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MONETARY AND NON-MONETARY EFFORTS FOR LEISURE ACTIVITIES

Abstract

Getting to and staying at a destination entails effort in terms of both monetary and non-monetary costs. This study analyzes how the “individual predisposition to make an effort to get to and stay at a destination” varies depending upon the desire to do different leisure activity patterns at and away from home, as well as distinct socio-demographics and accommodation types. Thus, the paper focuses on these questions: to what extent are people predisposed to incur these costs in order to have the opportunity to do new leisure activities that they do not do at home, or to do the same favorite leisure activities they do at home, but more frequently? Also, are either of these behaviors contingent upon the type of activity? The results show that different predispositions exist per participation-frequency scenario (activity pattern) and per type of leisure activity.

Key words: sensitivities to price and distance; leisure activities; residual and tourist cultures.

1. INTRODUCTION

Although it has not received much attention in the literature, the relationship between at-home recreation activities and those realized on vacations is critical for destinations (Brey and Lehto, 2007). These authors indicate that knowledge of this relationship is crucial for tourism planners and marketers implementing strategies as it allows them to propose the right set of recreation activities. In this context, not only is it relevant to know who is interested in a specific activity but to learn the effort an individual is predisposed to make to get to a destination and to stay there to be able to do such activities. Although the restorative properties of recreation are widely known, when recreation takes place away from home, it involves a certain degree of effort on the part of the individual. One can be excited about the idea of practicing an activity in a destination, but the person has to invest money in getting to and staying there as well as displacement time. The individual needs to balance the pleasure obtained from the activity against the amount of monetary and non-monetary effort that has to be made. Therefore, we can define the concept of *predisposition to effort (PEF)* as the monetary effort (basically, price of transport and accommodation) and non-monetary effort (mainly time invested in getting to the destination).

Based on this idea, this research proposes a model in which the individual predisposition to put an effort into going to and staying in a destination is determined by the difference in frequency of participation in leisure activities practiced at and away from home. As an example, we consider issues such as, to what extent people are predisposed to pay higher prices and travel further if they can, in return, do new leisure activities which are different from those they do at home, or do the same favorite home leisure activities but more frequently.

Leisure activities bring social and tourist dimensions together at destinations (Gibson, 2006), leading to interactions among tourists as well as between tourists and local residents. Tourists obtain pleasure from leisure activities which they take part in at destinations and local residents support policies aimed at developing the destination in a sustainable way through the use of resources and creation of activities that enhance their well-being. Although tourists and residents benefit from the existence of leisure activities in different ways, the activities shared between the two groups can foster social interaction. Therefore, knowing the types of activities that lead a specific segment of tourists to get the most satisfaction and that provide local residents with the optimal increment in their well-being (by attracting strongly predisposed tourists, for example) is critical if we seek to boost social interaction. In this way

both parties benefit individually and the third common benefit of social interaction will occur naturally.

2. MONETARY AND NON-MONETARY EFFORTS TO ENJOY LEISURE ACTIVITIES AT THE DESTINATION

The literature stresses the role of “attributes of the destination” in order to explain destination choice (Borocz, 1990; Sirakaya, McLellan & Uysal, 1996), as they contribute to the formation of perceived attraction among tourists. Chief among them are distance and prices (Wennergren and Nielsen, 1970; Fesenmaier, 1988; Siderelis and Moore, 1998). However, there is no consensus among authors on their impact on destination choice, since for each individual the distance and prices of destinations might act as attraction or deterrent factors. It all comes down to the fact that the effect of both variables (distance and prices) are contingent upon the effort an individual is predisposed to make in both monetary and non-monetary terms. Regarding the influence of distance on destination choice, one train of thought holds that distance is considered a restriction or a dissuasive dimension of destination choice, as the displacement of an individual to the destination entails physical effort and temporal and monetary cost (Taylor and Knudson, 1976). Alternatively, another line of research proposes that distance can lend positive utility. Baxter (1980) shows that the journey itself, as a component of the tourism product, can give satisfaction in its own right so that, on occasions, longer distances are preferred.

Concerning the influence of prices on destination choice, one line of thought holds that demand for tourism products is that of an *ordinary good*, in such a way that price increments diminish consumption (Smith, 1995), making it a factor which reduces the utility of a destination. At an empirical level, a negative relationship between price and destination choice is found by Train (1998) in the case of natural parks; by Morley (1994a; 1994b) and Eymann and Ronning (1992) for countries (administrative units) and by Siderelis and Moore (1998) for macro-destinations (i.e. destinations that are aggregated on account of their geographical proximity to form a larger destination, with the purpose of facilitating the individual choice analysis; for example, these authors reduced 17 lakes into 5 destinations). Conversely, another line of thought proposes that price does not always have a dissuasive effect on destination choice, but that it can be an attraction factor; not only for the product quality that high prices might convey, but also due to the hedonistic character often found in the consumption of tourism products (Morrison, 1996).

The positive and negative effects of distance (with both monetary and non-monetary costs) and prices (with monetary costs only) make these variables crucial as, on the one hand, they fundamentally represent the effort required to get to and stay at a destination and, on the other hand, heterogeneity among people is more evident in these attributes. In an attempt to look for factors affecting this individual effort, leisure activities emerge as an important determinant. An individual might be predisposed to make a bigger effort to get to and stay at a destination where s/he can do a specific activity. The underlying idea is that when choosing a destination, the individual potential effort might be determined by an interest in destinations that offer specific leisure activities. It is important to stress that the selection of a certain destination implies a desire for some kind of benefit, and the possibility of more intensively doing (or simply shifting) an activity might be an attraction factor.

