others. Bargain-hunters are basically complementary to picky ones regarding problems they experience while booking travel via Internet. Bargain-hunters have no problems finding a suitable offer – they go for the bargains.

Table 6

Analysis of cluster 4, the bargain-hunter

	Subjects were more likely to report:	Subjects were less likely to report:
Goals in travel agency	• Purchasing all-inclusive offer ($\chi $^{2}(1, 193) = 25.156**) • Booking hotel room reservation ($\chi $^{2}(1, 193) = 8.659**)	• Consultation about a specific product ($\chi $^{2}(1, 193) = 11.601**)
Travel services purchased	• Special offers ($\chi $^{2}(1, 193) = 10.395**) • All-inclusive offers ($\chi $^{2}(1, 193) = 7.369**) • Train tickets ($\chi $^{2}(1, 193) = 11.583**)	

Online purchasing problems		• Didn't find a suitable offer ($\chi $^{2}(1, 193) = 15.060**)

***emph{p} $<$ .01

Individual traveler. Participants in this cluster (see table 7) need the consultation a real travel agent can offer them. They purchase more single travel services like hotel room reservations and rental cars. These facts indicate that they tend to arrange basic travel products individually.

Table 7

Analysis of cluster 5, the individual traveler

	Subjects were more likely to report:	Subjects were less likely to report:
Travel services purchased	• Hotel room reservations ($\chi $^{2}(1, 193) = 11.965**) • Rental cars ($\chi $^{2}(1, 193) = 10.470**) • Special offers ($\chi $^{2}(1, 193) = 8.479**)	
Online purchasing problems	• Missing personal contact ($\chi $^{2}(1, 193) = 10.957**)	

***emph{p} $<$ .01

Table 8 shows the sizes of the identified clusters and the names they were given based on important features of their profiles.

Table 8

Cluster names and number of participants per cluster

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
N	26 (13\%)	14 (7\%)	44 (23\%)	72 (38\%)	37 (19\%)
Cluster Description	Flight purchaser	All-inclusive traveler	Picky one	Bargain-hunter	Individual traveler

Some of these clusters show a strong relation to one of the five basic consultation situations that were identified during the user and task analysis. The flight purchasing

and the all-inclusive travel-purchasing situation found in the quantitative booking-process analysis can be assigned to the flight purchaser and the all-inclusive traveler of the identified profiles of this survey. Customers visiting travel agencies to consult with a travel agent are mostly of the individual traveler type or picky ones. Bargain hunters seem to fit in either one of the non-consultation-oriented situations.

The sample of this survey consisted mainly of students as we could see. This possibly led to results and profiles we wouldn't find with a sample of all travel bookers. Also, the dichotomous items in the survey were not the ideal basis for statistical analysis. Despite these shortcomings, the results we obtained with this first online survey show that the analysis of online bookers and the building of clusters of online booker types is promising. We decided to conduct an improved second online survey.

7 Second online survey – Verification with a larger sample

Goal of the second online survey was to validate the findings about travel booking behavior from the first survey as well as the segmentation of travel bookers with a more appropriate sample of actual customers. This survey also provided the possibility to compare the first sample (mainly students) with a more general one. Furthermore, while the first survey was adapted to existing Kuoni customer surveys, we wanted to develop the second survey to generate scaled data that would be more suited for statistical analysis.

7.1 Methodology

This online survey consisted of three main parts: “Frequency of purchasing travel services”, “Importance of travel factors” and “Problems of online purchasing”. There were also questions concerning general Internet usage, traveling habits and demographic factors of the participants. In total the survey consisted of 49 items. The items were distributed over 11 pages. There was one additional page at the beginning and at the end, giving a total of 13 pages that had to be visited to complete the survey. In contrast to the first survey, participants of the second one were asked to state frequency of purchase, importance of travel factors and severity of experienced problems on the basis of likert scales to get scaled data.

The survey was online for three weeks in February 2006. It was advertised on the website of Kuoni (www.kuoni.ch) and the Kuoni newsletter. Among all participants that entered their email address, 5 Kuoni travel coupons were raffled. Again, a cluster analysis was conducted.

7.2 Results

Of the 1267 people that arrived at the first page, 1035 (82\%) started the online survey. 727 (70\%) of the people that started the survey answered all questions. There were questions concerning demographic and financial situation that were explicitly stated as being not mandatory. People who did not answer some of these questions are included in the 727 participants (39\% male, 60\% female, 1\% preferred not to indicate their

sex). The average age was 36.14 years (\emph{SD} = 12.901) and the average time to complete the survey was 6.489 minutes (\emph{SD} = 7.976).

