

Price sensitivity to tourism activities: looking for determinant factors

LORENZO MASIERO

*Institute for Economic Research (IRE), Faculty of Economics, University of Lugano, Via
Madero 24, CP 4361, CH-6904 Lugano, Switzerland. E-mail: lorenzo.masiero@usi.ch.
(Corresponding author.)*

JUAN L. NICOLAU

*Department of Financial Economics, Accounting and Marketing, Faculty of Economics,
University of Alicante, Spain. E-mail: jl.nicolau@ua.es.*

The literature contains evidence that there is a marked heterogeneity in price responses to tourism products, leading to a great variety of tourist sensitivities to price. Thus the role price plays is complex, and a particularly challenging aspect of this complexity is that its effect is not unambiguous, thereby negating the idea that the demand for tourism products and tourist activities can always be regarded as demand for ordinary goods. This article identifies and explains, as a novelty for the tourism industry, price sensitivities to tourism activities individual by individual. The operative formalization uses a mixed logit model to estimate the individual sensitivities to price, and then a regression analysis is applied to detect their determinants. The empirical application finds that motivations, influenced by age, and length of stay with a non-linear effect, are explanatory factors of tourists' price sensitivity to activities.

Keywords: tourism activities; response to price; price sensitivity; market heterogeneity; tourist choice

The variable price is a central element in the tourist market, since it is a flexible tool that permits rapid changes (in response to a rival's action) and a powerful competitive element (as individuals can make direct comparisons among different alternatives). Consequently, knowing the impact of prices on individuals' choices is central for tourism economics and management.

However, in a markedly heterogeneous market, like the tourist market, there is an enormous diversity of sensitivities to price. If managers knew the individual-by-individual preference structure in terms of price sensitivities, they would be able to adapt each product to each person. Although knowledge of this price preference structure would be valuable, the main limitation of analysing this internal dimension is that it is not easy to measure on an individual basis, as it is not directly observable.

In light of the above, the objective of this study is to characterize, as a novelty in the tourism industry, tourists' price sensitivities to tourism activities, individual by individual, by taking into consideration heterogeneity. For this purpose, the article proposes a mixed logit model to find the heterogeneity between individual preferences and to estimate individual responses to price. A regression analysis is then applied to detect the factors that explain these heterogeneous responses.

The article is organized as follows. The next section reviews the role of price in tourism and states hypotheses on the effects of the proposed explanatory variables. The subsequent section covers the design of the investigation, describing the methodology, sample and variables. In the penultimate section we present and discuss the results. Finally, the conclusions are summarized.

The role of price in tourism

Classical economic theory provides guidelines as to the nature of the demand–price relationship, accepting that price and demand are inversely related. However, at this point it is important to remember the now famous vexatiousness with which Crouch (1994) describes the role of prices in tourism. Certainly, the analysis of prices is one of the trickiest issues to deal with in tourism economics – remember, for example, not only the usual strategy of keeping prices low to be more attractive (Mangion *et al*, 2005) but the upward movements in prices to improve financial returns (Moriarty, 2010), as well as the market power and negotiating ability of intermediaries to influence prices (Aguiló *et al*, 2003). Price decisions are also among the more arduous tasks in marketing (Cooper *et al*, 2008). In this regard, there is considerable evidence from both marketing and economics that price is a complex construct that is multidimensional in nature, especially because of the duality in the effect of price: price can be an index of the amount of sacrifice the individual has to incur to consume the product, as well as of the level of quality that the individual might expect (Dodds *et al*, 1991; Murphy and Pritchard, 1997). In fact, Dodds and Monroe (1985) show that this dual effect will affect people's predisposition to buy.

The consumer search for quality is particularly intense in tourism not only because of quality in its own right but also because of the uncertainty reduction expected from it. On account of the perishability, inseparability, intangibility and heterogeneity inherent in tourism products, an individual may rely on prices to diminish uncertainty and make sure of what she or he will obtain. Remember that attributes of tourism products are difficult to grasp in advance, as their values are not observed before the service encounter (Espinet *et al*, 2003). Tourists value the services included in a package that differentiate it, but they do this evaluation by looking at prices (Aguiló *et al*, 2001). Certainly, prior to consumption, the individual forms expectations about the forthcoming experience using a number of intrinsic and extrinsic cues that indicate the likely performance standards (Gould-Williams, 1999). In this context, price is a quality-extrinsic signalling element (Zeithaml, 1988). And all this is without considering the underlying hedonistic character often found in the consumption of tourism products through which high prices do not always act against demand (Morrison, 1996).

