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The Minho-Lima sub-region as a common destination: tourist potential and agents' commitment on it

Abstract

Empirical evidence shows that tourism can give a real contribution to regional development and, in the case of certain remote and economic lagged territories, it is one of the best placed sectors to achieve this goal. This as to do, namely, with the possibility of making use of endogenous resources of territories. In the case of the Minho-Lima sub-region, an important tourist potential exists coming from the variety and singularity of its resources - the beauty of its landscapes, the architectonic wealth of secular buildings, and the exuberance of the gastronomy and many of its cultural manifestations.

Taking this in view, this paper attempts to catalogue and evaluate the tourist resources of Minho-Lima, as well as to analyze the complementary elements and the external factors related with the image of the destination. The methodology followed relies on a two-stage process. Firstly, taking the primary components, the consistency of the territory as a tourist destination was analysed, evaluating its tourism potential. In a second stage, considering the secondary elements, the components of the image of the common tourist destination were evaluated through the study of local, regional and national promotion strategies, in what brochures and web sites are concerned. The ultimate goal is to check the perception of the territory as a common destination and agents' commitment on it.

Key words: endogenous resources; regional development; tourist potential.

Introduction

It is usually admitted that tourism plays an important role in economic development, providing long-term benefits to local economies, mostly when implemented on a sustained base. The capacity of tourism to establish synergies with other activities, like lodging, feeding, drinking, transport and entertainment services for tourists, makes tourism a structuring sector of many economies.

In many developed countries and in developing ones tourism is nowadays a strategic sector. This is the Portuguese case, where tourism is presented as a strategic cluster by government's Economic *and Social Development Plan for 2000/2006*. In this document, tourism is officially claimed to be one pivotal activity to achieve the economic and social development of the nation and of its regions, particularly of the remote and lagged ones.

Assuming the analysis of the available tourist resources is crucial to define the tourist vocation of a territory, and, above all, to select the best tourist alternative within the range of available possibilities (Leno Cerro, 1993), this investigation aims to present a preliminary evaluation of the tourist resources of the Minho-Lima sub-region. For this purpose, we have selected the methodology of tourist value index or tourist potential suggested by Leno Cerro (1992), introducing some innovation by the use of a linear regression to calculate some weighting factors.

In a second stage, the components of the image of this territory as a common tourist destination were analysed through the study of local, regional and national promotion strategies, as documented by the brochures and web sites available.

1. Tourist Potential Evaluation

The tourist potential or the elements that configure a tourist destination depend, basically, of the amount and quality of the available tourist resources, although other aspects as the accessibility or equipments/infrastructures available also determine this potential. In other words, to characterize a destination it is necessary to evaluate resources as well as to analyze the geographical space that configures this territory, not just as a resource but also as a location factor for those activities (Pardellas *et al.*, 2001).

Empirical data show that tourism activities follow singular space location behaviour. This way, the general location theory can apply to this kind of studies, but the specificity of tourism activities and connected services sector must be present. In particular, one should account for the circumstance of the consumption of its products to take place where they are produced. This specificity implies, on the one hand, a direct and physical relation between tourist resources and goods produced from them and, on the other hand, that the tourists have to displace themselves from their usual residence to satisfy that demand.

The classification methods and the inventory of the resources constitute a first step in the analysis of the tourist potential, but the real value of the potential of a territory is not only measured by the number of attractions it possesses but also by their quality. This is the role of the evaluation techniques, which allow establishing a measure of the value of resources available, and thus, to support decisions taken in the aim of planning processes.

Therefore, the evaluation of the tourist potential of all municipalities of the Minho-Lima sub-region aims to establish indicators that can be useful for the private and public planning decisions.

Following Leno Cerro (1992 and 1993), to analyze the real value of the tourist potential of a territory we cannot only measure the number of resources and attractions that it possesses but, mostly, its quality, as well as other aspects like accessibility and equipment. Leno Cerro (1992 and 1993) establishes a formula of the Tourist Value Index or Tourist Potential, of a certain territory, as follows:

$IPTi = \alpha Fri + \beta Fai + \delta Fei$

where,

IPTi = Tourist Potentiality Index of the municipality "i".

Fr, Fa, Fe = values of the "resources", "accessibilities" and "equipments" factors of the municipality "i".

 α , β , δ = weighting factors.

The weighting factors attributed to each one of the elements in the elaboration of the model are justified by the fact that not all them have equal importance in the calculation of the tourist value.

1.1 Resources Value

From the touristic point of view, not all the inventoried resources have the same value. The value depends on the nature of the resource (natural, historical, ethnographic) and on its characteristics related to singularity, availability, etc.. Therefore, it is not enough to account for the number of resources available in each municipality. It is also needed to consider the individual importance of each one. By other words, we have to be able to evaluate them.

For this purpose, we have selected the methodology of resources evaluation suggested by Leno Cerro (1992 and 1993), which determines that the tourist value of a particular resource attending its nature and singularity, in agreement with the following equation:

where,

Vri= tourist value of resource "i"

Jpi = primary hierarchy of the resource "i"

 μ i = weighting factor, attending to the nature of the resource "i"

This way, the tourist value of a resource will depend on the hierarchy that it occupies, in terms of importance and/or singularity, as well as on the weighting factor attributed to the category which it belongs, taking into account its nature. With regard to this last issue, besides considering the weighting factors presented by Leno Cerro, we have introduced an alternative approach, calculating these factors through a linear regression.

However, before proceeding to the evaluation of the resources, it matters to classify them in large groups. Indeed, the simple identification of resources is not enough for its treatment in a planning process, because its nature can be very diverse. This circumstance makes necessary to take as a previous task their classification by homogeneous groups. Taking in consideration the classifications proposals of Defert (1996), Vera (1997) and Padín (2004), it was decided to classify resources in 3 major categories: RN - natural resources; RH - historical resources; and RE - ethnographical resources.

1.1.1 Establishment of hierarchies

In what concerns the evaluation of resources, by one side, this implies the establishment of hierarchies. Those hierarchies are function of the importance and singularity of each resource, which can be classified as being of international, national, regional or local interest. For the estimation of these hierarchies, one considered the several references we could find to them in electronic supports and in published paper materials (that is, brochures, tourist guides, itineraries, etc.). Trough this procedure we could attribute a scale of 1 to 4 points to the importance and/or singularity of each of the resources identified, being:

Hierarchy 1: local interest.

Hierarchy 2: regional interest.

Hierarchy 3: national interest.