The participants were asked whether they were still in training. 79\% indicated that they were not. As their occupation, most participants chose one of the categories “Employee / Clerk / Secretary” (42 \%) or “Medium / higher management” (18\%). 21\% didn’t reveal their labor situation and the other 19\% were divided among 6 different categories. Most of the participants that made a statement about their income placed themselves in the range from $50,000 to $70,000 (32\%).

Participants rated the Internet mostly as “very important” (60\%) or “rather important” (38\%). This is slightly less than in the first survey. The reported importance of the Internet for travel preparation showed a similar pattern: 54\% rated it as “very important for travel preparation”, 39\% as “rather important for travel preparation”. In terms of time spent on the Internet most of the participants chose the category “3 to 10 hours per week” (49\%). Table 9 shows that most of the participants undertake 2 travels with 2 or more overnight stays per year.

Table 9

Number of travels with 2 or more overnight stays per year

	Frequency	
	Absolute	Percent
None	7	1.0
Less than 1	36	5.0
1	139	19.1
2	293	40.3
3	163	22.4
4	46	6.3
More than 4	43	5.9

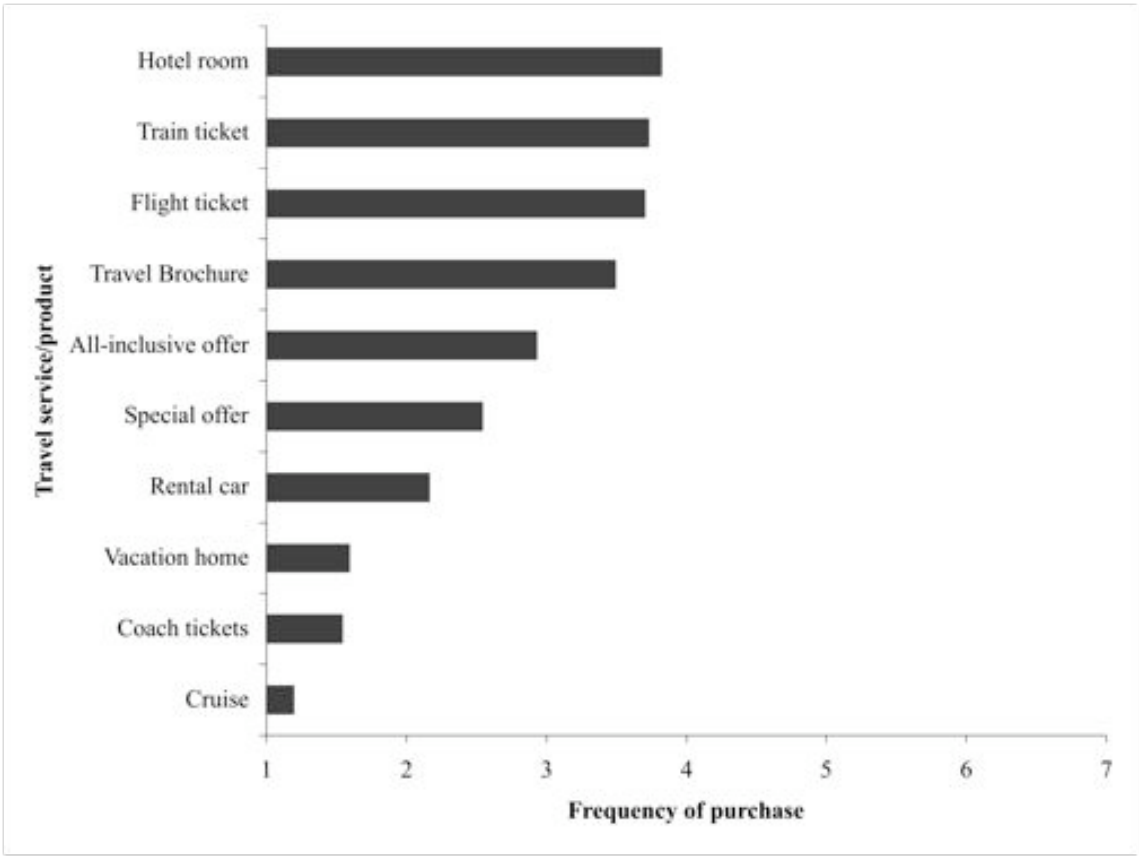

Figure 6. Average frequency of travel service/product purchase. Response options were 1 = Never, 2 = Less than once a year, 3 = Once a year, 4 = Twice a year, 5 = Three times a year, 6 = Four times a year, 7 = More than four times a year.

