“Residents’ perceptions of the tourism impacts on a mature destination: the case of Madeira Island”

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“Residents’ perceptions of the tourism impacts on a mature destination: the case of Madeira Island”

Diogo Teixeira
School of Economics and Management, University of Minho, Braga, Portugal

J. Cadima Ribeiro*
NIPE, School of Economics and Management, University of Minho, Campus de Gualtar, 4710-057 Braga, Portugal, email: jcadima@eeg.uminho.pt, phone: +351253604540

*Corresponding author

Abstract
Residents play a fundamental role in the quality of tourists’ experiences and satisfaction derived from a visit and, thus, in the success of a tourism destination. This paper addresses the perceptions that residents have of the impacts of tourism on Madeira Island, a mature tourism destination. Based on data extracted from a survey administered to residents during August and September 2018, we inquired about the extent to which they maintain a positive perception of the impacts of the tourist industry. Both descriptive and multivariable statistical methods were used. The empirical results attained indicate that the residents feel that there is no excess of tourism on the island. They do not fail to realize that there are a few negative consequences, but the positive ones got better scores on average. Being an inhabitant of an urban or a rural site did not seem to influence differently the perceptions gathered. This type of analysis can serve as a useful tool for tourism planners and managers in order to prevent or minimize eventual negative impacts of the tourism industry as felt by the local inhabitants and, thus, for creating the required policies.

Keywords: Residents' perceptions, Tourism impacts, Mature destination, Madeira Island.
Introduction

The tourism industry has recently had a significant impact on the Portuguese economy (Turismo de Portugal, 2017), and, as such, is an economic activity to which public and private entities acting at several levels of economic, social, and cultural life should devote special attention. Several factors influence the flow of tourists in a particular territory, and among them are the attitudes the residents form towards tourism and tourists (Ap, 1992; Faulkner & Tideswell, 1997; Dyer et al., 2007; Nunkoo & Gursoy, 2012; Vareiro, Remoalde & Cadima Ribeiro, 2013; Vargas et al., 2015; Malik et al., 2017).

In this paper, the research focus will be the residents' perceptions of the tourism impacts on Madeira Island, a mature tourism destination (Marujo, 2013; Almeida, 2016; SRETC, 2016). Even if Madeira Island has a long history in the tourism industry (Marujo, 2013), the development of tourism at Madeira as we know it today began in the 1960s. The construction of the nearby airport in 1964, played a major role in this development (Marujo, 2013). Since then, tourism has never ceased to grow, taking a leading role in the economy of the island and providing the first source of income and employment for its residents (SRETC, 2016).

This Portuguese island, located in the Atlantic Ocean near the Canary Islands and Northern Africa, has been designated more than once the best island destination in Europe and in the world by the international entities concerned with annual tourism awards (World Travel Awards). This, of course, has helped to enforce its tourist attractiveness and image.

The main aims of this paper are as follows:

i) to gain an accurate picture of the Madeira residents` perceptions of the impacts of tourism, ;

ii) to identify the extent to which residents share the same perceptions towards tourism development or, in other word, if a significant segmentation of the residents agree regarding the impacts of tourism ; and

iii) to determine if a pattern or relationship exists between tourism residents` perceptions and the sociodemographic profiles of respondents.
As far as we could verify, no research has been performed with the residents of this Island as the study objects.

From the empirical results achieved, policy recommendations can be drawn that can contribute to the design of planning guidelines and tourism policies that could lead to the strengthening of the relationship between residents and tourists and limit the negative impacts that might result from the tourist activity.

The literature on the issue indicates that different results can be found, whether concerning emergent or mature destinations (Vareiro, Remoaldo & Cadima Ribeiro, 2013; Lee, 2013; Figueroa & Rotarou, 2016; Rezaei, 2017; Malik et al., 2017; Martín, de los Salones Sánchez & Herrero, 2018), the level of involvement of local people on the tourism planning process (Butler, 1980; Dyer et al., 2007; Vareiro, Remoaldo & Cadima Ribeiro, 2013), or several features related to the sociodemographic profile of the residents and their commitment towards the place and the wellbeing of its inhabitants (Abdollahzadeh & Sharifzadeh, 2014; Wang & Xu, 2015; Almeida-García et al., 2016; Rezaei, 2017). In this sense, this research brings new contributions by providing data checking whether similar or different perceptions vis-à-vis tourism impacts can be found in Madeira, always keeping in mind its mature nature as a tourism destination.

