CONSUMER PREFERENCES FOR CULTURAL HERITAGE AND TOURISM E-SERVICES: A CASE STUDY OF THREE EUROPEAN CITIES

PREFERENCIJE POTROŠAČA ZA USLUGAMA KULTURNE BAŠTINE I TURISTIČKIM E-USLUGAMA: STUDIJA SLUČAJA TRIJU EUROPSKIH GRADOVA

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SAŽETAK

Ovaj rad prikazuje rezultate marketinškog istraživanja kojemu je cilj bio otkriti preferencije korisnika e-usluga u europskim kulturnim destinacijama. Rezultati su bitni za izazivanje preferencija korisnika za turističkim e-uslugama i e-uslugama povezanim s kulturom i baštinom.

ABSTRACT

This paper reports the results of a marketing study aimed at discovering consumer preferences for the e-services in European cultural destinations. Our results are central to eliciting potential consumers' preferences for tourism and cultural heritage-related e-services.

Rad se temelji na analizi rezultata anketiranja korisnika koje su autori proveli u sklopu ISAAC EU projekta u Amsterdamu, Genovi i Leipzigu od 2007. do 2009. godine. Kontaktiralo se s tri vrste ispitanika, a to su rezidenti, posjetitelji i pružatelji usluga (povezanih s kulturom i baštinom).

Rezultati daju brojne važne preporuke za kreiranje e-turističkih ICT platformi u europskim gradovima. ICT platforme novi su proizvod koji predstavlja novi pristup za povećanje prihoda od receptivnog turizma. Preporučuju se prioriteti koji će osigurati da informacijski sustav najspremnije odgovori na potencijalne potrebe korisnika.

The paper is based on the analysis of user surveys conducted by the authors within the ISAAC EU-funded project in Amsterdam, Genoa and Leipzig in 2007-2009. Three types of consumers were contacted: residents, visitors and (cultural heritage) service providers.

Our results provide a number of important recommendations for the design of e-tourism ICT platforms in European cities. The ICT platforms constitute a new market product, representing a novel approach to increasing the revenues from incoming tourism. The recommendations suggest priorities to ensure that the information system will most readily meet potential consumers' needs.

1. INTRODUCTION: CULTURAL HERITAGE AND E-SERVICES

Estimating consumers' preferences for differentiated concepts is often used by researchers in the field of tourism to evaluate the relationship between digital heritage (computer-based materials emanating from different communities, industries, sectors and regions and representing enduring value to be kept for future generations) and culture (see e.g. Chen & Chen, 2010; Pavlić & Kesić, 2011; Šerić & Gil Saura, 2012). The concept of "cultural heritage" used throughout this paper refers to the tangible heritage represented by historical buildings, sites and places of historical interest, as well as by the intangible cultural heritage that encompasses traditions, folklore and lifestyle associated with certain places or locations (see e.g. Vecco, 2010).

An estimation of this kind became the main goal of the EU-funded ISAAC project (Integrated e-Services for Advanced Access to Heritage in Cultural Tourist Destinations). The ISAAC project brought together researchers in economics, anthropology, cultural studies and tourism, ICT companies, city authorities and cultural institutions from five EU countries and Russia, including, for example, the University of Nottingham, the University of Sunderland, the Free University of Amsterdam or the Russian State Museum and the Hermitage. The project was supported by the EU 6th Framework Programme and lasted from 2006 until 2009. In its empirical part, the ISAAC project focused on a case study of three European cities – Amsterdam, Genoa and Leipzig.

In course of the project, 3100 specific surveys were administered to investigate people's preferences for the various aspects of a city-based electronic information system to promote cultural heritage and visitors' experience (for more, see van Leeuwen & Nijkamp, 2010). Three types of people were contacted: residents, tourists and (cultural heritage) service providers. We used stated-preference techniques (SPT), which enabled us to place a monetary value on products and services which are not currently traded in regular markets. The specific objectives of the survey were to analyze the socio-demographic characteristics of the end-users; to analyze their satisfaction, requirements and expectations to estimate the monetary value of a new and comprehensive package of e-service for the citizens, and the marginal values of the attributes characterizing the service.