To analyze this phenomenon we rely on the Carr (2002) tourism-leisure behavioral continuum, in which there are two central factors that influence behavior: *residual* and *tourist culture*. Residual culture deals with the leisure behavior people show in their home environment (generally, more habit-driven) whilst tourist culture influences the tourist behavior they exhibit at holiday destinations (overall, more liberated and hedonism-driven). Between these two behavior patterns are a range of intermediary behaviors that are influenced and conditioned by the force each culture (residual vs. tourist) exerts. This research uses this concept to analyze the varying levels of individual effort when people show different patterns of activity participation at home and at destinations. As shown in Figure 1, to go to and stay in a destination, people have to assume two essential attributes (price and distance), which jointly form their individual predisposition to make an effort. The purpose of this article is to analyze the determinants of this effort, i.e. the relationships among the elements in the hyphenated box in Figure 1. This predisposition can be affected by the prospect of participating in activities available at the destination that may or may not be practiced at home by the individual. In particular, it is expected that interest in increasing, maintaining or reducing participation frequency at the destination (compared to the frequency at home) should influence that individual predisposition.

Figure 1 about here

If this were the case, the implications would be quite relevant; for example, following the segmentation strategy, destination decision-makers could segment the market according to the criterion “individuals seeking a specific benefit” by focusing on people who are predisposed to pay higher prices or cover longer distances to go to a destination with leisure

activities different from those they do at home, or the criterion “participation frequency”, looking for individuals interested in doing their usual home leisure activities but more frequently. Obviously, if they are more predisposed to spending larger amounts because they can enjoy “novelty” or “increased frequency”, these represent rather interesting market segments. Note that this article focuses on the *PEF* of domestic travelers because: i) measures of price and distance must be feasibly attainable and homogeneous and as we define destinations in terms of administrative units (provinces) it is not advisable to mix different levels of administrative units (say, Spanish provinces with foreign countries). Operationally, prices and distances can, of course, be measured, but not without previous homogenization of the measurement procedures. ii) Also, if we simultaneously evaluated domestic and foreign destinations we could get important biases in the results as, for the particular case of Spain, only about 5% of Spanish tourists travel abroad for their vacations.

Additionally, factors other than participation frequency might affect the effort involved. For the purpose of including information about personal characteristics and behavioral variables, the following will be used as control variables: income, age, education and accommodation type: *Level of income*. Income is a personal budget restriction which determines the spending capacity of individuals and has been found to be highly explicative of tourist behavior (Mergoupis and Steuer, 2003). Empirical literature shows that medium-high and high income groups are more likely to take part in tourism and leisure activities (Hay and McConnell, 1979) and to spend more on them (Cai, Hong & Morrison, 1995; Fish and Waggle, 1996; Mudambi and Baum, 1997; Cai, 1999; Agarwal and Yochum, 1999; Cannon and Ford, 2002). This result corroborates the idea that tourism and leisure generally behaves as a *normal good* with positive demand-income elasticity, increasing its consumption as income increases (Davis and Mangan, 1992). In this respect, we should expect that income will affect the effort (especially, the monetary effort) required to go to and stay at a destination, as people with high incomes have easier access to high priced and long distance destinations. Therefore, the negative effect of the effort, at least in terms of money, should be lower.

Age. This dimension generates different points of view towards leisure and tourism consumption (Opaschowski, 1990). Young and middle age people consider holidays to be a part of their lifestyle and that extra holiday spending has to be saved for during the rest of the year. In fact, the study of the B.A.T. (1989) detects a tendency among young people to prioritize holiday expenditure, although once at the chosen destination half of these holidaymakers restrict their spending; and Dardis, Derrick, Lehfeld & Wolfe (1981) show

that this type of expenditure decreases with age. *Education*. According to Parker (1976), there is a positive link between the realization of leisure activities and an individual's educational level. Higher levels of education foment interest in recreation. Firstly, it allows better access to information and knowledge (Cai et al., 1995) and, secondly, higher educational levels may provide training and preparation for some types of recreation activities (Dardis et al., 1981). Apart from the effect it has on the decision to partake in leisure, Dardis et al. (1981), Cai et al. (1995) and Cai (1999) find a positive relationship between higher educational levels and greater leisure expenditures. *Accommodation*. The analysis of accommodation type and its effect on tourism and leisure expenditures is necessary, as it represents a considerable amount of the global travel budget. Agarwal & Yochum (1999) show that hotel accommodation is associated with higher expenditures, while apartments/villas and staying with friends and family are linked to lower expenditures. These different expenditure patterns make the analysis of accommodation relevant, as it can influence people's sensitivity to costs when going to and staying at a destination.

3. RESEARCH DESIGN

3.1. Methodology

The methodology used allows us to estimate and explain individual sensitivities based on real travel decisions and consists of two stages: one, estimation of *individual PEFs* through a Logit Model with Random Coefficients (RCL); and two, application of regression analysis.

3.1.1. Estimation of individual predisposition to effort

To estimate the individual parameters (*PEFs* measured by the sensitivities to price and distance) we apply Bayesian estimation methods to an RCL Model in the context of destination choice. We use the RCL Model because of: one, its ability to deal with the unobserved heterogeneity of N individuals by assuming that the coefficients of the variables vary among people; and two, its flexibility, which allows representation of different correlation patterns among alternatives. Thus, the conditional indirect utility function of destination i for individual n is defined as

$$U_{in} = \beta_{1n}pr_i + \beta_{2n}dist_i + \varepsilon_{in} \quad (1)$$

where pr_i is the price of destination i , $dist$ is the distance to the destination i , β_{1n} and β_{2n} are the parameters of price and distance for each individual n , which represent personal

sensitivities; i.e. they allow us to identify the individual sensitivities to the attributes “price” and “distance”; and ε_{in} is a random term that is independent and identically distributed (iid) extreme value. The likelihood of the observed choice i for individual n conditional on β_n is expressed as

$$P(i / pr_i, dist_i, \beta_n) = \frac{\exp\{\beta_{1n}pr_i + \beta_{2n}dist_i\}}{\sum_{j=1}^J \exp\{\beta_{1n}pr_j + \beta_{2n}dist_j\}} \quad (2)$$

where J is the number of alternatives. Since we do not know β_n , the probability of a choice being made is the integral of the previous expression over the distribution of β_n :

$$P(i / pr_i, dist_i, \theta) = \int P(i / pr_i, dist_i, \beta)g(\beta / \theta)d\beta \quad (3)$$