Hierarchy 4: international interest.

| Hierarchy/Category | Natural Resources | Historical Resources | Ethnographical Resources | Total | Total % |
|--------------------|----------------------|-------------------------|-----------------------------|-------|---------|
| Hierarchy 1 | 56 | 103 | 86 | 245 | 24,43 |
| Hierarchy 2 | 79 | 314 | 166 | 559 | 55,73 |
| Hierarchy 3 | 21 | 74 | 25 | 120 | 11,96 |
| Hierarchy 4 | 15 | 49 | 15 | 79 | 7,88 |
| Total | 171 | 540 | 292 | 1003 | 100 |
| Total % | 17,05 | 53,84 | 29,11 | 100 | |

Table 1 – Resources by category and hierarchy, in Minho-Lima

Source: authors' elaboration.

On the other side, the evaluation of resources implies the consideration of a factor that weights the nature of the resource¹, once the hierarchy doesn't indicate the touristic value of the resource, but its importance inside of the own category. The weighting factor will allow transforming that hierarchy in an economic graduation. With this purpose, one appealed to two differentiated methodologies, which we present in the next sections.

1.1.2 Demand-based coefficients / Leno Cerro's coefficients

Leno Cerro proposal (1992), has its bases in the empirical work done by other authors, like Var *et al.* (1977), Ferrario (1980) and Cinelli (1985). Starting from there, in order to

¹ The establishment of weighting factors is made not for each resource but for major groups of resources, according to its nature, which, in our case, will correspond to the three categories inventoried.

solve the problem of dealing with different space scopes used in the previous researches, Leno Cerro conducted a questionnaire about the Spanish tourists' motivations. Although the numerical values they got didn't coincide, these authors had in common the fact of identifying natural resources as the ones that raised larger interest in the tourist demand.

Following the before mentioned procedure, the weighting coefficients proposed by Leno Cerro for each of the resources categories were:

| | Weighting factors |
|-----------------------------|-------------------|
| - Natural resources: | 1,65 |
| - Historical resources: | 1,11 |
| - Ethnographical resources: | 1,12 |

As, in a study accomplished by RTAM² (RTAM, 2004), these factors broadly express the motivations of the tourists that had visited the Minho-Lima sub-region - occupying the natural and ethnographical resources the first places in its preferences - we thought to be appropriate to use the same values in our analysis.

1.1.3 Supply-based coefficients / Alternative coefficients

Besides the tourists' opinion, in the evaluation of resources we also decide to consider the one of the agents (publics and privates) charged of the elaboration of this territory promotion materials. From there, we would get the vision of the tourist destination trough the eyes of promoters, that is, an offer approach, and, of course, to confront both views.

Therefore, starting from its mention in the several promotional materials, we made the estimation of a linear regression (annex1), in order to determine the implicit importance of each category of resources.

As dependent variable, we chose the number of references in the various promotional supports (web sites, brochures, tourist guides, itineraries...). As independent variables, we used i) the number of natural resources, ii) the number of historical resources and iii) the number of ethnographical resources existing in each one of the parishes of the municipalities taken in our study.

The results obtained were:

² Alto Minho's Tourist Board - official entity charged of Alto Minho tourist promotion.

| | Weighting factors |
|-----------------------------|-------------------|
| - Natural resources: | 2,682 |
| - Historical resources: | 5,342 |
| - Ethnographical resources: | 4,493 |

As previously mentioned, these coefficients expose the importance that the agents (public and private) charged of the elaboration of the promotional material continue giving to the constructed heritage, as well as to the festivities, pilgrimages, gastronomy, etc. Supposedly, that is the mark image of this area.

1.1.4 Results of the factor resources evaluation

After the estimation of the parameters that define the tourist value of the each group of resource, it is possible to evaluate the potential of each municipality of Minho-Lima. The resources factor³ for each municipality is given by the sum of the scores obtained by the **n** resources that it possesses (table 2).

| Municipality | Vr (Leno Cerro) | Weighed value (Leno Cerro) | Vr (Regression) | Weighed value (Regression) |
|-------------------|--------------------|-------------------------------|--------------------|-------------------------------|
| Arcos de Valdevez | 265,03 | 63,37 | 1031,07 | 62,88 |
| Caminha | 244,03 | 58,35 | 872,66 | 53,22 |
| Melgaço | 169,37 | 40,50 | 681,1 | 41,54 |
| Monção | 197,84 | 47,31 | 796,71 | 48,59 |
| Paredes de Coura | 177,59 | 42,46 | 697,06 | 42,51 |
| Ponte da Barca | 207,73 | 49,67 | 774,03 | 47,21 |
| Ponte de Lima | 379,75 | 90,80 | 1565 | 95,44 |
| Valença | 226,61 | 54,19 | 890,41 | 54,30 |
| Viana do Castelo | 418,21 | 100 | 1639,7 | 100 |
| V.N. Cerveira | 164,64 | 39,37 | 578,69 | 35,29 |
| Minho-Lima | 2450,8 | | 9526,43 | |

 Table 2 - Resources value, by municipality

Source: authors' elaboration.

To be able to compare the different factors inside the tourist potential index, we have to standardise the values, since they present themselves in different scales. That is why it was decided to express the results in a scale from 0 to 100 points, the maximum value

³ The results shown in table 2 are the final ones; the intermediate calculations and the weighting scales were not incorporated in the paper to prevent is extension.

corresponding to the municipality that reaches the biggest value after the addition of resources.

Even if the coefficients (weighting factors) we got using the two methodologies are quite different, it is interesting to conclude that the final results obtained in terms of tourist ranking of the municipalities are similar.

We should consider these results from two perspectives: a nowadays one, and future one. The former considers the conditions and current characteristic of each municipality in analysis, establishing the potential from the present data. According, we could observe great disparities between the better localised municipalities and better resources endowed, and the other ones, less favoured in terms of geographical position and natural and historical resources endowment.

The second perspective has to do with the change in the initial parameters. That means, in strict terms, the election of planning alternatives, considering established objectives of improvement of the economic and social situation of the municipalities worst placed. This also means that some future desirable scenery should be defined

| Resource category | Vr (Leno Cerro) | Weighed value (Leno Cerro) | Vr (Regression) | Weighed value (Regression) |
|------------------------|--------------------|-------------------------------|--------------------|-------------------------------|
| Natural Resources | 556,05 | 22,69 | 903,83 | 9,49 |
| Historical Resources | 1275,40 | 52,04 | 6138,00 | 64,43 |
| Ethnographic Resources | 619,36 | 25,27 | 2484,60 | 26,08 |
| Total | 2450,8 | 100 | 9526,43 | 100 |

 Table 3 - Resources value, by resource category

Source: authors' elaboration.

1.2 Accessibilities Value

The accessibilities factor refers, basically, to the conditions that facilitate or make difficult the tourists' displacement from the emitting markets to the destination.

