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Sequential choice behavior: Going on vacation and type of destination

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Abstract

The literature of destination choice has so far studied multi-stage decision making processes that are more representative of the general choice behavior of tourists (e.g. going on vacation, going abroad, and destination country). Alternatively, this study proposes a multi-stage decision process to the choice of tourist destination types (going on vacation, coastal character, and urban character of the destination) as these choice sets are more idiosyncratic to tourists who prefer a specific type of tourist destination (e.g. Spain with clear coastal and inland variations). In order to test this multi-stage choice process as well as the sequential order of both decisions, coastal character and urban character, the current study analyses decision processes vs. different hierarchical multi-stage processes (going on vacation and coastal character preceding urban character; and going on vacation and urban character preceding coastal character). The empirical findings support the existence of a multi-stage choice process where coastal character precedes the urban character destination choice. The main implication of these findings is that, given the limited human analytical capability, a hierarchical choice process can be useful to handle the information overload and the complexity inherent to the destination type choice.

Keywords: Tourist behavior; Multi-stage decision process; Destination type choice; Random Parameter Logit Model

1. Introduction

Interest in the way in which individuals decide on purchase alternatives (product, brand, etc.) has made the analysis of choice and preference formation one of the most studied areas of marketing in recent years (Zwerina, 1997). Contributions to this are the development of probabilistic choice models derived from the Random Utility Theory, the extension of the Neoclassical Economic Theory proposed by Lancaster (1966) and the development of psychological theories focusing on the consumer.

In general, the study of tourist choice has been conducted from multiple perspectives due to the multiple sub-decisions involved in the decision making process (Fesenmaier & Jeng, 2000). If the focus is on the basic choice made by tourists, i.e. to take a vacation, one finds that the literature of probabilistic choice usually treats this as a single decision and applies Binomial Logit Models (e.g. Hay & Mcconnell, 1979; Walsh, John, McKean, & Hof, 1992). If the focus is on the choice of tourist destination, the authors also consider the single decision of selecting one destination from several alternatives, which are defined in terms of administrative units (e.g. countries Haider & Ewing, 1990; Morley, 1994a, 1994b), macro destinations (through the aggregation of geographical areas, in Siderelis & Moore, 1998) and destination types (such as regional or national natural parks, in Adamowicz, Louviere, & Williams, 1994; Borgers, Van Der Heijden, & Timmermans, 1989; Dubin, 1998; Fesenmaier, 1988; Morey, Shaw, & Rowe, 1991; Perdue, 1986; Riera, 2000; Schroeder & Louviere, 1999; Train, 1998; Wennergren & Nielsen, 1968). These studies apply Multinomial Logit Models (MLMs).

However, Eymann and Ronning (1992) and Eymann (1995) believe that tourist choice is a more complex process which can be separated into various stages incorporating the following decisions, which are more representative of the general choice behavior of tourists: to take a vacation (obviously, the decision to leave the usual place of residence during the vacation period constitutes the first choice made by tourists (Morley, 1992; Seddighi & Theocharous,

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2002)), to go abroad and choice of destination country. To test this process, Eymann and Ronning (1992) and Eymann (1995) use a Nested Logit (NL) Model because it resolves the problem of the assumption of Independence from Irrelevant Alternatives (IIA) and is therefore more suitable for the analysis of multi-choice decisions.[1]

Following this multi-stage approach, we propose that the decisions to go on vacation and the type of destination in terms of coastal character (coastal vs. inland) and urban character (village vs. city) are nested and non-independent decisions. Therefore, we assume that tourists make three sequential decisions before arriving at their final choice: the decision to go on vacation, the coastal–inland decision, and the decision over the urban character of the destination.

In contrast to previous studies of tourists' destination choice, in the second and third stage of our analysis, the formation of the choice sets as the types of tourist destinations (coastal vs. inland and village vs. city) seems to be less representative of the general choice behavior of tourists, but more idiosyncratic to those who prefer a specific type of tourist destination: for example, Spain with clear coastal and inland variations. The idea is that, if tourists want to travel to a country a great distance away and that is endorsed mainly by cultural heritage, they might not mind if the destination is coastal or inland. In this sense, our analysis of the types of tourist destinations (coastal vs. inland and village vs. city) refers more to the regional, than national, level of tourist traveling behavior. Moreover, given that these types of destinations could be strongly linked to the purpose of their visits, our paper considers how the purpose of the visit (motivation of travel) of tourists determines their destination choices.

Finally, the underlying outline in our hierarchical perspective of the choice process of destination (going on vacation, coastal vs. inland, and village vs. city) is supported by the idea that people have a limited analytical capacity (Simon, 1955). People often decompose a complex decision into a hierarchical process and adopt a small set of critical variables to monitor at each level (Steinbruner, 1974), making the decision process more manageable. Specifically, the hierarchical process is suitable for the destination type choice because of the dramatic differences that exist among various destination types and among the criteria of choice at each level. Thus, circumstances that are suitable for a coastal destination differ dramatically from those that call for an inland city. They are too different to be compared at the same level. Consequently, a sequential nested choice process can help tourists to gain a better understanding of complex destination choice behavior. However, we do not know the sequence of the two destination decisions (see Fig. 1).

In virtue of the above, the objective of this study is to test different destination type choice processes: with independent decisions and with nested and non-independent decisions. To do this, the methodology estimates and compares the following models, where the first stage is the decision to go on vacation: (i) two separated two-stage models that include the processes: going on vacation (first stage) and coastal–inland (second stage) decisions, and going on vacation (first stage) and city–village (second stage) decisions, respectively; (ii) a two-stage model with going on vacation (first stage) and the four destination type choices (simultaneously) in the second stage (coastal, inland, city, and village); (iii) two, three-stage models, one with going on vacation (first stage), then the coastal–inland decision (second stage) before the city–village decision (third stage), and another with going on vacation (first stage), then the city–village decision (second stage) before the coastal–inland decision (third stage).

Also, we test the determinant factors for these decision processes in terms of price of destination and the interactions "income × prices" and "motivation of travel × prices". To test these multi-stage decision making processes we propose a Random Coefficient Multinomial Logit (RCL) Model to find the correlations structure of the non-independent alternatives. As shown later (see Section 3.1), this model avoids the estimation problems of the NL and can represent any correlation among alternatives. In actual fact, McFadden and Train (2000) have demonstrated that any random utility model can be approximated by a RCL Model. Moreover, the RCL Model also finds the heterogeneity between tourist preferences by assuming that the coefficients of the variables vary among tourists.

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[1]This property implies that the ratio of probabilities between two alternatives i and j is independent of the choice set that contains them. That is, given two choice sets, S and T so that $S \subseteq T$, then

$$\frac{P_S(i)}{P_S(j)} = \frac{P_T(i)}{P_T(j)}.$$

However, this property sometimes leads to results that are against basic logic, as in the well-known Debreu (1960) "red-bus and blue-bus" paradox: the inclusion of a bus with a different color to the existing one has an influence on the probability of choosing a third alternative, say automobile. Basically, this property implies that valid choice sets are those whose alternatives are equally similar or dissimilar, in such a way that the inclusion or exclusion of one of them would result in the same proportional change in the probability of the other alternatives. However, in a real context with different levels of similarity or dissimilarity this proportional change is not very realistic. Let us assume an individual is going to stay in a resort, and may choose between a campsite and a hotel. If a new hotel with the same facilities as the existing one is also included, the Multinomial Logit Model will, no matter their choice probabilities, subtract the same proportion from each probability. However, intuition says that the probability of choosing a campsite should remain the same. Assuming that the original probabilities are 1/2, after adding the third alternative (the new hotel), the Multinomial Logit Model gives a probability equal to 1/3 for each alternative. From a statistical point of view, this inconsistency is due to the violation of the assumption of independence of the random term: in the previous example, the error sources for the two hotels are practically the same, resulting in highly correlated error terms; suffice it to say, the non-observable attributes of these two alternatives are very similar and, in consequence, the random components are not independent. The Nested Logit Model allows error components to be correlated; however, as detailed in Section 3.1, its estimation shows important problems.