Note that $g(\beta/\theta)$ is the distribution of the random parameter vector β in the whole population, and θ are the parameters of this distribution (mean and variance). We can derive the so-called *posterior* distribution $h(\beta/i, pr_i, dist_i, \theta)$ of the sensitivities of people selecting alternative i , by applying Bayes' rule. In fact, we estimate the model through Bayesian procedures because they are able to provide a parameter for each sample individual and they avoid the problems of convergence of algorithms of the classical estimation (Train 2009:285). (See the Appendix for the specifications of the Bayesian technique applied to this empirical application). Therefore, the *posterior* distribution is:

$$h(\beta / i, pr_i, dist_i, \theta) \cdot P(i / pr_i, dist_i, \theta) = P(i / pr_i, dist_i, \beta) \cdot g(\beta / \theta) \quad (4)$$

And re-arranging,

$$h(\beta / i, pr_i, dist_i, \theta) = \frac{P(i / pr_i, dist_i, \beta)g(\beta / \theta)}{P(i / pr_i, dist_i, \theta)} \quad (5)$$

Therefore, we can obtain the price sensitivity β_n of individual n through the expression

$$\bar{\beta}_n = \int \beta \cdot h(\beta / i, pr_i, dist_i, \theta) = \int \frac{\beta \cdot P(i / pr_i, dist_i, \beta)g(\beta / \theta)d\beta}{P(i / pr_i, dist_i, \theta)} = \frac{\int \beta \cdot P(i / pr_i, dist_i, \beta)g(\beta / \theta)d\beta}{\int P(i / pr_i, dist_i, \beta)g(\beta / \theta)d\beta} \quad (6)$$

3.1.2. Explaining individual predisposition to effort

To analyze the relationship between individual *PEF* and different leisure activity patterns, socio-demographics and accommodation type, we rely on OLS regression analysis. Let x_{ns} be a group of variables s relative to individual n 's leisure behavior (in terms of participation frequency), to socio-demographics and to accommodation type, which are proposed to explain the *predisposition to effort* $PEF_n = \beta_{1n} + \beta_{2n}$, and δ_s the coefficients which reflect the effects of these explanatory variables on this *predisposition*. Therefore, the following expression is arrived at:

$$PEF_n = \sum_{s=1}^S \delta_n x_{ns} + u_n \quad (7)$$

where the disturbance u_n follows a normal distribution with a zero mean and variance σ_u . As price and distance variables are of completely different scales, before computing the addition of their parameters, we rescale each of them to the same homogeneous range (-1,+1). Note that while an individual can appear only once in each activity pattern, s/he might appear in several activity patterns as s/he can take part in several leisure activities; consequently, for each activity a regression is performed, with the independent variables that capture the participation frequency showing the individual leisure behavior in as many activities as s/he partakes.

3.2. Sample, Data and Variables

To reach our proposed objective, we use information on leisure and tourism choice behavior obtained from a national survey carried out by the Spanish Center for Sociological Research, which contains information on individual destination choice behavior as well as behavior displayed at home. A priori, any person living in Spain older than 18 can be selected to take part in the survey because the sample is taken by using multistage sampling, stratified by conglomerations, with proportional selection of primary units (cities) and of secondary units (censorial sections). The information was collected through personal, at home, interviews with a structured questionnaire in October 1995. Of the initial sample of 3,781 individuals, we are left with 2,127 that had already taken their main vacation in one of the 50 Spanish provinces, so we can compare participation frequencies at and away from home. In order to facilitate the calculation of the *PEF* through price and distance, and to allow it to be applied in a discrete choice framework, we focus on domestic vacations (see below for the way they are gauged). Since an individual may take multiple trips/vacations a year, the

survey specifically asked about the main vacation, that is, the longest vacation period away from home.

In order to make the choice model operative, we define the variables used and identify the dependent and independent variables. *Dependent variable.* To represent the destination chosen by the individual, we use a categorical variable with 50 categories for the 50 Spanish provinces. *Independent variables for the choice model: Destination Price.* To measure this variable, authors such as Eymann & Ronning (1992) consider that the correct method of reflecting the price of a certain tourist market is to compare destination prices with those of the home market and those of competing destinations. They use purchase parity differentials between the origin and respective destinations, obtained from the corresponding consumer price indexes. Also, Morley (1994b) demonstrates that the Consumer Price Index of a geographical region is a good indicator of tourist prices, by showing high correlation between the two. In line with these authors, our study measures destination prices of intra-country administrative units through consumer price index differentials among origins and destinations. These are published by the National Institute of Statistics (INE) and represent the cost of living of each origin/destination. The use of this variable implies the construction of an origin-destination matrix of a 50x50 order. *Distance to the destination.* We measure distance in kilometers (DKm) and, as before, the use of this variable entails the construction of an origin-destination matrix of a 50x50 order, in which we include distance in kilometers between each origin and destination. This information is found in the Campsa Interactive Guide (taking the provincial capitals as reference points).

Independent variables for the regression model: Frequency variables. Respondents give us information on their participation frequency in leisure activities both during their vacations and throughout the rest of the year at home. All the respondents were asked about their participation in the fifteen activities indicated below. This is measured, in line with Brey and Letho (2007), through a 3-point ordinal scale (*practiced frequently* (F), *occasionally practiced* (O) and *not practiced at all* (N)). With this information we build the resulting nine variables: One, NH-FD (*not at home, frequently at destination*), which represents an activity the individual does not take part in throughout the rest of the year but practices frequently during the vacation period; two, NH-OD (*not at home, occasionally at destination*), the activity is not practiced at all in the home environment but occasionally practiced while on vacation; three, NH-ND (*not at home, not at destination*), activity not practiced either at home or the destination. This variable of absence of any activity is taken as the base

alternative in the regression model; four, OH-FD (*occasionally at home, frequently at destination*), an activity in which the individual participates occasionally during the rest of the year and frequently at the destination; five, OH-OD (*occasionally at home, occasionally at destination*), activity practiced occasionally, both at home and at the destination; six, OH-ND (*occasionally at home, not at destination*), activity practiced occasionally at home and not at the destination; seven, FH-FD (*frequently at home, frequently at destination*), activity practiced frequently at home and at the destination; eight, FH-OD (*frequently at home, occasionally at destination*), activity practiced frequently at home and occasionally at the destination; and nine, FH-ND (*frequently at home, not at destination*), activity practiced frequently at home and not at the destination.