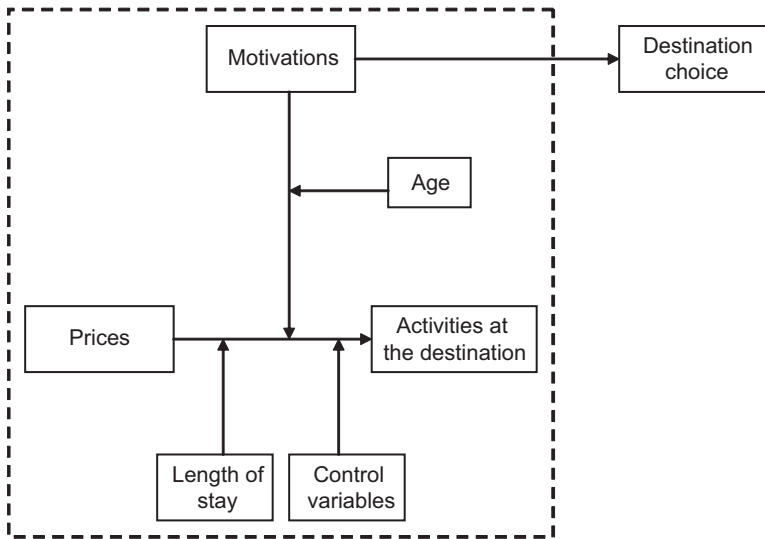


Figure 1. Determinants of individual sensitivities to price of tourism activities.

Therefore, in the context of tourism with a strong response heterogeneity and a great variety of sensitivities to price, the role that price plays becomes especially complex and its effect is not unambiguous – thus dismissing the idea that, in all cases, the demand for tourism products and tourist activities is that of *ordinary goods* in such a way that price increments diminish consumption. In this context, therefore, price cannot be universally regarded as a factor that reduces the utility of a destination. Consequently, the different price effects and, therefore, these distinct sensitivities to price should implicitly include several factors that explain this heterogeneity.

In this analysis, we focus on an area of research that has not been widely studied previously: the identification and explanation of individual price sensitivities to tourism activities. In the next section, we present the relationships between several factors and these sensitivities.

Determinants of the individual response to prices of tourism activities

We propose several factors that may explain the individual price sensitivities to tourism activities and outline their effects (see the dashed-line box in Figure 1). We expect the motivations that lead to the selection of a destination to have an effect on the predisposition to pay for the activities available at the destination; an effect that can be influenced by age. Also, as the number of days the individuals spend at the destination determines their level of expenditure, the length of stay should have an impact on price sensitivity to tourism activities. For each relationship, justification is provided below.

Motivations. Tourist motivations lead to the choice of a destination (Lo and Lee, 2010), and this relationship between destination choice and motivation is relevant in identifying the maximum price tourists are prepared to pay. The

theory of consumer behaviour considers that motivations represent individual internal forces that lead to action (Schiffman and Kanuk, 2007), and in this respect, tourist motivations act as push factors leading to the realization of tourist travel (Sirakaya *et al*, 1996; Kim and Lee, 2002). As the selection of a certain holiday destination implies a desire for some kind of benefit (such as participation in a given activity), motivations are essentially the reasons why people take a holiday (Richards, 2002). This fact can have an influence on people's predisposition to pay to take part in an activity. According to Rugg's (1973) proposal, a stay in a destination for a period enables enjoyment of the attributes of the destination from which tourists obtain utility. As far as the set of activities offered by a destination can be considered an attribute that describes it, tourists may be prepared to pay extra to obtain utility from participating in specific activities. This last statement applies as long as those activities are in line with people's motivations; otherwise, the reverse would apply – motivations that are not in line with the activities would make people more reluctant to pay extra. Bearing in mind these considerations, we expect that motivations affect people's price sensitivity to activities, and the following hypothesis is stated:

H1: Motivations to go to a destination affect the individual's price sensitivity to activities.

