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# THE IMPORTANCE OF THE ENVIRONMENT IN THE SELECTION OF SUN AND SEA HOLIDAY DESTINATIONS AND ITS RELATIONSHIP WITH THE ENVIRONMENTAL COMMITMENT: THE CASE OF PORTUGUESE AND SPANISH TOURISTS

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**Abstract:**

Environmental conscience has suffered a steady observable increase over the past few years, also bringing about a certain kind of tourist that includes in his decision process such aspects as environmental quality. This study aims two main research goals: i**)** understanding the importance attributed to environmental issues when choosing among sun and sea holiday destinations; and ii) to uncover the relationship between the sun and sea tourists' structure preferences and their environmental commitment. As a result, it was found that the key item when choosing a sun and sea touristic destination is "quality of the beach and the sea water", with three clearly different segments identified as to their preference structure and to their level of environmental commitment during their holidays, the most committed ones also presenting a preference structure that exhibits that same commitment.

**Keywords:** *selection of tourist destinations*; *environmental commitment*; *tourism marketing*; *green marketing*

## LA IMPORTANCIA DEL ENTORNO EN LA SELECCIÓN DE DESTINOS DE SOL Y PLAYA Y SU RELACIÓN CON EL COMPROMISO AMBIENTAL: EL CASO DE LOS TURISTAS PORTUGUESES Y ESPAÑOLES

**Resumen:**

Se ha observado un constante incremento de la conciencia ambiental en los últimos años, dando lugar a un cierto tipo de turista que incluye en su proceso de decisión aspectos como la calidad ambiental. Este estudio se propone dos objetivos principales: i) comprender la importancia atribuida a los aspectos ambientales al elegir entre destinos de sol y playa; y ii) desvelar la relación entre la estructura de preferencias de los turistas de sol y playa y su compromiso ambiental. Como resultado, se encontró que el factor clave al elegir un destino de sol y playa es la "calidad de la playa y el agua del mar", con tres segmentos claramente identificados en base a su estructura de preferencias y su nivel de conciencia ambiental durante las vacaciones, siendo los más comprometidos los que también presentaban una estructura de preferencias que muestra ese mismo compromiso.

**Palabras clave:** *selección de destinos turísticos*; *conciencia ambiental*; *marketing turístico*; *marketing verde*

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## 1. Introduction

The heavy dependency between tourism activities and the touristic destination's natural, cultural and environmental resources is today widely acknowledged. In this context, environmental conscience has steadily increased over the last few years, allowing for the emergence of a kind of tourist who includes environmental quality or destination sustainability as an item in his decision process. This means valuing not only environment or landscape quality, but also the level of the ecosystem's and natural resources' preservation, pollution, waste treatment, etc. (Ayuso 2003; Kelly et al. 2007).

Therefore, in the decision process the tourist compares among destination alternatives using certain criteria, including environmental performance, due to stronger awareness and concern over tourism's environmental impacts, since the eighties. Many are the reasons for the choice of a particular destination; yet, new trends in tourism point to the increasing relevance of environment variables in the decision process, such trends emphasized by certain tourist segments.

It is important then to research tourists' attitudes and behaviour towards the environment in order to understand their commitment to sustainable tourism development, evidenced by both their holiday destination choice and the efforts in reducing negative environmental impact while actually enjoying their stay. Accordingly, we consider this to be a highly relevant study, since it intends not only to analyse the importance of those attributes related to natural environment represent in tourism destination choice decisions, but also to understand environmental commitment when selecting among holiday destinations.

This study has two main goals: i) to understand the importance attributed to environment characteristics in the process of choosing a sun and sea destination, thus aiming to identify tourist segments which are clearly differentiated according to their preference structure; and ii) to establish a relation between the sun and sea tourists' preferences structure and their commitment towards the environment, thus profiling those who are most committed.

In order to achieve our first goal, a questionnaire was submitted to 819 Portuguese and Spanish tourists, from which their preference structure was estimated through Conjoint Analysis, using nine hypothetical tourist destinations characterized by four distinct attributes with different levels. After that, in order to establish the relationship between the sun and sea tourists' preference structure and environment commitment, we measured verbal, emotional and real commitment towards the environment of the same tourist sample using a scale adapted from the previous one by Maloney et al. (1975).