The leisure activities analyzed are the following: visiting museums, cathedrals and other monuments; attending festivals or performances of music, dance, theater etc; walking; reading and listening to music; photography and video activities; playing cards and board games; visiting amusement parks; jogging; cycling; mountaineering and trekking; hunting and fishing; ball sports; discotheques, dancing and eating out; traditional local activities (crafts, agricultural activities); and visiting places of outstanding natural beauty. Note that even though these activities represent a broad range of potential activities in which Spanish tourists might take part, they have been chosen based on context specific constraints, i.e. data availability. Table 1 shows the individual participation frequency in each activity, with the possibility of each individual taking part in more than one activity.

Table 1 about here

Income. This dimension considers different income levels in order to observe the possible lack of linearity to their effect. Monthly income levels are placed into the following categories: *Income 1*, up to \$750 per month; *Income 2*, between \$750 and \$1500; *Income 3*, between \$1500 and \$3000; *Income 4*, between \$3000 and \$5500; and *Income 5*, more than \$5500. *Income 1* is taken as the base reference. *Age.* A quantitative variable is used to represent the age of the individual. *Education.* We establish three educational levels through three categorical variables: *Education 1*, Basic Education; *Education 2*, Secondary education; and *Education 3*, University Education. *Education 1* is taken as a base reference. e) *Accommodation type.* This dimension is measured through three dummy variables representing “own apartment or villa”, “family or friends’ house” and “hotel”.

4. RESULTS

Firstly, we employ Bayesian procedures to estimate the coefficients (sensitivities) of the variables “price” and “distance” for each individual, using RCL Models. The global results representing the preferences of an average individual are as follows: “Price” shows a parameter equal to -0.222 (standard error=0.021) and a standard deviation standing at 0.056 (standard error=0.012), both significant at 0.1%; “distance” has a parameter reaching -0.398 (standard error=0.014) and a standard deviation equal to 0.146 (standard error=0.012), both significant at 0.1% as well. We find that the dimensions price and distance are significant at a level below 0.001, and present a negative sign. This leads us to characterize them as dissuasive factors in the choice of destination, in line with Smith (1995) in the case of prices and Taylor and Knudson (1976) in the case of distance. However, it is important to stress that the variance parameters of the coefficients ($SD(\beta)$) are significant, which implies that “price” and “distance” have a differentiated effect among the individuals of the sample and thus, neither a high price nor a long distance suppose the same reduction in utility for all the sample individuals. The differentiated effects found for “price” and “distance” suggest that there is a great diversity of sensitivities in the market.

Once the individual sensitivities to price and distance are estimated, they are summed to estimate the individual predisposition to make an effort to get to and stay at a destination. This is used as a dependent variable in the regression analysis to find the influence of the frequency variables, the sociodemographics and accommodation type described above, for each leisure activity examined. We also test for collinearity among independent variables by calculating the variance inflation factor (VIF) for each of the regression coefficients. They all are well below the cut off figure of ten recommended by Neter et al. (1985). The explanatory power of the models stands at around a modest 10%, leaving room for improvement and raising the need to further explore additional independent variables to increase the model’s explanatory power (as indicated in the Conclusions). Nevertheless, note that all the models are globally significant at 0.001 meaning that they effectively explain the *PEF*. The results obtained are as follows (Table 2):

Table 2 about here

Behaviors that involve an increased participation frequency: NH-FD, NH-OD and OH-FD. We find significant, positive parameters associated with the NH-FD behavior for the activities: “Visiting museums, cathedrals and other monuments”, “Attending festivals or performances of music, dance, theater etc”, “Photography and video activities”, “Visiting

amusement parks”, “Discotheques, dancing and eating out”, and “Visiting areas of outstanding beauty”. Regarding the NH-OD behavior, positive parameters are obtained for “Visiting museums, cathedrals and other monuments” and “Visiting areas of outstanding beauty”. Concerning the OH-FD behavior, positive parameters are shown for “Visiting museums, cathedrals and other monuments”, “Photography and video activities”, “Mountaineering and trekking”, “Traditional local activities (crafts, agricultural activities)”, and “Visiting areas of outstanding beauty”. As we are dealing with behaviors (NH-FD, NH-OD and OH-FD) which involve an increase in participation frequency, in all these activities “tourist culture” leads people to be predisposed to make extra effort if they can participate more frequently during their vacations, in line with Carr (2002). Also, note that when it comes to low-implication activities such as “jogging” and “cycling”, they have significant and negative parameters for NH-OD (“jogging”) and NH-FD (“cycling”), reflecting the fact that as these activities can be practiced anywhere people are not willing to make much more of an effort (paying extra and traveling further) to increase their frequency during vacations.

Behaviors that lead to the same participation frequency at and away from home: FH-FD and OH-OD. We find significant, positive parameters associated with the FH-FD behavior for the activities: “Visiting museums, cathedrals and other monuments” and “Visiting areas of outstanding beauty”. Regarding the OH-OD behavior, positive and significant parameters are obtained for “Visiting museums, cathedrals and other monuments”. The behaviors FH-FD and OH-OD entail maintaining the same level of involvement in an activity. Therefore, and according to Carr (2002), these people are driven by “residual culture” as they are prepared to *invest* additional effort to opt for destinations that allow them to keep on getting the pleasure of doing their favorite activities. As before, the low-implication activities “jogging” and “cycling” have significant and negative parameters for FH-FD. People wishing to maintain their frequency are reluctant to pay extra and travel further to do activities that can be practiced in virtually any place. The results obtained for these two types of behaviors “increasing” and “maintaining” participation at and away from home are in line with the findings of Brey and Lehto (2007), who find that the more individuals get involved in an activity on a day-to-day basis, the more they tend to participate in the same activity when they are vacationing. Note that involvement causes commitment, which increases resistance to change thereby giving rise to behavioral loyalty (Kyle et al., 2004; Iwasaki and Havitz, 2004; Brey and Lehto, 2007).

