GESTÃO DE BENS COMUNS
E DESENVOLVIMENTO REGIONAL SUSTENTÁVEL
BRAGANÇA – ZAMORA 29 JUNHO A 02 JULHO 2011

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GUIMARÃES RESIDENTS' PERCEPTIONS TOWARDS TOURISM IMPACTS: A CLUSTER ANALYSIS

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ABSTRACT
The present study was designed to assess and segment local residents with respect to their perceived impacts of Guimarães tourism development. The residents of this municipality (located in the northern part of Portugal) are quite strong in their support to tourism. However, they do not keep a homogeneous perception of tourism impacts. A clusters analysis using data from a survey of 400 Guimarães residents' has revealed the existence of three clusters, according the different degrees of perceived tourism impacts: the *Skeptics* - moderate in relation to the benefits (averages range from 2.89-3.74) and the ones more concerned with its costs (averages range from 2.86-3.74); the *Moderately optimistic* - very optimistic about the benefits of tourism (averages range from 3.74-4.51) and conscious of the costs (averages range from 2.71-3.49); the *Enthusiasts* - very optimistic about tourism benefits (averages range from 2.92-4.52) and little worried about its costs (averages range from 1.78-3.26). Following the data from the survey, the findings are discussed and a few conclusions are extracted.
Keywords: cluster analysis, Guimarães, residents' perceptions, tourism impacts.

INTRODUCTION
Cultural tourism plays a major role in local economic development in many cities throughout the world. However, touristic success can be a double-edged sword with tourist flows having a strong impact on the quality of life of residents, who are exposed both to the benefits and the costs of tourism development. Consequently, in order to ensure the support of residents to tourism projects and initiatives and that this industry is sustainable in the long term, many planners now seek to understand how residents perceive tourism and tourists (Aguilló and Rosselló, 2005; Brida, Osti and Barquet, 2010).

There are many studies dealing with residents' attitudes towards tourism and associated impacts, some of them exploring, from different approaches, residents' socio-demographic characteristics and their behaviour regarding the tourism industry (e.g. Besculides, Lee and McCormick, 2002; Brunt and Courtney, 1999; Kuvan and Akan, 2005; Lawson, Williams, Young and Cossens, 1998; Sharma and Dyer, 2009).

On the other hand, some studies analyses this attitudes in order to segment on a cluster-based residents' response toward tourism (Aguilló and Rosselló, 2005; Andriotis and Vaughan, 2003; Bieger and Laesser, 2002; Brida, Osti and Barquet, 2010; Davis, Allen and Cosenza, 1988; Fredline and Faulkner, 2000; Inbakaran and Jackson, 2006; Madrigal, 1995; Oviedo-Garcia et al., 2008; Weaver and Lawton, 2001; Williams and Lawson, 2001).

Nevertheless, relatively little research has been carried out in Portugal on residents' perceptions of tourism impacts and none deals with the segmentation of their perceptions.

Policy-makers and tourism planners may obtain useful information from the analysis of residents' concerns and attitudes regarding tourism development and impacts. Their segmentation in different groups, according to their different perceptions, attitudes and concerns will be, also, useful in order to orient different strategies for different groups, given their characteristics (Brida, Osti and Barquet, 2010; Davis, Allen and Cosenza, 1988; Fredline and Faulkner, 2000; Lankford, 1994; Weaver and Lawton, 2001; Williams and Lawson, 2001).

Like we said before, cluster analysis is widely used as a technique to separate residents into mutually exclusive groups (Aguilló and Rosselló, 2005; Andriotis and Vaughan, 2003; Bieger

and Laesser, 2002; Brida, Osti and Barquet, 2010; Inbakaran and Jackson, 2006) and the aim of this paper is using this technique to assess and segment Guimarães' local residents with respect to their perceived impacts towards tourism development.

This segmentation is crucial because with the clusters groups and the identification of the demographic profile of the elements of each group, the positive dimensions of tourism development and possible solutions to potential negative impacts can be directed to key people (Brida, Osti and Barquet, 2010).

The paper is organized as follows: section 1 provides a review of the literature on residents' segmentation; section 2 presents the study methods and data analysis; section 3 discusses the results from the survey of 400 Guimarães' residents held in 2010. The last section of the paper offers the concluding remarks and some policy recommendations.

