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THE INFLUENCE OF DISTANCE AND PRICES ON THE CHOICE OF TOURIST DESTINATIONS: THE MODERATING ROLE OF MOTIVATIONS

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ABSTRACT

The literature of tourist destination choice pays great attention to the direct impact of the attributes of "distance to the destination" and "prices of the destination", but does not reach any consensus around them regarding their -inhibitory or attraction- effect. Alternatively, our study proposes that the effects of distance and prices are moderated by tourist motivations at the moment of choosing a destination, which leads us to make hypotheses to explain this decision through the interaction between destination attributes and the personal motivations of the individual tourists. The methodology applied estimates Random Coefficient Logit models, which control possible correlations between different destinations and consider tourist heterogeneity. The empirical application carried out in Spain on a sample of 2,127 individuals, shows that the dissuasive influence of distance and prices on the selection of destinations is moderated by motivations, in the sense that the motivations have a direct (increasing the dissuasive effect) or inverse (reducing the dissuasive effect) moderating effect on the influences of distance and prices.

KEY WORDS: Tourism Marketing, Attributes of destinations, Motivations, Intra-country destinations, Random Coefficient Logit models.

1. INTRODUCTION

Studies of tourist choice have been conducted from multiple perspectives due to the various sub-decisions involved in the decision making process (Fesenmaier and Jeng, 2000). This is reinforced by the development probabilistic choice models derived from the Theory of Random Utility, due to their great flexibility when working with the discrete character of tourist choice situations; which makes them suitable instruments in this decision type (Morley, 1994a).

One of the most fruitful lines of investigation in this field is the choice of tourist destination (Fesenmaier et al., 2002), which distinguishes between various approaches to the definition of tourist destination (see Tables 1 and 2). One thread bases itself on destination type (discrete nature), such as regional or national natural parks (e.g. Wennergren and Nielsen, 1968; Perdue, 1986; Borgers et al., 1989; Fesenmaier, 1988; Morey et al., 1991; Dubin, 1998; Train, 1998; Riera, 2000; Adamowicz et al., 1994; Adamowicz et al., 1998; Schroeder and Louviere, 1999). Another approach defines choice alternatives (destinations) through the aggregation of geographical areas according to administrative units (countries, in Eymann & Ronning (1992), Haider & Ewing (1990) and Morley (1994a, 1994b)); criteria based on geographical proximity ("macro-destinations" or "macro-sites", in Siderelis & Moore,1998) and individual perceptions of similarity (e.g. Eymann & Ronning, 1997). With this last method, studies avoid an overly-elevated number of alternatives (e.g. if a tourist wishes to take a holiday on the Mediterranean coast, this option would cover any point in the whole area); which is a consequence of the continuous nature of the spatial dimension (Fotheringham & O'Kelly, 1989). However, the probabilistic analysis of intra-country destinations defined by administrative units has had little coverage in literature; despite the fact that the majority of national tourism in many countries is domestic, as in the case of Spain (Bote et al., 1991; Martínez, 2002); and that the territorial examination of tourism demand is a valuable element of regional economic planning (Usach, 1998), as it can characterize the tourist flow behaviour of nationals within their own country from the point of view of geographical distribution.

Apart from the above, the literature of destination choice is centred on the direct impact of destination attributes such as distance and prices, although the authors have reached no consensus on them. Some studies find that the dimensions "distance" and "price" are deterrent factors while others conclude that they can be attraction factors (see section 2). Alternatively, our study assumes a moderating role of motivations in the effects of distance

and price on destination choice. The underlying logic is that tourist motivations can become the main generators of utility when visiting distant or expensive destinations. Tourist habits have recently changed and these changes seem to have become permanent. Tourists spend more or less and travel further or closer depending on their wishes at a specific time. Accordingly, the effects of distance and price on destination could alter in function of the motivation of the tourist.

The Theory of Consumer Behaviour considers that motivations represent individual internal forces that lead to action (Schiffman and Kanuk, 1978). In this respect, tourist motivations are characteristics of individuals that influence the choice of destinations, since they act as push factors leading to the realisation of tourist travel (Moutinho, 1987; Sirakaya, 1992; Gartner, 1993; Sirakaya et al., 1996; Kim and Lee, 2002). It is important to stress that the selection of a certain holiday destination 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 behaviour towards certain ends (Nahab, 1975); in other words, they are the reasons why people take a holiday (Santos, 1983). These motivations have been classified according to the following typology by McIntosh & Goeldner (1984): i) physical, such as relaxation; ii) cultural, such as discovering new geographical areas; iii) interpersonal, such as socialising and meeting new people; and iv) prestige, such as self-esteem and self-actualisation.

Despite the above points, empirical choice literature has devoted little attention to the impact of tourist motivations on the selection of destinations. Exceptions to this scarcity are the studies of Fesenmaier (1988) and Eymann and Ronning (1997). However, these articles assume independence between tourist motivations and attributes of the destination. Alternatively, our study examines the motivations "search for relaxation and a good climate" (physical), "broaden culture and discover new places" (cultural), and "visiting family and friends" (interpersonal motivations), according to the typology of McIntosh & Goeldner (1984), as well as the interaction between the dimensions "motivations *x* price of destinations" and "motivations *x* distance".

Accordingly, the objective of this study is to analyse whether motivations act as moderating dimensions of the influence of distance and price on the choice of tourist destinations, defined as intra-country administrative units (see figure 1). To do this, we propose various hypotheses that explain the above decisions through the interaction of the

distance and price of the destination with the personal motivations of the tourist. The methodology applied is based on the estimation of various Multinomial Logit models with Random Coefficients in order to control possible correlations between different destinations and tourist heterogeneity. The empirical application is carried out in Spain on a sample of 2,127 individuals.