The purpose of providing this information was to provide an overview of how potential consumers perceive the value of culture (or heritage) in urban areas. This became quite a popular topic amongst many authors recently (see, e.g. Katoshevski & Timmermans, 2001; Alberini et al., 2003; Jurković Majić, 2007; Van Leeuwen & Nijkamp, 2010).

To the best of our knowledge, the research that employs SPT-based experiments with regard to cultural heritage is still scarce (see, e.g. Mazzanti, 2003; Thuan & Navrud, 2007). Thence, our analysis based on the findings obtained from the ISAAC project might shed some more light on the application of statistical methods on eliciting users' preferences in the field of digital cultural heritage.

Companies use stated-preference experiments to form benefit segments and make design trade-off decisions among various possible features of the product. This is an invaluable market tool that has proven very successful in helping forecast how costumers will welcome a product, and to help companies develop a consumer-oriented approach.

From a pure market analysis' standpoint, stated-preference techniques can be used to help design product platforms by bringing together demand-side forecasting methods with supply-side cost estimates. In this way, it is possible to compare sales and profit-maximizing designs. There has been considerable interest in the use of conjoint analysis to develop optimal product

configurations, i.e. designs forecast to maximize sales or profits for a given competitive setting. This method is therefore used to enhance firms' competitiveness. It was developed by Louviere and Hensher (1982), and Louviere and Woodworth (1983) who employed this technique to forecast the choice of attendance of international exhibitions. Although originating at market analysis theory, choice experiments are widely used to value environmental and natural resources, decisions in the allocation of scarce health care resources (San Miguel et al., 2000), and to measure workers' trade-offs between pay and workplace risks (Gegax & Stanley, 1997).

The ISAAC project survey involved the following stages: survey format development, pre-test, survey implementation, data analysis and reporting. Consumers' surveys were carried out in the cities of Amsterdam, Leipzig and Genoa. Each survey involved extensive field data collection by interview teams hired and trained by the researchers from the University of Nottingham.

The data collection used survey questionnaires, applied by research assistants in the three cities either on-line or using the face-to-face interview mode (stand-alone computer-run versions or paper versions). Research assistants in each city used similar recruitment and sampling techniques that allowed for data comparability.

The rest of this paper is organized as follows: Section 2 briefly explains the methodology of consumer surveys, Section 3 outlines the design and the execution of ISAAC project surveys, Section 4 describes the scope and methods of the field study, Section 5 reports the main results from the three cities and, finally, Section 6 concludes with some discussions and policy implications.

2. CONSUMER SURVEY METHODOLOGY

A survey, in the form of a survey questionnaire, is often employed as the most appropriate research tool that allows testing the research hypotheses and answers the research questions. The surveying approach chosen for this study represented the most appropriate tool to describe the specifications of potential users of cultural tourism-related e-services.

According to online Oxford English Dictionary (2012), a survey is defined as: *"a systematic collection and analysis of data relating to the attitudes, living conditions, opinions, etc., of a population, usually taken from a representative sample of the latter"*. The role of surveys is to obtain the data about situations, views, opinions and practices at a given point in time. When the data are gathered, quantitative analytical techniques are used to draw the conclusions from these data. The main advantage of surveys is the possibility of examining more variables at the same time, while their main disadvantage is the possibility of self-selection bias in the time frame within which the surveys are conducted, and in the survey design by researchers (see, e.g. Recanatini et al., 2000; Bryman, 2001; Lixin & Wallsten, 2002; Mantecón & Huete, 2011).

According to many researchers (see, e.g. Bryman, 1995; Cameron, 2005; Babbie, 2005; Spears & Rosenbaum, 2012), the specific objectives of the survey are typically the following:

- analysis of the socio-demographic characteristics of the end-users;
- analysis of the satisfaction and requirements/expectations of the end-users;
- economic analysis to estimate the monetary value of a new and more complete package of e-services for the citizens, including a cost benefit analysis of the marginal values of the attributes describing the e-service package, i.e. a competitiveness conjoint analysis for market purposes.