To calculate this factor rigorously it would be necessary to separately consider the internal accessibility and the external one. The internal accessibility would is related with the real and ideal distance between the municipalities. In this case, it will be taken just from a qualitative approach, through the consideration of the main communication infrastructures and accesses to each of the municipalities.

On the other hand, having in mind that in the concept of external accessibility we should capture the space-distance and the space-time vectors, we will assume that the

whole area in study benefits of the same net of highways regarding the access to the remaining domestic and European territory. This is a simplifying hypothesis we believe acceptable in a preliminary approach.



Figure 1 – Road National Plan (PNR): Portugal

Source: PNR 2000, in www.estradasdeportugal.pt



Figure 2 - Road National Plan: Minho-Lima

Source: PNR 2000, in www.estradasdeportugal.pt

The above listed maps allow us to conclude that our goal area presents easiness of access similar to other known and visited tourist destinations. This is a favourable factor that should be considered in the planning of the set of offers, as well as in the promotion strategies.

Regarding the internal accessibility, we will use as basic element for its estimation the type of road infrastructures available to reach each municipality, establishing a schematic and simplified structure based on the following scores:

- Municipalities acceded exclusively through city roads: 1 point.

- Municipalities acceded exclusively through regional roads: 2 points.
- Municipalities acceded through national roads: 3 points.
- Municipalities acceded through complementary high-speed roads: 4 points.
- Municipalities acceded through main itineraries/ highways: 5 points.

| Municipality | Total Value | Fai |
|-----------------------|-------------|-----|
| Arcos de Valdevez | 4 | 80 |
| Caminha | 4 | 80 |
| Melgaço | 3 | 60 |
| Monção | 3 | 60 |
| Paredes de Coura | 3 | 60 |
| Ponte da Barca | 4 | 80 |
| Ponte de Lima | 5 | 100 |
| Valença | 5 | 100 |
| Viana do Castelo | 5 | 100 |
| Vila Nova de Cerveira | 3 | 60 |

Table 4 – Accessibility Value, by municipality

Source: authors' elaboration.

The analysis of Table 4 allows establishing two differentiated situations. On the one hand, the axis Viana do Castelo, Ponte de Lima and Valença, served by highways, and, for another hand, the municipalities of Melgaço, Monção, Paredes de Coura and V.N. Cerveira, which have as main ways of internal communication national roads. In this second case, this signifies larger difficulties in accessibility terms, more emphasised if we consider the easy identification of the destinations and resources routes (markers and informative signs in the access roads).

1.3 Equipment Value

The equipment factor is the most complex one and also the one with smaller specific weight in the final value of the IPT (Pardellas *et al.*, 2005). This factor is defined as a

synthetic indicator of three basic elements: the tourist infrastructure; the commercial infrastructure; and the recreational-sport infrastructure -

FEi = f (Iti, Ici, Irdi)

where,

FEi = equipment factor in the municipality "i".

Iti = tourist infrastructure in the municipality "i".

Ici = commercial infrastructure in the municipality "i".

Irdi = recreational-sport infrastructure in the municipality "i".

In what concerns the tourist infrastructure, we considered two variables: lodging services and restaurants⁴, being defined as:

$$Iti = (aci + ri)/2$$

where,

aci = accommodation capacity in the municipality "i".

ri = restaurants capacity in the municipality "i".

Each one of these variables was expressed in a scale of five points, although in this case they can also take the value zero. In table 5 we can evidence that the results obtained reflect a widespread lack of tourist infrastructure, over all in the areas already referred as "poor" in terms of accessibilities.

| | lti = (aci+ri)/2 | | | | | |
|-------------------|------------------|------|----------|-------|--|--|
| Municipality | aci | ri | (aci+ri) | lti | | |
| Arcos de Valdevez | 3,09 | 1,4 | 4,49 | 2,245 | | |
| Caminha | 4,45 | 2,4 | 6,85 | 3,425 | | |
| Melgaço | 2,14 | 1,22 | 3,36 | 1,68 | | |
| Monção | 0,74 | 1,84 | 2,58 | 1,29 | | |
| Paredes de Coura | 0,41 | 0,21 | 0,62 | 0,31 | | |
| Ponte da Barca | 1,91 | 1,75 | 3,66 | 1,83 | | |
| Ponte de Lima | 2,15 | 3,66 | 5,81 | 2,905 | | |
| Valença | 0,64 | 2,05 | 2,69 | 1,345 | | |
| Viana do Castelo | 5 | 5 | 10 | 5 | | |
| V. N. Cerveira | 1,22 | 0,93 | 2,15 | 1,075 | | |

Table 5 – Tourist Infrastructures, by municipality

Source: authors' elaboration.

⁴ Leno Cerro (1993) suggests a third variable in this factor, the number of secondary residences, calculated by approaching the quotient between the number of telephones and its inhabitants. With the proliferation of mobiles, we considered that this variable could adulterate the results.

The commercial infrastructure was calculated from data of Commercial Cadastre Database of *DG Trade and Competition*, in what refers to the number of retailing and wholesale establishments of the area in study. For this variable it was used, as in the previous ones, a relative location coefficient, using a scale of 0 to 5 points, applying the equation:

Ici = (Estci*5)/Estcm

where,

Ici = commercial infrastructure in the municipality "i".

Estci = number of commercial establishments in the municipality "i".

Estem = number of commercial establishments of the municipality with the maximum number of commercial establishments.

| Municipality | Estci | Eci |
|----------------------------|-------|------|
| Arcos de Valdevez | 315 | 1,23 |
| Caminha | 283 | 1,10 |
| Melgaço | 111 | 0,43 |
| Monção | 373 | 1,46 |
| Paredes de Coura | 116 | 0,45 |
| Ponte da Barca | 152 | 0,59 |
| Ponte de Lima | 478 | 1,87 |
| Valença | 128 | 0,50 |
| Viana do Castelo | 1281 | 5 |
| Vila Nova de Cerveira | 108 | 0,42 |
| Company and and alab anoti | | |

Table 6 - Commercial Infrastructures, by municipality

It is worthy mentioning the strong disparity among the number of commercial establishments of Viana do Castelo (the more urban municipality) and the remaining ones, presenting this city the maximum value (5), against values that round the 0,4 in V.N. Cerveira, Melgaço and Paredes de Coura.

The estimation of the recreational-sport infrastructure is based on the facilities of this type that each municipality possesses, transforming into a scale of 0 to 5 points the existent establishments. The inclusion of this variable in the IPT is justified by the more or less active nature of the tourists who visit the area included in our research.

Analyzing the results obtained from the work-field and from the information given by city councils and by RTAM, the scarcity of this type of infrastructures is verified, not only from the tourism point of view, but also if the support to the local population is considered.