In the approach to the empirical reality undertaken, we will use data from a survey administered to the Madeira residents in August and September 2018, following models we found in the review of the empirical literature. The survey inquires on several dimensions the impacts perceived by residents of the tourist activity.

The paper is structured as follows: Section 1 refers to the review of the literature addressing the issue of the residents’ perception of the impacts of tourism; Section 2 presents the study methods; Section 3 presents a brief description of Madeira Island, which is our case for the study. Section 4 deals with the empirical results, including a discussion of the results obtained vis-à-vis the review of the literature; in the last section, the conclusions are presented, and brief policy considerations are made.
Residents’ perceptions of tourism’s impacts

Increased attention was devoted to residents’ attitudes toward tourism and tourists in the 1970s (Long, Perdue & Allen 1990; Lankford 1994; Chen, 2000; Jurowski & Gursoy, 2004; Nunkoo & Gursoy, 2012). In recent decades, there has been a substantial increase in research on the subject, because many companies, community leaders, and even government officials began to feel concern about the active opposition of residents of certain destinations toward the effects of tourism development (Gursoy & Rutherford, 2004; Lee & Back, 2006; Lee, 2013; Malik et al., 2017).

The most referenced theory to explain the link between residents’ perceptions and attitudes toward tourism and tourists is Social Exchange Theory (Ap, 1992; Látková & Vogt, 2012; Vargas et al., 2015; Malik et al., 2017). According to this theory, individuals and community groups who perceive getting more benefits than costs from the tourism industry are more likely to demonstrate a supportive attitude towards it (Ap, 1992; Lee, 2013). In other words, for tourists and residents to establish a good relationship, they need to feel that this interaction is beneficial for both parts (Renda, Mendes & Valle, 2014).

There are several reasons for the increased interest in understanding residents' attitudes towards tourism impacts. For example, negative attitudes of residents could be a disadvantage in the sustainability and development of tourist destinations (Butler, 1980; Ap, 1992; Diedrich & García-Buades, 2009; Malik et al., 2017), as the success of a destination depends greatly on local residents’ hospitality (Gursoy, Jurowski & Uysal, 2002; Lee, 2013; Vareiro, Remoaldo & Cadima Ribeiro, 2013; Renda, Mendes & Valle, 2014). Tourists also feel strongly about the way they are received by residents (Diedrich & García-Buades, 2009).

Tourism development does not occur by itself, and the support of residents is a key factor in its development (Butler, 1980; Dyer et al., 2007; Malik et al., 2017). This is especially noticeable in islands endowed with limited geographic space and fragile environments, because the concentration of tourism conduct during close interaction between residents and tourists could be more evident in the eventual environmental damages, namely those caused by tourism (Garau-Vadell, Díaz-Armas & Gutierrez-Taño, 2014).
Ap (1992) took a pioneering role in addressing the issue. Dogan (1989), Faulkner and Tideswell (1997), Besculides, Lee and McCormick (2002), Dyer et al. (2007), Nunkoo and Gursoy (2012), Brida, Osti and Barquet (2010), Vareiro, Remoaldo and Cadima Ribeiro (2013), Vargas et al. (2015), Wang and Xu (2015), and Martín, de los Salones Sánchez and Herrero (2018) are also among the several authors who have conducted studies worldwide to provide empirical evidence on the influence of residents' perceptions of tourism on their attitudes toward the industry.

In the literature, four main types of tourism impacts are identified: economic impacts (Huh & Vogt, 2008; McDowall & Choi, 2010; Lee, 2013; Martín, de los Salmones Sánchez & Herrero, 2018), cultural impacts (Besculides, Lee & McCormic, 2002; McDowall & Choi, 2010; Vareiro, Remoaldo & Cadima Ribeiro, 2013; Renda, Mendes & Valle, 2014), social impacts (Brunt & Courtney, 1999; Kuvan & Akin, 2005; Vareiro, Remoaldo & Cadima Ribeiro, 2013), and environmental impacts (Andereck et al., 2005; Kuvan & Akin, 2005; Renda, Mendes & Valle, 2014).