In order to fulfil this objective, the remainder of the paper is arranged as follows: The second section proposes and justifies various hypotheses on the moderating role of motivations in the effect of distance and price on the choice of intra-country destinations. The third section covers the design of the investigation; describing the methodology, sample and variables used. The fourth section presents the results obtained and their discussion. Finally, the fifth section summarises the conclusions and implications for business management.

[Insert Figure 1]

2. HYPOTHESES ON DETERMINANTS OF THE CHOICE OF DESTINATION.

Literature distinguishes the dimensions of "attributes of the destination" and "personal characteristics" in order to explain destination choice (Mak and Moncur, 1980; Borocz, 1990; Gartner, 1993; Sirakaya et al., 1996; Seddighi and Theocharous, 2002) (see Tables 1 and 2). Among the attributes of the destination, two stand out because of their greater utilization: distance (Wennergren and Nielsen, 1968; Stopher and Ergün, 1979; Moutinho and Trimble, 1981; Perdue, 1986; Borgers et al., 1989; Fesenmaier, 1988; Adamowicz et al., 1994; Schroeder and Louviere, 1999; Riera, 2000), and prices (Walsh et al., 1992; Siderelis and Moore, 1998; Schroeder and Louviere, 1999; Riera, 2000). However, there is no consensus among authors on their direct impact on destination choice (sections 2.1 and 2.2); that is, there is no agreement on their dissuasive or attraction effect.

Alternatively, our study proposes that tourist motivations play an important moderating role in the effect of distance and price on destination.

[Insert Tables 1 and 2]

2.1. Effect of distance on the choice of tourist destinations: Moderating role of motivations

The distance between the usual place of residence of an individual and the destination is an especially important criterion due to the clearly inherent spatial dimension of tourist destination choice. However, there is no consensus in literature on its influence. One train of thought holds that distance – or geographical position of the tourist relative to destinations- is considered a restriction or a dissuasive dimension of destination choice, as the displacement of an individual to the destination entails physical, temporal and monetary cost (Taylor & Knudson, 1976). This is the result reached by the studies of Wennergren & Nielsen (1968), Perdue (1985), Borgers et al., (1988), Fesenmaier (1988), Adamowicz et al. (1994) and Schroeder & Louviere (1999). 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. Similarly, Wolfe (1970; 1972) indicates that distance does not always act as a dissuasive factor, as the friction derived from it disappears after passing a certain threshold and it becomes a favourable attribute of the utility of a destination. Beaman (1974; 1976) explains this behaviour through a marginal analysis of distance, by observing the reaction of individuals to each unit of distance and concluding that each additional unit travelled offers less resistance than the previous.

Due to the lack of consensus, our study proposes that the following motivations moderate the impact of distance on the choice of destination.

The search for "climate" and "tranquillity". With regard to these physical motivations, we can say that Rugg (1973) assumes that a stay in a destination over a period of time allows for the consumption or enjoyment of the attribute of the destination, such as the "climate" or "tranquillity" that exist at a certain place (Rugg, 1973: p.65) and that the tourist obtains utility from this. Bearing in mind this consideration, and the fact that the motivation to go on holiday is a determinant of the valuation of attributes (distance) and of the choice of destination (Eymann and Ronning, 1997; De Borja et al., 2002), we can expect that people who choose a destination for its climate or for relaxation have a greater propensity to travel further if they receive these attributes in return. Therefore, we propose the following hypotheses:

H.1: *The search for climate moderates the effect of distance on the choice of destination, in such a way that the tourist is prepared to cover longer distances.*

H.2: *The search for tranquillity moderates the effect of distance on the choice of destination, in such a way that the tourist is prepared to cover longer distances.*

Tourist interest in "broadening culture" and "discovering new places". With regard to these cultural motivations, Anderson (1970) and Santos (1983) propose the so called "Ulysses Factor", which is a psychological aspect of special relevance in the planning of vacations; through which people feel a deep need to explore and to discover what lies beyond the known horizon. Mayo & Jarvis (1981) suggest that this "need to explore" is determinant in the explanation of travel, due to the fact that "travel allows one to satisfy the intellectual need to know". Bearing this in mind, and the fact that the importance assigned by tourists to the attributes of tourism products (distance) comes from the motivations of each situation (Calantone and Johar, 1984; Hu and Ritchie, 1993), it can be assumed that this yearning to explore, manifested by an interest in broadening cultural knowledge and in discovering new places generates positive utility by visits to faraway places. In other words, it is assumed that an interest in broadening cultural knowledge and discovering new places moderates the effect of the distance between the place of origin and the destination (a tourist could be prepared to travel further if it entails visiting a new place or broadening cultural knowledge, which would satisfy these interests). We therefore propose the following hypotheses:

H.3: *The interest of an individual in broadening cultural knowledge moderates the effect of distance on the choice of destination, in such a way that the tourist is prepared to cover longer distances.*

H.4: *The interest of an individual in discovering new places moderates the effect of distance on the choice of destination, in such a way that the tourist is prepared to cover longer distances.*

Visiting "family and friends". The interpersonal motivation of socialising through visiting family and friends 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). Along these lines, we propose that this factor moderates the effect of distance, given that an individual could be willing to travel long distances to visit family and friends. In virtue of the above, we propose the following hypothesis:

H.5: *Visiting family and friends moderates the effect of distance on the choice of destination, in such a way that the tourist is prepared to cover longer distances.*

2.2. The effect of prices on the choice of tourist destinations: The moderating role of motivations

Literature does not reach a consensus on 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; Lanquar, 2001; Serra, 2002), meaning that price is considered as a factor which reduces the utility of a destination. At an empirical level, a negative relationship between price and destination choice is found by Morey et al. (1991), Dubin (1998), Train (1998), Riera (2000) and Siderelis & Moore (1998) in the case of natural parks; by Haider & Ewing (1990), Morley (1994a; 1994b) and Eymann & Ronning (1992) for countries (administrative units) and by Siderelis & Morre (1998) for macro-destinations.