Although motivations have proven to have an effect on tourist decisions, their effect can be influenced by *age*. Age is a dimension that generates different points of view towards leisure and tourism consumption (Opaschowski, 1990); for example, young and middle-aged people consider holidays as part of their lifestyle, and accept that extra holiday spending has to be saved for during the rest of the year. In fact, a tendency has been detected among young people to prioritize holiday expenditure, although, once they are at the chosen destination, half of these holidaymakers restrict their spending (BAT, 1989). This finding implies that the above hypothesis about the effects of motivations on an individual's price sensitivity to activities may be different depending on the person's age. In fact, this could explain the suggestion in the literature that the assumption of a linear relationship between age and vacation travel decisions seems excessively simplistic and unrepresentative of the real behaviour of individuals (Walsh *et al*, 1992; Eymann and Ronning, 1992, 1997). That is, the same motivation can exert a different influence on a specific decision contingent on people's age. Therefore, Hypothesis 1 is qualified by Hypothesis 2 as follows:

H2: The effect of motivations to go to a destination on the individual's price sensitivity to activities is influenced by the age of the tourists.

Duration of stay. As the number of days a tourist spends away is 'holiday quantity' (Silberman, 1985), a positive relationship between the duration of stay and expenditure incurred during the holiday is found in the empirical literature: that is, a greater number of days implies greater expenditure (Spotts and Mahoney, 1991; Taylor *et al*, 1993; Nogawa *et al*, 1996; Seaton and Palmer, 1997; Van Limburg, 1997; Leones *et al*, 1998; Mules, 1998; Agarwal and

Yochum, 1999; Aguiló and Juaneda, 2000; Cannon and Ford, 2002). However, as more days lead to more expenses, it is expected that the tourist will take extra care when it comes to choosing higher-priced or lower-priced activities. That is, assuming two individuals, each with the same budget, but one with a length of stay double that of the other (say, ten days versus five), then when selecting an activity the first will pay greater attention to its price as his or her budget has to be spread over ten days rather than five. Consequently, we propose the following hypothesis:

H3: *A longer length of stay leads to higher price sensitivity to activities.*

As before, a nuance has to be taken into account when analysing the effect of the duration of stay on price sensitivity to activities. In particular, doubts can be cast on a linear relationship throughout the range of this continuous variable. Although longer stays are hypothesized to bring about higher price sensitivity to activities, there is no reason to assume a linear effect; quite the contrary, on account of the type of accommodation, tourists' sensitivities may change. Staying in a hotel, generally associated with shorter stays and where a large proportion of the tourist's budget goes to pay for the hotel, is not the same as staying in a second home, where not only can you stay longer with lower costs per person per night, but you also have a lot more discretionary money available (Agarwal and Yochum, 1999). Consequently, considering that we are dealing with a continuous variable, we propose the following hypothesis:

H4: *The effect of the length of stay on price sensitivity to activities is non-linear.*

Finally, we also consider the tourist's country of origin as a control variable to observe potential differences in average price sensitivities to activities.

Research design

Sample, data and variables

The data used for the analysis refers to a stated choice experiment¹ conducted in the Ticino region of Switzerland during summer 2010 as part of a project designed to investigate the preferences of tourists for different activities at the destination and the potential for a regional tourist card.

The design of the choice experiment is based on four attributes identified by applying a principal component analysis on the activities undertaken by tourists² – culture and nature, entertainment and sport, evening activities and water activities, respectively. The daily price was added as a fifth attribute, whereas free access to public transport (commonly included in tourist cards) was made explicit in each hypothetical situation generated by the experimental design. For each attribute associated with activities at the destination, three levels were defined, taking into consideration the factor loading of the activities undertaken by tourists. Concerning the price attribute, an exploratory analysis on the tourist cards present in the real market was carried out in order to define the attribute levels to be used in the experiment: 30, 45 and 60 CHF,

Table 1. Attributes and their levels.

Attribute	Attribute levels
Culture and nature	Free usage of cable cars Free entrance to museums Free entrance to botanical gardens
Entertainment and sport	Free entrance to entertainment parks 20% discount on wellness facilities 20% discount on sports and renting sport equipment
Evening activities	20% discount on events and festivals 20% discount in restaurants 20% discount in bars/clubs
Water activities	Free boat trips on the lake Free entrance to Lido 20% discount on renting a boat
Price	30 CHF/day 45 CHF/day 60 CHF/day

respectively.³ Table 1 describes the attributes and the attribute levels considered in the stated choice experiment.