## 2. Theoretical background

### *2.1. How the environment affects a tourism destination's choice decision?*

The way people decide on their choice options has been the focus of several studies in tourism since the seventies. One of the key aspects in assessing why individuals choose specific destinations is the understanding of their tastes and preferences regarding destination elements. The favouring of specific destinations comes about as a consequence of individual perceptions of each one's benefits (Marzo et al. 2002). When someone chooses her holiday destination, the benefits of each of the proposed alternatives are weighed in, thus supporting the final choice. A touristic destination –as any other service– can be thought of as composed by a set of attributes. The importance of each attribute will vary from individual to individual and from market segment to market segment.

Presently, tourism consumers tend to attribute great importance to all aspects related to environmental resources and the environmental quality of destinations, in harmony with the increasing concern about environmental degrading, resulting in higher awareness towards the seriousness of environmental issues, and the developing of ecological behaviour, whether in consuming (preferring ecological products issuing from companies who privilege environmental practices) or in their daily practices as individual active citizens.

We witness thus the coming up of a new environmentally aware tourist segment, sensitive to destinations environmental values, worried about preservation and highly demanding where environmental quality is concerned (Bosch et al. 1998). This is a particularly important aspect to consider by destinations where the environment is not only essential as a "production variable" –since ecosystems are taken over, waste is released and natural resources are used up– but also as a motivator aspect of market demand, thereby conditioning the tourist product (González and León 1998).

Therefore, destination officials need to understand what it is that motivates the travelling individual and which attributes are most essential in choosing a tourism product and its components (hospitality, catering, recreation). As soon as a clear understanding of the demand factors by a particular market segment is achieved, one can develop supply in order to satisfy, as nearly possible as one is able to, the needs expressed by the demand. Tourism survival, it can be said, depends both on destinations' resources and the perceptions held by tourists of those resources.

## 2. Methodology

### *3.1. Research question and objectives*

As previously noted, selecting a touristic destination is a complex process which may be associated to attractiveness of the destinations attributes, meaning level of importance associated with an attribute set. Having this in mind, this study's first objective is the relation between tourist behaviour and the destinations' environmental quality, aiming to verify how the different elements of a sun and sea destination's environment influence choice decision by Portuguese and Spanish tourists. We thus intend to specify the tourists' preference structure when choosing a sun and sea tourism destination, as well as identify tourist segments which are clearly differentiated according to their choice preferences.

The conjoint analysis technique was used to estimate the sun and sea tourist's preference structure, allowing the pointing out of the most important attributes at the moment a decision is reached when choosing among sun and sea destinations, as well as the level of importance given to environmental quality.

As secondary objective of this study we intended to establish the relation between sun and sea tourists' preference structure and their environmental commitment, thus profiling the most committed tourists. We first applied factor analysis and cluster analysis to identify different segments.

We used a quantitative methodology, survey through questionnaire proposed to sun and sea tourists, to compile the necessary information in order to fulfil the proposed objectives. After considering the dimension of our target universe, and also our restrictions in available time and data process resources, we ended up gathering data through a non random sampling method, thus obtaining a convenience sample of residents among several of Leiria District's communities (Portugal) as well as the Extremadura Region (Spain). A total figure of 819 valid questionnaires was obtained, 439 of them from Portuguese individuals and 380 from Spanish individuals (see technical details of the empirical research in Table 1)**.**

### *3.2. Design of conjoint analysis applied to sun and sea tourism destination's choice*

In the process of conjoint analysis data gathering, it is very important not only to correctly select those real attributes and their most significant levels to be analysed, but also the number of attributes and respective levels to be included in stimuli design, since a number too large of attributes may cause subjects to feel confused, causing denial to answer or absence of answer. Therefore, in order to identify most relevant attributes, we helped ourselves of previously published research literature based on several studies that relate environmental quality and tourism.