Behaviors leading to a reduction in participation frequency: FH-OD, FH-ND and OH-ND. We find significant, positive parameters associated to the FH-ND behavior for the activities: “Reading books and listening to music”, “Playing cards and board games” and “Cycling”. For the OH-ND behavior, the activity “Reading books and listening to music” shows a positive and significant parameter. As we are dealing with behaviors that entail lowering participation frequency, a positive parameter means a predisposition to make additional effort to reduce all-year-round involvement in those activities. In other words, people engaged in these activities at home tend to change them when taking vacations. These results are in accordance with the balance theory (Heider, 1958), through which people seek vacations that are opposite their daily lives and interests.

Regarding the socio-demographics and type of accommodation, it is important to note that the results are consistent in all fifteen equations, i.e., the same significant variables with the same signs. In particular, the categorical variables relative to *Incomes 3* and *4* show a positive sign and are significantly greater than those of the reference category of low income (*Income 1*). This result confirms our expectation that the effort (especially the monetary effort) involved to get to and stay at a destination has a different influence on individuals depending on their level of income; that is, the negative effect of monetary effort is lower for these two income categories. However, an aspect to be stressed is that *Income 5* is not significant. This result suggests the presence of a saturation point. Although people with high incomes can have easier access to faraway and high-priced destinations, there is a point where this predisposition stops increasing. For example, although augments in income enable them to afford long distance destinations, they can be satiated with such an attribute (or, as they earn higher salaries, they would also have to face too high opportunity costs in long distance destinations). In conclusion, although the negative effect of monetary effort is lower for high income people, there is a saturation point. As regards age, we find no influence of this variable in any of the equations as the parameter associated to age is not significant in any of the fifteen cases. This lack of significance of age could be explained by the fact that motivation/interest can exert a greater influence than age when taking vacations (Collins and Tisdell, 2002). For example, an individual makes a journey to visit family regardless of age. Therefore, this non-significance of age suggests that there are other personal factors which push an individual to go on holiday to a distant destination regardless of age. Exactly the same applies to the variable “level of education”.

Finally, with regard to accommodation type, all the equations show the following pattern: the parameter of the “own apartment or villa” is significantly negative, those of “family and friends’ house” and “hotel” are significantly positive (the latter more than the former). The negative parameter for “own apartment or villa” can be explained by the fact that people tend not to choose to make a big effort (either monetary or non-monetary) to go to a given destination if they own an apartment or villa in another destination. The positive parameter of the variable “family and friend’s house” means that an individual is willing to travel long distances to visit family and friends. At this point, it is important to stress that the interpersonal trait of socializing through visiting friends and relatives leads many individuals to this type of tourism. In fact, “returning to the place of origin” at least once a year is a very common tourist practice in some countries, such as Spain (Usach, 1998), and thus influences the *PEF*. With respect to the positive parameter of the “hotel” variable, Agarwal & Yochum (1999) show that hotel accommodation is associated with higher expenditures. Therefore, in terms of monetary efforts, an individual who opts for the alternative “hotel” will be predisposed to pay more money during his/her vacations.

5. CONCLUSIONS

The underlying idea of this article is that the individual predisposition to make an effort is influenced by drivers that lead people to search for destinations that facilitate taking part in specific leisure activities. Based on the influence of *residual culture* (through which people tend to exhibit similar behavior at destinations as at home) and *tourist culture* (through which people change their home based activity patterns during their stay at the destinations), the aim of this study is to see whether individual predisposition to make an effort to get to and stay at a destination is affected by the distinct leisure activity participation frequencies people have, at and away from home. Additionally, three socio-demographics (income, age and level of education) and type of accommodation are tested. For this purpose, we measure and identify people’s *PEF* (individual by individual) from their *real choices* (individual predisposition is estimated for each person by observing the destination s/he has actually selected). The operative formalization used to estimate the individual *PEF*’s follows a RCL Model and to detect the effect of the leisure activities, socio-demographics and accommodation type, a regression analysis is applied. The empirical application carried out on a sample of 2,127 individuals reaches the general main conclusion that *residual* and *tourist cultures* are shown to have an influence on the individual *PEF*.

In particular, *residual culture* has an effect on “Visiting museums, cathedrals and other monuments”, “Attending festivals or performances of music, dance, theater etc” and “Visiting areas of outstanding beauty”; and *tourist culture* has an influence on “Visiting museums, cathedrals and other monuments”, “Photography and video activities”, “Visiting amusement parks”, “Discotheques, dancing and eating out”, “Traditional local activities (crafts, agricultural activities)” and “Visiting areas of outstanding beauty”. Two findings stand out from these *residual* and *tourist cultures* effects: one, for the same leisure activity the two effects might have an impact on individual *PEF*. Specifically, we find this evidence for “Visiting museums, cathedrals and other monuments” and “Visiting areas of outstanding beauty”. Some people wish to maintain the frequency of these activities both at the destination and at home (*residual culture*) and some others want to increase that frequency at the destination (*tourist culture*); and two, stemming from this previous conclusion and going a step further, note that within the same effect (*residual* or *tourist culture*) the influences of the frequency variables change. For example, focusing on the activity “Visiting museums, cathedrals and other monuments”, we observe that the behavior NH-FD has a bigger impact on the *PEF* than the behaviors NH-OD and OH-FD.

Necessary reference has to be made to the significantly negative parameters found for “jogging” and “cycling”. Even though people might wish to maintain or increase their frequency at destinations, they are more reluctant to pay extra and travel further to take part in these low implication activities that can be practiced anywhere. Regarding sociodemographics and accommodation type, we find that for middle and high incomers the negative effect of monetary effort is lower but there is a saturation point; neither age nor level of education show any influence on the *PEF*; owners of an apartment or villa tend not to choose to make a big effort to go to an alternative destination; and staying in family and friend’s house or a hotel show a greater *PEF*.