Figure 6 shows the average frequency of purchase for travel services/products. Although the order changed slightly, flight tickets, hotel room reservations, train tickets and all-inclusive offers are the most purchased travel services/products.

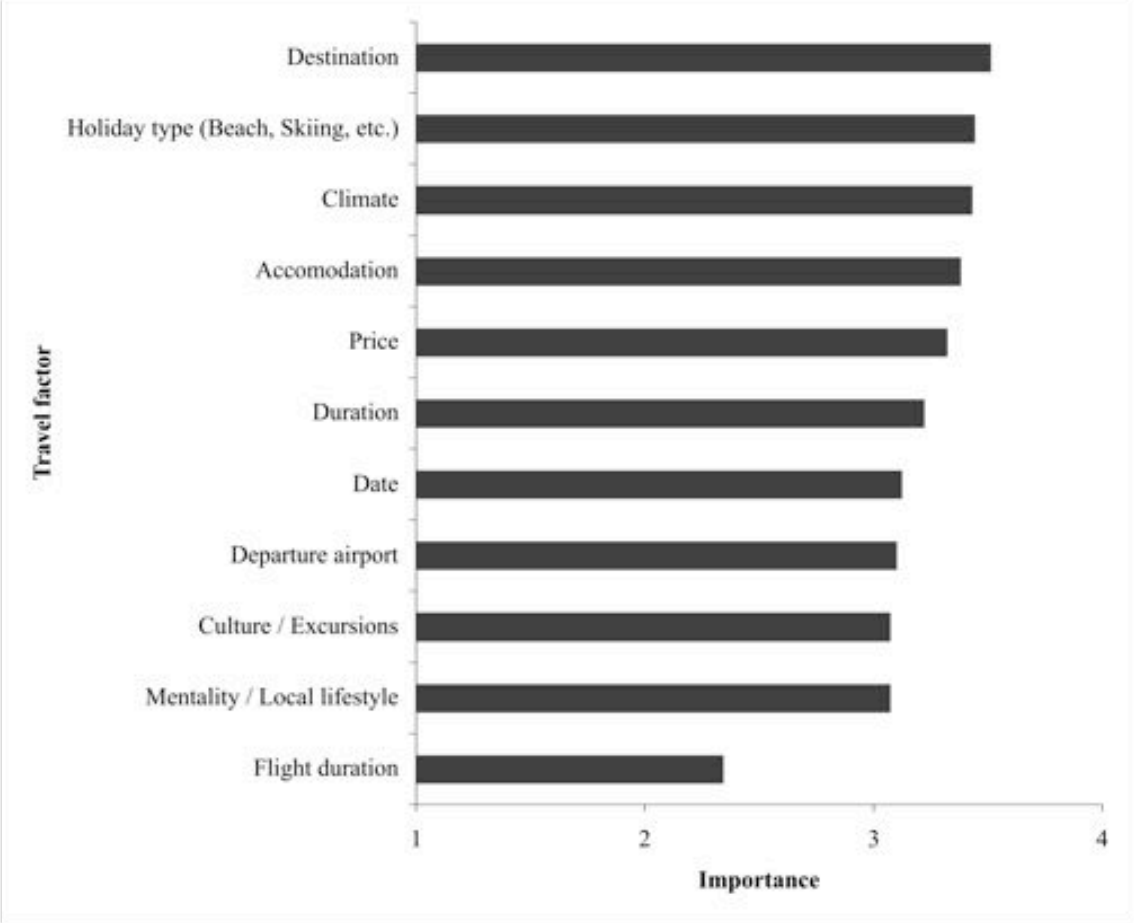

Figure 7. Importance of travel factors. Response options were 1 = Unimportant, 2 = Rather unimportant, 3 = Rather important, 4 = Very important.

Unlike participants from the first survey, the participants of the second survey showed a more balanced distribution of travel-factor preferences (see figure 7). In the first survey climate and accommodation were not rated as important factors. In the second survey, these factors were rated as even more important than price, duration and date. Considering that the first sample consisted mainly of students this is not very surprising. The skewed preference distribution of the first survey can be explained by the fact that students tend to have a smaller budget for traveling. Therefore, price becomes an important feature while comfort (accommodation and climate) plays a less important role.