**Table 1.** Technical details of the empirical research

| | |
|---|---|
| Universe | Sun and sea tourists residents in Leiria District (Portugal) and Extremadura Region (Spain) |
| Method for gathering information | Self-completion questionnaire |
| Population size | Equivalent to infinite population |
| Sampling type | Convenience sampling approach |
| Sample size | 819 individuals (439 Portuguese and 380 Spanish) |
| Error size | 3.42% |
| Level of confidence | 95% |
| Date of field work | February-June 2009 |

So a set of four attributes was considered as the most relevant in grading environmental quality's importance when choosing a destination for holiday spending associated with sun and sea tourism products.

The first attribute, *quality of the beaches and the seawater*, seeks to understand the importance to tourists of the beach's and the seawater's quality as indicated by the presence of the Blue Flag eco-label. We wanted to find out if tourists prefer beaches exhibiting the Blue Flag –a sign of high quality seawater, high quality beach spread, safety, ease of access, existent facilities for swimmers– when choosing their holiday destination. This attribute presented three levels: *"low quality"*, *"good quality"*, and *"good quality certified by Blue Flag eco-label"*.

*Development / crowdedness* refers to total number of visitors present at the destination in a particular moment, associated with urban development level, equipment and infra-structure overload. It is common to assume a higher preference for less congested destinations. We expected confirmation of this. This attribute presented three levels: *"rarely congested"*, *"moderately congested"*, and *"highly congested"*.

The attribute of *entertainment and nightlife* refers to recreational activities set up for tourist spare time occupation present in the destination, as well as nightlife spots (restaurants, bars, discos, bistros). We wanted to find out if tourists who choose environmentally certified destinations also prefer those destinations to be quiet and lacking in nightlife spots. This attribute presented three levels: *"few activities and nightlife"*, *"some activities and nightlife"*, and *"a lot of activities and nightlife"*.

The fourth attribute, *ecological tax*, relates to the setting up of a tourist tax, that is, adding a premium to hospitality rates, per person and per night, with the purpose of helping environmental preservation of the destination, thus reducing negative impacts of tourism development and increasing the quality of the tourism product. We chose this attribute to understand if tourists are willing to pay a bit more in order to enjoy and help preserve a quality environment. This attribute presented three levels: *"no tax"*, *"5% over rate tax"*, and *"10% over rate tax"*.

To build the stimuli we chose the additive model; in gathering data and presenting stimuli we opted for traditional conjoint analysis full-profile method. This way the number of considered stimuli would total 81 (3x3x3x3); however, this number of combinations would turn this analysis into quite a complex, exhaustive and difficult one, so we used a orthogonal fractional factorial design through *SPSS v.15.0* software, managing to reduce the level of stimuli to only 9.

To present the stimuli, we initially adopted a frame rigorously describing all the attributes and their levels along paragraphs. After that, we opted for the presentation of cards holding summarized information, in order to ease the reading by the subjects and make it less demanding. We described all the hypothetical destinations along paragraphs. One of these cards is showed in Figure 1.

Subjects were asked to order, from 1 to 9 and according to their preferences, all the different hypothetical destinations that were presented to them (cards), ranking number 1 as the most preferred destination of all, number 2 the second most preferred destination, and so on until number 9, which ranked as the least preferred destination of all. We therefore opted for *rank*, since the several studies we researched told us this preference measure holds two main advantages when compared to *rating* (Gustafsson 1999; Hair et al. 2005).

**Figure 1.** An example of the cards that were presented to the respondents during the empirical research

| **Destination 1** |
| --- |
| **Preference:**<br>• Good quality certified by "Blue Flag" eco-label, ensuring high quality of beaches and sea water<br>• Moderately congested<br>• Few activities and nightlife<br>• Eco-tax 10% |

Source: own elaboration

*3.3. Measuring environmental attitudes*

There is an increasing interest in understanding individuals' ecologically responsible behaviour, this having been measured through different approaches and variables, among which attitudes seem to be quite useful when predicting consumer behaviour patterns for a specific product or service, since they are frequently considered to represent stable and lasting behavioural dispositions (Mitchell and Olson 1981).

One of the proposed objectives of our study was the analysis of the relation between attitude and ecological behaviour through a tri-dimensional perspective on attitudes, that is considering the three elements of attitude (emotional, intentional and behavioural). We thus intended to follow the line of research of Maloney et al. (1975). To do that, we placed questions related to verbal, emotional and real commitment of the subjects to the environment in the survey's questionnaire. This meant to clarify intentions, emotions and behaviour of subjects towards preserving natural environment, allowing for the segmentation of tourists based on their environmental awareness (attitude and concern) and environmental behaviour.