As managerial implications, the following can be mentioned: given that the existence of diversity of predisposition to make monetary and non-monetary efforts is confirmed, an important implication is that, knowing the individual by individual preference structure in terms of their response to effort allows managers to find the appropriate destination for each individual (though extreme, it could be possible), as well as the formation of segments with similar “effort predispositions”. For instance, they could segment the market focusing on the criterion “benefit sought” by identifying people who are predisposed to pay higher prices and travel further distances to go to and stay at a destination where they can do leisure activities different from those at their place of residence, or the criterion “participation frequency”,

looking for individuals who want to increase (while on vacation) the frequency with which they engage in the same leisure activities they do at home. Evidently, as these segments are more predisposed to spending more money because they can enjoy “novelty” or “increased frequency”, they represent rather interesting market segments.

Note that no reference to the price of the activity has been made. Apart from the fact that some of them are free, the focus is how interesting a market segment is for a destination that possesses a specific characteristic: an individual might want to visit an “area of outstanding beauty“, and we have found that this person is predisposed to make a bigger effort (longer distances and higher prices) to get to and stay there. “Staying there” entails consuming all kinds of goods and services (accommodation, food, etc.) at the destination and, as has been found, they are prepared to make an extra effort and can be offered higher-priced products. “Getting there” implies covering a certain distance, and again, they are prone to make an extra effort, that is, to travel longer. When it comes to the distance, attracting this kind of long-distance individuals can favor the global income of the destination as well, on account of the positive effect of distance on longer stays and higher expenditures at the destination (Silberman, 1985; Cai, 1999).

The analysis is based on the preferences of individual people; and preferences are key elements in the choice of destinations. Moreover, the estimation of the individual parameters of the conditional indirect utility function of each individual reveals his/her preference structure and allows the analyst to operate with precise information on each individual. At a time when people are increasingly demanding service provision adapted to their specific needs, knowledge of the profile of each individual allows organizations to offer the most suitable products. Identifying individuals with more or less *PEF* to get to and stay at destinations, with a specific emphasis on their capability to provide the person with a specific activity, is crucial for destination managers. In this way they can, first, know their clientele in terms of preferences (e.g. identify what individuals are pursuing), second, develop appropriate products with the right attributes (e.g. set up travel packages with destinations where individuals can do the pursued activities), third, set “fair” prices (without incurring opportunity costs) and fourth, design promotional campaigns directed at the targeted group with the stress on the appropriate traits.

To sum up, this knowledge is critical for destinations in which such activities might take place in order to implement their policies. As participation frequency (at and away from home) has an influence on *PEF*, the availability of certain leisure activities helps reduce the negative effect of price and distance as people driven by the opportunity to try an activity not

practiced at all throughout the year, to maintain or increase their participation frequency, and even to shift the activities during the vacation, might become less sensitive to price and distance. Consequently, knowing the monetary and non-monetary efforts a person is predisposed to make to get to and stay at a destination is crucial for pricing policies (e.g. determining the prices of the goods and services to be consumed at the destinations compared to other destinations) and segmentation strategies (as destination managers can direct their promotion campaign to long distance individuals on account of the fact that, in the end, they might provide more income).

Sirakaya and Woodside (2005) indicate that “decision behavior is the structure upon which marketing must hang” and, accordingly, a strong point of our approach is that with very little information it is possible to obtain the utility function for each tourist, since with the observation of the alternative individuals have chosen it is feasible to identify their preference structure; which, in turn, is a core component of decision behavior. To illustrate this fact, let us imagine that a travel agent is looking into their clients’ preferences on three ski resorts. The travel agent just has to observe the alternative chosen and define the attributes that characterize the three ski resorts (such as prices, distance, snow quality, number of pistes, etc.). Evidently, the resort chosen as well as the attributes of each alternative are known by the travel agent, so it is not even necessary to look to surveys to learn the factors that drive people to opt for a given resort. Mirroring this example with our empirical application, the travel agent is able to gauge the *PEF* as s/he knows the utility functions for each individual, i.e. the effect of price and distance for every person; and given the other attributes, s/he also knows why an individual is more attracted to a ski resort. These results would help travel agents to determine prices and identify segments with similar *PEFs*.

Among the limitations of this study are the following: one, its static character, as it is only based on the main annual vacation of an individual. Alternatively, an analysis of all vacations taken (main vacation, weekend trips etc.) in a year or over various years with panel data would allow us a better understanding of the determinants of the choice, and the accuracy of sensitivities would be improved; two, the field of study is Spain, and it only studies domestic travel. It would be useful if the results were reinforced by applications on other geographical areas in order to be able to generalize the conclusions; three, the lack of available information on certain variables, such as psychological distance and individual perceptions of the attributes of the destinations, or the lack of information on more activities. Their inclusion could help increase the model’s explanatory power and clearly represents a future research need; and four, we do not consider a specific destination, rather any of the

destinations chosen by Spanish tourists. This could impede knowledge of the impact of the characteristic factors of a particular destination. However, this way of working allows us to find the influence of different dimensions in a general manner.

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Appendix. Applying the Bayesian procedure to this empirical application

Following Train (2009), the likelihood L of observed choice y_n for an individual n conditional on parameters b and W (average and variance of β_n , respectively) is expressed as:

$$L(y_n / b, W) = \frac{e^{X_n \beta_n}}{\sum_{j=1}^J e^{X_n \beta_n}} \phi(\beta_n / b, W)$$

where ϕ is the function of Normal distribution.