RESIDENTS' SEGMENTATION RESEARCHES

The implementation of a sustainable tourism strategy has to take into account the perception and attitudes of residents and to do its follow up on a frequent basis (Jackson, 2008).

This means that the general planning policy must be aware of the opportunity to reinforce the positive impacts (optimization of the benefits) of the tourism industry and of mitigating or minimize the negative ones felt by host communities (Ritchie and Inkari, 2006). This approach implies to listen to the host communities regarding their concerns about the industry development and to really make residents part of decision making process (Brunt and Courtney, 1999).

The idea that residents must be taken as important stakeholders of the touristic activity comes from the fact that they are an integrant part of the cultural tourism phenomenon and, being so, can be decisive for the success of tourism destinations (Brunt and Courtney, 1999; Cadima Ribeiro and Remoaldo, 2011; Eusébio and Carneiro, 2010; Nepal, 2008; Souza, 2009). This general idea could already be found in papers regarding the issue produced in the first half of the nineties of the past century, like the ones of Ap (1992) and Lankfort (1994), as underlined by Brunt and Courtney (1999).

The analysis of residents' attitudes has been used quite extensively in order to segment on a cluster-based residents' response towards tourism (Aguiló and Rosselló, 2005; Brida, Osti and Barquet, 2010; Davis, Allen and Cosenza, 1988; Fredline and Faulkner, 2000; Weaver and Lawton, 2001; Williams and Lawson, 2001). For example, in Aguiló and Rosselló (2005) empirical research, cluster analysis was made based on 62 questions or statements related to local perceptions and attitudes towards tourism. A cluster of five groups was obtained: Cluster A – *Development Supporters*; Cluster B – *Prudent Developer*; Cluster C – *Ambivalent and Cautious*; Cluster D – *Protectionists*; and Cluster E – *Alternative Developers*. According to these authors, this segmentation would be extremely important in terms of tourism management and planning, namely allowing to consider carefully the opinions of the protectionists group in order to reduce the causes of their concern, and from development supporters, to highlight the tourism positive aspects (Aguiló and Rosselló, 2005).

This study is also interesting because its authors established some parallels between the clusters obtained in their research and those identified by Davis *et al.* (1988), Fredline and Faulkner (2000), and Madrigal (1995).

A segmentation based on perceptions and attitudes towards tourism impacts is also used in a more recent research produced by Brida, Osti and Barquet, 2010. These authors identified five different clusters, on the same line of Aguiló and Rosselló study: Clusters A e C – labeled *Environmental Supporters*; Cluster B – *Development Supporters*; Cluster D – *Protectionists*; and Cluster E – *Ambivalent*.

Other studies seek to segment residents according to their demographic characteristics. An excellent example is the Inbakaran and Jackson research (2006) about residents in five tourist product regions in Victoria, Australia, and in which is summarized the main results of several previous studies. Their own results were the four-cluster solution: Cluster 1 – labeled *Tourism Industry Connection*; Cluster 2 – *Low Tourism Connection*; Cluster 3 – *Neutral Tourism Development*; and Cluster 4 – *High Tourism Connection*. These authors conclude that these cluster profiles were significantly different on key demographic and resident behaviors, namely with regard to negative attitudes towards tourism.

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As specified in the introduction, the purpose of this study is to explore clusters among resident perceptions towards tourism impacts in a Portuguese municipality, Guimarães. As already noted, relatively little research has been undertaken in Portugal that looks specifically at residents' perceptions towards tourism impacts and none deals with the segmentation of their perceptions, despite the acknowledged merit of these techniques.

STUDY METHODS

Taking into account the objectives underlined, the data collection was performed through a questionnaire delivered from January to March 2010 to a convenience sample of 540 residents from the municipality of Guimarães (Northern part of Portugal).

In order to create the sample, we contacted four public local secondary schools and one professional school. This allowed us to almost completely cover the 69 parishes which, administratively, constitute the municipality.

We chose the high schools as a means to, in theory, include three generations of inhabitants in our survey: the 15-24 year old, the 25-64 year old and the 65 or more years old residents. With that aim, we contacted the Head of each school and asked for the assistance of teachers who could hand out the questionnaires to their pupils. Secondly, the students who were over 16 years old were asked to include their brothers/sisters, parents and grandparents in the study by asking them to also answer the survey. Each teacher gave three questionnaires to each student over 16 and asked them to return them within a two weeks time schedule. As the sample revealed itself to be biased, under-representing the 25-64 years old section of Guimarães residents, in a second phase we asked adults that use the services of the municipal council to fill in the same questionnaire. That took place during the month of March 2010.