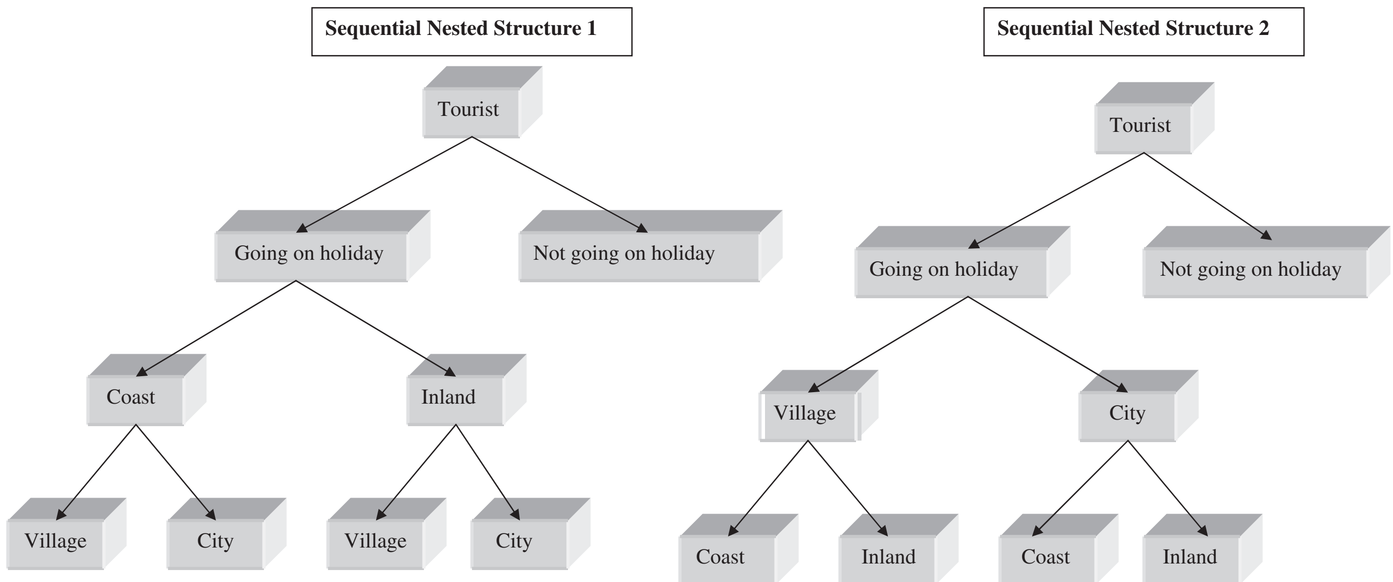

Fig. 1. Alternative sequential nested structures.

The empirical application is carried out in Spain[2] on a sample of 2491 individuals.

In order to fulfill this objective, the remainder of the paper is arranged as follows. Section 2 analyses the superiority of a sequential multi-stage choice process of tourist destination type over a single-stage choice process. Section 3 covers the design of the investigation; describing the methodology, sample, and variables used. Section 4 presents the results obtained and their discussion. Finally, Section 5 summarizes the conclusions.

2. Multi-stage process of destination type choice

Basically, the previous literature has assumed that destination choice is a single-stage rational analytic decision made by tourists (e.g. Haider & Ewing, 1990; Morley, 1994a, 1994b; Wennergren & Nielsen, 1968). Following Kumar and Subramaniam (1997), a single-stage rational analytic decision is characterized by: (i) people are assumed to consider all the destinations at the same point in time, and (ii) people are assumed to consider all the factors at the same point in time; hence, all the factors have the same level of relevance for all the destination choices. However, according to Simon (1955), the human brain does not always try to obtain a rational solution to a problem by considering all the alternatives and optimizing, since it has a limited analytical capability. Hence, when confronted with a complex problem, the ''limited'' human brain ''satisfices'' rather than optimizes (Kumar & Subramaniam, 1997). Steinbruner (1974) used the notion of ''satisficing'' and models cognitive processes to propose the ''cybernetic'' model of decision-making. The ''cybernetic'' decision maker decomposes the problem and the environment into stable subsystems. The variety inherent in the decision problem is eliminated by ignoring it. Only a small set of critical variables are monitored and the final decision is made by a sequential process based on some heuristics.

Specifically, according to Kumar and Subramaniam (1997) and Pan and Tse (2000), given that there are multiple types of destination, some of them are more similar to one another than others, and therefore, do not compete with each other at the same level. In consequence, the choice of destination type could follow a hierarchical process to reduce the uncertainty and complexity in the decision task: (i) tourists would first structure various destination types into a multi-level hierarchy; and (ii) tourists would define a set of evaluation criteria for each level, keeping in mind that tourists consider only a few critical factors at each level of the hierarchy, and that tourists consider different factors at different levels of the hierarchy.

This hierarchical (or ''cybernetic'') strategy of decision making is suggested in the works of Eymann and Ronning (1992) and Eymann (1995), who propose hierarchies more representative of the general choice behavior of tourists. Thus, Eymann and Ronning (1992) consider a natural hierarchy in destination choice, which distinguishes a first stage that differentiates vacation vs. no vacation; a second

[2]The development of tourist products as alternatives to the sun, sea and sand type vacation is largely found in ''inland'' areas of Spain, as it allows a destination typically known for its coast to diversify its ''product portfolio'' as well as an inland economy to be revitalized. Moreover, the application of city marketing in the 90s has led to the promotion of cities in Spain to attract tourists (Elizágarate, 2003). In this sense, given the jeopardizing saturation issue, new tourist product types and their differentiating strategies have resulted in new types of demand. In fact, the heterogeneity of tourist demand derived from different motivations as well as the existence of distinct products has led to an increased tendency for tourists to look for alternatives to the sun, sea, and sand type vacation in Spain (Fuentes, 1995).

stage, where vacation modes can be classified as domestic and foreign; and a third stage where tourists choose a foreign country. Likewise, Eymann and Ronning (1997) detect a hierarchy which distinguishes: a first stage that differentiates vacation vs. no vacation; a second stage, where vacation modes can be classified as vacation purposes (''adventure, sightseeing, or studying'', ''amusement'', ''relaxing'', or ''beach life''); and a third stage where tourists choose geographical regions.

Alternatively, we propose that destination choice can be examined from a hierarchical perspective, where ''going on vacation'', ''coastal vs. inland'', and ''village vs. city'' are nested and non-independent decisions. Our proposal considers, in the second and third stages, the formation of the choice sets as the types of tourist destination (coastal vs. inland and village vs. city). This structure seems more idiosyncratic to those who prefer a specific type of tourist destination (as indicated earlier, Spain with clear coastal and inland variations). Furthermore, in line with Kumar and Subramaniam (1997), a hierarchical process will be suitable for these choices because of the important differences that exist among various destination types and among the criteria of choice at each level (coastal vs. inland and city vs. village). Accordingly, circumstances that are suitable for a coastal destination are different from those related to an inland city.

Regarding the superiority of this multi-stage decision process, we highlight the following aspects: initially, single-stage rational analytic decision strategies are regarded as most likely to yield correct or optimal decisions (by considering all the alternatives and optimizing). Therefore, in this sense, the single-stage rational analytic decision strategy would be superior to the hierarchical strategy. However, the optimality of the solution using the single-stage rational analytic strategy is dependent on the amount and the quality of the information available. If there are too many factors to be considered and if obtaining reliable and accurate information is too difficult and expensive, then people will use a hierarchical strategy to simplify the structure of the decision problem (Kumar & Subramaniam, 1997).