Let $k(b, W)$ be the prior distribution of parameters b and W . In general, it is assumed that b has a Normal distribution and W an Inverted Gamma distribution (or Inverted Wishart distribution in the case of multi-variation) of type $f(W) = W^{-(v+1)/2} e^{-vs/2W}$ with v being the degrees of freedom and s a parameter of scale to be estimated. Bayes' rule allows the analyst to obtain the posterior distribution $K(b, W, \beta_n / Y)$ for the group of choices Y of the sample individuals ($n=1, \dots, N$) as:

$$K(b, W, \beta_n / Y) \propto \prod_{n=1}^N L(y_n / b, W) k(b, W)$$

The posterior distribution has three parameter types to estimate $\theta = \{b, W, \beta_n\}$: the average b , the variance W , and the parameters of each individual β_n , from which we obtain the conditional indirect utility functions of each individual and, therefore, the preference structure. The estimation of the parameters is obtained through the following expression

$$\hat{\theta} = \int_{\theta} \theta \cdot K(\theta / Y) d\theta$$

This integral has no closed solution, which leads the researcher to use a procedure of estimation by simulation. Therefore, θ is estimated as the average of the simulated drawings. However, the posterior distribution $K(\theta / Y)$ does not always take the form of a known distribution from which one could immediately take draws. Train (2001), in the case of choice models, suggests the use of Monte Carlo Markov Chains; specifically, the sample simulation algorithms of Gibbs and Metropolis-Hasting for the draws of the density function (the parameter estimates for the model are based on 14,000 draws obtained after discarding the first 4,000 iterations (which are used for burn-in) and the prior values for parameters comes from the maximum likelihood sample estimates).

Table 1. Participation in each activity (percentage)

	NH-FD	NH-OD	NH-ND	OH-FD	OH-OD	OH-ND	FH-FD	FH-OD	FH-ND
Museums	4	10	41	7	12	3	5	2	17
Festivals	2	7	37	4	16	6	6	3	19
Walking	4	2	5	19	8	1	57	2	1
Reading/Listening	1	2	16	6	15	6	40	8	6
Photos/Videos	8	10	40	15	13	0	10	1	3
Cards	5	7	43	7	16	2	12	2	7
Amusement Parks	3	6	51	4	13	3	5	1	13
Jogging	2	4	76	1	6	1	5	1	4
Cycling	4	6	68	3	5	2	5	1	5
Mountain/Trekking	3	6	77	3	4	0	3	0	3
Hunting/Fishing	1	2	88	1	2	0	2	0	2
Ball sports	2	3	77	2	5	2	5	1	4
Disco	2	7	30	9	23	1	18	3	6
Tradit. Activities	2	7	56	4	15	1	4	1	9
Natural Beauty	8	12	23	18	19	1	14	1	5

Table 2. Effects of participation–frequency scenarios on effort predisposition
(Standard error in parenthesis)

	Museums	Festivals	Walking	Reading Listening	Photos Videos	Cards	Amusement Parks
NH-FD	0.315 ^a (0.066)	0.232 ^c (0.111)	0.008 (0.087)	0.013 (0.135)	0.191 ^a (0.052)	-0.101 (0.065)	0.172 ^c (0.079)
NH-OD	0.152 ^a (0.047)	0.047 (0.056)	-0.003 (0.111)	-0.142 (0.111)	0.056 (0.050)	0.021 (0.055)	0.016 (0.058)
OH-FD	0.159 ^b (0.054)	0.068 (0.074)	-0.081 (0.069)	-0.059 (0.070)	0.112 ^b (0.043)	-0.089 (0.057)	-0.031 (0.068)
OH-OD	0.188 ^a (0.046)	0.074 (0.042)	-0.058 (0.077)	0.006 (0.050)	-0.040 (0.046)	-0.051 (0.039)	-0.019 (0.044)
OH-ND	0.044 (0.085)	0.012 (0.063)	-0.273 (0.179)	0.142 ^c (0.068)	0.190 (0.192)	0.053 (0.098)	0.081 (0.071)
FH-FD	0.207 ^a (0.064)	-0.001 (0.059)	-0.041 (0.064)	-0.005 (0.043)	0.043 (0.048)	-0.067 (0.044)	0.039 (0.062)
FH-OD	0.125 (0.099)	0.101 (0.076)	0.047 (0.110)	-0.036 (0.061)	0.024 (0.206)	0.126 (0.099)	-0.143 (0.108)
FH-ND	-0.053 (0.039)	0.037 (0.040)	-0.034 (0.153)	0.124 ^c (0.062)	0.108 (0.078)	0.112 ^c (0.056)	0.086 ^c (0.043)
Income 2	0.040 (0.037)	0.042 (0.038)	0.046 (0.038)	0.043 (0.038)	0.038 (0.038)	0.050 (0.038)	0.043 (0.038)
Income 3	0.115 ^b (0.045)	0.127 ^b (0.046)	0.130 ^b (0.046)	0.130 ^b (0.046)	0.114 ^b (0.046)	0.144 ^b (0.046)	0.129 ^b (0.045)
Income 4	0.245 ^a (0.073)	0.234 ^b (0.074)	0.244 ^a (0.074)	0.248 ^a (0.074)	0.237 ^a (0.073)	0.258 ^a (0.073)	0.236 ^a (0.073)
Income 5	-0.157 (0.208)	-0.130 (0.211)	-0.148 (0.211)	-0.122 (0.210)	-0.183 (0.210)	-0.081 (0.211)	-0.169 (0.211)
Age	-0.001 (0.001)	0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Education 2	-0.065 (0.036)	-0.049 (0.037)	-0.052 (0.036)	-0.046 (0.037)	-0.055 (0.036)	-0.043 (0.036)	-0.046 (0.036)
Education 3	-0.056 (0.042)	-0.023 (0.043)	-0.025 (0.042)	-0.018 (0.043)	-0.028 (0.042)	-0.035 (0.042)	-0.022 (0.042)
Own apart. Villa	-0.106 ^b (0.040)	-0.138 ^a (0.041)	-0.137 ^a (0.040)	-0.129 ^a (0.040)	-0.111 ^b (0.041)	-0.136 ^a (0.040)	-0.133 ^a (0.040)
Friend/Fam. house	0.106 ^b (0.037)	0.088 ^b (0.038)	0.085 ^c (0.038)	0.088 ^b (0.038)	0.099 ^b (0.038)	0.084 ^c (0.038)	0.090 ^c (0.038)
Hotel	0.232 ^a (0.041)	0.262 ^a (0.042)	0.273 ^a (0.042)	0.262 ^a (0.042)	0.252 ^a (0.042)	0.248 ^a (0.042)	0.270 ^a (0.042)
Constant	-0.667 ^a (0.065)	-0.663 ^a (0.070)	-0.569 ^a (0.091)	-0.622 ^a (0.074)	-0.676 ^a (0.069)	-0.608 ^a (0.068)	-0.646 ^a (0.069)
R-squared	0.120	0.088	0.086	0.092	0.097	0.093	0.091
F-statistic	10.518 ^a	7.462 ^a	7.290 ^a	7.855 ^a	8.308 ^a	7.912 ^a	7.736 ^a

a=prob<0.1%; b=prob<1%; c=prob<5%

Table 2. (Cont.)