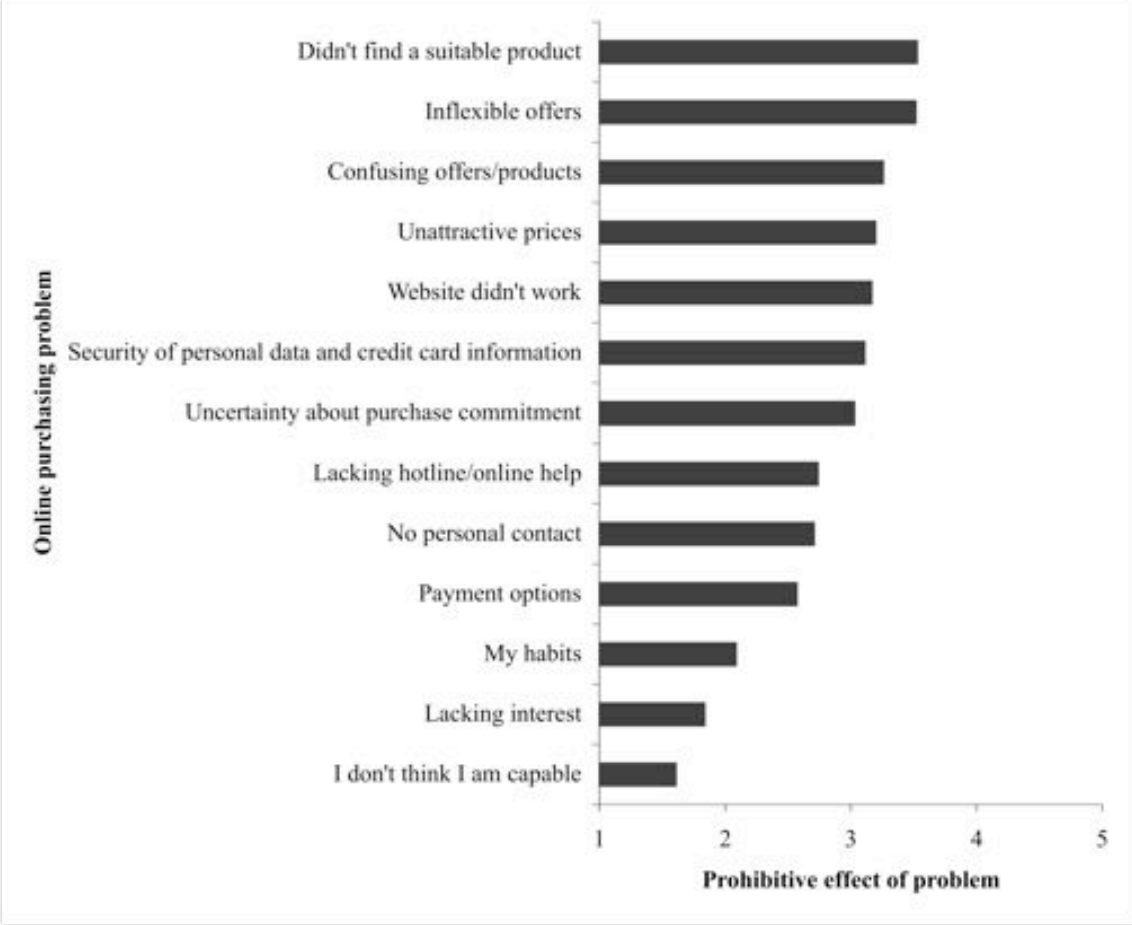

Figure 8. Problems that prevent people from purchasing more travel services/products online. The response options were: 1 = Doesn't prevent at all, 2 = Hardly prevents, 3 = Prevents a little, 4 = Prevents strongly, 5 = Prevents very strongly.

Concerning the prohibitive effect of certain problems on online purchasing, the results from the first survey were also confirmed by the second survey. Namely "didn't find a suitable product", "confusing offers/products", "security" and "uncertainty about purchase" were rated as prohibitive problems in both surveys (see figure 8).

7.2.1 Differences between online and offline bookers

In order to compare online and offline bookers we followed a different approach in this survey. To achieve a balanced proportion of online to offline bookers, and to avoid classifying participants as online bookers who tried out online travel purchasing just once, we defined people who reported purchasing less than 25\% of their travel services/products online as offline bookers. This led to a group of 449 (62\%) online

bookers and 278 (38\%) offline bookers. Again, Mann-Whitney U-Tests were used to analyze both groups.