For example, in the case of the region of Cantabria, located in the north of Spain, Martín, de los Salmones Sánchez and Herrero (2018) found that the main variable which determined the attitudes of residents regarding the tourism development of their regions was the positive economic impacts experienced. These results are in line with the findings of Abdollahzadeh and Sharifzadeh (2014), who claim that the economic effects are those the residents value the most.

According to the previously mentioned authors (Martín, de los Salmones Sánchez & Herrero, 2018), the impacts that influence the residents' attitudes least were the negative economic impacts and the positive environmental ones. Trying to interpret such a result, Martín, de los Salmones Sánchez and Herrero (2018) argued that this could be due to two reasons: first, in the region where the study was conducted, the tourism model was not a mass one, so the negative economic effects usually attributed to conventional tourism had not yet occurred, and secondly, the main motivation of the majority of tourists who chose to visit the Spanish area under examination was to establish contact with nature. As such, residents could just look at the negative impacts, and they might not have taken into consideration the positive ones (Martín, de los Salmones Sánchez & Herrero (2018).
In many studies, we can verify that the intensity of the perception of negative and positive impacts is affected by factors such as the number and type of visitors, length of stay, diversity of economic power, social heterogeneity of the visitors, social characteristics of the destination, and the personal characteristics of residents, such as whether they work or not in tourism activities, their attachment to the local community, whether they live in rural areas influenced by tourism or in tourist centers, and their social and demographic profile (Gursoy & Kendall, 2006; Bujosa Bestard & Rosselló, 2007; Woosnam, Norman & Ying, 2009; Vareiro, Remoaldo & Cadima Ribeiro, 2013; Renda, Mendes & Valle, 2014).

Similarly, Abdollahzadeh and Sharifzadeh (2014) have pointed out that the main reasons affecting residents’ attitudes towards tourism are their education level, gender, age, employment profile, and the degree of attachment to the community.

According to Ritchie and Inkari (2006) and also Renda, Mendes and Valle (2014), among several other authors, in general, residents believe that tourism is good for the local economy and for the community. This is particularly true among individuals working in the tourism and retail sectors, although they recognize that negative impacts do exist. Other researchers have come to the conclusion that the variable of how long the resident has lived in the area is strongly influential on the perception expressed; that is, the longer individuals live in a community, the more their attitudes towards tourism tend to become negative (McCool & Martín, 1994; Ryan & Montgomery, 1994; Renda, Mendes & Valle, 2014). The results found by Wang and Xu (2015) follow the same path; they emphasize that local identity plays a key role in residents' attitudes towards tourism impacts. The issue of the destination life cycle also provides a relevant perspective on the way residents’ perceptions and attitudes toward tourism tend to evolve (Butler, 1980; Dogan, 1989).

When residents have higher levels of education, their perceptions tend to be more positive; that is, attitudes toward tourism improve as residents’ educational levels increase (Almeida-García et al., 2016; Vareiro, Remoaldo & Cadima Ribeiro, 2013). On the other hand, and considering the specific case of Benalmádena, in Spain, Almeida-García et al. (2016) concluded that being a native of Benalmádena or having lived there for more than ten years had a negative relationship with the perception of the tourism benefits.
Interviewees with less than five years of residence showed a more positive attitude toward the impact of tourism than the ones living there for a longer period.

Residents’ perceptions towards tourism impacts were also studied in the case of Guimarães, an emerging tourist destination, by Vareiro, Remoaldo and Cadima Ribeiro (2013). In that empirical study, they have found three groups of residents, according to their perceptions of the benefits of the city’s tourist development: the skeptics; the moderately optimistic; and the enthusiasts.

The skeptics were the smallest group, composed mostly by male, older, and less-educated residents. The moderately optimistic were those who believed the most in the benefits of tourism development and included the residents with the highest income. The enthusiasts were the largest group of residents, having the same view as the moderately optimistic ones about the positive impacts but showing a tendency to minimize the negative ones (Vareiro, Remoaldo & Cadima Ribeiro, 2013).

Research conducted by Malik et al. (2017) on another emergent destination, the region of A`Dhakhiliyah in the Sultanate of Oman, also found a highly supportive attitude towards tourism development among residents. In this regard, being a Muslim country driven by Islamic principles and traditions did not prove to be a major obstacle (Malik et al., 2017).