A pre-test involving 19 Guimarães residents was conducted between 30th November and 4th December 2009. The time estimated to fill in the questionnaire, of almost four pages, was 10 minutes.

A total of 540 usable surveys were returned, which constituted a response rate of 67.1% of the questionnaires handed out. Examination of missing data indicated that this occurred completely at random. The simplest and most direct approach for dealing with missing data is the complete case approach, considering only those questionnaires with complete data (Hair, Anderson, Tatham and Black, 1998). After eliminating incomplete responses, 400 with complete data were retained for the analysis.

The questionnaire developed for the study was based on previous researches on residents' perceptions of tourism impacts (Besculides, Lee and McCormick, 2002; Jackson, 2008; Kuvan and Akan, 2005; Sharma and Dyer, 2009; Williams and Lawson, 2001). Additionally, we followed and adapted a questionnaire applied by Monjardino (2009) envisaging the evaluation of residents' perception of the Azores islands tourism development. However, given the special characteristics of Guimarães, some modifications had to be included. The result was a questionnaire with 25 questions, mostly categorized, and structured according to a five point agree-disagree Likert scale, going from the "completely disagree" option to the "completely agree" one.

In one of the main questions of the questionnaire (question 11), five tourism impact dimensions were considered. Since Guimarães is a cultural destination, we privileged the socio-cultural impacts: 6 items were used to measure the perceived positive socio-cultural impacts and 3 items the negative socio-cultural impacts; 3 items were used to measure economic benefits and 1 item tried to capture the perceived economic problems; and, finally, 1 item addressed the perceived negative environmental impacts.

Respondents' socio-demographic information (age, gender, education level, household income, occupation, link to the industry) was also included in the questionnaire. A few geographic variables, such as being born in the municipality, the length of time the person had been living in the municipality of Guimarães and the parish where he/she was living were also included.

For this study, several statistical procedures were carried out using the Statistical Package for Social Sciences (SPSS version 19) in the following research steps.

In the first step, before any other statistical analyses were performed, univariate statistics were calculated for all survey items.

In the second step, one-way ANOVA and t-tests were used to identify differences between six socio-demographic variables (age, gender, education level, household income, link to the

industry and place of residence) in respect of the 14 items of the question 11, measuring the perceived impacts of tourism in Guimarães. When the independent variable was divided into two groups, *t*-tests were applied. ANOVA tests were applied when the independent variable was divided into three or more subgroups.

Finally, a non-hierarchical cluster analysis using the *k*-means cluster algorithm for the 14 items measuring the perceived impacts was performed, in a third step. The socio-demographic variables were omitted from this cluster analysis, so that the residents could be grouped only by their perceptions and not by their demographic profile.

Study Results
General Data

Before presenting and examining the results we obtained from the cluster analysis, it is important to highlight some general data for the sample as a whole.

Firstly, taking into account the statement "*Tourism is good for the municipality of Guimarães*", and using a Likert scale, we could conclude that 80% of the respondents expressed a positive opinion, as they completely agreed that tourism was good for the development of the city. If we also consider the respondents who chose to simply agree with this view, we obtain a total of 98.2% who kept a positive opinion of tourism. It is relevant to mention that only 0.2% of the respondents expressed a total disagreement with this claim.

Interestingly, perceptions that tourism helps individual respondents to improve their economic position were much less present: the percentage of people who disagreed that tourism helped them personally was 54.8% (resulting in a mean score of no more than 3.37 for the question). Therefore, residents perceive the tourism industry as a major opportunity for enhancing Guimarães' general development and they believe that many of its inhabitants will benefit, but are much less certain that they personally will benefit.

Taking into consideration that Guimarães has only an emergent status as a cultural tourism destination, this result could be associated with the residents' strong expectations kept regarding the socio-economic potential of tourism development. To some degree, it could also be evidence of a naïve understanding of tourism impacts (Vareiro, Cadima Ribeiro, Remoaldo and Marques, 2011).