Conversely, another line of thought proposes that price does not have a dissuasive effect on destination choice, but that it is an attraction factor. Morrison (1996) indicates that the underlying hedonistic character often found in the consumption of tourism products implies that high prices do not always act against demand; rather that the concept of value for money, which compares the amount spent with the quality of installations and service, takes over (Morrison, 1996). This implies an association of price increase with demand increase.

Due to the lack of consensus, our study proposes that the following motivations moderate the impact of prices on the choice of destination.

The search for "climate" and "tranquillity". In the opinion of Rugg (1973), a stay at a destination over a period of time facilitates the enjoyment of attributes of the destination, such as the "climate" or "tranquillity" of the place, which generate utility for the tourist. Furthermore, the motivation to go on holiday determines the valuation of attributes (price) and the choice of destination (Eymann and Ronning, 1997; De Borja et al., 2002), which means that we can assume that people who choose a destination for its climate or tranquillity have a greater propensity to pay higher prices if they can obtain these attributes. In virtue of the above, we propose the following hypothesis:

H.6: *The search for climate moderates the effect of prices on the choice of destinations, in such a way that the tourist is prepared to pay higher prices.*

H.7: *The search for tranquillity moderates the effect of prices on the choice of destinations, in such a way that the tourist is prepared to pay higher prices.*

Tourist interest in "broadening culture" and "discovering new places". With regard to these cultural motivations, the "Ulysses Factor" explains why people feel the need to explore beyond the known (Anderson, 1970; Santos, 1983); and this need to explore determines the reasons for tourist travel (Mayo and Jarvis, 1981). Furthermore, the importance assigned by tourists to the attributes of destinations (price) come from the motivations of each situation (Calantone and Johar, 1984; Hu and Ritchie, 1993), which means that we can assume that an individual's need to explore (manifested by an interest in broadening cultural knowledge and discovering new places), generates positive utility when visiting expensive destinations. In other words, we expect that an interest in broadening cultural knowledge and discovering new places moderates the effect of the price of the destination (a tourist could be prepared to pay higher prices if it entails visiting a new place or broadening cultural knowledge). Therefore, we propose the following hypotheses:

H.8: *The interest of an individual in broadening cultural knowledge moderates the effect of prices on the choice of destination, in such a way that the tourist is prepared to pay higher prices.*

H.9: *The interest of an individual in discovering new places moderates the effect of prices on the choice of destination, in such a way that the tourist is prepared to pay higher prices.*

Visiting "family and friends". The interpersonal motivation of socialising through visits to family and friends explains why many people travel. In fact, in countries such as Spain, returning to the place of origin at least once a year is a very common practice. Consequently, we can expect that visiting family and friends moderates the effect of destination prices, as the tourist would travel to these places regardless of their prices. In virtue of this, we propose the following hypothesis:

H.10: *Visiting family and friends moderates the effect of prices on the choice of destination, in such a way that the tourist is prepared to pay higher prices.*

3. RESEARCH DESIGN

3.1. Methodology

For the analysis of intra-country choice of administrative units and in order to test the hypothesis H.1-H.10, we propose the estimation of Multinomial Logit Models with random coefficients (RCL) due to: 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 motivations of tourists; β_t is the vector of coefficients of these attributes and motivations for each individual *t,* which represent personal tastes; and ε_{it} is a random term that is iid extreme value. This specification of the RCL model allows coefficients β_t to vary over decision makers with density $f(\beta)$). Note that it differs from the Multinomial Logit and Nested Logit models on β, since in these model, β is fixed and does not vary over decision makers.

As β is not observable, the probability is the integral of $P_t(i/\beta_t)$ over all the possible values of β_t:

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

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^2.

With regard to the second aspect, the flexibility of the RCL model allows one to avoid the assumption of Independence from Irrelevant Alternatives (IIA) of the Multinomial Logit Model. In fact, the RCL does not exhibit the restrictive substitution patterns of the Logit

[2] In fact, a significant variance estimation implies the superiority of the Random coefficients Logit model over the Multinomial Logit model (Train, 2003).

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.

With regard to the estimation of the RCL model, the above integral does not give a closed solution, which means that its estimation requires the application of simulation techniques (Train, 2001a). This circumstance explains why this model has not been widely used in Marketing until relatively recently (Erdem et al., 2002). The final aim is to optimize the following function by maximum simulated likelihood

$$MVS(\theta) = \sum_{t=1}^{T}\sum_{j=1}^{J} d_{tj} \ \ln\left\{ \frac{1}{R}\sum_{r=1}^{R} \frac{\exp\left\{\sum_{h=1}^{H} x_{ih}\beta_{th}^{r}\right\}}{\sum_{j=1}^{J}\exp\left\{\sum_{h=1}^{H} x_{jh}\beta_{th}^{r}\right\}} \right\}$$

where d_{tj} =1 if individual t chooses alternative j, and zero if not; and R is the number of draws of the density function $\phi(\beta_t)$. In this case, vector $\theta=\{b,W\}$ represents the maximum simulated likelihood estimator (MSLE). To realise the draws of the density function we use the Halton[3] sequences method, which is found to be better than random draws as it reduces error (Spanier & Maize, 1991; Train, 1999; Munizaga & Alvarez-Daziano, 2001; Hensher, 2001). The GAUSS program was used for the estimation of the model.