Looking to a very different cultural heritage and business dynamic, Scalabrini, Remoaldo and Lourenço (2018) addressed also the case of an emergent destination, Joinville, State of Santa Catarina, Brazil, and likewise found great receptiveness among the residents to the enhancement of the amount of visitors: only 1.4% expressed the wish to witness a lesser amount, while more than one third (36.5%) declared that the number of tourists received could be considered low or even very low.

From their study in Greece, Sdrali, Goussia-Rizou and Kiourtidou (2014) concluded that most residents had a positive view towards tourism, especially vis-a-vis tourists who protected the natural and cultural environment and who supported the local economy and alternative tourism activities. Also, according to the results of this study, respondents were strongly convinced that tourism was contributing to the promotion of local products and the economic development of the region in general. However, following the residents’ responses, the lack of promotion of the area by local authorities as a tourist
destination and the quality of road infrastructure available were identified as the main obstacles to tourism development faced by the region.

Curiously, this issue of the public infrastructure endowment which was expected to come with tourism development was also the main complaint expressed by the residents of A`Dhakhiliyah, as found by Malik et al. (2017), that is, what they had gotten up to the moment the research was performed was much less than they were expecting to receive.

In another case and in a direct causal relationship with the impact tourism had on residents, from his study on the historical center of Yazd, Rezaei (2017) pointed out that tourism development had no impact on the local residents' economy, but only on that of the owners of the hotels and craft sellers. It did not also create new job opportunities for residents of the historic sites or improve their living conditions. However, residents admitted that the emergence of tourism had been a positive change in their lives due to three more significant effects; namely, the improvement of the physical conditions of the region, the cultural and social progress attained by the residents, and the greater awareness and pride of the residents of their region (Rezaei, 2017).

Figueroa and Rotarou (2016) studied the perceptions of residents of Easter Island. They concluded that the main problems experienced by residents were the increase in vehicles at the destination and traffic congestion, the increased waste released, and the negative environmental impacts felt. However, 96% of residents believed that tourism was important or very important to the economy of the region. According, looking to the general effect of tourism on residents, the researchers concluded that, while they were aware of the negative impacts of the increased tourist flows, they supported the sector because it was the main driver of the island's economy (Figueroa & Rotarou, 2016).

Garau-Vadell, Díaz-Armas and Gutierrez-Taño (2014) compared the residents' perceptions of the impacts of tourism in Majorca and Tenerife. On both islands, the results indicated that more than 80% of residents perceived tourism as beneficial. Of all the positive impacts of tourism, those who had more significance on the two islands were that it was an important source of investment on the island, it generated employment, it led to social improvements, it led to the development of leisure activities, it helped in the preservation of traditional sites, and it led to the discovery of other cultures. The negative impacts that were felt as having the greatest weight were the increased cost of living,
increased job insecurity, increased local insecurity, generation of pollution, and increased discomfort felt by the residents in their own homes (Garau-Vadell, Díaz-Armas & Gutierrez-Taño, 2014).

Our study examines a tourism destination that has developed mostly since the 1960s (Marujo, 2013; Almeida, 2016). As such and keeping in mind the role of tourism as a major driver of the Madeira Island economy, it can be considered a mature tourism destination (Almeida, 2016; SRETC, 2016). Because of these characteristics, we have decided to explore the residents' perceptions of the impacts of tourism. In addition to capturing the overall picture, we will look at the segmentation of residents regarding those impacts.

In this regard, it is noticeable that the Regional Government of Madeira itself through one of its secretaries, the Regional Secretary for Economics, Tourism, and Culture (SRETC) not long ago (SRETC, 2016) determined that there was a need to acknowledge the importance of residents as part of the tourist product, as people are part of the destination offers and have an enormous impact on its differentiation.

**Research Methods**

In our empirical approach to the issue, we decided to follow the methodology and type of analysis found in several of the studies previously mentioned. This applies also to the structure of the survey implemented.