First, the literature has proposed numerous factors to explain the destination choice (e.g. destination attributes and personal characteristics), which foment a hierarchical decision making process. Second, problems with information quality, as some tourists use information that is subject to the usual problems of data integrity and reliability associated with the sources, which foments a hierarchical decision making process. Many other tourists do not have the time or the resources to collect extensive information on destinations, and they may use the hierarchical strategy for their destination choice to reduce uncertainty to a certain manageable level.

To sum up, a decision made by a tourist depends on characteristics of the decision task, such as the number of factors that have to be taken into consideration in order to make the decision and expectations about the quality of the information available to make the decision. If a tourist faces a decision with a few alternatives/determinant factors and with reliable information, the tourist is facing a simple decision and he uses a single-stage decision process. However, if the tourist faces a very complex decision with a high number of alternatives/determinant factors and with non-reliable information, then, the tourist will use hierarchical decision strategies that are less formal and transparent but easier to use. Keeping the above in mind, these aspects characterize the destination type decisions (coastal and urban character), and hence we propose:

Hypothesis 1. A hierarchical decision process is not superior to a single-stage process in the choice of the types of destination ''coastal, inland, village and city''.[3]

In spite of the fact, we consider the coastal and urban character of destination as two separated and sequential decisions which tourists have to face, we do not know the sequential order. Keeping in mind that this is actually an empirical question, our paper will test it.

3. Research design

3.1. Methodology

Our study shares with previous literature (e.g. Eymann & Ronning, 1992, 1997) a decision process where the first stage is the decision to go on vacation, but is different in that after this first stage it tests a hierarchical decision process of destination type. To do so, we estimate the following models: first, we estimate two separated two-stage models (using RCL Models), one with a second stage that includes the decision on the coastal character of destination (coastal vs. inland), and another that includes the urban character choice (village vs. city). Second, a two-stage model with four different (simultaneously considered) destination types (coastal, inland, city, and village) in the second stage, using an RCL Model. Third, a three-stage model with going on vacation (first stage), and then coastal character before the urban character decision: the choice in the second stage is between coast and inland. Tourists who go on vacation and choose coast in the second stage go on to a third stage in which they decide between a coastal village and a coastal city. Tourists who go on vacation and choose inland in the second stage go on to a third stage in which they choose between an inland village and an inland city. Finally, we estimate another three-stage model with going on vacation (first stage), and with urban decision before the coastal decision. The choice in the second stage is between village and city. Tourists who take a vacation and choose village in the second stage go on to a third stage in which they choose between a coastal village and an inland village. Tourists who take a vacation and choose city in the second stage go on to a third stage in which they

[3]The null hypothesis is stated negatively as the statistical procedure is designed to reject it.

decide between a coastal city and an inland city. These three-stage models are also estimated with RCL Models.

Specifically, we propose RCL Models as an alternative to the more traditional multinomial model because of the following reasons: (i) their ability to deal with the unobserved heterogeneity of tourists, by assuming that the coefficients of the variables vary among tourists; and (ii) their flexibility, which allows representation of different correlation patterns among alternatives.

With regard to the first point, it is highly unlikely that the whole tourist sample has the same set of parameter values, which implies the need to consider unobserved heterogeneity of tourists in parameter estimations. Hence, the utility of alternative i for tourist t is defined as $U_{it} = X_{it}\beta_t + \varepsilon_{it}$ where X_{it} is a vector that represents the attributes of the destination and the characteristics of tourists; β_t is the vector of coefficients of these attributes of destinations and characteristics for each individual t, which represent personal tastes (these coefficients β_t vary over decision makers with density $f(\beta)$); and ε_{it} is a random term which is iid extreme value. This specification of the RCL Model differs from the traditional Logit Model in which β is fixed. In fact, if parameter β_t were observable, the choice probability of alternative i conditional on parameter β_t would be given by this expression:

$$P_t\left(\frac{i}{\beta_t}\right) = \frac{\exp\left\{\sum_{h=1}^{H} x_{ih}\beta_{th}\right\}}{\sum_{j=1}^{J} \exp\left\{\sum_{h=1}^{H} x_{jh}\beta_{th}\right\}}, \quad (1)$$

which is the standard Logit Model. However, as it is not observable, the non-conditional probability is the integral of $P_t(i/\beta_t)$ over all the possible values of β_t:

$$P_i = \int_{\beta_t} \frac{\exp\left\{\sum_{h=1}^{H} x_{ih}\beta_{th}\right\}}{\sum_{j=1}^{J} \exp\left\{\sum_{h=1}^{H} x_{jh}\beta_{th}\right\}} \phi\left(\frac{\beta_t}{b}, W\right) \mathrm{d}\beta_t, \quad (2)$$

where J is the number of alternatives and ϕ is the density function of β_t, assuming that β_t is distributed as a Normal with average b and variance W.[4]

With regard to the second point, the flexibility of the RCL Model allows one to represent different correlation patterns among non-independent alternatives. This flexibility allows us to avoid the assumption of IIA. In fact, it does not exhibit the restrictive substitution patterns of the traditional Logit Model, as the ratio of probabilities P_{ti}/P_{tj} depends on all the data, including the attributes of alternatives other than i and j (see Formula (2)).

Additionally, the flexibility of the RCL Model also allows representation of any random utility model (McFadden & Train, 2000). In particular, an RCL Model can approximate a NL, which, to date, has been used in the analysis of multi-stage tourist choice processes (e.g. Eymann, 1995; Eymann & Ronning, 1992). It is important to note that the NL Model is not widely used because of the computational problems arising from maximum likelihood estimations using a large database and a large number of alternatives. The maximization of the likelihood function can be difficult as it is not always fully concave. In actual fact, in Eymann and Ronning (1992) and Eymann (1995) the NL Model is estimated with the sequential technique proposed by McFadden (1981) in order to avoid these problems. However, it is also important to stress that sequential estimation results in consistent but not efficient estimators (Train, 2003, p. 89). For these reasons, we use an RCL—which is not affected by these estimation problems[5]—to reflect a nested structure. Following Browstone and Train (1999), the RCL Model is analogous to an NL Model in that it groups the alternatives into nests by including a dummy variable in the utility function which indicates which nest an alternative belongs to. The presence of a common random parameter for alternatives in the same nest allows us to obtain a co-variance matrix with elements distinct from zero outside the diagonal,[6] obtaining a similar correlation pattern to that of an LN model.

3.2. Sample, data, and variables

To reach our proposed objectives, we have used information on tourist choice behavior obtained from the national survey "Spanish Holidaying Behavior (III)", which was carried out by the Spanish Centre for Sociological Research. This is due to the following reasons: (i) the availability of information on individual tourist destination choice behavior in terms of the types of destination "coastal–inland" and "village–city"; and (ii) The survey is directed at a sample (over 18 years old) obtained in origin, which avoids the characteristic selection bias of destination collected samples, leading to a more precise analysis of tourist demand. The sample is taken by using multi-stage sampling, stratified by conglomerations, with proportional selection of primary units—cities and of

[4]A significant variance estimation implies the superiority of the Random Coefficients Logit Model over the Multinomial Logit Model (Train, 2003).

[5]Precisely, estimation advantages have led the RCL model to be used over other models such as Probit Models.