Table 1 presents the results related to the statements mentioned above and the responses to the 14 perceived impacts of tourism items. For all items the Likert scale ranged from 1 = "completely disagree" to 5 = "completely agree". An examination of the data of this table reveals that, generally speaking, the residents of the sample agreed with the positive impacts of tourism and show concern vis-à-vis the negative ones.

Table 1 - Overall responses to some general questions and the 14 perceived impacts of tourism

		Likert scale					M	SD
		1	2	3	4	5		
General Questions	Tourism is good for Guimarães	.3	0.0	1.5	18.3	80.0	4.78	.483
	Personally, I benefit from the development of tourism in the municipality of Guimarães	7.5	10.5	36.5	28.3	17.0	3.37	1.113
Benefits	Promotes contact with different cultures	.3	1.3	5.0	48.3	45.3	4.37	.663
	Encourages local culture and handicrafts	.8	1.5	7.3	53.3	37.3	4.25	.716
	Aids the conservation and restoration of historic buildings	1.0	1.8	11.5	48.5	37.3	4.19	.782
	Helps supply new services for residents	1.0	3.5	19.8	56.5	19.3	3.90	.781
	The quality of services (e.g., restaurants, cafes, bars, shops) in Guimarães is now better due to tourism	1.3	6.8	26.0	52.3	13.8	3.71	.833
	Residents have easy access to services used by tourists	1.8	8.5	28.5	52.8	8.5	3.58	.831
	Creates jobs for residents	1.8	1.5	10.0	55.3	31.5	4.13	.785
	Money spent by tourists is kept by municipality agents and residents	1.3	6.3	39.5	46.0	7.0	3.51	.769
	Guimarães has control on tourism management and planning	3.0	11.3	47.3	32.8	5.8	3.27	.848
Costs	Increases crime rates	14.3	31.5	37.3	14.3	2.8	2.60	.989
	Local people change their behavior in an attempt to mimic the behavior of tourists	17.0	40.8	28.0	12.3	2.0	2.42	.975
	Tourism limits the access of residents to leisure sites and equipment	19.5	40.0	25.5	11.8	3.3	2.39	1.030

Increases prices	2.0	12.5	35.8	39.0	10.8	3.44	.913
Generates excessive noise in the Historical Center	18.3	36.0	29.8	13.3	2.8	2.46	1.023

Source: authors' own survey data.

In the results derived from the ANOVA analysis and t-tests, not many statistical differences were found, since residents displayed a quite high degree of similarity in their responses. However, among the six socio-demographic variables, age and education level were the two best discriminators of perceived impacts of tourism. Age was a discriminator for five of the items. The results of the ANOVA tests (see Table 2) indicate that the oldest residents were less favorable towards the positive impacts of tourism and demonstrated a greater agreement with the negative impacts than the younger.

Table 2 – Mean scores and Anova tests for age

Impacts of tourism in Guimarães:	15-24 (n=126)	25-64 (n=213)	+65 years old (n=61)	F-Ratio	P-value
Creates jobs for residents	4.16	4.19	3.89	3.672	0.026
Promotes contact with different cultures	4.52	4.35	4.13	7.731	0.001
Tourism limits the access of residents to leisure sites and equipment	2.26	2.39	2.66	3.035	0.049
Generates excessive noise in the Historical Center	2.20	2.52	2.80	8.222	0.000
Local people change their behavior in an attempt to mimic the behavior of tourists	2.06	2.57	2.61	13.308	0.000

Source: authors' own survey data.

Education level was also important as a discriminator of perceived impacts of tourism for four of the items. Table 3 indicates that the more educated residents were more favorable they showed to be regarding tourism development, that is, more expectations they put in the positive impacts of tourism and less worried they were regarding the eventual negative impacts of the industry.

Table 3 – Mean scores and Anova tests for education level

Impacts of tourism in Guimarães:	At least 6 years (n=102)	7th - 9th grade (n=86)	10th - 12th grade (n=140)	University (n=72)	F-Ratio	P-value
Creates jobs for residents	3.96	4.23	4.07	4.38	4.797	0.003
Promotes contact with different cultures	4.18	4.45	4.40	4.49	4.290	0.005
Encourages local culture and handicrafts	4.06	4.34	4.24	4.42	4.255	0.006
Tourism limits the access of residents to leisure sites and equipment	2.53	2.35	2.46	2.11	2.704	0.045

Source: authors' own survey data.