3.2. Sample, Data and Variables

To reach our proposed objectives, we have used information on tourist choice behaviour obtained from the national survey "Spanish Holidaying Behaviour (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 behaviour in terms of intra-country administrative units; 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 multistage sampling, stratified by conglomerations, with proportional selection of

[3] This method is designed to obtain a sequence of numbers in order to later introduce them into a function of inverse distribution, f^{-1}. To achieve this we begin with any prime number, for example 3 and create a sequence by dividing a unitary interval into as many parts as the prime number. In this case, the three divisions create two cut off points, 1/3 and 2/3, which confirm the first terms of the Halton sequence. Then we sub-divide the three segments obtained into three equal parts and add the new cut off points to the original group: 1/3, 2/3, 1/9, 4/9, 7/9, 2/9, 5/9, 8/9. This procedure is repeated successively. Finally, we take the series obtained and apply the function of inverse distribution: $f^{-1}(1/3)$, $f^{-1}(2/3)$, $f^{-1}(1/9)$, $f^{-1}(4/9)$, ...etc.

primary units -cities- and of secondary units –censorial sections-. The information was collected in October 1995 through personal, at home, interviews with a structured questionnaire. Of the initial sample of 3,781 individuals, we are left with 2,127 that take holidays. This final sample represents a sample error of ±2.16% 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.

1) *Dependent variables.* To represent the intra-country destination (administrative units) chosen by the tourist, we use 50 dummy variables for the Spanish provinces.

2) Independent Variables. a) *Distance to the destination*. In general, studies use different indicators of real distance[4], such as the Euclidean distance -in kilometres or miles- (Wennergren & Nielsen, 1968; Stopher & Ergün, 1979; Moutinho & Trimble, 1981; Peterson et al., 1983; Perdue, 1986; Borgers et al., 1988; Fesenmaier, 1988; Adamowicz et al., 1994; Dellaert et al., 1997; Schroeder & Louviere, 1999), and displacement time (Louviere & Hensher, 1983; Dellaert et al., 1997; Schroeder & Louviere, 1999; Kemperman et al., 2000).

Following these authors, we measure distance in kilometres (DKm) and in time invested in displacement (Dtime), which facilitates a comparison of the results with those of other international studies. The use of both variables implies the construction of two origin-destination matrices of a 50x50 order, in which we include kilometres and time between each origin and destination for the provinces. This information on distances and displacement times between origins and destinations is found in the Campsa Interactive Guide (taking the provincial capitals as reference points).

c) 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

[4] Psychology and Geography of Behaviour show the existence of discrepancies among perceived distance by individuals -or subjective- and the real distance -objective or geographical-. Ewing (1980) argues the incidence of factors such as the familiarity or monotony of a route. Baxter & Ewing (1981) propose the "perceptual barrier effect", by which a distance is perceived to increase due to a perceived rather than real barrier (e.g. a mountain pass). Moreover, with the lack of "perceptual barriers", tourists perceive destinations closer than they physically are (Mayo & Jarvis, 1986). Finally, Baxter & Ewing (1979) propose the so called "intervening opportunities effect", which considers the flow of people between two destinations *a* and *b* with similar characteristics and equidistant from an origin *o* are influenced by intermediary destinations. Thus, a destination *c* situated between *o* and *a* greatly reduces flows between *o* and *b*, independently of the fact that *c* competes indistinctly with *a* and *b*. In other words, these intermediary opportunities act as "distance amplifiers" between two destinations. The lack of information in our study on the perceptions of individuals prevents us from using subjective measurements of distance.

researchers to make simplifications in their empirical applications. Consequently, various authors propose the use of widely available proxies to reflect the prices of a destination.

Morey et al. (1991), Dubin (1998), Train (1998), Riera (2000), Siderelis & Moore (1998) and Morley (1994a,b) 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 travelling, measurable by the price paid on public transport (Dellaert et al., 1997; Morley 1994a; 1994b) or in a private vehicle; whether by unit of distance (e.g., 24 ptas/km (Riera, 2000) or 0.16$/mile (Siderelis & Moore, 1998)) or by total fuel costs (Train, 1998); ii) the physical and psychological effort of realising the journey, which, to date, has not been modelled 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 travelling time on money earning activities), whose measurement has been very limited in literature; using estimations from other fields (value of time spent travelling to work (Cesario, 1976; Edward & Dennis, 1976) - untrustworthy for tourism (Goodwin, 1976; Ewing, 1980); the result of regressing the number of journeys in a period on travelling 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 (Witt & Martin, 1987; Morley, 1994a, 1994b). However, authors such as Eymann & Ronning (1992) and Usach (1999) consider that the correct method of reflecting the prices of a certain tourist market is to compare destination prices with those of the home market and those of competing destinations. Along this line, Eymann & Ronning (1992) use purchase parity differentials between the origin and respective destinations, obtained from the corresponding consumer price indexes[5]. In line with these authors, our study measures destination prices of intra-country administrative units through consumer price index differentials among origins and destinations, which are published in the National Institute of Statistics (INE), which represent the cost of living of each origin/destination.

c) Motivations. The measurement of motivations is not simple as it involves analysing internal aspects of the individual. Although the previous characteristics are of great use in

[5] Morley (1994c) demonstrates that the Consumer Price Index of a geographical region is a good indicator of tourist prices, by showing high correlation between the two.

explaining tourist behavior, Plog (1994) suggests incorporating dimensions which allow representation of internal aspects of the individual. Along this line, González & Díaz (1996) suggest that values and life styles (psychographic variables) provide a global description of the cognitive structure of the individual. Therefore, these factors are fundamental characteristics in order to properly configure vacation products[6]. However, these psychographic factors are not widely used in the literature of choice as they 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 et al. 2000; Lehmann 1993;), allow the capture, as proxies, of the internal aspects of the individual. Along these lines, motivations of the search for "*climate*" and "*tranquillity*", interest "*in broadening cultural knowledge*" and "*discovering new places*", and of "*visiting family and friends*", are measured through dummy variables, where the value of one means that the individual considers this motivation when selecting a destination, and zero otherwise (McIntosh and Goeldner, 1984; Eymann and Ronning, 1997).