The main research instrument in designing questions related to environment commitment was the ecological scale proposed by Maloney et al. (1975). Although it is not a recent scale, it's still one of the most used in ecological consumer behaviour literature, even if sometimes only some of its dimensions are used (Alwitt and Pitts 1996; Li 1997; Chan 1999, 2001; Kaiser et al. 1999a, 1999b; Fraj and Martínez 2002).

This scale comprehends forty five items divided into four sub-scales: *affect*, *verbal commitment*, *actual commitment* and *knowledge*. However, our study opted for working solely with the items of *affect*, *verbal commitment* and *actual commitment*, withdrawing the *knowledge* scale since it would make the survey much more exhausting to fill. Besides, we only used 23 of the total 45 items in the Maloney et al.'s scale, and all the scales were adapted to the Portuguese and Spanish reality, most items having been rewritten in order to relate specifically to environmental awareness and behaviour during holiday periods and not to general environment issues. We used a five option Likert scale in the set of questions referring to attitudes and behaviour towards the environment (environment commitment) ranging from *"totally disagree"* to *"totally agree"*.

## 4. Results and discussions

*4.1. Analysing tourists' preference structures when choosing among sun and sea destinations*

The *SPSS v.15.0* software package was deployed to estimate partial utilities and relative importance of destination's attributes, using the Linear Regression Model through the Ordinary Least Squares method for model parameters estimation. The subjects' ranking of preference was set up as the dependent variable and the destinations' different attributes' levels were set up as independent variables. The whole sample (both Portuguese and Spanish subjects) was submitted to conjoint analysis with the purpose of obtaining both the utility associated by our subjects to the attributes' levels, and each attribute's relative importance to the surveyed subjects.

As for the attributes levels' utilities table 1 indicates that subjects prefer those tourism destinations with *"good quality certified by Blue Flag eco-label"* ($u$ = 1.57) rather than *"low quality"* destinations ($u$ = -2.54), so it can be said that the greater the environmental quality of destinations the greater their utility and consequently they get chosen more often. Adding to that, subjects prefer *"rarely congested"* destinations ($u$ = 0.80) rather than *"highly congested"* ones ($u$ = -1.14), with *"a lot of activities and nightlife"* ($u$ = 0.59) and with no ecological tax (*"no tax"*, $u$ = -0.11). As far as the eco-tax is concerned all the attributes' levels get a negative utility; however, as the rate gets higher, its utility diminishes, this results being in accord to Economic Theory.

Partial utility analysis tells us that as far as our sample is concerned, the ideal sun and sea tourism destination would have to exhibit beach and seawater certified through Blue Flag eco-label, thus guaranteeing the highly demanding levels of seawater and beach sand quality, availability of environment information and environment education campaigns, local environment management, swimmers safety, as well as additional tourist facilities. It would have to exhibit, in addition, a low level of development (rarely congested), that is a destination with only a few tourists, not many hotels, preference for dispersed one-family villas.

This destination would be a quiet relaxing place, with that "runaway from it all" quality. On the other hand, there would be many beach entertainment activities (volleyball, beach soccer, radical sports area…) and also a diversity of nightlife spots (restaurants, bars, discos…). It would finally be a destination without ecological taxes.

As far as the attributes' relative importance is concerned (Table 2), we can see that *"seawater and beaches' quality"* is the key attribute in the moment a touristic destination is chosen (registering a 46.42% in terms of importance), followed by *"development/crowdedness"* (that contributes 25.12% to preference formation), *"entertainment and nightlife"* (with 16.78% in importance) and finally the *"ecological tax"* (which influences 11.68% the touristic destination selection).

One cannot emphasize enough the importance of beach and seawater quality, reaching a percentage close to 50%, quite valued when compared to the rest of the attributes. However it is also important to notice the least importance of all attributes given to the ecological tax.