Finally, for the remaining four independent variables (gender, household income, link to the industry and place of residence), not many significant differences were found in what concerns perceived impacts.

Cluster Analysis

Clusters Analysis is a multivariate statistical technique that allows grouping cases or variables into homogenous groups (clusters) according to one or more common features. Thus, any case belonging to a cluster is similar to any other from that cluster (low degree of intra-group variation) and distinct from any other included in another cluster (high degree of inter-group variation).

In cluster analysis, grouping cases or variables is done through similarity or dissimilarity measures (distance) between two cases, at an early stage, and, subsequently, between two clusters, through hierarchical (group cases and variables) or nonhierarchical techniques (group cases).

Following previous researches (Aguiló and Rosselló, 2005; Andriotis and Vaughan, 2003; Bieger and Laesser, 2002; Brida, Osti and Barquet, 2010; Inbakaran and Jackson, 2006), we used a nonhierarchical clustering technique (k-means cluster analysis). This technique was designed specifically to group cases rather than variables and can be efficiently applied to larger data sets (n > 200) compared with the hierarchical technique (Johnson and Wichern, 1998, in Brida, Osti and Barquet, 2010). Although, it implies the previous decision about the number of groups to be formed. Thus, taking into account the technique used by Brida, Osti and

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Barquet (2010), and by Aguiló and Rosselló (2005), we considered to implement a stepwise methodology allowing to form from five to two clusters, based on the average scores of the 14 impacts of tourism items. Table 4 presents the percentage of the sample in each cluster, in each set of groups (two to five). As it highlights, if four or five groups are selected, minority groups accounting for less than 5% of the sample are obtained.

Table 4 – Percentage of Sample within each Group

| Clusters | Number of groups | | | |
	2	3	4	5
1	47	19	29	29
2	53	40	4	2
3	--	42	35	28
4	--	--	33	26
5	--	--	--	16

Source: authors' own survey data.

Then, to ensure the simplicity of the interpretation of the results, three clusters were examined. Comparison of intergroup variability, based on the distance among cluster centroids, and the intra-group variability, based on the mean distances of each resident from their cluster centroid, are provided in Table 5, which shows that the clusters with greatest disparity are the 1 and the 2, while clusters 2 and 3 have a closer similarity.

Table 5 – Inter and Intra-group Variability[a]

Clusters	1	2	3
1	3.511		
2	3.492	3.065	
3	3.406	2.369	3.185

Source: authors' own survey data.
[a] The means of the distances between each resident and their cluster are shown in italics on the diagonal (within group variability), and the distances between cluster centroids are shown in the lower part of the table (between group variability).

An analysis was made of the different clusters, examining the means for the 14 impacts of tourism items (Table 6), revealing the agreement/disagreement vis-à-vis these items for residents of each cluster. Further, Table 6 indicates that the contribution of all impacts were significant for defining the clusters (p-value <0.01), although the impacts that differentiated the clusters most were "*Tourism limits the access of residents to leisure sites and equipment*" and "*Local people change their behavior in an attempt to mimic the behavior of tourists*", both representing costs of tourism. The impact that seems to be an issue for consensus among residents and contributes less to the definition of distinct groups was "*Increases prices*".

Taking into accounting the perceived benefits, the items that show a lesser differentiation among the clusters are "*Encourages local culture and handicrafts*".

Table 6 – The perceived impacts of tourism in Guimarães among clusters (percentage agreeing[1] and average scores[2])

Impacts of Tourism in Guimarães:		Cluster 1 n=76 (19%)		Cluster 2 n=158 (40%)		Cluster 3 n=166 (42%)		F-Ratio	P-value
		Agree (%)	Average scores[2]	Agree (%)	Average scores[2]	Agree (%)	Average scores[2]		
Benefits	Promotes contact with different cultures	72.4	3.74	98.8	4.51	98.2	4.52	54.271	0.000
	Encourages local culture and handicrafts	71.0	3.71	95.6	4.42	94.6	4.33	31.046	0.000
	Aids the conservation and restoration of historic buildings	55.2	3.41	94.3	4.48	91.5	4.28	66.285	0.000
	Helps supply new services for residents	40.8	3.17	90.5	4.20	77.7	3.94	57.210	0.000
	The quality of services (e.g., restaurants, cafes, bars, shops) in Guimarães is now better due to tourism	39.4	3.25	91.8	4.15	53.6	3.49	49.258	0.000
	Residents have easy access to services used by tourists	19.7	2.89	83.6	3.94	59.0	3.55	50.572	0.000
	Creates jobs for residents	61.8	3.49	94.9	4.34	90.3	4.23	38.469	0.000
	Money spent by tourists is kept by municipality agents and residents	19.7	3.01	77.9	3.89	44.6	3.38	46.384	0.000
	Guimarães has control on tourism management and planning	21.0	3.07	65.2	3.74	53.0	2.92	51.390	0.000
Costs	Increases crime rates	30.3	3.11	23.4	2.87	4.8	2.10	45.155	0.000
	Local people change their behavior in an attempt to mimic the behavior of tourists	17.1	2.86	26.6	2.82	1.2	1.83	68.013	0.000