The stated choice experiment was conducted by face-to-face interviews in which tourists were asked to make two choices, first choosing card A, card B, or neither card and, second, choosing between card A or card B. Each respondent was presented with 12 choice situations⁴ (see Figure 2 for an example of a choice card). The dataset analysed in this study refers to the first choice dataset – of card A, card B, or neither.

Nine main locations in Ticino were identified for conducting the survey with tourists, taking into consideration both the most touristic places and the geographical dimension. The sample was comprised of 261 tourists and the survey resulted in 3,132 valid choice observations.

The descriptive statistics for the main socio-demographic and socio-economic groups are reported in Table 2. Within the sample, 70% of the tourists are between 31 and 60 years old, 10% are older than 61, and 5% are under 20. With regard to nationality, the most represented are Swiss, followed by Germans and Italians. This pattern reproduces correctly the market shares experienced in Ticino for the three main countries driving tourism demand. Regarding length of the stay and daily budget, the sample interviewed stayed on average for 4.8 nights in Ticino and had an average daily budget of 65 CHF for activities at the destination.

Along with the stated choice experiment, the tourists interviewed were also asked to state their degree of agreement with a set of motivations that had been relevant to their choice of Ticino as holiday destination. In particular, we focus on seven statements included in the survey and measured according to a four-point Likert scale – not at all important (1), rather unimportant (2), rather important (3) and very important (4), respectively.

	Card A	Card B	None
Public transport	Free public transport in Ticino	Free public transport in Ticino	
Culture and nature	Free entrance to museums	Free entrance to botanical parks	
Entertainment and sport	20% discount on wellness facilities	20% discount on sports and renting sport equipment	
Evening activities	20% discount in restaurants	20% discount in bars/clubs	
Water activities	Free entrance to lido	Free boat trips on the lakes	
Price	45 CHF	30 CHF	
Which card would you buy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If you could only chose between A and B, which one would you prefer?	<input type="checkbox"/>	<input type="checkbox"/>	

Figure 2. Example of a choice card.

Table 2. Sample descriptive statistics.

Variable	Sample
Gender	Females (60%); males (40%)
Age	20 or under (5%); 21–30 (16%); 31–40 (20%); 41–50 (25%); 51–60 (24%); 61–70 (9%); 71 or older (1%)
Country	Switzerland (45%); Germany (17%); Italy (16%); other (22%)
Average overnight stay	4.8 nights
Average daily budget	65 CHF

Table 3 illustrates the sample mean and median for the seven motivations considered in this study. According to the sample surveyed, ‘getting rest and relaxation’ and ‘going to a sunny place’ are perceived as very important motivations in the decision process for selecting Ticino as holiday destination, as shown by the high value of the sample median. This result is in line with the image that tourists commonly associate with Ticino. Indeed, tourism in Ticino is active mainly during the warm seasons, spring and summer. Two other motivations had played an important role in the selection of the destination: ‘trying new food’ and ‘visiting historical places’, which registered a sample median of 3

Table 3. Sample descriptions for motivations.

Motivation	Mean	Median
Trying new food	2.6	3
Visiting historical places	2.8	3
Experiencing a simpler lifestyle	2.2	2
Feeling safe and secure	2.4	2
Feeling at home away from home	2.3	2
Going to a sunny place	3.4	4
Getting rest and relaxation	3.5	4

(‘rather important’). On the other side, three of the seven motivations considered – ‘experiencing a simpler lifestyle’, ‘feeling safe and secure’ and ‘feeling at home away from home’ – had exerted a lower degree of influence in the selection of the destination.

Method

Within a random utility model framework (McFadden, 1974), the utility function, associated with respondent n for alternative j in choice situation s , is typically assumed to be linear in parameters, and represented by Equation (1):

$$U_{njs} = \alpha_j + \sum_{k=1}^K \beta_{nk} x_{njks} + \varepsilon_{njs} \quad (1)$$

where, ε_{njs} is the random term that is independent and identically distributed (IID) extreme value type 1.