4. RESULTS OBTAINED AND DISCUSSION

The identification of the moderating role played by motivations (proposed by hypotheses H.1-H.10) in the effect of distance and prices on the choice of destination implies the estimation of various Logit models with Random Coefficients, which are shown in Tables 3, 4 and 5.

[Insert Tables 3, 4 and 5]

Equation 1 of the tables shows the effects of both distance (in kilometres and in travelling time) and of prices with no interactive effects, which are taken as reference models to observe the increase in the explicative capacity (through the function of maximum-likelihood) of the motivations that interact with them in the other equations. The results

[6] Moreover, from a wider point of view, research demonstrates that psychographic variables have a strong explanatory power on tourist choice behavior (Dalen 1989; De Borja et al. 2002; González & Bello 2002;

obtained show that, for the dimensions analysed -distance (in kilometres and travelling time) and prices-, the inclusion of motivations as interactions leads to increases in the values of the maximum-likelihood function (the only exception being equation 6 of Table 5), which supports the idea that motivations moderate the effects of distance and prices in the choice of tourist destinations.

4.1. The moderating role of motivations in the relationship between distance and destination choice.

With regard to the direct impact of distance, we find that this dimension (in kilometres for table 3 and in travelling time for table 4), is significant at a level below 0.001 in all the equations and presents a negative sign, which leads us to characterize distance as a dissuasive factor in the choice of destination province, in line with Taylor and Knudson (1976). In other words, the displacement of an individual to the intra-country destination supposes physical, temporal and monetary investment. Apart from this, the significance of its variance at the 0.001 level in all cases, suggests that distance has a differentiated effect among the individuals of the sample, and thus, longer distances do not suppose less utility for all the sample tourists.

The analysis of the motivations that moderate the effect of distance (Table 3 and 4), shows the following: For the physical motivation "search for climate", the estimation of the interactive coefficient presents a positive sign, significant at the 0.01 level (Equation 2), which implies that an individual interested in climate as an important attribute of a holiday is prepared to make a long journey to find it, which supports hypothesis H.1. For the physical motivation "search for tranquillity" (Equation 3), the interactive coefficient is also significant at the 0.001 level but with a negative sign, which does not support hypothesis H.2. This means that individuals looking for this attribute prefer to stay close to their normal place of residence. It would seem that the journey itself represents physical and psychological effort and that people looking for tranquillity are not pre-disposed towards long distances, especially when tranquillity can be found closer to home. It should not be forgotten that in Spain there is a marked tendency to take holidays in the home or neighbouring regions of the individual. This aspect could be explained by the type of tourism realised, whose main motivation is leisure or rest in familiar areas, for which long journeys are not necessary (Usach, 1998).

Hsieh et al. 1993; Muller 1991; Pitts & Woodside 1986; Shih 1986; Zins 1996;

Turning to cultural motivations, interest in discovering new places positively influences (at the 0.001 level) the utility of distant destinations (Equation 5), which supports hypothesis 4, whereas interest in broadening cultural knowledge does not interact significantly with distance (Equation 4), which leads us to reject H.3. These results imply that the Ulysses Factor, through which people feel a need to explore and discover what is beyond the known horizon, is manifested in individuals motivated to discover new places, which leads them to make longer journeys for their holidays. However, the influence of this factor is not manifested in people who wish to broaden their cultural knowledge, as they may not be willing (or have no need) to cover long distances to satisfy this intellectual need.

Finally, the interaction between the interpersonal motivation of "visiting family and friends" and distance (Equation 6) is positive and significant at the 0.001 level, which allows us to accept hypothesis 5. This means that tourists who travel to visit family and friends have a predisposition towards long journeys; for them, travel often represents "returning home".

4.2. The moderating role of motivations in the relationship between prices and destination choice.

With regard to the direct impact of prices (see table 5), we find that this dimension is significant at a level below 0.001 in all the equations, and presents a negative sign, which suggests that tourists tend to choose intra-country destinations (provinces) with lower prices, in line with Smith (1995) and Lanquar (2001). This result allows us to support the idea that tourism products are ordinary goods. It is important to stress that the variance parameter of the price coefficient is not significant in any equation, which implies that higher prices lead to less utility for all individuals.

The analysis of the motivations that moderate the effect of prices shows the following: For the physical motivation "search for climate", the estimation of the interactive coefficient presents a negative sign, significant at the 0.01 level (Equation 2), which does not support hypothesis 6. This result implies that an individual looking for climate as an important holiday attribute is not willing to pay high prices to obtain it. The other physical motivation, "search for tranquillity" (Equation 3) is not significant, which leads us to reject hypothesis 7 on the moderating role of the motivation "search for tranquillity" in the effect of prices on the choice of destination.

With regard to cultural motivations, interest in broadening cultural knowledge and discovering new places have a positive influence (at the 0.001 level) on the utility of high priced destinations (Equations 4 and 5), which supports hypotheses 8 and 9. This result implies that people who manifest an intellectual need to know and discover new places (Ulysses Factor) are willing to pay higher prices.

Finally, the interpersonal motivation "visiting family and friends" (Equation 6) is negative and significant at the 0.01 level, which does not allow us to accept hypothesis 10. This means that tourists that travel to visit family and friends have lower utilities (more negative) of expensive destinations. Therefore, the price of a destination still behaves as a barrier in the choice of destination, despite the existence of a motivation to visit family and friends. Table 6 presents the results of the tests of the proposed hypotheses.