[6]Intuitively, let us assume the utility function $U_{ti} = \beta_{xt} + \mu_t z_i + \varepsilon_{ti}$, where μ is a vector of random terms with zero mean and variance σ_μ^2, and ε_{ti} is iid extreme value with variance σ_ε^2. The unobserved random portion of utility is $\eta_i = \mu_t z_i + \varepsilon_{ti}$, which can readily be correlated over alternatives depending on the specifications of z_i. For instance, four hypothetical destinations A, B, C, and D have the following utility functions:

$$U_{t\text{Destination A}} = \beta x_t + \mu_t + \varepsilon_{t\text{A}},$$
$$U_{t\text{Destination B}} = \beta x_t + \mu_t + \varepsilon_{t\text{B}},$$
$$U_{t\text{Destination C}} = \beta x_t + \varepsilon_{t\text{C}},$$
$$U_{t\text{Destination D}} = \beta x_t + \varepsilon_{t\text{D}}.$$

If destinations A and B are correlated, we obtain that $\mathrm{Cov}(\eta_\text{A}, \eta_\text{B}) = E(\mu_t + \varepsilon_{t\text{A}})(\mu_t + \varepsilon_{t\text{B}}) = \sigma_\mu^2$, thereby avoiding the restrictive assumption of IIA and permitting the representation of correlation patterns among non-independent alternatives. Analogously, in the same vein, it is easy to see that we can specify a variable z_i accompanying an attribute variable x_t to reach the same purpose.

secondary units—censorial sections. The information was collected through personal, at home, interviews with a structured questionnaire. The sample size is of 2491 individuals, which represents a sample error of $\pm 2.00\%$ for a confidence level of 95.5%.

In order to make the choice models operative, we will define the variables used and identify the dependent and independent variables.

3.2.1. Dependent variables

To test the three-stage models and the two-stage model (where the second stage simultaneously includes the selection of the four types of destinations), a polychotomous variable is used, with four alternative destination types: (i) coastal village, which takes a value of 1 when this combination is chosen and 0 if not; (ii) coastal city, where a value of 1 shows that it has been chosen and 0 if not; (iii) inland village, which takes a value of 1 when chosen and 0 if not; (iv) inland city, where a value of 1 shows that it has been chosen and 0 if not. To test the two separated two-stage models, which include a simple second stage, we use two dummy variables: (i) the coastal character decision, where 1 is coast and 0 is inland; and (ii) the urban character decision, where 1 is village and 0 is city. Note that we add to each model the alternative "not going on vacation" (first stage).

3.2.2. Independent variables

With regard to the determinant factors of these nested tourist decisions, we rely on: (i) Neoclassical Economic Theory—which suggests that the major determinants for tourism are income of tourists and the prices of destinations; (ii) Lancaster's characteristic approach, through which the individual obtains utility by means of the attributes of the product—this extension to the Economic Theory is crucial for the development of Random Utility Models as the attributes of an alternative are explicitly introduced into the utility function; and (iii) Psychological theories. According to Grundey (2006), economists identify three main factors that affect consumption: prices, income, and personal tastes. However, traditional economists do not consider the latter as they do not regard it as part of the realm of economics. This author indicates that psychology is interested, among other things, in learning how different stimulating elements influence the personal decision process, with one of the main topics being the analysis of motivations.

Accordingly, we consider consumer prices of destinations and the interaction between them and both, income and purpose of visit (motivations of travel). Despite the fact that these dimensions have been widely used in tourist demand studies (Vanegas & Croes, 2000), we find no studies that cover the differentiated and interactive effect that these dimensions can have on destination types.

3.2.2.1. Income. Income is a personal budget restriction which determines the spending capacity of individuals and it is taken into account in order to maximize utility (Crawford & Godbey, 1987). For this dimension, we consider different income levels in order to observe the possible non-linearity of their effect (Eymann & Ronning, 1997). Monthly income levels are placed into the following categories: *Income 1*, up to €600 per month; *Income 2*, between €600 and 1200; *Income 3*, between €1200 and 2400; *Income 4*, between €2400 and 4500; and *Income 5*, more than €4500. Income 1 is taken as the base reference.

3.2.2.2. Motivations of travel. The Theory of Consumer Behavior considers that motivations represent individual internal forces that lead to action (Shiffman & Kanuk, 2005). It is important to stress that the selection of a certain vacation destination type implies a desire for some kind of benefit. Because of this, motivations play a fundamental role in destination choice, as they constitute internal thoughts which lead tourist behavior towards certain ends (Nahab, 1975); in other words, they are the reasons why people take a vacation (Santos, 1983). We consider four motivations: (1) The search for "amusement", (2) tourist interest in "broadening culture", (3) tourist interest in "discovering new places", and (4) search for "tranquillity". The measurement of motivations is not simple as it involves analyzing internal aspects of the individual that are not directly observable by the analyst, who would have to make additional effort in the collection of information through databases and VALS (Value and Life Styles), LOV (List of Values), or AIO (Activities, Interests and Opinions) studies (Plog, 1994). However, certain one-dimensional indicators, which are also known as primary dimensions or life style parameters (Bigné, Font, & Andreu, 2000; Lehmann, 1993), allow the capture, as proxies, of the internal aspects of the individual. Along these lines, and following Eymann and Ronning (1997), motivations of the search for "amusement", interest "in broadening cultural knowledge", "discovering new places", and "tranquillity" are measured through dummy variables, where the value of one means that the individual considers this motivation when selecting a destination, and zero otherwise.

3.2.2.3. Destination prices. Literature measures the prices of a destination with different indicators. For example, costs at the destination in absolute quantities or in terms relative to individual tourist income. However, the difficulties tourists have in knowing, *a priori*, all costs (e.g. goods bought at destination) and the exact cost of each component, oblige researchers to make simplifications in their empirical applications. Consequently, various authors propose the use of widely available proxies (compared to finding detailed price lists of products and services in each destination) to reflect the prices of a destination.

Morey et al. (1991), Dubin (1998), Train (1998), Riera (2000), Siderelis and Moore (1998), and Morley (1994a, 1994b) employ travel costs as a proxy of total price, as it is one of the highest costs to the tourist. However, the measurement of travel costs is not without problems. Travel costs are made up of the following three elements (Ewing, 1980): (i) the effective cost of traveling, measurable by the price paid on public transport (Dellaert, Borgers, & Timmermans, 1997; Morley 1994a, 1994b) or in a private vehicle; whether by unit of distance (e.g. 0.144 €/km (Riera, 2000) or 0.16 $/mile (Siderelis & Moore, 1998) or by total fuel costs (Train, 1998); (ii) the physical and psychological effort of realizing the journey, which, to date, has not been modeled given the impossibility of representing it in monetary terms and by unit of time (Ewing, 1980); and (iii) the opportunity costs of the time given to the journey (what an individual would earn if s/he spent the traveling time on money earning activities), whose measurement has been very limited in literature; using estimations from other fields (value of time spent traveling to work (Cesario, 1976; Edwards & Dennis, 1976) untrustworthy for tourism (Ewing, 1980; Goodwin, 1976); the result of regressing the number of journeys in a period on traveling time, salary, and cost of transport (Hof & Rosenthal, 1987); or arbitrarily fixing a value of 1/3 of salary per hour (Train, 1998)). Another indicator is the exchange rate of the destination country (Morley, 1994a, 1994b; Witt & Martin, 1987).