Source: authors' elaboration.

| Municipality | Eqrdi | Erdi |
|-----------------------|-------|------|
| Arcos de Valdevez | 9 | 2,14 |
| Caminha | 21 | 5 |
| Melgaço | 11 | 2,62 |
| Monção | 5 | 1,19 |
| Paredes de Coura | 6 | 1,43 |
| Ponte da Barca | 11 | 2,62 |
| Ponte de Lima | 18 | 4,29 |
| Valença | 16 | 3,81 |
| Viana do Castelo | 20 | 4,76 |
| Vila Nova de Cerveira | 11 | 2,62 |

Table 7 – Recreational-Sport Infrastructure, by municipality

Source: authors' elaboration.

Just as in the previous variable, a relative location coefficient was used, that it is expressed in a scale of 0 to 5 points, applying the formula:

Irdi=(Eqrdi*5)/Eqrdm

where,

Irdi = recreational-sport infrastructure in the municipality "i".

Eqrdi = number of recreational-sport establishments in the municipality "i".

Eqrdm = number of recreational-sport establishments of the municipality with the maximum number of recreational-sport establishments.

The three analyzed indicators, tourist infrastructure (It), commercial infrastructure (Ic) and recreational-sport infrastructure (Ird) are synthesized in an only factor (FE). That is the third component of the Tourist Potentiality Index (IPT).

This way, the equipment factor is the result of the weighed sum of the values obtained in the individual components. The sum is weighed by the different specific weights of the values, being the tourist infrastructure the one that better reflects the tourist importance of the municipality, marked with a coefficient 2. Thus, the equipment factor is expressed as:

FEi=2Iti + Ici + Irdi

where,

FEi = equipment Factor of municipality "i".

Iti = touristic infrastructure of municipality "i".

Ici = commercial infrastructure of municipality "i".

Irdi = recreational-sport infrastructure of municipality "i".

As these variables are expressed in a scale of 0 to 5 points, the theoretical limit of this factor would be between 0 points, for that municipality that does not have any equipment or infrastructure, and 20 points, for one better endowed. To allow the comparability of this factor with the remaining ones analyzed, these initial results should be transformed into a scale of 0 to 100 points (FEiPond).

| Municipality | 2lti | lci | Irdi | FEi | FEiPond |
|-----------------------|------|------|------|-------|---------|
| Arcos de Valdevez | 4,5 | 1,23 | 2,14 | 7,87 | 39,83 |
| Caminha | 6,86 | 1,10 | 5 | 12,96 | 65,59 |
| Melgaço | 3,36 | 0,43 | 2,62 | 6,41 | 32,44 |
| Monção | 2,58 | 1,46 | 1,19 | 5,23 | 26,47 |
| Paredes de Coura | 0,62 | 0,45 | 1,43 | 2,5 | 12,65 |
| Ponte da Barca | 3,66 | 0,59 | 2,62 | 6,87 | 34,77 |
| Ponte de Lima | 5,82 | 1,87 | 4,29 | 11,98 | 60,63 |
| Valença | 2,7 | 0,50 | 3,81 | 7,01 | 35,48 |
| Viana do Castelo | 10 | 5 | 4,76 | 19,76 | 100 |
| Vila Nova de Cerveira | 2,16 | 0,42 | 2,62 | 5,2 | 26,32 |

Table 8 – Equipment Factor, by municipality

Source: authors' elaboration.

1.4 The Tourist Potentiality Index

The tourist resources, the accessibility and the equipments, as it was mentioned, are the three factors that determine, highly, the tourist value of a certain territory. Although it is difficult to measure the value of a perception, in this paper we intend to follow that goal, applying some theoretical concepts suggested by a few authors (Leno Cerro, 1992 and 1993; Pardellas *et al.*, 2005).

Meanwhile, it is necessary to have in mind that nor all elements of the index have the same importance in the estimation of this value. For that, in the theoretical formulation, we must include weighting factors for the different elements. For the quantification of these weighting coefficients, the basic hypothesis was the human intervention level on each one of the factors. As a consequence, the resources will have the highest coefficient, considering that, if they don't exist, it will be very difficult to create them. The accessibility factor is the second in importance, since we can improve the quality of the accesses, but it is impossible to reduce the physical distances. Finally, the equipments constitute the less critical factor, since its lack is relatively easy to solve. In

this regard, the Tourist Potentiality Index (IPT) would be expressed by the following equation:

IPTi= 1,5 FRi + 1,25FAi + 1,00FEi

Thus, the IPT of a concrete municipality will vary between a maximum of 375 and 0^5 . To keep the homogeneity with the scales used in the estimation of each factor, we transformed the index into a scale of 0 to 100 points (IPTiPond), taking as base the 375 possible points. The results we've got are presented in the table that follows:

| | 1,5 Fri | | | | IF | PTi | IPTiPond | |
|-----------------------|---------------|------------|---------|---------|---------------|------------|---------------|------------|
| Municipality | Leno Cerro | Regression | 1,25FAi | 1,00FEi | Leno Cerro | Regression | Leno Cerro | Regression |
| Arcos de Valdevez | 95,06 | 94,32 | 100 | 39,83 | 234,89 | 234,15 | 62,64 | 62,44 |
| Caminha | 87,53 | 79,83 | 100 | 65,59 | 253,12 | 245,42 | 67,50 | 65,45 |
| Melgaço | 60,75 | 62,31 | 75 | 32,44 | 168,19 | 169,75 | 44,85 | 45,27 |
| Monção | 70,97 | 72,89 | 75 | 26,47 | 172,44 | 174,36 | 45,98 | 46,50 |
| Paredes de Coura | 63,69 | 63,77 | 75 | 12,65 | 151,34 | 151,42 | 40,36 | 40,38 |
| Ponte da Barca | 74,51 | 70,82 | 100 | 34,77 | 209,28 | 205,59 | 55,81 | 54,82 |
| Ponte de Lima | 136,2 | 143,16 | 125 | 60,63 | 321,83 | 328,79 | 85,82 | 87,68 |
| Valença | 81,29 | 81,45 | 125 | 35,48 | 241,77 | 241,93 | 64,47 | 64,51 |
| Viana do Castelo | 150 | 150 | 125 | 100 | 375 | 375 | 100 | 100 |
| Vila Nova de Cerveira | 59,06 | 52,94 | 75 | 26,32 | 160,38 | 154,26 | 42,77 | 41,14 |

Table 9 – Tourist Potentiality Index, by municipality

Source: authors' elaboration.