Results from the second online survey not only indicate that online bookers rate the Internet as being more important for travel preparation (\emph{U}(449, 278) = 38831.5, *\emph{p} $<$ .01) but also in general (\emph{U}(449, 278) = 48950, *\emph{p} $<$ .01). Furthermore, online bookers reported to use the Internet more frequently than offline bookers (\emph{U}(449, 278) = 48413, *\emph{p} $<$ .01). Online bookers differed from offline bookers in terms of education level ($\chi $^{2}(3, 727) = 38.978, \emph{p} $<$ .01). They were more likely to have completed academic training or a qualification for university entrance than offline bookers. Other demographic differences could not be shown. The second survey confirms that online bookers are more frequent travelers than offline bookers (\emph{U}(449, 278) = 46807, *\emph{p} $<$ .01). Additionally, participants of the second survey were asked to indicate business travel intensity as well as the annual amount of money spent on travel and business travel. Online bookers rated higher in business travel frequency (\emph{U}(449, 278) = 49288, *\emph{p} $<$ .01) and money spent on travel (\emph{U}(449, 278) = 46819.5, *\emph{p} $<$ .01) and business travel (\emph{U}(449, 278) = 13629.5, *\emph{p} $<$ .01).

Consistent with the first survey, online bookers reported to purchase more flight tickets (\emph{U}(449, 278) = 43246.5, *\emph{p} $<$ .01), hotel room reservations (\emph{U}(449, 278) = 42985.5, *\emph{p} $<$ .01) and special offers (\emph{U}(449, 278) = 47409, *\emph{p} $<$ .01). Unlike the first survey, the second survey also indicated that online bookers rent more cars (\emph{U}(449, 278) = 47729, *\emph{p} $<$ .01) and vacation homes (\emph{U}(449, 278) = 54680, *\emph{p} $<$ .01) than offline bookers. Again, online bookers reportedly do not purchase more all-inclusive travel offers than offline bookers, in contrast to the other frequently purchased services/products (flight tickets, hotel rooms, special offers). Again, no differences were found between online and offline bookers in terms of importance of travel factors, indicating that these factor are not depending on booking behaviors and online as well as offline bookers mind destination, holiday type and climate more than other factors.

The set of questions about what problems were preventing the purchase of more travel services/products via Internet showed that offline bookers rated the problems

“Security of personal data and credit card information” (\emph{U}(449, 278) = 36522.5, *emph{p} $<$ .01), “Uncertainty about purchase commitment” (\emph{U}(449, 278) = 43508, *emph{p} $<$ .01), “Lacking hotline/online help” (\emph{U}(449, 278) = 54603.5, *emph{p} $<$ .01), “No personal contact” (\emph{U}(449, 278) = 28342.5, *emph{p} $<$ .01), “Payment options” (\emph{U}(449, 278) = 42445, *emph{p} $<$ .01), “My habits” (\emph{U}(449, 278) = , *emph{p} $<$ .01), “Lacking interest” (\emph{U}(449, 278) = 40073.5, *emph{p} $<$ .01), and “I don’t think I am capable” (\emph{U}(449, 278) = 44507, *emph{p} $<$ .01) as more prohibitive than the online bookers. The problem “Website didn’t work” in turn did prevent more of the online bookers from booking more online (\emph{U}(449, 278) = 52887.5, *emph{p} $<$ .01).

7.2.2 Clustering online bookers

Online bookers of the second online survey were grouped according to the similarity of their profile of purchased travel-services (Flight tickets, Hotel booking, all-inclusive offers, special offers and vacation homes). A cluster analysis was conducted to achieve the grouping. We used squared Euclidian distance of the z-standardized variables to calculate the dissimilarity between the participants and used Ward’s method as clustering algorithm.

Based on the results from the qualitative analysis and the first online survey, we expected to find five clusters of travelers. However, the similarity of two of the clusters we generated in this way led to the decision to use a four-cluster solution. Because of unequal group sizes, Mann-Whitney U-Tests were conducted to analyze the clusters.