Tourism limits the access of residents to leisure sites and equipment	30.3	3.07	22.1	2.71	1.2	1.78	71.317	0.000
Increases prices	60.5	3.74	54.4	3.49	40.3	3.26	7.744	0.001
Generates excessive noise in the Historical Center	26.3	3.12	25.3	2.73	2.4	1.90	59.452	0.000

Source: authors' own survey data.

Notes: [1] percentage agreeing are those answering 4, 5 on the 5-point scale; [2] scale ranges from 1= completely disagree to 5= completely agree.

Cluster 1 – Skeptics: they constitute the smallest group, involving 19% of the sample, containing no more than 76 residents. This cluster shows a moderate position about the positive impacts of tourism and a significant worry regarding the negative impacts. For example, only 19.7% of the residents of this cluster agree that the "*Money spent by tourists is kept by municipality agents*" and 55.2% that tourism "*Aids the conservation and restoration of historic buildings*", contrasting with the 77.9% and 94.3%, respectively, from the *Moderate optimistic* group. Although, 60.5% agree that "*Increases prices*" and 30.3% believe that tourism "*Increases crime rates*" and *Limits the access of residents to leisure sites and equipment*". Their demographic profile (Table 7) is marked by the circumstance of including mostly males, oldest and less educated residents when compared with the other clusters.

Cluster 2 – Moderately optimistic: this second cluster contains 158 residents (40% of the sample respondents). These respondents are the most firmly convinced of the benefits of tourism, although they also have an over-average awareness of the negative impacts of the activity. In fact, 98.8% agree that tourism "*Promotes contact with different cultures*" and 95.6% that "*Encourages local culture and handicrafts*". This is the more gender-balanced cluster, including people who are well educated (highest percentage of people with at least 10 years of scholarship) and the smallest percentage of people with up to 500€ of income.

Cluster 3 – Enthusiasts: it is the largest group, constituted by 42% of the sample, including 166 residents. Like the previous one, they held extreme positive views about the positive impacts of tourism, although disagreeing with statements describing the negative impacts of the industry, with the exception of the item "Increases prices" (like we said before, it is quite consensual). For instance, only 1.2% of the residents of this cluster agree that "*Local people change their behavior in an attempt to mimic the behavior of tourists*" and that "*Tourism limits the access of residents to leisure sites and equipment*". The "*excessive noise in the Historical Center*" caused by tourists is only considered by 2.4% of this cluster's memberships. The cluster has the highest percentage of females, younger residents, including people who are well-educated and living in APU (Predominant Urban Areas).

Table 7 – Demographic profile of the three clusters of residents

	Cluster 1		Cluster 2		Cluster 3		Total		Chi-Square Value	P-value
	N	%	N	%	N	%	N	%		
	76	19	158	40	166	42	400	100		
Gender									8.865	0.012
Male	41	53.9	83	52.5	63	38.0	187	46.8		
Female	35	46.1	75	47.5	103	62.0	213	53.2		
Age									15.441	0.004
15-24	20	26.3	48	30.4	58	34.9	126	31.5		
25-64	34	44.7	87	55.1	92	55.4	213	53.2		
65 and more	22	28.9	23	14.6	16	9.6	61	15.2		
Education									12.488	0.052
at least 6 years	29	38.2	37	23.4	36	21.7	102	25.5		
$7^{th} - 9^{th}$ grade	13	17.1	34	21.5	39	23.5	86	21.5		
$10^{th} - 12^{th}$ grade	27	35.5	59	37.3	54	32.5	140	35.0		
University	7	9.2	28	17.7	37	22.3	72	18.0		
Work in sector									4.574	0.102
No	60	78.9	127	80.4	146	88.0	333	83.2		
Yes	16	21.1	31	19.6	20	12.0	67	16.8		
Place of residence									4.903	0.086
AMU	17	22.4	39	24.7	25	15.1	81	20.2		
APU	59	77.6	119	75.3	141	84.9	319	79.8		
Income									16.665	0.011
Up to 500€	17	27.0	12	9.2	20	14.5	49	14.8		
501-1000€	24	38.1	50	38.5	45	32.6	119	36.0		
1001-2500€	21	33.3	53	40.8	54	39.1	128	38.7		