In our application, prices of destination types coastal–inland and village–city are measured using another indicator proposed by literature as a proxy: the specific cost index for each destination and individual of Eymann and Ronning (1997). This is obtained with the following two-stage procedure: (i) the regression model $G_{it} = \alpha_i + \beta_i X_{it}^{(1)} + \gamma_i X_t^{(2)} + \varepsilon_{it}$ is estimated, where G_{it} are the tourism costs of each individual t in each destination type, $X_{it}^{(1)}$ is the consumption intensity in the corresponding destination type i based on the number of days spent there, and $X_t^{(2)}$ are the socio-demographic characteristics of the individual (household size, marriage status, and education); and (ii) estimated parameters α_i, β_i, and γ_i are used to construct the specific cost indices SCI_{it} for each destination and individual using the expression[7]

$$SCI_{it} = \hat{\alpha}_i + \hat{\beta}_i \bar{X}_i^{(1)} + \hat{\gamma}_i X_t^{(2)},$$

Table 1
Descriptive statistics of the variables in the choice model

Variables	Mean/ proportion	Standard deviation
Dependent variable		
Coastal village choices	27.2	–
Coastal city choices	12.3	–
Inland village choices	18.1	–
Inland city choices	6.2	–
Not going on vacation	36.1	–
Independent variables		
Coastal village destination prices	740.79	169.02
Coastal city destination prices	835.74	300.21
Inland village destination prices	558.25	172.59
Inland city destination prices	566.41	124.04
Income 1	27.62	–
Income 2	48.13	–
Income 3	19.87	–
Income 4	3.97	–
Income 5	0.40	–
Amusement	6.46	–
Cultural interest	9.47	–
New places	34.00	–
Tranquility	20.00	–

[7]The variables used in the estimation of the SCI_{it} are the following: *Tourism expenditures* (G_{it}). The variable relative to tourist expenditures is found by a quantitative variable which represents costs incurred during the holiday. The explanatory variables ($X_{it}^{(1)}$ and $X_t^{(2)}$) of tourist expenses are described as follows: *Duration of stay* ($X_{it}^{(1)}$). If we consider that the number of days that a tourist spends away from the usual place of residence is "vacation quantity" (Silberman, 1985), we can assume a positive relationship between the duration of stay and expenditure incurred during the holiday: a greater number of days implies greater expenditure. Literature shows that the number of days spent at a certain destination (along with the number of tourists) has an influence on the level of income from tourist activity (Alegre & Pou, 2003). At an empirical level, the importance of length of stay to vacation expenditures has been shown in various studies (Agarwal & Yochum, 1999; Aguiló & Juaneda, 2000; Cannon & Ford, 2002; Seaton & Palmer, 1997). In our study, length of stay is represented by a quantitative variable of the number of days that

(*footnote continued*)
a tourist spends outside the usual place of residence, in line with Silberman (1985). *Household size* ($X_t^{(2)}$). With regard to the effect of household size on tourist expenditures, the effect is uncertain. While large families might be expected to spend more on recreation, expenditures on necessities would also increase, thus reducing the amount available for discretionary items such as recreation (Dardis, Derrick, Lehfeld, & Wolfe, 1981). However, this reasoning appears to be more closely linked to the initial decision to go on vacation taken by a family. With regard to the family size/spending relationship, it is logical to expect that, once the initial decision to go on vacation has been taken, larger families will spend more, given that the services required are greater. In our work, household size is measured by the number of people living in the house (Eymann & Ronning, 1992, 1997; Walsh et al., 1992). *Marital status* ($X_t^{(2)}$). Marital status is considered to be a determinant factor in vacation expenditure behavior (Cai, Hong, & Morrison, 1995). In particular, the tourist activities of both partners are complementary and non-substitutional. The spending pattern differences between married and single people may be attributable to the incremental expenses of the spouse on vacations taken as joint activities by husbands and wives (Cai, 1998). Along this line, Dardis et al. (1981), Cai et al. (1995), and Cai (1998, 1999) find a positive relationship between vacation expenditures and marriage. For this dimension, a dummy variable is created where married = 1 and single = 0 (Eymann & Ronning, 1997; Hay & Mcconnell, 1979). *Education* ($X_t^{(2)}$). According to Parker (1976), there is a positive link between the realization of tourist activities and an individual's educational level. Higher levels of education foment interest in tourism. Firstly, this 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). Moreover, Dardis et al. (1981), Cai et al. (1995), and Cai (1998, 1999) find a positive relationship between higher educational levels and greater tourist expenditures. This result can be explained by, firstly, the fact that people with higher educational qualifications usually find higher paid occupations, which allows them higher vacation budgets, and secondly, because people with higher educational levels take a greater number of foreign vacations (Bardón, 1991; I.E.T., 2000; S.G.T., 1993), which usually cost more than national

where $\bar{X}_i^{(1)}$ represents the average consumption of variable $X_i^{(1)}$ in destination i.[8]

Table 1 shows descriptive statistics of the dependent and independent variables. Note that the preferred alternative is ''Coastal village'' with 27.2%, despite of being in the top-two most expensive destinations (€835.74), followed by ''Inland village'' (18.1%) which is the cheapest destination (€558.25). An important aspect is that coastal destinations are priced higher than inland destinations, as is usual in Spain. Regarding the levels of income, nearly half of the sample belongs to Income 2 (48.13%) with monthly income levels between €600 and 1200, and there are very few people in Incomes 4 and 5, with more than €2400 per month. Concerning motivations, tourist interest in discovering new places and the search for tranquillity clearly outperform the other two percentages.

4. Results and discussion

This section tests alternative decision processes of destination types (coastal, inland, village, and city) through the estimation of several Logit-type models. The selection of the best model is made by employing likelihood-based information criteria to find the optimum structure. In particular, the study uses the Akaike and Schwarz Information Criteria, defined as $\text{AIC} = -2\log(L_{\text{ML}})/T - 2k/T$ and $\text{SIC} = -2\log(L_{\text{ML}})/T - k\log(T)/T$, respectively, in which L_{ML} represents the likelihood function of the model evaluated in the ML estimate, T is the number of observations, and k the number of parameters in the model. These measures, apart from considering the likelihood function, take the parsimony of the model into account by adjusting for the number of parameters, which are considered as a penalty. The model with the lowest value will be preferred.

Table 2 shows each model's fit[9] for the decision processes proposed: (i) the two separated two-stage models (Model 1: going on vacation (first stage) and the coastal–inland decision (second stage), and Model 2: going on vacation (first stage) and the city–village decision (second stage)); (ii) the two-stage model with going on vacation (first stage) and the four destination type choices (simultaneously considered) in the second stage (coastal, inland, city, and village) (Model 3); and (iii) the two, three-stage models: Model 4 with going on vacation (first stage) and the coastal–inland decision (second stage) before the city–village decision (third stage), and Model 5 with going on vacation (first decision), and the city–village decision (second decision) before the coastal–inland decision (third stage).

Both the Akaike and Schwarz Information Criteria indicate that the three-stage structure (Model 4 in Table 2) coastal–inland before city–village makes a better fit. This result indicates that the optimum structure to represent the tourist decision sequence is nested structure 1 (Fig. 1), with a first stage in which individuals decide whether or not to go on vacation; a second stage in which those who decide to go on vacation choose between coastal and inland destination types and a third stage which decides the urban character (city or village) of the previously selected coastal or inland destination type. In other words, the ''coastal–inland'' choice precedes the ''village–city'' choice. Hence, Hypothesis 1 is rejected as the results show that the hierarchical decision process is superior to the single-stage process in the destination type choice. It seems that the high number of alternative/determinant factors and non-reliable information lead consumers to use the hierarchical choice process on destination types (where coastal character precedes urban character). To sum up, tourist choice is a complex process which can be broken down into three stages: the decision to take a vacation, the coastal character and the urban character of the destination, which are nested non-independent decisions.

Once the best fitting model has been identified, we work on the interactions ''price × income'' and ''price × motivations'' (Table 3). With regard to the coefficients estimated, it is important to stress that the significance of parameter b indicates the average effect of the dimension analyzed, and that the significance of the parameter of standard deviation S.D. (β) shows that the effect of this dimension is different for each tourist (which evidences the existence of heterogeneity and the superiority of the RCL Model over the standard Logit). The results obtained show the following.

In Eqs. (1) and (2) in Table 3, we find a negative sign for price. It suggests that tourists tend to choose destinations with lower prices; in line with Smith (1995). Therefore, it supports the research thread that holds that price is a dissuasive element that reduces the utility of a destination and, therefore, that tourism products are ordinary goods. However, the standard deviation of the coefficient of price is significant in the equations, which indicates that its effect is not homogeneous for all individuals and suggests an examination of the interactive effects ''price × income'' and ''price × motivations''. In this way, Eq. (1) in Table 3 shows that the coefficients corresponding to the interaction between prices and income levels 2, 3, and 4 are positive and significantly higher than that of level 1. This shows

(*footnote continued*)
vacations. We establish three educational levels through three categorical variables: *Education 1*, Basic Education; *Education 2*, Secondary education; and *Education 3*, University Education. Category *Education 1* is taken as a base reference (Eymann & Ronning, 1997; Riera, 2000).