As previously mentioned, the research undertaken demonstrated the following main objectives: to capture the perceptions of the residents of Madeira regarding the impacts of island tourist development; to identify to what extent the residents shared the same perceptions of the benefits of tourism or whether there was a stratification of residents according their positioning towards tourism and tourists; to verify the existence of a relationship between perceptions and sociodemographic profiles of respondents; and, from the empirical results achieved, to withdraw policy recommendations that could contribute to the design of policies and planning actions which could lead to the strengthening of the relationship between residents and tourists and minimize the negative impacts of the tourism industry.
In order to obtain answers to the aforementioned issues, a survey was administered to the residents, structured in two main parts: one about their perceptions of the impacts of tourism, and another with questions about the sociodemographic characteristics of the respondents. In the questions (or statements) about the perceived impacts, a 5-level Likert scale was used, in which respondents chose from 1 to 5, ranging from total disagreement to full agreement.

Before the application of the survey, a pre-test was given to check the adequacy of the language used and the time the respondents took to complete it. No major concerns on the issue were raised.

The data were collected in August and September 2018 using a convenience sample. The respondents were approached personally to take the survey. The places chosen for the application of the questionnaire were, above all, the municipalities of Calheta and Funchal on Madeira Island. The aim of adopting this territorial distribution was to balance the number of questionnaires filled out by individuals living in rural areas with the ones of respondents living in urban areas.

We aimed to collect around 150 completed surveys, at least, to facilitate statistical treatment of the data. This resulted in the initial collection of a total of 165 questionnaires, 14 of which were excluded for further statistical treatment due to the existence of blank answers to a few of the questions raised. Of the total respondents from which we got complete responses (151), 148 were living on the island for at least 5 years.

In the analysis of the data, descriptive statistics and multivariate methods were used. A clusters analysis, adopting the non-hierarchical method (K-means), was used to build in homogeneous groups of respondents based on their perceptions of the impacts of tourism on the region. For this purpose, we made use of the respondents’ answers on 20 statements related to the different impacts perceived.

All statistical analyses were performed using SPSS statistics, version 24.
**Madeira Island: main features**

The archipelago of Madeira is part of the Atlantic island component of the Portuguese territory. It includes two habitable islands, Madeira and Porto Santo. In addition to Madeira and Porto Santo, Desertas and Selvagens islands, protected natural environments, compose the Madeira Archipelago. This archipelago has a total area of 801 km², 57 km long and 23 km wide and the highest point, at 1862 meters of altitude, is located in the municipality of Santana (Oliveira and Pereira, 2008; Almeida, 2016).

Madeira Island comprises a total of 10 municipalities, which are Calheta, Porto Moniz, Ponta do Sol, São Vicente, Ribeira Brava, Câmara de Lobos, Funchal, Santa Cruz, Santana and Machico (Fernandes, 2015; Marujo, 2013). In 2014, following Almeida (2016), the number of inhabitants was 258,686 individuals.

According to Marujo (2013), the tourism activity in Madeira had its genesis in a fairly remote period. What previously attracting tourists during the nineteenth century was its sub-tropical climate, which was recommended for therapeutic purposes (Marujo, 2013). After this phase and until 1930, the island was visited mainly by members of the upper social class. During World War II, tourism declined, however, and English and Germans, mainly, took Madeira as a place of refuge. Tourism became the main economic driver of Madeira in the post-war period, especially after the 1960s (Marujo, 2013). As mentioned, its airport began operation in 1964.

In terms of Madeira's tourism, most hotels are located in the south of the island, concentrated mainly in the city of Funchal, the capital of the island nation. The northern part, called the Coast of the Laurissilva (“laurel forest,” distinguished by UNESCO in 1999 as a natural world heritage site), is mainly devoted to rural and environmental (nature) tourism. On this coast is the network of levadas (manmade irrigation channels), which facilitate beautiful footwalks in the area (Fernandes, 2015).

According to the Madeira Regional Statistics Office (Direção Regional de Estatísticas da Madeira, https://estatistica.madeira.gov.pt/, access on May 15, 2018), in 2017, the number of overnight stays in the archipelago was over 7.5 million, 1.9% more than the amount registered in 2016. The total revenue from the tourism industry in 2017 amounted to 407.4 million euros, 7.8% up from the previous year.
Another interesting figure was the amount of passengers in transit on cruise ships in the region's ports, which increased by 4.21% in 2017, compared to 2016, despite the decrease of 4 vessels. The amount of passengers reached 537,535 (Direção Regional de Estatísticas da Madeira, 2018).