The validity and reliability of this model can be seen both by the Kendall's *T* and Pearson's *R* coefficients, which inform of the correlation values between estimated and observed preferences. In this case we can conclude both coefficients present a value higher than 1, then the relation/correlation being significant ($p = 0$).

From our previous analysis we can meet our study's first goal. We can therefore state that *"seawater and beach quality"* is the most valued attribute at the decision moment of choosing a sun and sea holiday destination, with a relative importance of nearly 50%, followed by *"development/crowdedness" "entertainment and nightlife"* and *"ecological tax"*, this last one being the least relevant when choosing a touristic destination. Besides, when analyzing utilities of the different *"seawater and beach quality"* attribute's levels we see that destinations holding the Blue Flag eco-label have preference over those not holding that label. Tourists also place more utility in destinations where there is no ecological tax .These conclusions are in accord with results by other authors who used some of the same attributes as our own study (Huybers and Bennett 2000; Huybers 2003; Brau and Vici 2009).

### *4.2. Segmentation of tourists according to their preference structure*

In order to ascertain the existence of tourist segments clearly differentiated according to their preferences when choosing among sun and sea destinations, *post-hoc* segmentation was designed, through manifest preferences. Three segments were obtained exhibiting statistically significant differences in their preference structure among themselves ($p = 0$), the first segment comprising 118 individuals, the second 484 individuals and the third 217 individuals.

**Table 2.** Estimated utilities and relative importance of attributes

| Attribute | Level | Utility | Importance (%) |
|---|---|---|---|
| Quality of beaches and seawater | Low quality | -2.5385 | 46.42 |
| | Good quality | 0.9642 | |
| | Good quality certified by "Blue Flag" eco-label | **1.5743** | |
| Development / crowdedness | Rarely congested | **0.7957** | 25.12 |
| | Moderately congested | 0.3423 | |
| | Highly congested | -1.1380 | |
| Entertainment and night life | A lot | **0.5922** | 16.78 |
| | Some | -0.0956 | |
| | Few | -0.4965 | |
| Ecological tax | No tax | **-0.1062** | 11.68 |
| | 5% over rate tax | -0.2125 | |
| | 10% over rate tax | -0.3187 | |
| *Constant* | | 5.2125 | 100% |

Following the design of three homogeneous groups separated by the pointing out of partial utilities of distinct attributes of the hypothetical sun and sea destination, we estimated the linear model that explained each segment's preference structure, characterizing them according to the questionnaire's answers. Tourist segments were labelled *"worried about crowdedness"*, *"worried about certified quality"*, and *"worried about quality but unwilling to pay any tax"* according to their preference structure. From the results in Table 3 it can be said that the *"worried about crowdedness"* segment, at the moment of sun and sea destination selection, places greater utility on *"good quality of seawater and beach"* ($u$ = 0.70), believing the Blue Flag eco- label to be unnecessary in beaches, opting for *"rarely congested"* destinations ($u$ =1.73), with *"a lot of recreational activities and nightlife"* ($u$ = 0.52), and not minding a 10% premium on top of hospitality daily rates as a way of ecological tax, with the purpose of preserving or improving the area's natural conditions ($u$ = 0.42). In terms of relative importance *"development/crowdedness"* is the key attribute for this segment at the moment of sun and sea touristic destination selection (44.54% of importance).

Regarding the *"worried about certified quality"* segment, tourists prefer touristic destinations presenting *"good quality certified by the Blue Flag eco-label"* ($u$ = 2.01) over *"low quality"* destinations ($u$ = -2.92), and it can be said that the higher the tourism destination quality the greater its utility and therefore it gets chosen more often. Besides, tourists prefer *"rarely congested"* destinations ($u$ = 0.97) with *"a lot of recreational activities and nightlife"* ($u$ = 0.57), attributing greater utility to the 10% premium on top of their hospitality rates in way of ecological tax with the purpose of preserving or improving the area's natural conditions ($u$ = 0.51). In terms of relative importance, *"seawater and beach quality"* is the key attribute for this segment, with a value of 52.66%.