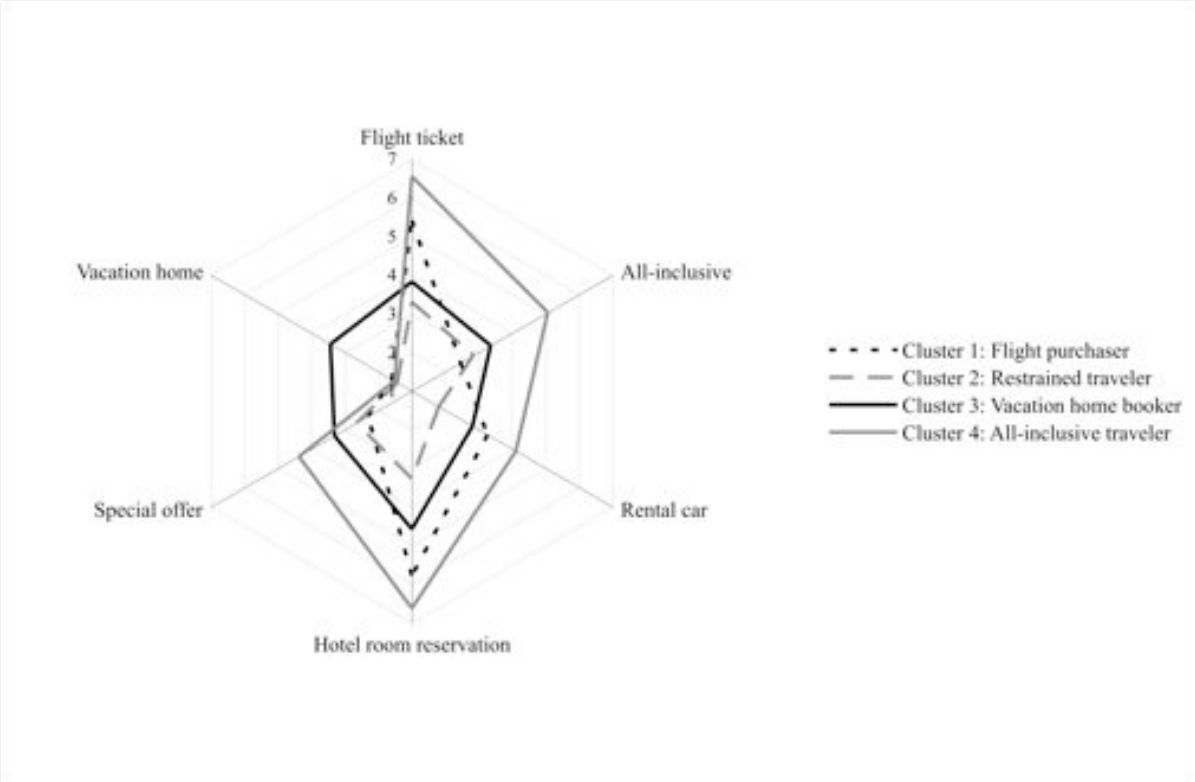

Figure 9. Travel-service purchase-frequency profiles of clusters found in survey 2.

The clusters we found have different profiles of travel-service purchase frequency (see figure 9). Cluster 1 purchases more flight tickets (\emph{U}(102, 347) = 7003, *emph{p} $<$ .01), rental cars (\emph{U}(102, 347) = 9477, *emph{p} $<$ .01) and hotel room reservations (\emph{U}(102, 347) = 5219, *emph{p} $<$ .01) and less all-inclusive (\emph{U}(102, 347) = 12718, *emph{p} $<$ .01) and special offers (\emph{U}(102, 347) = 13434, *emph{p} $<$ .01) than the average. Flight tickets and hotel room reservations are the most often purchased services of this cluster.

People from cluster 2, which is the cluster that travels least of all, unsurprisingly purchase less flight tickets (\emph{U}(276, 173) = 8810.5, *emph{p} $<$ .01), rental cars (\emph{U}(276, 173) = 10320, *emph{p} $<$ .01), hotel room reservations (\emph{U}(276, 173) = 4775.5, *emph{p} $<$ .01), vacation homes (\emph{U}(276, 173) = 17701, *emph{p} $<$ .01) and train tickets (\emph{U}(276, 173) = 19474, *emph{p} $<$ .01) than people from other clusters.

Cluster 3 is the only one where the number of vacation home bookings is above average (\emph{U}(42, 407) = 979.5, *emph{p} $<$ .01). People from cluster 3 also

purchase more all-inclusive offers (\emph{U}(42, 407) = 6537.5, *emph{p} $<$ .01), rental cars (\emph{U}(42, 407) = 6152, *emph{p} $<$ .01) and special offers (\emph{U}(42, 407) = 5968, *emph{p} $<$ .01).

Cluster 4 shows the same pattern as cluster 1 in respect to travel frequency and amount of money spent on travel. It also shows a similar pattern of travel-service purchase-frequency: Subjects from cluster 4 purchase more flight tickets (\emph{U}(29, 420) = 1243, *emph{p} $<$ .01), rental cars (\emph{U}(29, 420) = 3150.5, *emph{p} $<$ .01), and hotel room reservations (\emph{U}(29, 420) = 1119, *emph{p} $<$ .01) than other clusters, but they also purchase more all-inclusive (\emph{U}(29, 420) = 1071.5, *emph{p} $<$ .01) and special offers (\emph{U}(29, 420) = 2587, *emph{p} $<$ .01).