The survey questionnaire used in this paper to obtain information about potential consumers' needs was aimed at determining user preferences and needs for different e-services, as well as

their current use and attitudes to cultural heritage attractions.

3. ISAAC SURVEY: DESIGN AND PLANNING

To implement the surveys, interviewers were hired in each of the three cities to take charge of surveying each target group of respondents – residents, visitors/tourists and service providers.

Two interviewers in each city responsible for visitors and residents were each set a target of obtaining 650 responses, and the interviewer responsible for service providers was set a target of 350 responses. The responses could be gathered either using the on-line version of the survey or the stand-alone version on the interviewer's personal computer. With regard to the above, it should be noted that, while the stand-alone version of the surveys on the interviewer's laptop and the on-line version might seem similar, the stand-alone version allowed establishing closer contacts with the respondents as far as the interviewers had to fill in the answers themselves, in cooperation with respondents. The on-line version often led to the respondents filling in the questionnaire themselves.

This approach allowed the interviewers to manage their time for data collection, assigning it either to preparing and conducting face-to-face interviews or to advertising the on-line interviews and getting respondents to fill them on the Internet website, specifically created for that purpose. Possible ways of promoting the on-line surveys included:

- Placing terminals in the waiting areas of the administration buildings;
- Using newspaper (and Internet press) articles;
- Placing banners on the city's tourism websites;
- Placing an advertisement about the on-line survey in the footer of the e-mails from the city's tourist office or in the registration confirmation e-mails sent by hotels and hostels.

The interviewers in each city were asked to implement the methods that they considered to be the most relevant and effective in generating responses.

Although the operational details of the survey were left to the discretion of each research assistant, there was some preparation done in each city. Potential sites for the interviews were pre-selected in cooperation with the respective municipalities and a suggested list of the sites in each city was provided. Examples of these sites included: entrance halls to the museums and galleries, tourist information offices, venues at the train and bus stations and (in case the weather permits) market squares and the vicinity of historic landmarks (monuments, buildings and sites of cultural importance). The interviewers were asked to make sure that they had a permission issued by the relevant authorities to interview people on the sites, as well as that there were places on the selected sites suitable for putting a stand with the notebook. The interviewers were asked to liaise with the contact persons in the municipality and obtain reference letters from them.

It was also suggested to interviewers that the best way to collect the required data was to set up a small exhibition stand, and to ask the respondents to answer the questions on the screen of a laptop computer while seated. The paper version of the survey was also made available to the people who preferred answering questions on paper to using a computer.

The interviewers had a letter from the Municipality with them at all times. All of them were informed what to do in case any troubles emerged during the interview (they had a back-up plan and a list of useful telephone numbers to contact the authorities, if necessary).

The questionnaire was provided in three media formats: computer stand-alone version, paper and Internet-based versions. The resident and visitor interviewers could opt for various data collection strategies:

- Exhibition stand with computers using the stand-alone software;
- Exhibition stand with computers using the Internet version, for which broadband connection would be necessary;
- Exhibition stand with the paper-based questionnaire;
- Street encounters using the paper-based questionnaire;
- Advertising and promoting the ISAAC survey website and encouraging people to complete the Internet version.

The service provider interviewers had two options:

- Visit the respondent's office and use their own computer to access the Internet version;
- Visit the respondent's office and use a laptop with the stand-alone software;
- Telephone or e-mail the service provider and encourage them to complete the Internet version.

The advantage of both the stand-alone and Internet versions was that they logged the data automatically and this data could be easily exported to Excel for further analysis. Interviewers who used the paper-based versions were required to fill in the data directly into Microsoft Excel.

A brief user guide was provided together with the questionnaire. The user guide showed how to start a new user session, go through the session or at least the response section, and end the session. The interviews were to follow general guidelines in order to maintain the integrity of the data.

The option of offering a small incentive or prize (for instance, a pen or a candy) to each respondent completing the survey was also considered. The interviewers liaised with the Municipalities in order to obtain incentives in the form of posters, calendars or neck-straps. Moreover, ISAAC project partners in Amsterdam reported that they had used the incentive of an iPod prize to great effect, so this was the strategy they adopted.