Finally, the individuals in the *"worried about quality but unwilling to pay any tax"* segment prefer *"good seawater and beach quality"* destinations attributing greater utility value than the one attributed by the *"worried about crowdedness"* segment ($u$ = 1.23). Besides, they prefer *"moderately congested"* destinations ($u$ = 0.26), that is, destinations host to a moderate number of visitors and only a few areas of urban concentration, combining sporadic infra-structure and equipment congestion, but with a predominant relaxed atmosphere. Like the previous mentioned segments, they prefer destinations with *"a lot of recreational activities and nightlife"*, and they attribute it the greater utility value ($u$ = 0.90). This segment is unwilling to pay any tax and attributes greater utility to the *"without tax"* level ($u$ = -0.86). As for relative importance, this segment gives greater importance to the *"seawater and beach quality"* attribute, with 42.4%, slightly lower than the percentage given by the *"worried about certified quality"* segment.

**Table 3.** Estimated utilities and relative importance of attributes for the three segments

| Attribute | Level | Concerned with crowdedness (14%) | | Concerned with certificated quality (60%) | | Concerned with quality but without paying taxes (26%) | |
|---|---|---|---|---|---|---|---|
| | | Utility | Imp. (%) | Utility | Imp. (%) | Utility | Imp. (%) |
| Quality of beaches and seawater | Low quality | -1.362 | 28.2 | -2.920 | 52.66 | -2.327 | 42.43 |
| | Good quality | 0.701 | | 0.908 | | 1.232 | |
| | Good quality certified by "Blue Flag" eco-label | 0.661 | | 2.012 | | 1.095 | |
| Development / crowdedness | Rarely congested | 1.732 | 44.54 | 0.970 | 24.96 | -0.103 | 14.90 |
| | Moderately congested | 0.723 | | 0.284 | | 0.264 | |
| | Highly congested | -2.455 | | -1.255 | | -0.161 | |
| Entertainment and night life | A lot | 0.517 | 16.97 | 0.471 | 13.90 | 0.903 | 23.08 |
| | Some | -0.062 | | -0.089 | | -0.129 | |
| | Few | -0.455 | | -0.382 | | -0.774 | |
| Ecological tax | No tax | 0.141 | 10.29 | 0.171 | 8.47 | -0.860 | 19.59 |
| | 5% over rate tax | 0.282 | | 0.343 | | -1.720 | |
| | 10% over rate tax | 0.424 | | 0.514 | | -2.581 | |
| *Constant* | | 4.718 | | 4.657 | | 6.720 | |
| *Pearson's R* | | 1.000 | | 1.000 | | 0.999 | |
| *Kendall's T* | | 1.000 | | 1.000 | | 1.000 | |

*4.3. Analysing commitment to the environment by sun and sea tourists*

In this part of our study we establish the relation between sun and sea tourists' preference structure and their commitment towards the environment. This allows us to determine the tourists' feelings about environmental aspects, commitments and sacrifices they're willing to do, but also commitments and sacrifices they already do, that is, we determine their degree of interest or concern over environmental issues and their commitment towards preservation (both verbal and actual commitment). Thus we seek to segment our sample according to their environmental commitment, and also to analyze the relation between the identified segments' preference structure and their environmental commitment.

Of the total 45 items that comprise the Maloney et al.'s scale (1975), 23 items were used. However, we had to reduce the large number of variables through Principal Component Analysis so we could gather the main factors that define tourists' environmental commitment during their holidays and in their daily routines.

On the other hand, the sub-scales' internal consistency indexes were calculated through Cronbach's alpha. Results show values varying between 0.62 and 0.77 for every construct, which we consider a satisfactory value for an exploratory study, since Hair et al. (2005) state that values of 0,60 or higher indicate acceptable internal consistency. Most of the items are therefore correlated with each other, which supports the items' adequateness and the idea that this scale has generally a logical and structured design.

When it comes to verbal commitment, according to Bartlett's sphericity test and Kaiser-Meyer-Olkin, we see that the six items which were initially used were reduced to two factors that explain about 52.1% of total variance (Cronbach's alpha = 0.62). As far as emotional commitment is concerned, Main Component Analysis generated two factors that explain about 54.6% of variance (Cronbach's alpha = 0.64). Analysis of data referring to actual commitment during holiday time obtained a single factor explaining 46.9% of variance, that is all items saturate on a single factor or dimension, so the scale is unidimensional (Cronbach's alpha = 0.77). About daily commitment, we also obtained a single factor explaining 48.9% of variance (Cronbach's alpha = 0.71).