In 2017, the number of island guests reached around 1435.7 thousand (Direção Regional de Estatísticas da Madeira, 2018), representing a positive variation of 5.2% from 2016.

**Tourism impacts perceived: empirical results**

*Respondents’ profiles*

As previously mentioned, in order to obtain empirical data on the research issue, a survey was applied to the Madeira residents. The survey was conducted in August and September 2018 using a convenience sample, and the main places chosen for its application were the municipalities of Calheta and Funchal. In this way, we aimed to balance the number of respondents living in rural and urban areas.

Using the 151 completed questionnaires we succeeded in collecting, Table 1 presents the main features of the respondents’ profiles.

As can be seen in Table 1, the majority of respondents were female (71%). Regarding the representativeness of the sample, it should be kept in mind that the population living in Madeira, in 2017, according to INE (National Statistical Institute; https://www.ine.pt/, accessed on February 25, 2019), had a higher proportion of women than men. Of the total resident population (254,368 people), 135,957 (53%) were women and 118,411 (47%) were men. So, it is clear that the percentage of respondents who are women is significantly higher than that of the population, conducting to an obvious bias in our sample.
Table 1. Respondents’ profile

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(151)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>44</td>
<td>29.0</td>
</tr>
<tr>
<td>Female</td>
<td>107</td>
<td>71.0</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14-24</td>
<td>44</td>
<td>29.0</td>
</tr>
<tr>
<td>25-54</td>
<td>95</td>
<td>63.0</td>
</tr>
<tr>
<td>Over 55</td>
<td>12</td>
<td>8.0</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic + Secondary</td>
<td>80</td>
<td>53.0</td>
</tr>
<tr>
<td>University</td>
<td>71</td>
<td>47.0</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>73</td>
<td>48.0</td>
</tr>
<tr>
<td>Married</td>
<td>66</td>
<td>44.0</td>
</tr>
<tr>
<td>Divorced/Widowed</td>
<td>12</td>
<td>8.0</td>
</tr>
<tr>
<td>Municipality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calheta</td>
<td>58</td>
<td>38.4</td>
</tr>
<tr>
<td>Câmara de Lobos</td>
<td>9</td>
<td>6.0</td>
</tr>
<tr>
<td>Funchal</td>
<td>48</td>
<td>31.8</td>
</tr>
<tr>
<td>Ponta do Sol</td>
<td>16</td>
<td>10.6</td>
</tr>
<tr>
<td>Santa Cruz</td>
<td>10</td>
<td>6.6</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>6.6</td>
</tr>
</tbody>
</table>

Source: Authors’ elaboration based on own survey data.

Regarding the municipality of residence among the respondents, we can see from Table 1 that the majority lived in Calheta (58 individuals) and Funchal (48 individuals). This resulted from the choice we made regarding the places in which the questionnaire should be completed. From the remaining municipalities, responses were obtained from residents of Ponta do Sol (16), Santa Cruz (10), Câmara de Lobos (9), Santana (6), Ribeira Brava (3), and Machico (1). As stated before within the research aims, our purpose was collecting, in balanced values, responses from individuals living in rural and urban areas.
According to INE (2019), in 2017, Funchal had 104,442 inhabitants (41% of the total population of the Madeira archipelago) and Calheta 10,901 (4%). Dividing the municipalities by those with urban characteristics (Funchal, Câmara de Lobos, Santa Cruz, Machico, and Santana) and the ones which do not have such characteristics (Calheta, Ribeira Brava and Ponta do Sol), we obtain approximately 50% of residents in each kind of territory.

Making use of the age cohorts of 14 to 24 years, 25 to 54 years, and over 55 years, we can observe, according to Table 1, that the majority of the respondents (63%) were aged between 25 and 54 years old. Secondly were the respondents aged between 14 and 24 years (29%) and, finally, those aged over 55 (8%). Average age in our sample was approximately 37 years, with 14 years old being the age of the youngest respondents and 84 years the oldest.

According to INE (2019), in 2017, in Madeira, there were 31,880 people aged between 15 and 24 years and 41,656 people aged 65 years and over.