In order to capture the heterogeneity between individual preferences, we rely on the mixed logit class of models⁵ which allow the estimation of both the mean and the standard deviation for the random coefficients according to a specific density function, typically a normal distribution, as follows:

$$\beta_{nk} = \beta_k + \sigma_k v_{nk} \quad (2)$$

where β_k is the sample mean, v_{nk} is the individual specific heterogeneity with mean zero and standard deviation one, and σ_k is the standard deviation of β_{nk} around β_k , which in our case follows a normal distribution.

Under these assumptions, the probability that respondent n chooses alternative j is described as follows:

$$P_n = \int \left(\prod_s \frac{\exp(\alpha_i + \sum_k \beta_{nk} x_{nisk})}{\sum_j \exp(\alpha_j + \sum_k \beta_{nk} x_{njks})} \right) f(\beta) d(\beta) \quad (3)$$

where $s = 1, \dots, S$ represents the choice situations. Since the integral does not have a closed form, the estimation of the utility parameters is derived from the maximization of the following simulated log likelihood:

$$L_n = \sum_n \ln \frac{1}{R} \sum_r \prod_s \frac{\exp(\alpha_i + \sum_k \beta_{nk} x_{nisk})}{\sum_j \exp(\alpha_j + \sum_k \beta_{nk} x_{njsk})} \tag{4}$$

where $r = 1, \dots, R$ refers to the number of draws used for the identification of each random parameter. In this article, we refer to 500 Halton draws.⁶

The individual specific estimates for the price coefficient are then computed by using the Bayes Identity:

$$g(\beta | y_n) Prob(y_n) = Prob(y_n | \beta) f(\beta) \tag{5}$$

where y_n indicates the alternative j chosen by respondent n . The Bayes Identity in (5) allows us to formulate the conditional density of β_n :

$$g(\beta_n | y_n) = \frac{L_n(y_n | \beta) f(\beta)}{P_n} \tag{6}$$

From the conditional density in (6) we can obtain the conditional expectation as follows:

$$E(\beta_n | y_n) = \int \beta g(\beta | y_n) d\beta = \int \frac{\beta Prob(y_n | \beta) g(\beta | y_n) d\beta}{P_n} \tag{7}$$

Given that the integral in the conditional mean for β_n does not exist in closed form, the individual specific estimates for the price coefficient are then simulated as:

$$E(\beta_n | y_n) = \frac{1}{R} \sum_r \beta_{nr} \omega_{nr} \quad \text{where, } \omega_{nr} = \frac{L_n}{\sum_r L_n} \tag{8}$$

In order to investigate the determinant factors for the heterogeneity in the price sensitivity, a regression is then performed on the estimated individual coefficients associated with the price attribute in the stated choice experiment. Formally, the OLS regression takes the following specification:

$$\beta_n = \alpha + \sum_k \delta_k x_{nk} + u_n \tag{9}$$

where, α is the constant, δ_k the estimated parameter associated with individual specific variable x_k and u_n is the error term that is normally distributed with mean zero and standard deviation σ .

Results

We first estimate the stated choice experiment using a mixed logit model, in which the coefficient of interest – price sensitivity – is included and gauged.

Table 4. Stated choice model of tourism activities.

	Coefficient	<i>t</i> -ratio
<i>Means for random and non-random parameters</i>		
ASC Alt A	2.5405	15.03 ^a
ASC Alt B	2.4058	14.23 ^a
Price	-0.0398	-9.58 ^a
Cable car	-0.0742	-1.45
Museum	0.2183	3.41 ^a
Entertainment park	-0.0714	-1.42
20% discount on sport and renting sports equipment	-0.0309	-0.56
20% discount on restaurants and bars	-0.2456	-2.70 ^a
Free boat trips on the lake	0.3516	6.77 ^a
20% discount on renting a boat	-0.2484	-3.76 ^a
<i>Standard deviations for random parameters</i>		
Ns Price	0.0410	14.73 ^a
Ns Cable car	0.1434	1.01
Ns Museum	0.4724	7.90 ^a
Ns Entertainment park	0.0057	0.03
Ns 20% discount on sport and renting sports equipment	0.2059	2.22 ^b
Ns 20% discount on restaurants and bars	0.6380	5.83 ^a
Ns Free boat trips on the lake	0.3991	6.86 ^a
Ns 20% discount on renting a boat	0.1462	1.15
Sample		3,132
Halton draws		500
Restricted LL		-3,439.76
Final log-likelihood		-2,961.66
Number of parameters		18
AIC		1.9033
McFadden pseudo ρ^2		0.1390

Note: ^aprob < 1%; ^bprob < 5%; ^cprob < 10%.