Interviewers were also advised that, if they were setting up an exhibition stand in a public place, they were to make it as attractive as possible to potential respondents. It was suggested that some form of refreshments, such as water, soft drinks and snacks might be provided and that the stand might be made more attractive with fresh flowers.

4. SCOPE AND METHODS OF THE FIELD STUDY

A first draft of the survey questionnaire was devised, based on the results of 24 focus group meetings held between 2006 and 2007 in Amsterdam, Leipzig and Genoa (overall 159 people attended these meetings). Among these people were tourists visiting the cities, residents and providers of tourism services who have a say in the way that cultural tourism is organized.

In devising the questions, both qualitative and quantitative methods of analysis were considered, as recommended in the research literature (see, for example, Stewart & Shamdasani, 1990). Qualitative evidence puts a stress on relationships rather than numbers, while quantitative evidence is expressed in terms of numbers (Sherman & Reid, 1994). It may include binary variables (for example, 1, 2, 3 standing for the respondent's opinion, such as "strongly agree", "agree" or "disagree"), as well as real numbers that represent the so-called Likert scale (see, e.g. Likert, 1932; Albaum, 1997). In addition, survey questionnaires used in similar studies were analyzed (see Recanatini et al., 2000).

This first draft was circulated to ISAAC project partners, interviewers and municipalities' representatives. In response to their feedback (e.g. that the questionnaire was too long and that some of the questions were less interesting than others or duplicating information), some redundant questions were removed or simplified and the questionnaire was shortened from 15 to 9

pages. This was done without undermining the primary aims of the survey in terms of answering questions about user needs and preferences relevant to devising the ISAAC platform.

Because over four-fifths of the questions to residents and visitors were the same, it was decided to structure the questionnaire as a single document with a branching structure, in which the first question determined whether the respondent was a visitor or resident and, depending on their answer, started interviewing them at a different point in the questionnaire. An entirely separate questionnaire was devised for service providers since the questions overlapping with residents and visitors were far fewer.

In order to test the survey questionnaire, a number of pilot surveys were conducted. According to Bryman (2001), the main outcome of the pilot survey is that a researcher can test which questions require clarification and which questions should be omitted from the survey.

Using the content and structure of the first draft paper questionnaire, a computer-based version in English was produced. Using FileMaker®, a proprietary database application, which can be hosted over the Internet as well as on laptop, allowed the research team to prepare and run the pilot. Three questionnaires were devised for each of the three survey target groups: residents, visitors and service providers.

The pilot took place in Naples, Italy in June 2007 with 15 respondents. All of them were able to complete the survey in full and no rejection rate was registered. This initial success with the first pilot of the computer-based questionnaire was very encouraging.

This live pre-testing was extremely successful and generated a mass of very detailed comments. Some of these were matters of fine detail, involving changing the wording of questions or field values to make them easier to understand or more relevant to the ISAAC project. Some of them were fundamental and involved re-structuring to make the ordering of the questions more logical, using the same value lists for similar questions to ensure consistency and comparability, and the addition of new sections to strengthen the surveys usefulness to ISAAC project.

There were nine different versions of the survey: three different groups of respondents – English speaking tourists, native speaking residents and visitors, and service providers in three different cities: Amsterdam, Genoa and Leipzig. The structure of the final version of the questionnaire contained from 25 questions in residents' and visitors' questionnaire respectively, and 14 questions in service providers' questionnaire.

The questionnaires ended with information about the ISAAC project and the survey. The respondents were asked to leave their e-mail addresses in case they wanted to enter a competition (a draw) for an iPod prize.

5. CONSUMER SPECIFICATIONS AND PREFERENCES IN THE THREE CITIES

In this section, the results from the three cities are compared and some general implications for consumers' specifications are derived. The section is then followed by the general discussion of results. The discussion provides the analysis of basic observed trends in potential consumers' specifications across the three cities.