Additional differences between the clusters could be found in respect to traveling behavior, importance of travel factors and extent of problems preventing more online purchases. Cluster 3 didn't show any differences in terms of traveling behavior, importance of travel factors and extent of problems preventing more online purchases. All in all we have following clusters of online bookers:

Flight purchaser. People in this cluster (see table 10) purchase mainly flight tickets and hotel room reservations. They travel a lot and worry less about price, security or missing personal contact when booking online.

Table 10

Analysis of cluster 1, the flight purchaser

	Subjects rated higher:	Subjects rated lower:
Traveling behavior	• Importance of Internet for travel preparation (\emph{U}(102, 347) = 14198**) • Proportion of online bookings (\emph{U}(102, 347) = 13481.5**) • Travels per year (\emph{U}(102, 347) = 12970**) • Business travels per year (\emph{U}(102, 347) = 11364**) • Money spent on travels per year (\emph{U}(99, 325) = 11134**) • Money spent on business travel per year (\emph{U}(68, 189) = 4024.5**)	
Importance of travel factors		• Price (\emph{U}(102, 347) = 14661.5**)
Online purchasing problems		• No personal contact (\emph{U}(102, 347) = 14708.5**) • Security of credit card and personal information (\emph{U}(102, 347) = 13718.5**) • I don't think I am capable (\emph{U}(102, 347) = 15473**)

***emph{p}* $<$ .01

Restrained traveler. Cluster 2 (see table 11) has a small travel budget and consequently travels less than other clusters. For people in cluster 2, price is more important than for other clusters. Online booking problems like security concerns and the lacking contact with actual persons prevent specially cluster 2 from purchasing online. It is the largest cluster.

Table 11

Analysis of cluster 2, the restrained traveler

	Subjects rated higher:	Subjects rated lower:
Traveling behavior		• Importance of Internet for travel preparation (\emph{U}(276, 173) = 20061**) • Proportion of online bookings (\emph{U}(276, 173) = 18246.5**) • Travels per year (\emph{U}(276, 173) = 14201.5**) • Business travels per year (\emph{U}(276, 173) = 14442.5**) • Money spent on travels per year (\emph{U}(258, 166) = 12820**) • Money spent on business travel per year (\emph{U}(147, 110) = 4694.5**)
Online purchasing problems	• No personal contact (\emph{U}(276, 173) = 20379.5**) • Security of credit card and personal information (\emph{U}(276, 173) = 20123**) • I don't think I am capable (\emph{U}(276, 173) = 20758**)	

**\emph{p} $<$ .01

Vacation home booker. People who book vacation homes form a special cluster. They purchase other travel services as well but are the only online booker type with a considerable amount of vacation home booking. They differ only in terms of frequency of different travel services (see figure 7). Travel purchasing behavior, travel factor

ratings and online booking problems were average.

All-inclusive traveler. People in this cluster purchase a lot of flight tickets, hotel room reservations and rental cars like flight purchasers, but not as exclusively as flight purchasers. Instead this is the only cluster with above average special and all-inclusive offer purchases. Travel frequency and purchase profile (see figure 7) suggest that this cluster unites the all-inclusive traveler and the bargain-hunter we identified in our first survey.

Table 12

Analysis of cluster 4, all-inclusive traveler

	Subjects rated higher:	Subjects rated lower:
Traveling behavior	• Proportion of online bookings (\emph{U}(29, 420) = 4268.5**) • Travels per year (\emph{U}(29, 420) = 1592**) • Business travels per year (\emph{U}(29, 420) = 2937**) • Money spent on travels per year (\emph{U}(28, 396) = 2331**) • Money spent on business travel per year (\emph{U}(20, 237) = 1634**)	

***emph{p}* $<$ .01

Table 13 shows the sizes of the identified clusters.

Table 13

Cluster names and number of participants per cluster

	Cluster 1	Cluster 2	Cluster 3	Cluster 4
N	102 (23\%)	276 (61\%)	42 (9\%)	29 (6\%)
Cluster Description	Flight purchaser	Restrained traveler	Vacation home booker	All-inclusive traveler

8 Conclusions

With the conducted studies we were able to identify the most purchased travel services and products, the most important factors of the travel service booking process as well as the problems that prevent travel bookers from purchasing more online. Furthermore, we could confirm many results from our first survey as well as some results that Weber and Roehl (1999) found. In addition, we successfully described profiles of the main online bookers clusters to gain insight into customer segments of online travel shops.