Table 4 shows the global results that represent the preferences of an average tourist. We find that price is significant at a level below 0.001, and presents a negative sign. This leads us to characterize it as dissuasive factor in the choice of activities. However, it is important to stress that the standard deviation parameter of the coefficient is significant, which implies that 'price' has a differentiated effect among the individuals of the sample and, thus, a given high price does not suppose the same reduction in utility for all the tourists sampled. The differentiated effect found for 'price' suggests that there is a great diversity of sensitivities in the tourist market.

Once the individual sensitivities to price have been estimated, they are used as the dependent variable of a regression analysis so as to detect its explanatory factors and test the hypotheses stated (Table 5). Note that, even though the *R*-square is not as good as desirable, it is important to observe that the regression is globally significant ($F = 2.3$; $p < 0.01$), and, most importantly, 16 coefficients are significant out of 20. This means that the proposed variables

Table 5. Determinant factors of price sensitivity to activities.

	Coefficient	t-ratio
Trying new food	0.0164	2.25 ^b
Visiting historical places	-0.0116	-1.78 ^c
Experiencing a simpler lifestyle	-0.0136	-1.74 ^c
Feeling safe and secure	0.0145	2.09 ^b
Feeling at home away from home	-0.0125	-1.85 ^c
Going to a sunny place	-0.0134	-1.71 ^c
Getting rest and relaxation	0.0202	2.26 ^b
Age × Trying new food	-0.0032	-1.83 ^c
Age × Visiting historical places	0.0043	2.72 ^a
Age × Experiencing a simpler lifestyle	0.0035	1.87 ^c
Age × Feeling safe and secure	-0.0036	-2.11 ^b
Age × Feeling at home away from home	0.0027	1.58
Age × Going to a sunny place	0.0028	1.47
Age × Getting rest and relaxation	-0.0059	-2.87 ^a
Stay	-0.0019	-2.14 ^b
Stay ²	0.0003	1.71 ^c
Italy	-0.0161	-2.14 ^b
Germany	-0.0064	-0.87
Switzerland	0.0043	0.73
Constant	-0.0356	-2.28
Sample	259	
Number of parameters	20	
R-squared	0.155	
Adjusted R-squared	0.088	

Note: a=prob<1%; b=prob<5%; c=prob<10%.

are clearly determinant factors of this internal aspect of the individual and that further research is needed to find more elements that explain price sensitivity in the context of tourism activities – thereby opening up new threads of research. Turning to the specific results, we find the following.

As for motivations, we obtain significant parameters for the seven motivations, supporting Hypothesis 1 that motivations to go to a destination reduce the individual's price sensitivity to activities. In particular, positive parameters are found for 'trying new food' ($p < 0.025$), 'feeling safe and secure' ($p < 0.037$) and 'getting rest and relaxation' ($p < 0.024$), meaning that people with these motivations when selecting a destination are less affected by higher prices when choosing activities. On the other hand, we find negative parameters for 'visiting historical places' ($p < 0.075$), 'experiencing a simpler lifestyle' ($p < 0.082$), 'feeling at home away from home' ($p < 0.064$) and 'going to a sunny place' ($p < 0.088$). One can assume that most tourists are not prepared to pay extra for activities that allow them to experience a simpler lifestyle, feel at home away from home or go to a sunny place merely for the sun: people with these motivations should obtain their sought benefits without incurring greater costs. However, it is surprising to see that people with the motivation 'visiting historical places' become more sensitive to price, which in principle is against

expectations. Nevertheless, this result is still reasonable, as the cultural activities proposed in the cards were free in all cases. Thus when culture-motivated people select the activities, once they have made sure that they will get what they expect at the destination (visiting historical places), they do not much care about the non-cultural activities and will go for the cheaper option.