[8] As we will have to calculate the interaction between these prices and income levels, we do not introduce income as an explanatory variable of G_{it} to avoid endogeneity. However, it is important to note that some endogeneity could still exist since ''consumption intensity''—which is an obligatory dimension to be included—might be related to income levels. Even though the main purpose of this article—testing different hierarchical structures—is not affected by this fact, we carried out a preliminary exploratory analysis by calculating correlations. We find that the level of correlation between income levels and length of stay (consumption intensity) ranges from 0 to 0.13; these are low quantities that are far away from the level that could be potentially ''dangerous''.

[9] For the sake of parsimony, the selection of the best fitting model is made by estimating the main effect of price. Subsequently, once we have detected the best model the interactions will be estimated.

Table 2
Comparison among structures

	Model 1	Model 2	Model 3	Model 4	Model 5
	Separated two-stage structure with second stage: coastal and urban character	Separated two-stage structure with second stage: urban and coastal character	Two-stage structure with second stage: coast, inland, village and city	Three-stage structure: coastal character before urban character	Three-stage structure: urban character before coastal character
Likelihood function	−5250.14	−5250.14	−3630.78	−3627.28	−3629.79
Akaike information criterion	−5244.14	−5244.14	−3625.78	−3621.28	−3623.79
Schwarz information criterion	−5239.95	−5239.95	−3622.29	−3617.09	−3619.60

Table 3
"Price × income" and "Price × purpose of visit" interactions effect on the destination types choice

Independent variables	Eq. (1)		Eq. (2)	
	b	S.D. (β)	*b*	S.D. (β)
Coastal destination prices	−0.0023[a] (0.0004)	0.0022[a] (0.0003)	−0.0013[a] (0.0003)	0.0003 (0.0004)
Inland destination prices	−0.0021[a] (0.0004)	0.000004 (0.0002)	−0.0052[d] (0.0029)	0.0032 (0.0021)
Prices × Income 2	0.0014[a] (0.0002)	0.00002 (0.0001)		
Prices × Income 3	0.0026[a] (0.0003)	0.0003 (0.0005)		
Prices × Income 4	0.0028[a] (0.0004)	0.0004 (0.0003)		
Prices × Income 5	0.0005 (0.0012)	0.0004 (0.0007)		
Coastal destination prices × Income 2			0.0012[a] (0.0002)	0.0001 (0.0002)
Coastal destination prices × Income 3			0.0021[a] (0.0003)	0.0004 (0.0004)
Coastal destination prices × Income 4			0.0024[a] (0.0004)	0.0006 (0.0016)
Coastal destination prices × Income 5			0.0016 (0.0225)	0.0087 (0.0931)
Inland destination prices × Income 2			0.0010[d] (0.0006)	0.0024 (0.0018)
Inland destination prices × Income 3			0.0023[a] (0.0007)	0.0034[c] (0.0017)
Inland destination prices × Income 4			0.0020[c] (0.0010)	0.0002 (0.0043)
Inland destination prices × Income 5			−0.0016 (0.0034)	0.0005 (0.0008)
Prices × amusement	0.0047[a] (0.0008)	0.0034[b] (0.0011)		
Coastal destination prices × amusement			0.0033[a] (0.0010)	0.0023 (0.0021)
Inland destination prices × amusement			0.0026[b] (0.0010)	0.0003 (0.0017)
Prices × cultural interest	−0.0002 (0.0004)	0.0034[b] (0.0012)		
Coastal destination prices × cultural interest			−0.0007[d] (0.0004)	0.0021[d] (0.0013)
Inland destination prices × cultural interest			−0.0009 (0.0010)	0.0048[c] (0.0022)
Prices × new places	−0.0011[a] (0.0002)	0.0002 (0.0004)		
Coastal destination prices × new places			−0.0008[a] (0.0002)	0.0006 (0.0008)
Inland destination prices × new places			−0.0043[c] (0.0019)	0.0055[d] (0.0028)
Prices × tranquility	0.0034[a] (0.0003)	0.0000 (0.00002)		
Coastal destination prices × tranquility			0.0027[a] (0.0003)	0.0001 (0.0002)
Inland destination prices × tranquility			0.0058[a] (0.0012)	0.0001 (0.0007)
Coastal-village constant	0.1142 (0.2174)		−0.1992 (0.1951)	
Coastal-city constant	−1.0101[a] (0.2402)		−1.1954[a] (0.2159)	
Inland-village constant	−0.2709 (0.1911)		0.6802 (0.9523)	
Inland-city constant	−1.4130[a] (0.2022)		−0.5077 (0.7045)	
Likelihood function	−3379.06		−3343.48	

Three-stage structure: coastal character before urban character. Standard errors in brackets.
[a]prob < 0.1%.
[b]prob < 1%.
[c]prob < 5%.
[d]prob < 10%.

that high-income groups are not so affected by high prices. This result can be explained for this tourist group by the hedonistic character of the consumption of tourist products (Morrison, 1996) and, therefore, by the importance of the concept of *value for money*. In principle, this would imply that an increase in the available tourist products for an individual (as a consequence of an income increase) leads to the choice of higher priced products. However, the parameter of income category 5 is not significant, which suggests a saturation point when individuals reach a certain income level. In other words, the fact that lower budget restrictions allow individuals of this income category a greater number of alternatives does not imply that they will always opt for higher priced products.

When we analyze the interaction between price and income, distinguishing the destination types that make up the principal nests (Eq. (2) in Table 3), we observe quite similar behavior patterns. For coastal destinations, the effect of the interaction is significant, positive and growing for income groups 2, 3, and 4, which suggests a saturation point for these destinations (for group 5). In other words, high prices for coastal destinations are a surmountable barrier as income increases, but for higher income individuals, the greater ability to acquire high priced products does not lead them to choose the most expensive. The jump from income level 1 to levels 2, 3, or 4 leads to individuals selecting more expensive coastal destinations (from their set of alternatives), whereas the step up to level 5 (which gives access to the most expensive coastal destinations) does not imply that they will choose the most expensive. Once more, these results seem to indicate that when a high-income level is reached, selection of coastal destinations is not fully determined by price. Similarly, for inland destinations, the price/income interactions of income levels 2, 3, and 4 are significant, with a positive sign; however, the maximum effect is on level 3. As before, people with greater purchasing power do not necessarily choose the most expensive inland destinations.

The analysis of the motivations that moderate the effect of prices (Table 3) shows the following. For the motivations "amusement" and "tranquillity", the estimation of the interactive coefficients presents positive signs, significant at the 0.01 level (Eq. (1) in Table 3), which implies that an individual looking for amusement and tranquillity as important vacation attributes is willing to pay high prices to obtain them. The same pattern is found when the interaction is separated for each type of destination (Eq. (2) in Table 3), the only difference being that individuals are more willing to pay extra money to get amusement in coastal rather than inland destinations, and the reverse applies to obtaining tranquillity.

With regard to the motivation "interest in broadening cultural knowledge" (Eq. (1) in Table 3), it is not significant, which leads us to reject, *a priori*, any potential moderating role of this motivation in the effect of prices on the choice of destination. Nevertheless, note that the standard deviation of its coefficient is significant, implying that this absence of effect is not general for all individuals in the sample. In fact, when we differentiate its effect, we observe that people going to inland destinations are more predisposed to pay higher prices to obtain cultural knowledge (notice that the parameter associated to the coastal alternative is significantly negative). Concerning the motivation "discovering new places", it has a negative influence on the utility of high priced destinations (Eqs. (1) and (2) in Table 3). This result implies that people who manifest this motivation are not willing to pay higher prices when facing the alternatives coast and inland.