[Insert Table 6]

5. CONCLUSIONS

The supposition that the effects of distance and prices on the choice of tourist destinations (intra-country administrative units) could be moderated by motivations has allowed us to analyse this aspect in Spain with a sample of 2,127 individuals. To do this, our study proposes various hypotheses on the interaction between these dimensions and physical, cultural and interpersonal motivations.

The operative formalization to test these hypotheses follows the Logit modelization with Random Coefficients. This is due to their ability to deal with the unobserved heterogeneity of tourists, and because it is a flexible model that allows representation of different correlation patterns between different alternatives and, therefore, overcomes the inconveniences of non-compliance with the IIA hypothesis. The empirical application realised on the analysed sample shows that the dissuasive influence of distance and prices on the selection of destinations is moderated by motivations. Additionally, the results obtained find that the motivations examined have a direct (increasing the dissuasive effect) or inverse (reducing the dissuasive effect) moderating effect on the influences of distance and prices.

Motivations with a direct moderating impact on the effect of distance: "Search for tranquillity" increases the negative effect of distance; in other words, it reinforces the fact that individuals reduce their preference for distant destinations. The physical and psychological

effort implicit in long journeys leads to a situation in which individuals looking for tranquillity are not inclined towards long trips, especially when they can find their tranquillity close to home.

Motivations with an inverse moderating impact on the effect of distance: "Interest in discovering new places", the "search for climate" and "visiting family and friends" reduce the negative effect of distance. Interest in exploring and discovering what lies beyond the known horizon (*Ulysses Factor*), the search for climate as a fundamental holiday attribute and returning to the place of origin to visit family and friends lead people to make longer journeys.

Motivations with a direct moderating impact on the effect of prices: "Search for climate" and "visiting family and friends" increase the negative effect of prices; meaning that they reinforce the fact that individuals reduce their preference for expensive destinations. Although climate is an aspect that is valued by tourists (leading to them covering long distances), they are not prepared to pay any price to find it. Similarly, tourists visiting family and friends, who have part of their costs already met, do not tend to go to expensive destinations.

Motivations with an inverse moderating impact on the effect of prices: "Interest in broadening cultural knowledge and discovering new places" reduces the negative effect of prices. In other words, people that manifest an intellectual need to know and discover new places (*Ulysses Factor*) are willing to pay higher prices.

As implications for management, knowledge of the moderating role of personal motivations in the effect of destination attributes (distance and price) on choice, enables tourism organizations to better design their Marketing strategies and policies, adapting them according to the key dimensions. In fact, the result obtained concerning distance, through which it is considered a dissuasive element in the choice of destination, implies that public and private managers should promote tourist destinations in the closest administrative units (provinces) as Spanish tourists are more likely to travel to closer destinations. However, the results reached regarding the moderating role of motivations lead one to reorientate the former implication for distance. On the one hand, "tranquil" destinations should be promoted in neighbouring provinces, as individuals with this motivation are not willing to cover long distances, wheras on the other hand, destinations with good climate and cultural aspects could

also be promoted in more distant markets, as individuals with these motivations are prepared to travel further. With regard to prices, according to the results obtained, they are seen as inhibitors of the choice of destinations. This statement would explain the widely used low-cost strategy by tourism firms. Also, this study has detected that tourists looking for culture are generally more willing to pay higher prices, whereas those looking for climate are less willing. As a matter of fact, the generalisation of the low-cost strategy has been adopted by the airline, rent-a-car, cruising and hotel industries, among others; and the tourism companies consider the "low-cost" concept as a permanent phenomenon, since it is a consequence of the typical feeling of the consumer who considers price a decisive element in the decision. However, these tourism firms should also take into account the fact that tourist habits have changed, since tourists spend more or less depending on the motivations they have at a specific time. Therefore, the analysis of the tourist motivations which lead to the choice of a destination is crucial, and it should be born in mind by tourism organizations in order to identify the maximum price that tourists are prepared to pay (*reserve price*).

Among the limitations of this study are the following: i) its static character, as it is only based on the main annual holiday of an individual. Alternatively, an analysis of all holidays taken (main holiday, 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; ii) the field of study is Spain. It would be useful if the results were reinforced by applications on other geographical areas in order to be able to generalise the conclusions; iii) the lack of available information on certain variables, such as psychological distance and individual perceptions of the attributes of the destinations; and iv) 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.

Possible future lines of research are that the results of this study should be supported by research on other geographical areas in order to make comparisons. Similarly, it would be interesting to test the hypotheses from a longitudinal perspective, which would allow us to observe the temporal evolution of the effects of the proposed dimensions.