Regarding interactions, five out of seven interactions are significant: as people get older, the positive effects of 'trying new food' ($p < 0.068$), 'feeling safe and secure' ($p < 0.035$) and 'getting rest and relaxation' ($p < 0.004$) on price sensitivity to activities are reduced; and the negative effects of 'visiting historical places' ($p < 0.006$) and 'experiencing a simpler lifestyle' ($p < 0.061$) diminish too. These significant interactions confirm Hypothesis 2 that the effect of motivations to go to a destination on the individual's price sensitivity to activities is influenced by age.

Concerning duration of stay, we find a negative parameter for the variable 'number of nights' ($p < 0.032$) and a positive parameter for its squared value ($p < 0.088$). These results support Hypothesis 3 that longer lengths of stay lead to higher price sensitivity to activities, as the budget has to be divided by more days, and Hypothesis 4 that the effect of length of stay on price sensitivity to activities is non-linear. In particular, 'the longer stays, the higher sensitivity' statement holds up to a point (specifically, up to day five); after that, for stays of six days or longer, people become less sensitive to prices. As longer durations are enjoyed mostly by people with second homes, on account of the lower costs per person per night, the idea that they have more discretionary money at their disposal can aptly apply, in line with Agarwal and Yochum (1999).

As for the control variable 'tourist's country of origin', we observe differences in sensitivities; in particular, we find that Italians are more reluctant to pay extra money ($p < 0.033$) than any other nationality in the sample.

Conclusions

Prices in tourism are especially complex and their effects are not unambiguous, characterized by a strong response heterogeneity which leads to a great variety of sensitivities to prices. This implies that, rather than prices being dissuasive elements that diminish utility, they can sometimes have positive – or, to be more precise, less negative – effects.

In this vein, the objective of this study is to analyse, for the first time, tourists' price sensitivities to tourism activities, individual by individual, by taking into consideration heterogeneity. To do this, we use a mixed logit model to find the heterogeneity between individual preferences and estimate the individual responses to price, and then apply a regression analysis to identify factors that explain these heterogeneous responses.

The results of the empirical application show that the demand for tourist activities is that of *ordinary goods* insofar as price increases diminish consumption; however, 'price' has a differentiated effect among individuals, and thus a particular high price does not have the same reduction in utility for all tourists. Specifically, we find that motivations exert an effect on price sensitivity to activities, some diminishing and others increasing it. At this point, it is important to stress that the effect of motivations is influenced by the tourist's

age, such that the same motivation might impact differently on an individual's price sensitivity depending on his or her age. Concerning length of stay, we find that longer stays lead to higher price sensitivity to activities (because of people's limited budget), but there is a threshold in day five; from day six, people become less sensitive (as these longer durations are mainly associated with people who have a second home and therefore have more money for discretionary expenditure).

With regard to the implications for management, the first point to note is that a knowledge of the determinant factors of price sensitivities to activities allows destinations and travel organizations to improve the effectiveness of their price policies and strategies by taking into account those characteristics of the selected target group that will lead them to accept a price to a greater or lesser extent. Given the confirmation of the existence of a diversity of price sensitivities, a critical implication is that knowing the tourist by a tourist preference structure in terms of price sensitivities enables more tailored pricing strategies. It is important to remember that the analysis of 'price preferences' requires looking into an internal dimension which is not directly observable.

Further avenues of research remain to be explored. First, more explanatory factors of this internal aspect of the individual's price sensitivity to tourism activities are needed. Second, *a posteriori* analysis could help to identify segments according to their price sensitivities to activities, which would definitely allow organizations to detect their target groups.

Endnotes

1. Stated choice experiments, also known as stated preference experiments, are statistical experiments involving hypothetical choice situations and predefined (by the researcher) attributes and attribute levels (see Louviere *et al.*, 2000 for details).
2. The entire survey involved two waves. Data collected from the first wave were used to identify the four attributes (via principal component analysis) characterizing the stated choice experiment conducted in the second wave.
3. Approximate exchange rate at December 2010: 1 CHF = 1.03 US\$.
4. The experimental design refers to an orthogonal design performed by Ngene (www.choice-metrics.com). The final design resulted in two blocks of twelve choice situations each.
5. See Hensher and Greene (2003) for a detailed discussion on mixed logit models.
6. See Train (2009) for details about Halton draws.

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