The Tourist Potentiality Index allows to analyse the possibilities of this sector development and, by extension and integration, of the set of the productive sector in a certain territory (Pardellas *et al.*, 2005). In our research, we got significant information about the differences between municipalities, and this will allow adjusting the mechanisms and planning alternatives to each situation, having in mind to modify the factors that can be considered less favourable.

⁵ The result 375 is obtained from: 1,5x100 + 1,25x100 + 1,00x100, that are the maximum values of each one of the factors. The minimum value is close to zero, for each one of the factors.

2. The analysis of the image of the destination

After analysing the "internal" elements of a destination, which represent the intrinsic components or elements that motivate tourists displacement, and that were synthesized in a range of tourist potential indicators of the territory, this paper aims to add some elements more to the destination analysis. These elements, which are part of the destination and have a clear influence on it, are called external factors, and have to do with the image of the destination.

The image of the destination is formed by a set of elements or individual attributes that clearly influence it. The definition of image refers to a set of attitudes, perceptions, beliefs and ideas that a person has regarding a geographic area. It is a "mental" representation that promoters try to pass to people in order to influence their destination choice (Gartner, 1996). As a result, if one wants to analyze the destination, it has to analyze the image and the particular elements that form it.

In tourism scientific literature, the importance of the tourists' image of the destination is generally recognized, since it affects the individual's subjective perception and, then, their behaviour and destination choice (Gallarza *et al.*, 2002; Echtner and Ritchie, 1993; Stabler, 1988; Telisman-Kosuta, 1989; Chon, 1990 and 1992).

The empirical studies carried out to measure the image of the destination are numerous and varied. Generally, studies make use of combinations of multivariate and bivariate techniques, as well as of qualitative techniques, at least in a first stage (Gallarza *et al.*, 2002; Guthrie and Gale, 1991; Echtner and Ritchie, 1993; Ashworth, 1991; Selby and Morgan, 1996; Mazanec, 1994).

In our case, the analysis of the image of the new destination will be carried out through the study of the factors that determine the formation of the image of the destination, measuring and evaluating it.

This work is of special importance in the case of a destination not consolidated or in process of formation, since it has been demonstrated by the empirical literature (Baloglu and Brinberg, 1997) that the results obtained are closely correlated with the image projected. This image is formed by a set of factors that should be analyzed in an isolated way and, also, together, once it is the group of attributes that determines the last image of the destination kept.

In the analysis of the factors that determine the image, planners should have present that multiple variables are relevant, with different degrees of influence. As a matter of fact, we can speak of exogenous variables and endogenous variables. The former refer to those factors of the image linked with the profile of the tourist consumer, like the age, the education and travel motivations. This certainly has influence in the choice of destinations and planners have to keep it in mind. The studies regarding the segmentation of demand deal with it. Planers can try to adjust the characteristics of the destination to tourists, but they can not influence their tastes. Endogenous variables, on the other hand, are those related with the factors where the planner has a more or less direct influence. In this group we can find the variety (amount) and types of sources of information relative to the destination. Having this in mind, the planner should have a direct influence in the design of these materials. This agent' role is crucial since the image projected should be very similar to the image designed in the planning process.

Starting from the study of the endogenous variables, we should note that the external image of the destination passed to the public can be scrutinized, as the more consolidated the destination is, the more visible it will be in the several sources of information used. Likewise, the consistency of the planning process can be evaluated checking the adequacy between the available "endogenous resources" and what is offered to the market and, therefore, the proximity between the image projected and the real image of the territory. In this regard, the latter represents the set of products designed according the available resources, whereas the projected image will be the information of the destination we want to pass (sell) to potential consumers.

In our study, the analysis of the image had a clear aim: to check the perception of the destination as a common destination and the agents' commitment on it. The analysis followed two stages: in the first one, the promotion strategy of the different municipalities was studied through the analysis of the brochures and web sites used. Those are considered the two basic vehicles in this domain. This is the traditional methodology used in this kind of studies. The results we got will be presented in the paper. Simultaneously, as a second approach, contact was established with a sample of tourism operators, applying an inquiry-type to restaurants, as well as conducting interviews with institutional agents, main actors in the promotion of the territory. Unfortunately, those results are not yet available. We hope to be able to release those data in the next future.

The **brochures** are understood as a tourist pack that, despite the differences, simulates the pack of any product (Muñoz Oñate, 1997). They are considered a basic element in the classic promotion of tourism destinations. Much of the information available in a brochure about a destination and their products, themselves, can be considered by consumers as essential, since they take it as a database.

According to the objectives of the research, the brochures to tourists available in the destination's tourism offices were analyzed, in order to establish the current situation of the promotion of the territory. The brochures analysed are mentioned in Table 6.

| | GENERAL | SPECIFIC |
|-------------------|---------|--|
| ARCOS DE VALDEVEZ | 2 | 1 (Gastronomic Route of Arcos de Valdevez) |
| | | 1 (Religious Baroque in Arcos de Valdevez) |
| | | 2 (Trails) |
| CAMINHA | 1 | |
| MELGAÇO | 1 | 1 (Sports/Leisure Complex of Melgaço) |
| | | 1 (Solar do Alvarinho /Wine visiting house) |
| | | 1 (Porta de Lamas do Mouro / Door to Natural Park) |
| MONÇÃO | 1 | |
| PAREDES DE COURA | 1 | 1 (Fortified Town of Cossourado – Paredes de Coura) |
| | | 1 (Archaeological Route of Paredes de Coura) |
| | | 1 (Corno do Bico Protected Landscape) |
| | | 1 (<i>Território com Alma</i> – 17 trails) |
| PONTE DA BARCA | 1 | |
| PONTE DE LIMA | 1 | 1 (Protected Area of the Lagoons – Ponte de Lima) |
| | | 1 (Arnado's Park) |
| VALENÇA | 1 | |
| VIANA DO CASTELO | 2 | 1 (The Viana do Castelo Municipal Museum) |
| | | 5 (Nuclei Museums) |
| | | 2 (Trails) |
| V.N.CERVEIRA | 1 | 1 (Art Village) |
| | | 1 (Tourist and Cultural Route) |
| VALE DO LIMA | 1 | 1 (The sea, the river and the mountain - Routes through the Lima Valley) |
| | | 1 (History, Heritage and Culture - Routes through the Lima Valley) |
| | | 1 (Colours, Tastes and Traditions – Routes through the Lima Valley) |
| VALE MINHO | 1 | |
| ALTO MINHO | 2 | 1 (Gastronomic Sundays) |
| | | 1 (Romanesque of Ribeira Minho) |
| | | 1 (Santiago – Routes of Alto Minho) |
| | | 1 (Alto Minho Festivities) |
| | | 1 (Handicraft Route) |
| | | 1 (Congress Centre) |
| 1 | | |

Table 6 – Brochures

Source: authors' elaboration.