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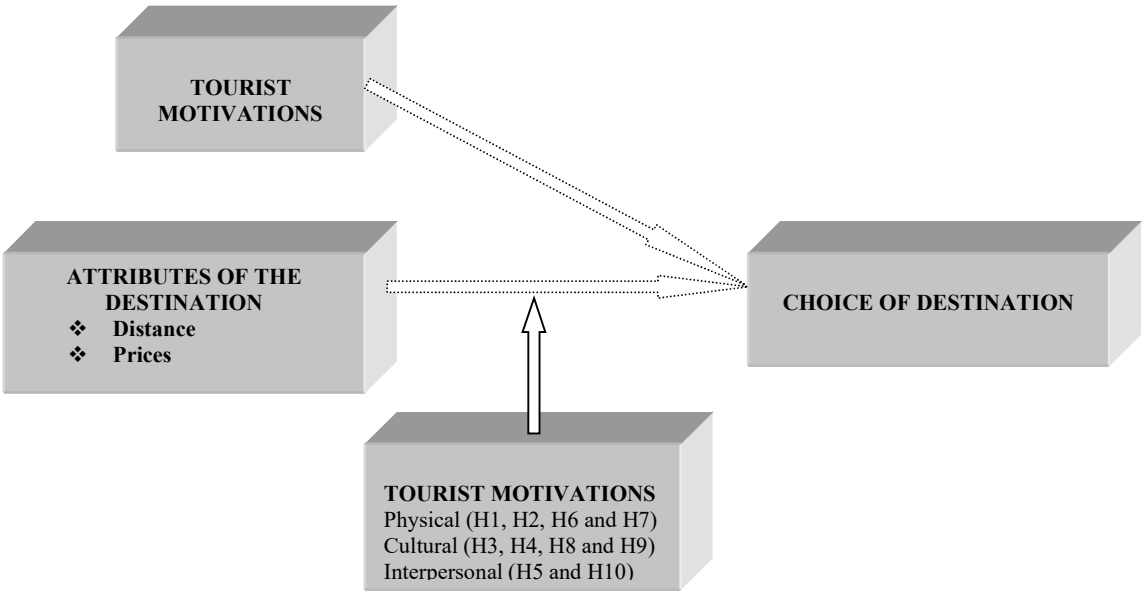
Figure 1. The moderating role of motivations



Note: Dot arrows represent the research carried out to date.
Source: Own work.

TABLE 1
EMPIRICAL EVIDENCE OF DESTINATION CHOICE WITH REVEALED PREFERENCE PROBABILISTIC MODELS

Authors	Destination	Model	Explicative Dimensions	Operative Variables
Wennergren & Nielsen (1968)	Natural parks	Probabilistic based on the Luce model	Destination attributes	- Surface area of recreational area - Distance
Perdue (1986)	Nature parks	Multinomial Logit	Destination attributes	- Attraction - Distance
Borgers, Van deir Heijden & Timmermans (1988)	Nature parks	Multinomial Logit	Destination attributes	- Surface area - Distance - Type of recreation area - Existence of specific installations - Type of vegetation
Fesenmaier (1988)	Nature parks	Multinomial Logit	Destination attributes Personal characteristics	- Distance - Infrastructure - Motivations
Morey, Shaw & Rowe (1991)	Nature parks	Multinomial Logit	Destination attributes	- Price (Cost of travel) - Activities at the destination
Dubin (1998)	Nature parks	Multinomial Logit	Destination attributes	- Price (travel costs)
Train (1998)	Nature parks	Multinomial Logit and Multinomial Logit with Random Coefficients	Destination attributes	- Size of each area - Price (Travel costs) - Naturals attributes (Number of species, aesthetics number of camping sites number of access points) - Number of protected species - Ranking in tourist guides

TABLE 1
EMPIRICAL EVIDENCE OF DESTINATION CHOICE WITH REVEALED PREFERENCE PROBABILISTIC MODELS (Continuation)

Authors	Destination	Model	Explicative Dimensions	Operative Variables
Riera (2000)	Nature parks	Multinomial Logit	Destination attributes	- Surface area - Price (Travel costs) - Natural attributes - Infrastructure - Accessibility - Programmed Activities
			Personal characteristics	- Income - Age - Sex - Studies - Nationality - Occupation
Eymann & Ronning (1992)	Administrative Units (Countries)	Nested Multinomial Logit	Destination attributes	- Price (Purchase parity differential) - Repetition of destination
			Personal characteristics	- Organization of the trip - Fragmentation of holidays
Eymann & Ronning (1997)	Macro-destinations formed by perceptions of similitude of countries.	Nested Multinomial Logit	Destination attributes Personal characteristics	- Price (Specific cost index) - Motivations - Repetition of the destination - Members < 18 years old - Age - Marital status - Education - Size of city of residence - Residence
Siderelis & Moore (1998)	Macro-destinations formed by the analyst by geographical proximity	Nested Multinomial Logit	Destination attributes	- Surface area - Price (Travel cost) - Attributes related to natural attractions, quality and services.

TABLE 2
EMPIRICAL EVIDENCES OF DESTINATION CHOICE WITH STATED PREFERENCES PROBABILISTIC MODELS

Authors	Destinations	Model	Explicative Dimensions	Operative Variables
Adamowicz, Louviere & Williams (1994)	Nature parks	Multinomial Logit	Destination attributes	- Distance - Natural characteristics (beach, water quality, land type, size, quantity and type of species) - Restrictions to navigation
Adamowicz, Boxall, Williams & Louviere (1998)	Nature parks	Multinomial Logit applied to Experimental Discrete Choice	Destination attributes	- Surface area - Population of species - Restrictions of use
Schroeder & Louviere (1999)	Nature parks	Multinomial Logit applied to Experimental Discrete Choice	Destination attributes	- Distance and time of journey - Entry Prices - Attributes related to parks
Haider & Ewing (1990)	Administrative Units (Countries)	Multinomial Logit applied to Experimental Discrete Choice	Destination attributes	- Global price - Hotel size - Hotel services - Proximity to beach - Proximity to the city - Distance to the airport - Proximity to other accommodation - Shops
Morley (1994a)	Administrative Units (Countries)	Binomial Logit and Probit applied to Experimental Discrete Choice	Destination attributes Personal characteristics	- Price (Air tickets, Hotel prices and exchange rates) - Income - Age - Sex
Morley (1994b)	Administrative Units (Countries)	Multinomial Logit applied to Experimental Discrete Choice	Destination attributes Personal characteristics	- Price (Air tickets, Hotel prices and exchange rates)- Income - Age - Sex