Most people undertake 2 travels with 2 or more overnight stays per year. The most purchased travel services/products are Hotel room reservations, train and flight tickets and all-inclusive travel offers. The most important travel factors are destination, holiday type, climate, accommodation, and price. The usability of online travel shops plays an important role in enabling customers to purchase products online. Most people were prevented from purchasing more travel services online because they were unable to find a suitable product, the offers were confusing, they had concerns about security or privacy or were uncertain about the commitment of purchase during or after the purchase procedure. Non-usability problems among the most prohibitive factors were inflexible offers, unattractive prices, and websites that didn't work (which can actually also be classified as a usability problem depending on what type of action or element of the web site didn't work).

Online bookers differ in important ways from offline bookers. Least surprisingly, they use the Internet more often than offline bookers and also rate it as more important. Online bookers travel more and hence purchase many travel services/products more often than offline bookers, namely flight tickets, hotel room reservations, special offers, rental cars and vacation homes. Interestingly, online bookers do not purchase more all-inclusive travel offers than offline bookers. The clear difference between online and offline bookers in terms of demographic properties that Weber and Roehl (1999) found could not be confirmed. This might be explained by the importance and prevalence of the Internet that grew even more since Weber and Roehl's survey, thus making the initial differences between classes and genders disappear. Another important difference between online and offline bookers is the fact that offline bookers rate all online booking problems as more prohibitive than the online bookers,

except “Inflexible offers”, “Unattractive prices”, “Didn’t find suitable product”, and “Confusing offers/products”.

The important result for travel e-commerce is the finding of different online booking behaviors. Two clusters of online bookers showed to be consistent over both surveys: The flight purchaser and the all-inclusive traveler. These are also the clusters that purchase the highest proportion of travel products and services online. Equally important is the identification of the large cluster of restrained travelers. Security concerns and missing personal contact play a crucial role in their decision to purchase travel services online. Restrained travelers seem to be the segment that profits most from traditional travel agencies.

We propose that for further research in this direction and to reach a better understanding of travel purchasing clusters like the picky one, individual travelers, and the vacation home booker, different booking behaviors should be analyzed on a process level. After all, many people take on different mindsets depending on their changing travel needs. Our approach of classifying the booking process based on individuals therefore measured a mix of changing mindsets for some customers. The vacation home booker, the bargain hunter, etc. are not persons but roles that require a more sophisticated examination. Travel feature preferences and booking problems should therefore be analyzed on a per purchase basis to get more accurate data and identify more specific needs of flight purchasers, all-inclusive travelers and especially the less distinct types of travelers.

9 References

Bloch, M., \& Segev, A. (1997). The impact of electronic commerce on the travel industry: An analysis methodology and case study. *Proceedings of the Hawaii International Conference on System Sciences, 30*(4), 48-58.

Heichler, E. (1997). Internet lacks content for women. *Computer World, 31*(19), 17.

Heung, V. C. S. (2003). Barriers to implementing e-commerce in the travel industry: A practical perspective. *International Journal of Hospitality Management, 22* (1), 111-118.

Jarvenpaa, S. L., \& Todd, P. A. (1997). Is there a future for retailing on the Internet? In R. A. Peterson (Ed.), *Electronic Marketing and the consumer* (pp. 139-154). Thousand Oaks: Sage Publications.

Lewis, I., Semeijn, J., \& Talalayevsky, A. (1998). The impact of information technology on travel agents. *Transportation Journal, 37*(4), 20-26.

Lingenfelder, M., \& Loevenich, P. (2003). Identifikation und Auswahl von Zielgruppen im E-Commerce. *Marketing: Zeitschrift für Forschung und Praxis, 25*, 119-131.

Porres, E. (2003). *The travel industry sails online.* Retrieved June 19, 2006, from http://www.imediaconnection.com/content/2000.asp

Swinyard, W. R., \& Smith, S. M. (2003). Why People (Don't) Shop Online: A Lifestyle Study of the Internet Consumer. *Psychology \& Marketing, 20*, 567-597.

Tweney, D. (1997). Making money on the web: what is really working? *InfoWorld, 19*(36), 63–64.

Weber, K., \& Roehl, W. (1999). Profiling people searching for and purchasing travel products on the world wide web. *Journal of Travel Research, 37*(3), 291–298.

Werthner H., \& Ricci F. (2004). E-Commerce and Tourism. *Communications of the ACM, 47*(12), 101-105.