The analysis of the brochures was carried out paying attention, specially, to graphical characteristics and content. The elements kept in mind were: front pages, texts, general information data, maps and plans, languages used.

In what concerns the content, not only the texts were analyzed but also the general data was considered, since this section usually collects data about the available services and its space localization. The graphical characteristics were measured through the quality of the front pages, maps and languages used.

Each municipality has a generalist brochure, with equal structure. The front page consists of an image that identifies the municipality (in general, a monument) and the *logo* of the Alto Minho's Tourist Board (RTAM), presenting in the interior pages the representative heraldry of the municipality. The exceptions, in what regards to this last point, are Monção and Vila Nova de Cerveira.

The maps of these brochures, present, in general, a plan of the municipality with its main tourist resources and another one that inserts the municipality in the Minho-Lima sub-region. However, there is no reference to points of interest in the other Minho municipalities or in the other side of the border. The only exception regards the mention to the motorway that connects Valença and Tui, in the scope of the religious tradition of the Santiago Route (*Caminhos de Santiago*).

Even if the photos shown in the brochures do have some quality⁶, in most of the cases the place that was photographed is not identified and, in some situations, the images presented are not related with the text that they were supposed to illustrate.

In what concerns the languages used, brochures are written in Portuguese and in English. Surprisingly, no brochure in Spanish was found, despite the proximity of the territories. These verifications reinforce the idea of the modest visibility given to the destination and he inconsistency of its local and regional promotion.

In what the content of the brochures is concerned, one must underline that they should present only strictly necessary information and related photos and maps. The brochures analysed present a small synopsis of the history of the municipality and/or a general description of the most emblematic monuments, some general information, a few maps and some coloured photographs.

Regarding the general information made available, we must underline the importance given to it in all the analyzed brochures. Under this head line one can find a wide list of

⁶ The new brochures that replaced the ones that were analyzed are of worse quality, using just 2 colours.

restaurants, lodgings, leisure firms, etc.. It is likewise important to mention that the prices and hours of visit are not available in the information packages.

As a first conclusion, we can say that brochures currently used to promote the municipalities included in our research are characterized by being essentially informative, offering elementary information. Its content does not integrate data which allows considering them tourist packs. Indeed, they can be considered as supports to promotion of the municipalities, but not real promotional materials of this common destination. The municipalities continue to ignore the possibility to establish a joint promotion strategy of this territory or to develop any sort of substantive tourist collaboration. The exceptions we have identified were the brochures of the Lima and Minho Valleys, even if they present municipalities separately. Another exception was a touristic-cultural route, created in the aim of a Cross-Border Cooperation Program joining Vila Nova de Cerveira and Baiona. There, we could find several informations regarding those two localities. However, there is no reference to the closer Galician municipalities.

The strengths of the brochures are the quality and amount of useful information they offer about each municipality, besides the presence of some maps and plans. The weaknesses regard, above all, the absence of information relative to hours of visit and prices. The scarce quality of the new brochures is also something to notice, and correct, of course.

Finally, we have analysed the **web sites**. These electronic platforms have converted lately into fundamental communication vehicles to interact with diverse types of public and other agents. On the demand side, the evolution of the travel culture makes the access to update information a major value of our time. Besides, information of better quality is increasingly easy to obtain. These reality has transformed web sites and, by extension, the Internet in a basic resource. The study of this territory as a tourist destination cannot forget this fact and, therefore, the use of web sites is analyzed as mean to promote its tourist offer.

The analyse of the web sites intends to answer to our study central aim, that is: to analyze the current tourism products offered and the degree of exploitation of the potentialities of that territory, having in mind the perspective of implementing a sustainable and integrated development strategy of the Minho-Lima sub-region..

In a first approach to the territory, using diverse web searchers, we could highlight the amount of pages in which information regarding the territory was available. Interestingly, through a posterior analysis we could see that other territories make use of several resources of this destination as their own offer. In fact, in the search of Minho-Lima sub-region in the main Portuguese web searcher, no page of any municipality did show. Trying Alto Minho (that includes the municipalities of Minho-Lima and 3 others), instead, the first municipal web site listed was one that does not make part of Alto Minho (even so, it is in a border area). The only official sites from municipalities of Minho-Lima that have shown were Viana do Castelo and Paredes de Coura.

The same way, using another national searcher, it is only possible to accede to the web sites of the municipalities through the site of the Alto Minho's Tourist Board, or searching directly with the address of the municipality. Once in these web sites, only in Arcos de Valdevez, Caminha, Ponte de Lima, Valença e Viana do Castelo we can find real guides of the municipalities, having all the necessary information to program a touristic journey. In the other municipalities web sites, the tourism information is very scarce. Also the ones from Alto Minho's Tourist Board and from the Valley of Minho Municipalities Association have all kind of useful tourism information, including maps of the region and quite suggestive images.

Another aspect to underline is the strong exploitation that the establishments of rural tourism and adventure sports firms or associations make of this sort of information.

Just as in the analysis of the brochures, a conclusion to keep is that the degree of use of the tourist resources of the territory is scarce, taking the existing potentialities. It is also reduced the information and systematisation of the resources available.

Conclusion

The Tourist Potentiality Index analysis allowed us to reach some conclusions. The first one has to do with the high value of the resources factor in Viana do Castelo and Ponte de Lima. In the first case, this is the result of the singular natural resources endowment (it joins sea, river and mountain) and wealthy ethnographic heritage. In the Ponte de Lima case, that potential comes from the important constructed heritage, not only civilian but also religious, as well as from the relevant ethnographic resources. In the case of some municipalities, it is worthy noting the scarce importance given to natural resources, even if they are endowed with excellent resources, as it is the case of Paredes de Coura with the Corno do Bico Protecting Landscape. A second remark refers to the accessibility factor that, due to the simplification adopted in the analyses, presents values more elevated in Ponte de Lima, Valença and Viana and lower in the other areas. If we add this result to the previous one, we will verify that the rectification of the deficiencies identified at the infrastructures level is a crucial factor for the improvement of the tourist and economic position of the less favoured areas.

The third remark regards the equipments, where the differences are larger between the municipalities in analysis. Partially, this situation is linked with the differences between the population densities found. As a consequence, the highest equipment values are reached by the more urban areas, allowing comparative distances of 2,5 and 19,76 points, if we take the minimum (Paredes de Coura) and maximum (Viana do Castelo) values.

Clearly, on one side, this factor highlights the need of public policies, because it is the factor more easily modifiable on short-term and, on the other side, it makes clear the market tendency to an asymmetric growth path. This is the result of the circular effect between (less) offer/(more) production costs and (less) demand.