5. Conclusions

The idea that the types of tourist destinations (coastal vs. inland, and village vs. city) are more idiosyncratic to tourists who prefer a specific type of tourist destination has allowed us to focus this research on this particular aspect. Moreover, our study assumes the nested and non-independent character of the coastal and urban decisions (and, therefore, the decomposition of the choice of destination type into a three-stage process: going on vacation, coastal–inland, and city–village), as well as the superiority of this hierarchical decision making process over single-stage processes in complex situations like tourist decisions. The underlying logic is that people have a limited analytical capacity, which leads them to decompose a complex decision into a hierarchical process and adopt a small set of critical variables to monitor at each level, in such a way that the decision process becomes more manageable. All of this has permitted the analysis of this phenomenon as well as the sequential order of these decisions using a sample of 2491 individuals. To do this, the methodology is based on various RCL Models which overcome the inconveniences of the models applied to date.

The empirical analysis carried out on the sample reaches the following conclusions. The joint modelization shows the nested and non-independent character of the tourist decisions to go on vacation and the type of destination, which reveals the multi-stage nature of the decision making process. The optimum structure, which best represents the tourist decision sequence, is that with the first stage of deciding to go on vacation, a second stage of choosing between coastal and inland destinations and a third stage of deciding the urban character (city–village) of the previously selected destination (coastal–inland). Therefore, the decision of the choice of destination type should be modeled jointly with the decision to go on vacation, due to the dependency between them and the coastal–inland decision would precede the city–village decision. Moreover, this sequential order (coastal before urban character) suggests that the most important variations in the choice of these types of destinations in Spain are between coast and inland (rather than village and city).

With regard to the interactions proposed, we find that there is a significant "price × income" interactive effect, which suggests that income moderates the price effect and shows a quite similar effect for coastal and inland destinations. For coastal destinations, we find an increasing moderating effect in income groups 2, 3, and 4 on the price effect; in other words, an income increase to levels 2, 3, and 4 reduces the negative price effect. For inland destinations, we find a moderating effect for income groups

2, 3, and 4 on the price effect, with a maximum effect on level 3. Concerning the interaction "price × motivation", we find that "price × amusement" and "price × tranquillity" are positive (an individual looking for amusement and tranquillity as important vacation attributes is willing to pay high prices), "price × cultural interest" is not significant (there is no moderating role of this motivation in the effect of prices on the choice of destination; nevertheless, there is a different influence between coastal and inland destinations, with more predisposition to pay higher prices in the latter), and "prices × discovering new places" has a negative influence on the utility of high priced destinations (people who manifest this motivation are not willing to pay higher prices).

The results of this research have important managerial implications, both in general and in particular. In general, the key implications of the modeling technique and the sequential choice process for tourism management are: (i) the Random Parameter Logit Model is useful to compare different decision structures in a process with different stages. In fact, this modeling avoids the estimation problems of the NL Model—applied so far by Eymann and Ronning (1992) and Eymann (1995)—in situations with a lot of alternatives and data. (ii) The proposed hierarchical process proposed provides, according to Pan and Tse (2000), a more precise picture of what affects the destination type choice and at what level. This can avoid the mistakes of writing off some key factors if they fail to show a significant impact in the first stage (going on vacation) or in the second stage choice (coastal vs. inland). In fact, this study shows that the "price × cultural interest" interaction does not influence at the first level of the decision making process, but rather exerts substantial influence on the coastal–inland choice in the second stage. (iii) The hierarchical process can be useful for tourists to handle information overload and the complexity of the decision. Following Pan and Tse (2000), tourists can focus on a few key factors at the first level. For instance, this study shows that the "price × income" interaction is relevant at the first level of the hierarchy, but out with this factor, tourists also need to be aware of the unconscious influence of "prices × motivations" on their choice to avoid making suboptimal decisions.

In particular, the implications of the specific results obtained for managing tourism flows are: (i) the knowledge of the three-stage sequential choice process "going on vacation, coastal/inland and city/village" is fundamental for tourism organizations. In particular, the result obtained that the coastal–inland choice is made before the city–village choice indicates that, in countries such as Spain, inland tourism is established in the mind of tourists as an alternative to the traditional sun, sea, and sand vacation, whereas the city–village choice is subordinate to the earlier decision. This should be born in mind by tourism bodies in such a way that their main positioning criteria would be diversification in both aspects (coastal–inland) or specialization in one of the two. And (ii) tourist and destination type profiles allow these bodies to better design their marketing policies and strategies, adapting them to the aspects they consider most important. Price fixing in tourist destinations should consider that the sensitivity of tourists to price changes differs according to available income, destination type—coastal and inland—and motivation of travel.

Among the limitations of this study are the following: (i) 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 dimensions of income and prices; (ii) the field of study is Spain. It would be better if the results were reinforced by applications on other geographical areas in order to be able to generalize the conclusions; (iii) we do not consider specific destinations, rather types of destinations. 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 the dimensions in a general manner; and (iv) it is rather complicated to form "prices" for "types" of destinations, raising the need to build indices.

References

Adamowicz, W., Louviere, J., & Williams, M. (1994). Combining revealed and stated preference methods for valuing environmental amenities. *Journal of Environmental Economics and Management*, *26*, 271–292.

Agarwal, V. B., & Yochum, G. R. (1999). Tourist spending and race of visitors. *Journal of Travel Research*, *38*, 173–176.

Aguiló, E., & Juaneda, C. (2000). Tourism expenditure for mass tourism markets. *Annals of Tourism Research*, *27*(3), 624–637.

Alegre, J., & Pou, L. L. (2003). La Estancia Media de los Turistas en Islas Baleares: Determinantes Microeconómicos e Implicaciones sobre la Evolución del Gasto Agregado. XII Simposio Internacional de Turismo y Ocio, Barcelona.

Bardón, E. (1991). Resumen del Estudio sobre el Grado de Satisfacción de la Demanda Turística Nacional and Extranjera en relación con el Producto Turístico Español. *Estudios Turísticos*, *110*, 65–123.

Bigné, E., Font, X., & Andreu, L. (2000). *Marketing de Destinos Turísticos: Análisis and Estrategias de Desarrollo*. Madrid: Esic.

Borgers, A. W. J., Van Der Heijden, R. E. C. M., & Timmermans, H. J. P. (1989). A variety seeking model of spatial choice-behavior. *Environment and Planning A*, *21*, 1037–1048.

Browstone, D., & Train, K. (1999). Forecasting new product penetration with flexible substitution patterns. *Journal of Econometrics*, *89*, 109–129.

Cai, L. A. (1998). Analyzing houshold food expenditure patterns on trips and vacations: A tobit model. *Journal of Hospitality & Tourism Research*, *22*(4), 338–358.

Cai, L. A. (1999). Relationship of houshold characteristics and lodging expenditure on leisure trips. *Journal of Hospitality & Leisure Marketing*, *6*(2), 5–18.

Cai, L. A., Hong, G., & Morrison, A. M. (1995). Household expenditure patterns for tourism products and services. *Journal of Travel & Tourism Marketing*, *4*(4), 15–40.

Cannon, T. F., & Ford, J. (2002). Relationship of demographic and trip characteristics to visitor spending: an analysis of sports travel visitors across time. *Tourism Economics*, *8*(3), 263–271.

Cesario, F. J. (1976). Value of time in recreation benefit studies. *Land Economics*, *52*, 32–41.

Crawford, D. W., & Godbey, G. (1987). Reconceptualizing barriers to family leisure. *Leisure Sciences*, *9*, 119–128.