From the previously obtained six factors, we therefore performed a cluster analysis, identifying three segments of individuals bearing significant differences among themselves when it comes to commitment towards the environment ($p = 0$), the first segment totalling 363 individuals, the second 225 and the third 231 individuals.

Weighing in the factors, all of them presenting positive values, we can see that segment 1 is the most committed to the environment, showing high values in all three levels of commitment towards the environment (emotional, verbal and actual). This segment shows actual commitment towards preserving natural resources both during holidays and in daily activities, evidencing concern about water and energy consumption, recycling waste, showing willingness to act in favour of environmental preservation, as well as worry and outrage before natural resource degradation. This tourist segment is willing to contribute to improving the destination's environment. We thus designated this as the *"active towards the environment"* segment.

This segment's characteristics match other studies that suggest that tourists generally worry about environmental and social problems caused by tourism and show positive attitudes towards efforts in reducing these impacts (Budeanu 2007). Besides, tourists are on average more concerned about protecting the environment and more involved with ecological behaviour in their holiday time (Tartaglia and Grosbois 2009).

As opposed to this, segment 3 shows the least commitment towards the environment, since all factors present negative values. As to actual commitment during holidays and daily routines, it shows no attitudes in favour of the environment, that is, it doesn't look for accommodation seeking to reduce ecological footprint, it doesn't seek to reduce waste generation nor water consumption. In addition, individuals in this segment show no sign of worry nor outrage towards natural resources degradation, being the less willing of all three segments to act in favour of natural preservation. We therefore designated this as the *"inactive towards the environment"* segment.

Segment 2, on the other hand, shows average commitment towards the environment, with average values on the scale we used. It is important to notice that although one of the verbal and emotional factors presents positive influence, the component related to actual commitment during holidays and daily routine shows a minus sign, thus evidencing the absence of ecological behaviour in this segment, in spite

of its intentions towards so. We therefore designated this as the *"average towards the environment"* segment. This last segment's results are in accord with the conclusions obtained by Maloney and Ward (1973) and Maloney et al. (1975), which state that sometimes individuals profess high level of emotional and verbal commitment towards the environment, yet low levels of actual commitment, that is, individuals show great concern and behavioural disposition when questioned on environmental issues, but when it comes to actual behaviour they show little effort at preservation.

Coming now to the relation between the preference structure of all three tourist segments and evidenced commitment towards the environment (Table 4), we were able to verify, through an *a priori* segmentation built on environmental commitment, that the three segments present very similar values of relative importance as far as the different attributes are concerned, assigning higher importance to *"seawater and beach quality"*, then *"development/crowdedness"*, *"entertainment and nightlife"* and finally *"ecological tax"*. Therefore the main difference between preference structures of tourist segments when it comes to environment commitment resides in the willingness to pay ecological tax (positive utilities *versus* negative utilities).

About the comparison between preference structure and environment commitment, we can say that in spite of the fact that some of the researched studies show a different scope of analysis, their conclusions are a benefit to our own study since they relate environmental attitudes with touristic destination selection. Such is the case of the study conducted by Luzar et al. (1995), where there is a positive relation between environmental attitudes and choosing a type of tourism, although a nature based one. Such is also the case with the Eagles and Higgins' study (1998), where we can see that individuals who present positive attitudes towards the environment tend to wish to learn or experimenting with nature aspects, or show an intention to develop tourism practices' choosing behaviour associated to nature. Finally, Wearing et al. (2002) suggest that some individuals care enough for the environment that they assimilate that care in choosing tourism products.

Characteristics presented by the *"active towards the environment"* segment can then be said to reflect the conclusions in the study by Fairweather et al. (2005), stating that the segment composed of tourists exhibiting strong environmental attitudes shows great interest for ecological labels and a willingness to use them, as well as meeting a surcharge rate for a "environmentally friendly" accommodation. In this sense, also Han et al. (2009) have reached the same conclusions stating that individuals who exhibit favourable attitudes towards the environment manifest in their daily behaviour, are willing to stay in environmentally aware accommodation, and do not mind paying a premium price for it.