From the analysis of the image of the destination, we have tried to check the perception of the destination as a common one. We have also tested the agents' commitment on it. We have verified if the promotion materials developed by the municipalities of the analyzed territory did reflect the reality of the tourist demand previously mentioned.

The analysis conducted allowed us to conclude that the degree of use of the available tourist resources of our goal territory was reduced, mainly when compared with the existing potential. We also concluded that it is scarce the importance given to the territory as a common destination, which is reflected in its promotion strategy. In fact, the municipalities (and private agents) continue to ignore the possibility to establishing a joint promotion strategy or to develop any sort of substantive tourist territorial collaboration.

For the consolidation of the territory as a tourist destination it will be needed that all the agents, publics and private, take action in order to attain a more efficient use of the available endogenous resources. A prioritary step in that direction will be the definition and consequent promotion of an image of the region as common tourist destination.

References

- ASHWORTH, G. J. (1991), Products, places and promotion: destination images in the analyses of the tourism industry, in *The tourism industry: an international analyses*, SINCLAIR, T. and STABLER, M.J. (eds.), CAB International, Wallingford.
- ASHWORTH, G. J. and DIETVORST, G. J. (ed.) (1995), *Tourism and spatial transformations implications for policy and planning*, CAB International, Oxon.
- BALOGLU, S. and BRINBERG, D. (1997), "Affective images of tourism destination", *Journal of Travel Research* 35 (4): 11-15.
- CHON, K.S. (1990), "The role of destination image in tourism: a review and discussion", *Reveu du Tourism* 47 (2): 2-9.
- CHON, K.S. (1992), "The role of destination image modification process marketing implications", *Tourism Management* 12 (1): 68-72.
- CINELLI, A. (1985), "Il poténciale turistico", in *Turismo come e perché. Modelo di* recerca geografica e psicologica. Il territorio Varesino, CORNA PELLEGRINI, G. and FRIGERIO, A. (eds.), ASK Edizioni, Varese.
- COFFEY, W.J. and POLÈSE, M. (1985), "Local development: conceptual basis and policy implications" *Regional Studies* 19: 85-93.
- DEFERT (1966), La localisation turistique: problèmes theoriques et practiques, Gurten, Berna.
- DREDGE, D. and MOORE, S. (1992), "A methodology for the integration of tourism in town planning", *Journal of Tourism Studies* 11 (3): 8-21.
- DREDGE, D. (1999), "Destination place planning and design", *Annals of Tourism Research* 26 (4): 772-791.
- ECHTNER, C. M. and RITCHIE, B. (1993), "The measurement of destination image: an empirical assessment", *Journal of Travel Research* 31 (4): 3-13.
- FAGANCE, M. (1995), Changing paradigms of orthodoxy: the case of spatial models in tourism planning, Les Caters du Tourisme, Centre Des Hautes Études Touristiques, Aix-en-Provence.
- FERRARIO, F. (1980), *An evaluation of the tourist resources of South Africa*, Col. Etudes et Memoires (44), Centre de Hautes Etudes Touristiques, , Aix-en Provence.

- GALLARZA, M. et al. (2002), "Destination image towards a conceptual framework", Annals of Tourism Research 29 (1): 56-78.
- GARTNER, W. C. (1996), *Tourism development: principles and policies*, Van Nostram Reinhold, New York.
- GETZ, D. (1986), "Models in tourism planning towards integration of theory and practice", *Tourist Management* 7(1): 21-32.
- GUNN, Clare A. (2002), *Tourism planning: basics, concepts*, cases, 4th ed., Routledge, New York.
- GUTHRIE, J. and GALE, P. (1991), "Positioning ski areas", in *New Horizons Conference Proceeding*, University of Calgary, Calgary
- JENKINS, O. (1999), "Understanding and measuring tourist destination images", in *International Journal of Tourism Research* 1: 1-15.
- LAWS, Eric (1995), *Tourist destination management: issues, analysis and policies*, Routledge, London.
- LEIPER, N. (1995), Tourism management, RMIT Press, Melbourne.
- LENO CERRO, F. (1992), "La evaluación del potencial turístico en un proceso de planificación: el Canal de Castilla", *Estudios Turísticos* (16): 49-85.
- LENO CERRO, F. (1993), *Técnicas de evaluación del potencial turístico*, Centro de Publicaciones, Ministerio de Industria, Comercio i Turismo, Madrid.
- MAZANEC, J. A. (1994), "Images measurements with self-organizing maps: a tentative application to Austrian tour operators", *Revue du Tourisme* 49 (3): 9-18.
- MUÑOZ OÑATE, F. (1997), Marketing turístico, Ed. Ramón Areces, Madrid.
- ORGANIZACIÓN MUNDIAL DEL TURISMO (OMT) (1996), *El desarrollo sustentable del turismo: papel del municipio*, Ed. OMT, Habana.
- PADÍN, C. (2004), El desarrollo endógeno local. Estudio de la actividad turística como forma de aprovechamiento de los recursos: aplicación al caso del Baixo Miño, Departamento de Economía Aplicada, Universidad de Vigo, Doctoral thesis not published.
- PARDELLAS, X. et al., C. (2005), "Competitividade e innovación no sector turístico: unha nova oportunidade de avaliación dos recursos endóxenos", in II Estudos Estratéxicos do Eixo Atlântico – Libro IV, SOUTO, X. et al (coord.), Eixo Atlântico, Ourense.

- PARDELLAS, X. and PADÍN, C. (2001), "El patrimonio etnográfico y el desarrollo local: el Baixo Miño como destino turístico en Galicia", in *IV Congreso De Turismo, Universidad y Empresa,* Castellón.
- PARDELLAS, X. *et al.* (2003), "El desarrollo local y la cooperación ente España y Portugal", in *Actas do IX Encontro Nacional da APDR*, Colecção APDR, Coimbra.
- PARDELLAS, X. (2002), Aproximación á actividade turística nas cidades do Eixo Atlântico, Ed. Eixo Atlântico, Vigo.
- PEREIRA, A. (1999), Guia prático de utilização do SPSS análise de dados para ciências sociais e psicologia, Edições Sílabo, Lisboa.
- PESTANA, M. and GAGEIRO, J. (2005), Descobrindo a regressão com a complementaridade do SPSS, Edições Sílabo, Lisboa.
- PESTANA, M. and GAGEIRO, J. (2005), *Análise de dados para ciências sociais a complementaridade do SPSS*, Edições Sílabo, Lisboa.
- RITCHIE, J. (1993), "Crafting a destination vision: putting the concept of resident responsive tourism into practice", *Tourism Management 14*: 379-381.
- RITCHIE, J. and CROUCH, G. (2003), *The competitive destination: a sustainability perspective*, Univ. Calgary, Canada.
- RTAM (2004), "Procura turística do Alto Minho", in *Boletim da Região de Turismo do Alto Minho* 10: 2-11.
- SELBY, M. and MORGAN, N. G. (1996), "Reconstructing place image: a case study of its role in destination market research", *Tourism Management* 17: 287-294.
- STABLER (1988), "The image of destination regions: theoretical and empirical aspects, in *Marketing in tourism industry: the promotion of destination regions*, GOODALL, B.; ASHWORTH (eds.), Croom Helm, London.
- SWARBROOKE, J. and HORNER, S. (1999), *Consumer behaviour in tourism*, Butterworth Heinemann, Oxford.
- TELISMAN-KOSUTA, N. (1989), "Tourism destination image", in *Tourism marketing and management handbook*, WILL, S.F.; MOUTINHO, L. (eds.), Prentice Hall, Cambridge.
- TORRES, E. (2003), "Una aproximación a la sostenibilidad económica en los procesos de desarrollo turístico" in *Experiencias públicas y privadas en el*