Regarding the marital status (Table 1), the majority of the sample (92%) were single (48%) and married or living in de facto union (44%). The remainder were divorced (5%) or widowed (3%).

Almost half of the respondents had an education at the university level (47%) (Table 1). There was also a considerable percentage of people endowed with 10 to 12 years of education (35%). We also surveyed those with up to 6 years (10%), and from 7 to 9 years (8%).

Most of the respondents (64%) worked as employees. Next were students, with 21%. The amount of unemployed people looking for a job was 9 (6%). At the same percentage (3%) were the self-employed and the retired as well as the domestic workers and the workers in family businesses.

Most of the respondents (112) declared that they had no involvement in the tourism industry. At identical percentages each (11%), we obtained information from a few respondents that they previously had direct contact with tourists and that they now or in the past had a job in the tourism industry. Of the total sample, only 5 individuals reported that they were owners of a business related to the tourism industry.
Regarding the financial status, the majority of the respondents answered that their income was just enough to live their life (71%). Those who told that their income allowed them to live comfortably represented 26% of the sample. 13% of the respondents declared that it was difficult to live with the income they receive.

Perceived impacts: a few main results

From the results attained on the issues related to residents’ perceived impacts of the tourism industry, we have retained five general findings that will be presented below. To properly understand their meaning, it is useful to recall that a 5-level Likert scale was used, in which respondents had to choose from 1 to 5, 1 being very unsatisfactory, 2 being unsatisfactory, 3 being satisfactory, 4 being good, and 5 being very good.

The issues for which the survey results are highlighted are the following: i) “What is your opinion about the development of tourism on Madeira Island?”; ii) “How do you rate the tourist flow in the region?”; iii) “In your free time (leisure activities) do you usually meet tourists?”; iv) ”Does this contact [with tourists] disturb your activity?”; v) “In the future, would you like to see more or less tourism in Madeira?”.

In all cases, the most chosen classification was four. From the expression of these answers, it can be concluded that, according to the majority of respondents, the development of tourism in Madeira is good, and the residents often meet tourists in their leisure activities. They stated that this contact does not disturb their activity.

Also, when inquired whether they would like more tourism in Madeira in the future, 46% responded at a level 4 (plus) on the Likert scale. Next were responses of level 3 (the same) and 5 (much more), each attaining the same percentage of respondents (25%).

From those results, we must conclude that there is a positive perception of the tourist activity on the island, which also indicates the general impacts of the industry. This fact is particularly noteworthy, given the status of this mature tourist destination. So, this positive perception cannot result from a relative lack of knowledge on the impacts (economic, social, cultural, and environmental) that the industry can have on the territory.

Regarding the situations in which the respondents have shown to be more divided, among others, the respondents indicated the following: ”[Tourism] damages the moral standards
of local society," "It increases public insecurity and crime," and "It causes the deterioration of sites of historical, architectural, and cultural value."

Among all of the questions, the one on which the respondents were most divided was that claiming that tourism causes transit and parking problems. Here, we found the highest standard deviation (1.263) and the mean closest to 3 (do not agree or disagree).

Perceived impacts: results of the cluster analysis

Envisaging going deeper in the analysis of the data, in a second moment a clusters analysis was performed to identify the homogeneous groups of respondents based on their perceptions on the impacts of tourism. The 20 statements contained in item 9 of the survey, which were related to the different impacts studied, were applied in this analysis. The non-hierarchical method (K-means) was used. From the statistical analysis performed, four clusters of residents were obtained. The first group integrated a total of 19 respondents, the second one 42, the third one 44, and the fourth 46.

In Table 2 we see the means of the answers received for each question raised and each cluster. The results presented in Table 2 allow us to extract an overall picture of the responses gathered from the different clusters; however, for better understanding of the results, we have decided to look at the type of impact we are considering, using the figures which we present below.