	Jogging	Cycling	Mountain. Trekking	Hunting Fishing	Ball sports	Disco	Tradit. Activities	Natural beauty
NH-FD	-0.106 (0.103)	-0.238 ^a (0.070)	0.130 (0.077)	-0.103 (0.142)	-0.089 (0.110)	0.298 ^a (0.091)	0.120 (0.099)	0.170 ^b (0.053)
NH-OD	-0.172 ^b (0.080)	-0.109 (0.062)	0.046 (0.058)	-0.070 (0.083)	-0.044 (0.077)	0.077 (0.057)	0.102 (0.053)	0.137 ^b (0.050)
OH-FD	-0.036 (0.109)	-0.095 (0.077)	0.196 ^c (0.080)	-0.084 (0.117)	-0.071 (0.096)	0.054 (0.055)	0.174 ^b (0.075)	0.227 ^a (0.043)
OH-OD	-0.074 (0.060)	-0.099 (0.060)	0.027 (0.073)	-0.104 (0.081)	-0.069 (0.063)	0.055 (0.040)	0.054 (0.039)	0.027 (0.042)
OH-ND	-0.104 (0.110)	-0.026 (0.083)	0.159 (0.169)	0.169 (0.191)	0.072 (0.098)	-0.045 (0.139)	0.050 (0.115)	0.176 (0.154)
FH-FD	-0.126 ^b (0.060)	-0.158 ^b (0.060)	-0.089 (0.080)	-0.180 (0.097)	-0.113 (0.063)	0.041 (0.049)	0.043 (0.068)	0.120 ^b (0.045)
FH-OD	0.057 (0.142)	-0.265 (0.141)	0.067 (0.208)	-0.479 (0.292)	-0.195 (0.137)	0.066 (0.088)	0.097 (0.124)	0.064 (0.132)
FH-ND	-0.003 (0.065)	0.169 ^b (0.064)	0.085 (0.073)	0.016 (0.089)	0.075 (0.069)	-0.032 (0.064)	0.021 (0.048)	-0.048 (0.067)
Income 2	0.044 (0.038)	0.046 (0.037)	0.044 (0.038)	0.050 (0.038)	0.042 (0.038)	0.040 (0.038)	0.041 (0.038)	0.040 (0.037)
Income 3	0.124 ^b (0.046)	0.133 ^b (0.045)	0.130 ^b (0.045)	0.137 ^b (0.046)	0.133 ^b (0.046)	0.119 ^b (0.046)	0.123 ^b (0.046)	0.113 ^c (0.045)
Income 4	0.242 ^a (0.073)	0.273 ^a (0.073)	0.242 ^a (0.074)	0.256 ^a (0.074)	0.247 ^a (0.074)	0.231 ^b (0.073)	0.238 ^a (0.074)	0.225 ^b (0.073)
Income 5	-0.128 (0.211)	-0.094 (0.209)	-0.122 (0.211)	-0.080 (0.212)	-0.067 (0.213)	-0.142 (0.211)	-0.132 (0.211)	-0.082 (0.208)
Age	-0.001 (0.001)	-0.002 (0.001)	0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	0.000 (0.001)	-0.001 (0.001)	0.000 (0.001)
Education 2	-0.040 (0.036)	-0.034 (0.036)	-0.052 (0.036)	-0.047 (0.036)	-0.042 (0.036)	-0.045 (0.036)	-0.052 (0.036)	-0.058 (0.036)
Education 3	-0.018 (0.042)	-0.019 (0.041)	-0.032 (0.042)	-0.029 (0.042)	-0.028 (0.042)	-0.024 (0.042)	-0.028 (0.042)	-0.039 (0.042)
Own apart. villa	-0.146 ^a (0.041)	-0.119 ^b (0.040)	-0.135 ^a (0.041)	-0.135 ^a (0.040)	-0.137 ^a (0.040)	-0.135 ^a (0.040)	-0.135 ^a (0.041)	-0.115 ^b (0.040)
Friend/Fam. house	0.077 ^c (0.038)	0.084 ^b (0.037)	0.089 ^c (0.038)	0.085 ^c (0.038)	0.082 ^c (0.038)	0.081 ^c (0.038)	0.089 ^b (0.038)	0.098 ^b (0.037)
Hotel	0.262 ^a (0.042)	0.247 ^a (0.041)	0.271 ^a (0.042)	0.268 ^a (0.042)	0.263 ^a (0.042)	0.256 ^a (0.042)	0.271 ^a (0.042)	0.252 ^a (0.041)
Constant	-0.574 ^a (0.068)	-0.566 ^a (0.067)	-0.651 ^a (0.066)	-0.608 ^a (0.065)	-0.587 ^a (0.069)	-0.672 ^a (0.076)	-0.645 ^a (0.066)	-0.719 ^a (0.069)
R-squared	0.090	0.103	0.090	0.089	0.088	0.092	0.089	0.109
F-statistic	7.609 ^a	8.929 ^a	7.689 ^a	7.539 ^a	7.511 ^a	7.797 ^a	7.576 ^a	9.485 ^a

a=prob<0.1%; b=prob<1%; c=prob<5%

Figure 1. Determinants of individual predisposition to effort