Dardis, R., Derrick, F., Lehfeld, A., & Wolfe, K. E. (1981). Cross-section studies of recreation expenditures in the United Sates. *Journal of Leisure Research*, *13*(3), 181–194.

Debreu, G. (1960). Review of R.D. Luce, individual choice behavior: A theoretical analysis. *American Economic Review*, *50*, 186–188.

Dellaert, B. G. C., Borgers, A. W. J., & Timmermans, H. J. P. (1997). Conjoint models of tourist portfolio choice: Theory and illustration. *Leisure Sciences*, *19*, 31–58.

Dubin, J. A. (1998). The demand for recreations fishing in Montana. In J. A. Dubin (Ed.), *Studies in consumer demand-econometric methods applied to market data*. Boston: Kluwer Academic Publishers.

Edwards, S. L., & Dennis, S. J. (1976). Long distance day-tripping in Great Britain. *Journal of Transport Economics and Policy*, *10*, 237–256.

Elizágarate, V. (2003). *Marketing de ciudades*. Madrid: Esic.

Ewing, G. (1980). Progress and problems in the development of recreational trip generation and trip distribution models. *Leisure Sciences*, *3*(1), 1–24.

Eymann, A. (1995). *Consumers' spatial choice behavior*. Heidelberg: Physica-Verlag.

Eymann, A., & Ronning, G. (1992). Discrete choice analysis of foreign travel demand. In H. J. Vosgerau (Ed.), *European integration in the world economy. Studies in international economics and institutions*. Berlin: Springer.

Eymann, A., & Ronning, G. (1997). Microeconometric models of tourists' destination choice. *Regional Science and Urban Economics*, *27*, 735–761.

Fesenmaier, D. R. (1988). Integrating activity patterns into destination choice models. *Journal of Leisure Research*, *20*(3), 175–191.

Fesenmaier, D. R., & Jeng, J. (2000). Assessing structure in the pleasure trip planning process. *Tourism Analysis*, *5*, 13–27.

Fuentes, R. (1995). Análisis de las Principales Características de la Demanda de Turismo Rural en España. *Estudios Turísticos*, *127*, 19–52.

Goodwin, P. B. (1976). Human effort and the value of travel time. *Journal of Transport Economics and Policy*, *10*, 3–15.

Grundey, D. (2006). Delineating values, emotions and motives in consumer behviour: An interdisciplinary approach. *Transformations in Business & Economics*, *5*(2), 21–46.

Haider, W., & Ewing, G. O. (1990). A model of tourist choices of hypothetical Caribbean destinations. *Leisure Sciences*, *12*, 33–47.

Hay, M. J., & Mcconnell, K. E. (1979). An analysis of participation in nonconsumptive wildlife recreation. *Land Economics*, *55*(4), 460–471.

Hof, J. G., & Rosenthal, D. H. (1987). Valuing opportunity cost of travel time in recreation demand models: An application to aggregate data. *Journal of Leisure Research*, *19*(3), 174–188.

I.E.T. (2000). *Movimientos Turísticos de los Españoles en 1999*. Madrid: Instituto de Estudios Turísticos.

Kumar, V., & Subramaniam, V. (1997). A contingency framework for the mode of entry decision. *Journal of World Business*, *32*(Spring), 53–72.

Lancaster, K. J. (1966). A new approach to consumer theory. *Journal of Political Economy*, *14*, 132–157.

Lehmann, D. R. (1993). *Investigación and Análisis de Mercado*. México: Cecsa.

McFadden, D. (1981). Econometric models of probabilistic choice. In C. Manski, & D. McFadden (Eds.), *Structural analysis of discrete data with econometric applications* (pp. 198–272). Cambridge: MIT Press.

McFadden, D., & Train, K. (2000). Mixed MNL models of discrete response. *Journal of Applied Econometrics*, *15*, 447–470.

Morey, E. R., Shaw, W. D., & Rowe, R. D. (1991). A discrete choice model of recreational participation site choice, and activity valuation when complete trip data are not available. *Journal of Environmental Economics and Management*, *20*, 181–201.

Morley, C. L. (1992). A microeconomic theory of international tourism demand. *Annals of Tourism Research*, *19*, 250–267.

Morley, C. L. (1994a). Experimental destination choice analysis. *Annals of Tourism Research*, *21*(4), 780–791.

Morley, C. L. (1994b). Discrete choice analysis of the impact of tourism Q13 prices. *Journal of Travel Research*, *33*, 8–14.

Morrison, A. M. (1996). *Hospitality and travel marketing*. New York: Delmar Publishers.

Nahab, S. (1975). *Tourism management*. London: Tourism International Press, Londres.

Pan, Y., & Tse, D. (2000). The hierarchical model of market entry modes. *Journal of International Business Studies*, *31*(4), 535–554.

Parker, W. M. (1976). *The sociology of leisure*. London: George Allen & Unwin.

Perdue, R. R. (1986). Traders and nontraders in recreational destination choice. *Journal of Leisure Research*, *18*(1), 12–25.

Plog, S. C. (1994). Developing and using psychographics in tourism research. In: *Travel, tourism and hospitality research*. New York: Wiley.

Riera, A. (2000). Modelos de Elección Discreta y Coste del Viaje. Los Espacios Naturales Protegidos en Mallorca. *Revista de Economía Aplicada*, *8*(24), 181–201.

Santos, J. L. (1983). La Decisión de Compra del Turista-Consumidor. *Estudios Turísticos*, *79*, 39–53.

Schroeder, H. W., & Louviere, J. (1999). Stated choice models for predicting the impact of user fees at public recreation sites. *Journal of Leisure Research*, *31*(3), 300–324.

Seaton, A. V., & Palmer, G. (1997). Understanding VFR tourism behaviour: The first five years of the United Kingdom tourism survey. *Tourism Management*, *18*(6), 345–355.

Seddighi, H. R., & Theocharous, A. L. (2002). A model of tourism destination choice: A theoretical and empirical analysis. *Tourism Management*.

S.G.T. Informe de la Secretaría General de Turismo. (1993). Las Vacaciones de los Españoles. *Estudios Turísticos*, *119–120*, 153–177.

Shiffman, L., & Kanuk, L. (2005). *Consumer behavior*. Englewood Cliffs, NJ: Prentice-Hall.

Siderelis, Ch., & Moore, R. L. (1998). Recreation demand and the influence of site preference variables. *Journal of Leisure Research*, *30*(3), 301–318.

Silberman, J. (1985). A demand function for length of stay: The evidence from Virginia Beach. *Journal of Travel Research*(Spring), 16–23.

Simon, H. (1955). A behavioural model of rational choice. *Quarterly Journal of Economics*, *69*, 99–118.

Smith, S. L. J. (1995). *Tourism analysis: A handbook*. Reino Unido: Longman Group Limited.

Steinbruner, J. (1974). *The cybernetic theory of decision*. Princeton: Princeton University Press.

Train, K. E. (1998). Recreation demand models with taste differences over people. *Land Economics*, *74*, 2.

Train, K. E. (2003). *Discrete choice models with simulation*. Cambridge: Cambridge University Press.

Vanegas, M., & Croes, R. R. (2000). Evaluation of demand: US tourist to Aruba. *Annals of Tourism Research*, *27*(4), 946–963.

Walsh, R. G., John, K. H., McKean, J. R., & Hof, J. G. (1992). Effect of price on forecasts of participation in fish and wildlife recreation: An aggregate demand model. *Journal of Leisure Research*, *24*(2), 140–156.

Wennergren, E. B., & Nielsen, D. B. (1968). *A probabilistic approach to estimating demand for outdoor recreation*. Working paper, Utah State University.

Witt, S. F., & Martin, C. A. (1987). Econometric models for forecasting international tourism demand. *Journal of Travel Research*, *25*(Winter), 23–30.

Zwerina, K. (1997). *Discrete choice experiments in marketing*. Heidelberg: Physica-Verlag.