TABLE 3
INTERACTION BETWEEN DISTANCE (KM) AND MOTIVATIONS IN DESTINATION CHOICE WITH RCL
(Standar Errors in parenthesis)

Independent Variables	Equation 1		Equation 2		Equation 3		Equation 4		Equation 5		Equation 6	
	β	SD of β	β	SD of β	β	SD of β	β	SD of β	β	SD of β	β	SD of β
DKm	-0.003[a]	0.003[a]	-0.004[a]	0.003[a]	-0.003[a]	0.003[a]	-0.004[a]	0.003[a]	-0.004[a]	0.003[a]	-0.004[a]	0.003[a]
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
DKm x Climate			0.0007[b]	0.000								
			(0.0002)	(0.000)								
Dkm x Tranquility					-0.001[a]	0.000						
					(0.000)	(0.000)						
DKm x Cultural Interest							0.0006	0.0003				
							(0.0004)	(0.0006)				
DKm x New places									0.001[a]	0.000		
									(0.000)	(0.000)		
DKm x Visiting F&R											0.001[a]	0.000
											(0.000)	(0.000)
ML(θ)	-7601.71		-7445.06		-7433.58		-7448.55		-7431.74		-7436.23	

a=prob<0,1%; b=prob<1%; c=prob<5%.

TABLE 4
INTERACTION BETWEEN DISTANCE (IN TRAVELLING TIME) AND MOTIVATIONS IN DESTINATION CHOICE WITH RCL
(Standar Errors in parenthesis)

Independent Variables	Equation 1		Equation 2		Equation 3		Equation 4		Equation 5		Equation 6	
	β	SD of β	β	SD of β	β	SD of β	β	SD of β	β	SD of β	β	SD of β
DTime	-0.510[a]	0.676[a]	-0.566[a]	0.672[a]	-0.441[a]	0.667[a]	-0.517[a]	0.675[a]	-0.585[a]	0.666[a]	-0.581[a]	0.666[a]
	(0.022)	(0.025)	(0.026)	(0.025)	(0.025)	(0.025)	(0.022)	(0.025)	(0.026)	(0.025)	(0.026)	(0.025)
DTime x Climate			0.170[a]	0.074								
			(0.043)	(0.089)								
DTime x Tranquility					-0.241[a]	0.060						
					(0.045)	(0.112)						
DTime x Cultural Interest							0.096	0.181				
							(0.076)	(0.096)				
DTime x New places									0.287[a]	0.009		
									(0.044)	(0.018)		
DTime x Visiting F&R											0.237[a]	0.048[a]
											(0.043)	(0.030)
ML(θ)	-7340.22		-7332.40		-7326.35		-7339.22		-7320.67		-7325.68	

a=prob<0,1%; b=prob<1%; c=prob<5%.

TABLE 5
INTERACTION BETWEEN PRICES AND MOTIVATIONS IN DESTINATION CHOICE WITH RCL
(Standar Errors in parenthesis)

Independent Variables	Equation 1		Equation 2		Equation 3		Equation 4		Equation 5		Equation 6	
	β	SD of β	β	SD of β	β	SD of β	β	SD of β	β	SD of β	β	SD of β
Prices	-0.199[a]	0.099	-0.157[a]	0.013	-0.222[a]	0.090	-0.213[a]	0.077	-0.236[a]	0.016	-0.172[a]	0.092
	(0.019)	(0.144)	(0.023)	(0.020)	(0.022)	(0.158)	(0.019)	(0.189)	(0.022)	(0.148)	(0.021)	(0.148)
Prices x Climate			-0.140[b]	0.334[a]								
			(0.041)	(0.087)								
Prices x Tranquility					0.081	0.027						
					(0.042)	(0.063)						
Prices x Cultural Interest							0.193[b]	0.126				
							(0.072)	(0.203)				
Prices x New places									0.142[a]	0.190		
									(0.044)	(0.128)		
Prices x Visiting F&R											-0.112[b]	0.001
											(0.045)	(0.027)
ML(θ)	-8267.64		-8260.64		-8265.86		-8264.13		-8261.85		-8267.62	

a=prob<0,1%; b=prob<1%; c=prob<5%.

TABLE 6
DESTINATION CHOICE HYPOTHESES TESTS

	Hypotheses	Acept	Reject
H.1	*The search for climate moderates the effect of distance on the choice of destination, in such a way that the tourist is prepared to cover longer distances.*	X	
H.2	*The search for tranquillity moderates the effect of distance on the choice of destination, in such a way that the tourist is prepared to cover longer distances.*		X
H.3	*The interest of an individual in broadening cultural knowledge moderates the effect of distance on the choice of destination, in such a way that the tourist is prepared to cover longer distances.*		X
H.4	*The interest of an individual in discovering new places moderates the effect of distance on the choice of destination, in such a way that the tourist is prepared to cover longer distances.*	X	
H.5	*Visiting family and friends moderates the effect of distance on the choice of destination, in such a way that the tourist is prepared to cover longer distances.*	X	
H.6	*The search for climate moderates the effect of prices on the choice of destinations, in such a way that the tourist is prepared to pay higher prices.*		X
H.7	*The search for tranquillity moderates the effect of prices on the choice of destinations, in such a way that the tourist is prepared to pay higher prices.*		X
H.8	*The interest of an individual in broadening cultural knowledge moderates the effect of prices on the choice of destination, in such a way that the tourist is prepared to pay higher prices.*	X	
H.9	*The interest of an individual in discovering new places moderates the effect of prices on the choice of destination, in such a way that the tourist is prepared to pay higher prices.*	X	
H.10	*Visiting family and friends moderates the effect of prices on the choice of destination, in such a way that the tourist is prepared to pay higher prices.*		X