In addition, the results of some basic statistical tests are also presented. A valid sample of 3113 cases is used for the statistical analysis. However, it should be noted that the results of the tests are testing bi-variate relationships between two variables. The results of the tests are shown only if they are relevant to the topics discussed in the respective sub-sections. The results are demonstrated in Tables 1-4.

Table 1: Importance of cultural heritage for respondents in the three cities

Cultural heritage	Residents, %	Visitors, %	Service providers, %
Amsterdam			
Architecture and buildings	73	77	91
Monuments and landmarks	61	60	76
Museums and galleries	70	74	85
Urban landscapes	72	65	64
Cultural events, festivals, exhibitions	68	55	65
Local traditions and lifestyle	43	59	52
Local customs and beliefs	38	48	36
Local knowledge and skills	35	42	36
Other things of local significance	33	46	38
Genoa			
Architecture and buildings	86	82	80
Monuments and landmarks	73	70	58
Museums and galleries	73	70	88
Urban landscapes	71	63	72
Cultural events, festivals, exhibitions	59	63	79
Local traditions and lifestyle	48	55	76
Local customs and beliefs	31	47	50
Local knowledge and skills	35	45	37
Other things of local significance	32	41	55
Leipzig			
Architecture and buildings	88	85	82
Monuments and landmarks	67	63	74
Museums and galleries	64	66	69
Urban landscapes	87	78	71
Cultural events, festivals, exhibitions	73	61	70
Local traditions and lifestyle	43	49	54
Local customs and beliefs	52	42	55
Local knowledge and skills	62	40	59
Other things of local significance	64	43	61
Key: = >75%	= 50-74%	= 33-49%	

Source: own results

Table 2: Use of e-services, as declared by respondents in the three cities

E-services	Residents, %	Visitors, %
Amsterdam		
Book on-line	48	51
Download information	63	44
Genoa		
Book on-line	13	57
Download information	83	44
Leipzig		
Book on-line	64	26
Download information	64	31
Key: =>75%	=33-49%	

Source: own results

Table 3: Importance of e-services, as declared by respondents in 3 cities

E-services	Residents, %	Visitors, %	Service providers, %
Amsterdam			
Interactive map	**67**	**80**	**81**
Booking service	**74**	**71**	**74**
Journey planner	**81**	63	**87**
Personalized information	48	54	56
Virtual tours	47	44	56
e-Forum	36	31	26
Interactive games	30	20	17
Genoa			
Interactive map	**70**	66	**85**
Booking service	**70**	57	**76**
Journey planner (e.g. timetables)	**85**	70	**85**
Personalized information	**70**	83	**80**
Virtual tours	42	29	63
e-Forum	33	22	25
Interactive games	10	7	24
Leipzig			
Interactive map	76	53	68
Booking service	62	51	33
Journey planner (e.g. timetables)	53	53	75
Personalized information	33	48	67
Virtual tours	35	32	38
e-Forum	25	31	33
Interactive games	6	7	10
Key: =>75%	= 50-74%	= 33-49%	

Source: own results

Table 4: Use of e-services during the visit

E-services	Residents, %	Visitors, %
Amsterdam		
Interactive map	2%	**20%**
Personalized information	4%	**19%**
Booking service	1%	6%
Journey planner	2%	**14%**
e-forum	2%	9%
Virtual tour	3%	**12%**
Interactive games	1%	**12%**
Genoa		
Interactive map	**11%**	4%
Personalized information	**12.5%**	6%
Booking service	5%	4%
Journey planner	6%	4%
e-forum	8%	3%
Virtual tour	6%	2%
Interactive games	4%	3%
Leipzig		
Interactive map	5%	8%
Personalized information	3%	5%
Booking service	1.5%	3%
Journey planner	2.5%	4%
e-forum	2%	3%
Virtual tour	3%	5%
Interactive games	3%	2%
Key:	= > 10%	

Source: own results

Based on the preceding analysis in the focus groups conducted within the ISAAC project (see e.g. Strielkowski et al., 2012), three hypotheses were tested:

- H1: Some cities are more advanced in IT tourism-related services than others. People in Amsterdam are expected to use tourism and cultural heritage related e-services more than people in Genoa and Leipzig.
- H2: Younger people use tourism related e-services more than older people.
- H3: People with a higher level of income use tourism-related e-services more than poorer people.