desarrollo de un modelo de turismo sostenible, VALDÉS, L. and PÉREZ, J. M. (dir.), Fundación Universidad de Oviedo.

- VALDÉS, L. and RUIZ, A. (Coord.) (1996), Turismo y promoción de destinos turísticos: implicaciones empresariales, Servic. Publicaciones, Universidad de Oviedo.
- VALLS, J. F. (1996), Las claves del mercado turístico, Ed. Deusto, Bilbao.
- VAR, T. *et al.* (1977), "Determination of tourist attractiveness of the tourist areas in British Columbia", *Journal of Travel Research* (5): 1-8.
- VAZQUEZ BARQUERO, A. (1999), Desarrollo, redes e innovación. Lecciones sobre desarrollo endógeno, Ed. Pirámide, Madrid.
- VEAL, A. J. (2002), *Leisure and tourism policy and planning*, 2^a ed., CABI Publishing. Oxon.
- VERA, F. (Coord.) (1997), Análisis territorial del turismo, Ariel, Barcelona.
- VERA, F. (2002), "Estrategias de diversificación y diferenciación en destinos turísticos litorales", in *Estrategias turísticas urbanas*, PARDELLAS, X. (coord.), AECR, Vigo.
- WORLD TOURISM ORGANIZATION (WTO) (1999), *National and regional tourism planning*, International Thomson Business Press, London.
- ZIMMERMANN, E. (1933), *World resources and industries*, Harper and Brothers, New York.

Sites:

- www.dgempresa.min-economia.pt; information collected in 05/01/2006.
- www.estradasdeportugal.pt; information collected in 09/02/2006.
- <u>www.rtam.pt</u>; information collected in 21/06/2005.

| Dep. Var. | NRef | | |
|-------------------------|----------------------|--|--|
| Ind. Var. | INIXCI | | |
| RN | 2,682 (7,243)*** | | |
| RH | 5,342 (40,400)*** | | |
| RE | 4,493 (17,272)*** | | |
| Constant | - 1,394 | | |
| | (-2,822)** | | |
| R ² | 0,965 | | |
| Adjusted R ² | 0,965 | | |
| F | 2093,805 | | |
| Ν | 228 | | |

Annex 1. Linear regression to estimate the weighting factor, attending to the nature of the resource

Notes: *p<0,05; **p<0,01; ***p<0,001. The values in parenthesis are t-statistics. *statistically significant at the 0,05 level; ** at the 0,01 level; *** at the 0,001 level.

Annex 2. Tourist Infrastructures Value, by municipalities

| Municipality | Tourist Infrastructures | | | | CETI | Aci = (CETi*5)/CETm | |
|-------------------|-------------------------|-------|-------|------|-------|---------------------|-----------------------|
| municipanty | EH | TER | ΤN | MCAT | РС | CEII | ACI = (CEII J)/CEIIII |
| Arcos de Valdevez | 0,94 | 1,61 | 5 | 0 | 1,28 | 8,83 | 3,09 |
| Caminha | 2,2 | 1,14 | 0 | 5 | 4,36 | 12,7 | 4,45 |
| Melgaço | 1,14 | 0,19 | 3,33 | 0 | 1,44 | 6,1 | 2,14 |
| Monção | 0,92 | 1,18 | 0 | 0 | 0 | 2,1 | 0,74 |
| Paredes de Coura | 0,16 | 1 | 0 | 0 | 0 | 1,16 | 0,41 |
| Ponte da Barca | 0,16 | 0,59 | 3,33 | 0,09 | 1,28 | 5,45 | 1,91 |
| Ponte de Lima | 1,15 | 5 | 0 | 0 | 0 | 6,15 | 2,15 |
| Valença | 1,29 | 0,54 | 0 | 0 | 0 | 1,83 | 0,64 |
| Viana do Castelo | 5 | 3,42 | 0 | 0,86 | 5 | 14,28 | 5 |
| V. N. Cerveira | 1,51 | 0,18 | 0 | 0,83 | 0,96 | 3,48 | 1,22 |
| Minho-Lima | 14,47 | 14,85 | 11,66 | 6,78 | 14,32 | 62,08 | |

Source: authors' elaboration.

EH - Hotel accommodation capacity weighted by categories.

TER - Tourism establishments' capacity available in rural areas weighted by categories.

TN - Tourism establishments' capacity available in natural areas weighted by categories.

MCAT - Extra-Hotel accommodation capacity weighted by categories.

PC- Camping capacity weighted by categories

CETi - Tourist infrastructures capacity weighted by categories.

CETm – municipality value with higher CETi.

Aci - Accommodation capacity in the municipality "i".

Annex3. Restaurants Value, by municipality

| Municipality | Capacity | CRi | Ri = (CRI*5)/CRm |
|-----------------------|----------|-------|------------------|
| Arcos de Valdevez | 2416 | 6383 | 1,40 |
| Caminha | 4145 | 10931 | 2,40 |
| Melgaço | 2095 | 5533 | 1,22 |
| Monção | 3126 | 8367 | 1,84 |
| Paredes de Coura | 337 | 941 | 0,21 |
| Ponte da Barca | 2795 | 7960 | 1,75 |
| Ponte de Lima | 5794 | 16654 | 3,66 |
| Valença | 3361 | 9356 | 2,05 |
| Viana do Castelo | 7796 | 22767 | 5,00 |
| Vila Nova de Cerveira | 1444 | 4226 | 0,93 |
| Minho-Lima | 33309 | | |

Source: authors' elaboration.

CRi - Restaurant capacity in the municipality "i" weighted by categories.

CRm - municipality value with higher CRi.

Ri - Restaurants value in the municipality "i".