More than 2500€	1	1.6	15	11.5	19	13.8	35	10.5	

Source: authors' own survey data.

CONCLUSION

Tourism success can play a strong impact on the quality of life of residents, either positive or negative. Due to that, recent investigations have underlined the need of a better understanding of how residents perceive tourism and tourists in order to achieve more sustainable approaches to tourism development.

Even if there are many empirical studies dealing with residents' attitudes towards tourism and associated impacts have been produced at the international level, so far this issue has just attracted the attention of a few Portuguese researchers, and none of the research produced as focused on the segmentation of residents' perceptions. As a first reason, this led us to develop this empirical research. Other reasons where the fact that Guimarães got its historical centre classified by UNESCO as a World Heritage Site, since 2001, and that the city will host the 2012 European Capital of Culture.

Until nowadays, tourism industry is mostly a complementary industry of the Guimarães local economy, but it has been experiencing a sustainable growth in the number of visitors since 2000. In 2009 it attained a record number of 70.075 visitors, according the figures collected at the tourism offices available in the city, but a significant pressure from the visitors still seems far from happening. The data regarding the length of stay of the tourists confirms this view, as the average overnight stay of guests at Guimarães is still very low (1.8 nights in 2009). The figures regarding tourists and length of stay are far from matching with the tourism potential of the city, either in terms of tourism attributes, either in what regards its lodging capacity. In what regards this last dimension, one can mention that the net bed-occupation rate registered continues to be very low (reaching 35% in 2008) and it has a lot to improve to reach the proportion of foreign guests attained at the national level (53% in 2008).

Cluster analysis can provide the basis for a focused approach in terms of planning and management of the tourism activity, segmenting local residents into groups of individuals with common perceptions towards tourism impacts. In fact, in this research we concluded that residents of the municipality of Guimarães are quite strong in their support to tourism, even if, they do not keep a homogeneous perception of tourism impacts. Therefore, with this technique we identified three clusters, labelled as: Skeptics; Moderately optimistic and Enthusiasts.

The Skeptics (cluster 1) constitute the smallest group, involving 19% of the sample. This cluster showed a moderate position about the positive impacts of tourism and a significant worry regarding the negative impacts. Their demographic profile is marked by the circumstance of including mostly males, oldest and less educated residents when compared with the other clusters.

The Moderately optimistic (cluster 2) contains 40% of the sample respondents. These respondents were the most firmly convinced of the benefits of tourism, although they also had an over-average awareness of the negative impacts of the activity. This is the more gender-balanced cluster, including people who are well educated (highest percentage of people with at least 10 years of scholarship) and the smallest percentage of people with up to 500€ of income.

The Enthusiasts (cluster 3) is the largest group, constituted by 42% of the sample. Like the previous one, they hold extreme positive views about the positive impacts of tourism, tending to minimize the negative impacts of the industry, with the exception of the item "Increases prices".

Nevertheless, the results obtained in this first empirical analysis should bear in mind that Guimarães is an emergent tourism destination and, according to its resources potential, the tourism industry will take a much more relevant place in the local economy in the next future.

As previously underlined, we are facing a place of deep symbolic meaning, as well of strong cultural identity. This occurs because Guimarães is faced by Portuguese people as the cradle of the nation and its sense of cultural identity was reinforced by its certification as a World Heritage Site. These facts make predicting the tourism will go on growing in this territory, with all the positive and negative consequences resulting from that. In such context, it is thought to be of major importance that tourism planners and managers can be aware of the perceptions towards the industry of the local people, that is, try to continuously capture and do the follow up of their concerns, and take that into consideration in their policy decisions. This research envisaged to contribute to such a move forward.

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