Our three hypotheses were tested using the pooled data from each city for each group of the respondents. The statistical tests used to verify these hypotheses are: Chi-squared for nominal versus nominal variables tests; Mann Whitney U for ordinal versus nominal variables test and t-test for ratio versus nominal variables. Therefore, one should check the meaning of each specific test to interpret the signs and the significance of the coefficients and the p-values in order not to mix them with the results of the simple regression analysis. Stata® and SPSS® statistical software packages were used for all computations and testing.

5.1. Consumer specifications and preferences: residents

If one looks at the result of the analysis for residents in the three cities, there are certain similarities that emerge (see Tables 1-4):

- Residents in all three cities are frequent users of on-line services in organizing their leisure time in the city, most of them using these e-services to download information from the Internet.
- Residents choose to highlight different attractions in the three cities. The most chosen attractions were: in Amsterdam – urban landscapes; in Genoa – architecture and buildings; and in Leipzig – city's atmosphere.
- In terms of the importance attached to different aspects of cultural tourism, residents in all cities choose tangible cultural heritage over the intangible. So, they chose architecture, buildings and museums over business, nightlife and cultural events.
- Journey planner and the booking service were the most frequently chosen options by residents in all three cities.
- Residents in all three cities mostly use e-services before their trip.
- Ease of use, reliability and the updating of information are the most important characteristics to residents in all three cities. The level of integration of e-services, personalization of information and appearance are currently less important.

We tested our hypotheses outlined in the beginning of this section and found that there is a statistically significant difference between the cities in terms of whether a resident is more inclined to use novel e-services to plan his or her leisure time (such as cultural tourism-related e-services) [Chi (N = 988) = 50.41, p<0.05]. However, it turns out that there is no statistically significant difference between residents' age and the use of e-services [U (N=988) = -4.590, p<0.05]. This means that age has nothing to do with the use of e-services. Older residents seem to have equal chance of using novel e-services to the young residents. With regard to residents' income, it turned out that there is a statistically significant difference due to income: [U (N=988) = 0.315, p=0.752]. This means that a higher income is likely to boost the use of e-services. Residents with a higher income have extra money to spend on novel technologies.

Two out of three hypotheses were verified for our pooled samples of residents. It is clear now that wealthier people living in a more technologically-advanced environment are more likely to encounter e-services and use them in the area of cultural tourism and heritage.

5.2. Consumer specifications and preferences: visitors

Comparing visitors in the three cities reveals both similarities and differences (see Tables 1-4):

- Whilst the majority of Amsterdam visitors came on business, the majority of visitors to Genoa and Leipzig came on holiday.
- Visitors to the three cities were mainly attracted by the architecture and buildings, museums and galleries and cultural events, festival and exhibitions. In Amsterdam and Leipzig city's atmosphere was an additional attraction.
- The majority of the visitors in the three cities organize the trips themselves using e-services, and download information from the Internet sources before their trips.
- Most visitors to Amsterdam and Genoa stay for 3 days or less. In Leipzig the typical stay is even less, being only 1 day on average.
- The average spending per person per day is the highest in Genoa, followed by Leipzig and then Amsterdam.
- In terms of the importance of different aspects of cultural tourism, like residents, visitors to all three cities choose tangible cultural heritage over the intangible (architecture, buildings and museums over business, nightlife or cultural events).

- Like residents, visitors to all three cities preferred practical e-services, such as a journey planner, interactive maps and a booking service to more novel e-services, such as interactive games or personalized information.
- Visitors to all three cities use e-services before the trip.
- Ease of use, reliability and updating of information are the most important characteristics required of e-services; level of integration and personalization are the least important.