**Table 4.** Estimated utilities and relative importance of attributes for each segments, according to environmental commitment

| Attribute | Level | Active towards the environment | | Average towards the environment | | Inactive towards the environment | |
|---|---|---|---|---|---|---|---|
| | | Utility | Imp. (%) | Utility | Imp. (%) | Utility | Imp. (%) |
| Quality of beaches and seawater | Low quality | -2.662 | 47.72 | -2.474 | 46.19 | -2.407 | 44.62 |
| | Good quality | 0.971 | | 0.929 | | 0.988 | |
| | Good quality certified by "Blue Flag" eco-label | 1.691 | | 1.545 | | 1.418 | |
| Development / crowdedness | Rarely congested | 1.017 | 27.54 | 0.579 | 23.00 | 0.658 | 23.37 |
| | Moderately congested | 0.362 | | 0.292 | | 0.361 | |
| | Highly congested | -1.379 | | -0.871 | | -1.019 | |
| Entertainment and night life | A lot | 0.505 | 14.87 | 0.676 | 18.44 | 0.648 | 18.17 |
| | Some | -0.073 | | -0.219 | | -0.100- | |
| | Few | -0.433 | | -0.547 | | 0.548 | |
| | | | | | | -0.774 | |
| Ecological tax | No tax | 0.038 | 9.87 | -0.101 | 12.36 | -0.338 | 13.84 |
| | 5% over rate tax | 0.076 | | -0.203 | | -0.675 | |
| | 10% over rate tax | 0.114 | | -0.304 | | -1.013 | |
| *Constant* | | 4.924 | | 5.203 | | 5.675 | |
| *Pearson's R* | | 1.000 | | 1.000 | | 0.999 | |
| *Kendall's T* | | 1.000 | | 0.944 | | 1.000 | |

## 5. Conclusions

Our study makes a contribution the increase of our knowledge about the relation between tourist behaviour and touristic destination environmental quality, specifically the understanding of the importance given to the environment's elements of a sun and sea tourist destination, by Portuguese and Spanish tourists, as they make their decision.

Therefore we believe it to be evident that:

- Analysing tourist preference structure told us that the key attribute to Portuguese and Spanish tourists when choosing among sun and sea touristic destinations is *"seawater and beach quality"*, considering such quality certified by the presence of the Blue Flag eco-label. It can thus be said that certifying a destination through an ecological label can be an effective tool for communication and for distinction from the destination's competition.

- About the destination attributes, it's important to say that an attribute may be apprehended in a significantly different way by different market segments. Considering our subjects' preference structure we identified three tourist segments holding statistically significant differences among themselves, that we designates *"worried about crowdedness"*, *"worried about certified quality"* and *"worried about quality but unwilling to pay any tax"*. As suggested by Klenosky (2002, p. 338) "finding those differences may have important implications in developing effective promotional and product strategies".

- Concerning tourists environmental commitment, we identified three distinct segments according to verbal, emotional and actual commitment, on holidays and also on the daily routines, having designates these segments as *"active towards the environment"*, *"average towards the environment"* and *"inactive towards the environment"*. It is important to clarify that the most committed segment (*"active towards the environment"*) shows high values of commitment on all three levels (emotional, verbal and actual). It is therefore characterized by actual behaviour in favour of preserving natural resources whether during holiday time or in daily routines, showing concern over water and energy consumption, waste recycling, and a willingness to act in favour of environmental preservation, manifesting worry and outrage emotions before natural resources degradation, also being willing to contribute to environmental improvement of the holiday destination.

- By relating environmental commitment with tourist preference structure, it is possible to draw out a segment of committed tourists, the one willing to pay an ecological tax which purpose is maintaining and improving the area's natural conditions.

Worrying and concern manifested by sun and sea tourists when it comes to the environment should be presented as a key element in tourist destination development. It is therefore essential for every economic agent associated to tourism supply to intervene in favour of the adoption of measures that on the one hand avoid natural resource degradation and on the other promote environmental quality as a way to attract "environmentally aware" tourist segments that can bring more benefits towards destinations.

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