The statistical tests used to verify our hypotheses in case of visitors revealed that there is a statistically significant difference between the cities in terms of whether a visitor is more inclined to use novel e-services to plan his or her leisure time (such as cultural tourism-related e-services) [Chi^2 (N = 662) = 54.768, $p<0.05$]. Tourists visiting a city with a broader offer of tourism-related e-services explore this opportunity in planning their leisure time. In addition, our results demonstrated that there is a statistically significant difference between respondents' age and the use of e-services [U (N=662) = 1.060, p=0.263]. This means that, unlike residents, age may affect visitors' use of e-services. Younger visitors seem more likely to use e-services to plan their trips than older visitors. However, our results also showed that there is no statistically significant difference due to income: [U (N=662) = 1.854, p=0.06]. A paired sample t-test to test the relationship between the visitors' use of e-services and the money spent on the trip to the city also shows no statistically significant relationship [t (662)=12.859, $p<0.05$].

Our results mean that, for visitors, neither income nor the amount of money spent on travelling is related to the use of e-services.

Overall, two hypotheses turned out to be significant for our pooled sample of visitors. Younger people visiting a more technologically-advanced city are more likely to encounter and use e-services in the area of cultural tourism and heritage.

5.3. Consumer specifications and preferences: service providers (stakeholders)

Moreover, we will compare service providers from our sample in the three cities (see Tables 1-4):

- The majority of service providers in Amsterdam and Leipzig are employed in private tourism sector or public and private companies. By contrast, most service providers in Genoa are employed in governmental facilities (i.e. the Municipality).
- The majority of service providers in Amsterdam and Leipzig are the front-line staff. In Genoa more managers were surveyed.
- Most service providers are experienced in their field. In Genoa service providers are more experienced than in the other two cities.
- In all three cities there were service providers with expertise in tourism, architecture and planning. Respondents in Amsterdam also have expertise in marketing and IT, and respondents in Leipzig are proficient in cultural heritage conservation.
- In terms of the importance of different aspects of cultural tourism, the majority of service providers in all three cities choose tangible cultural heritage (e.g. architecture and buildings). Service providers in Amsterdam and Leipzig also listed the city's atmosphere.
- In all three cities service providers think cultural events, festivals and exhibitions need additional promotion.
- About half the providers in all three cities are aware of the e-services that are used to promote their city as a popular tourism destination.
- Journey planner and booking service were the most frequently chosen e-services in all three cities.
- Service providers agree with visitors and residents about the timing of the use of e-services.
- Ease of use, security, reliability and the updating of information are more important to service providers than the level of integration of e-services or personalization of information.

Our statistical results yielded a statistically significant difference between the cities in terms of whether service providers think people will use e-services to plan leisure time and trips to the city [Chi^2 (N=428) = 15.511, p<0.05]. Moreover, there is a statistically significant difference between service providers' age and the anticipated use of e-services [U (N=428) = 0.180, p=0.856]. This means that in case of service providers age might affect the use of e-services to plan leisure time in the city. This might mean that more senior and, therefore, experienced service providers may know more about tourism-related e-services or be more aware of their potential.

Overall, it appears that the location specifics and age matter in knowing about e-services and using tourism-related e-services amongst service providers.

5.4. Results of the conjoint analysis study for the three cities

In addition to our statistical results and hypotheses testing, we would like to report the results of the STP conjoint analysis study conducted within the framework of ISAAC project. The results of the conjoint analysis are show in Table 5 below.

Table 5: Results of a conjoint analysis study in the three cities

Willingness to Pay	Residents	Visitors	Service providers
Amsterdam			
Booking service	**€9.70** ***	**€15.57** ***	**€11.87** *
Journey planner	**€6.55** ***	**€9.21** ***	**€26.59** ***
Virtual tours	**€3.20** **		**€14.00** *
e-Forum		*	**€11.91** *
Level of integration	**€5.10** ***	**€5.85** **	**
Mode of delivery	***	**	*
Price	***	***	*
Genoa			
Booking service		**NOT ROBUST**	**€16.33** ***
Journey planner	**€9.68** *		**€6.12** ***
Virtual tours	**€12.65** *		**€8.72** ***
e-Forum			
Level of integration			
Mode of delivery			***
Price	*		***
Leipzig			
Booking service	**€4.59** *	*	**NOT ROBUST**
Journey planner		*	
Virtual tours			
e-Forum	**		
Level of integration		***	
Mode of delivery	***	***	
Price	**	***	
Key to the Conjoint Analysis results:			
significant & positive	significant and negative		not significant

Note: Key: Significance is indicated by ***, ** and * for the 1, 5 and 10 per cent level.
Source: own results

Our key findings stemming from the conjoint analysis show that people were more willing to pay for booking service, journey planner and virtual tours than they were for the e-forum, level of integration or delivery by mobile. Although most of the people were unwilling to pay for the e-forum, as and when the e-service matures, the demand was likely to increase.

It appears that mobile delivery of e-services is insufficiently developed or widespread to be seen as acceptable by most of the stakeholders. The obvious outcome would be to develop the platform for Internet delivery running on personal computers. However, since mobile technology is developing rapidly and the use of smartphones is ubiquitous, it might be prudent to develop the e-tourism platform for both Internet and mobile delivery.

With the exception of service providers in Amsterdam, close and high integration was currently perceived as a cost rather than as a benefit for which people were willing to pay. However, this might be just a feature of the current state of the art. Given the complexity of the Internet nowadays, the majority of older and not very well-versed Internet users might still prefer simple booking services and journey planners.

People's preferences for interactive maps, booking service journey planner were often mentioned, while e-forums and interactive games were chosen by relatively few respondents. In addition, most e-services tended to be used before the actual visit.

There is no doubt that users' preferences are changing over time. The demand for e-services during the visit to a cultural destination is likely to increase as technology and content improve. With the developing technology and the ability to provide tailored information with greater ease and at lesser cost, more people would express their demand for it. As a result, e-forums might become more popular among people after their visit in case they receive positive feedback.

Overall, it has become clear that the majority of users preferred simple and easy-to-use information systems. The most highly-rated cultural tourism-related e-services were booking service, journey planner and interactive maps. If personalized information e-services were to be available in a practical and useful form, users would, most likely, adopt them readily.

6. CONCLUSIONS AND DISCUSSIONS

Although all potential tourism e-services users in Amsterdam, Leipzig or Genoa differed in terms of their socio-demographic characteristics, their perception of cultural heritage or cultural tourism-related e-services was quite similar. The key findings stemming from our research may be summarized as follows: it appears that users in all three cities prefer tangible cultural heritage (e.g. architecture and buildings, museums and galleries) over intangible cultural heritage (city's atmosphere, cultural events, festivals etc.). Nevertheless, intangible aspects of cultural heritage, such as local traditions and lifestyle, are rated as important by about 50% of respondents of all three categories in all three cities. While most people said they were frequent users of e-services' to plan their trips, most people attributed greater importance to "traditional" e-services, such as booking service or journey planners.

Most e-services appeared to be useful to users before their visit to the city. It turned out that very few respondents were interested in having an access to the tourism-related e-services during or after their trip. And when it came to the characteristics of e-services, the vast majority of respondents in all three cities preferred the ease of use, security, updating and reliability of information to integration or personalization of information.

Our findings can be used by policy-makers in European cities, since they described potential

consumers' preferences for the e-services and the way that information might best be presented. In this respect, the following points might be considered by designers of tourism- and cultural heritage-related e-services in European cities:

- Users prefer a simple and easy-to-use platform that would include a large share of "traditional" cultural tourism-related e-services, such as booking service or journey planner.
- It proves more efficient to focus on the ease of use, reliability, security and updated information provision in the ISAAC user-centric ICT environment, instead of focusing on the level of integration or personalization of information.
- It would be more useful to provide access to the platform before a user's trip to the European cultural tourism destination.
- Potential users of e-services are interested in the services that promote tangible cultural heritage. Although some aspects of intangible cultural heritage were also mentioned, such as the city's atmosphere, it is recommended that the platform concentrate initially on tangible cultural heritage.
- In addition, service providers in all three cities want to promote cultural events, festivals and exhibitions. The platform should provide this facility.

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