Table 2. Mean values calculated for each question (statement) and each cluster

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<td>1. It allows the creation of jobs for residents</td>
<td>4.05</td>
<td>4.71</td>
<td>4.86</td>
<td>4.59</td>
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<td>2. Local firms/businesses get benefits from it</td>
<td>3.95</td>
<td>4.76</td>
<td>4.80</td>
<td>4.50</td>
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<td>3. It attracts investments in the local economy</td>
<td>3.79</td>
<td>4.67</td>
<td>4.73</td>
<td>4.43</td>
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<td>4. It contributes to the increase of environmental damage</td>
<td>2.53</td>
<td>3.88</td>
<td>2.66</td>
<td>3.65</td>
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<tr>
<td>5. It leads to the increase of prices of goods, services, and real estate</td>
<td>3.84</td>
<td>4.38</td>
<td>3.55</td>
<td>3.98</td>
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</table>
6. It contributes to the improvement of the quality of life of the residents 2.58 4 4.05 2.78
7. It generates car traffic congestion and parking difficulties 2.84 4.05 2.66 3.07
8. It leads to public insecurity and crime increase 1.37 3.14 1.48 2.13
9. It leads to changes in landscape and biodiversity (fauna and flora) 1.63 3.55 1.77 2.85
10. It leads to the damage of historical, architectural, and cultural sites 1.32 3.17 1.59 2.65
11. It damages the moral standards of the local society 1.11 2.83 1.27 2.41
12. It hinders residents’ access to bathing areas and other leisure facilities 1.95 3.62 1.52 3
13. It contributes to the preservation of cultural identity and heritage 3.21 3.93 3.95 3.02
14. It leads to the increase of scarcity of natural resources needed by the local population 1.47 3.21 1.66 2.78
15. It contributes to an increase in household incomes 2.95 4.07 4.11 2.91
16. It contributes to the improvement of infrastructures and public services 2.53 4.10 4.20 3.33
17. It encourages the production and availability of local products 3.11 4.12 4.45 3.72
18. It contributes to better planning practices and better territory planning 2.47 3.93 4.11 3.04
19. It leads to the increase of social inequality 2.47 3.43 1.75 2.61
20. It increases the residents’ pride in their culture and self-esteem 3.26 3.93 4.34 4

Source: Authors’ elaboration based on own survey data

Figure 1 indicates that, for each residents’ cluster, the mean values attained by the answers to the statements related to the economic impacts of the tourism industry. The statements "It allows creating jobs for residents" (9.1), “Local firms/businesses get benefits from it” (9.2), “It attracts investments for the local economy” (9.3), “It contributes to an increase in household incomes” (9.15) and “It encourages the production and availability of local products” (9.17) are statements whose assessment is clearly positive. On the other hand,
we see that the statement "It leads to the increase in prices and real estate" (9.5) is perceived by the local inhabitants as a negative consequence of tourist activity.

**Figure 1. Mean values of the economic impacts perceived by each cluster**

Source: authors’ elaboration based on own survey data

The data from both Table and Figure 1 lead us to conclude that, from cluster 1, which includes the respondents which we have called the "skeptics," we gain the response mean values that are the lowest, except in item 15 (9.15), which presents a statistical value close to that of cluster 4. Cluster 3, which we called the "pragmatic optimism", is the one that generally presents the highest average values given to the statements mentioned. In particular, we have the highest statistical mean value towards statement 9.1, therefore expressing agreement on the potential of tourism to create jobs for residents.

Cluster 3 has the highest perception of both the positive and negative impacts of tourism, with many of the average values above 4. An interesting feature is that the statement on item 9.5, of negative character, shows the same tendency of the other statements. As in all clusters, if we found a high level of agreement towards the positive statements, we also have a similar level for this one, particularly showing that all clusters agree that tourism tends to drive up prices of goods and real estate.

Moving from economic to environmental impacts, we can see in Figure 2 the similarity of the mean trends in response to the three environmental statements presented in the survey. All of the statements have a negative nature, so the higher the respondents rated on a specific statement, the more they agree that tourism is harmful to the island's
environment. In contrast, the smaller the statistical mean achieved, the more they disagree on the negative impact they were rating.

Examining Figure 2, we see that clusters 1 and 3 do not agree that tourism damages the environment, unlike cluster 2, which we decided to call the "accommodated or followers," who agree that tourism is harmful to the environment. This opinion is intensified in relation to tourism contributing to the increase in the environmental damage (9.4). In cluster 4, which we called the "indifferent or insecure," the members showed some lack of opinion regarding the fact that tourism causes changes in the landscape and biodiversity (fauna and flora), which can lead to the scarcity of natural resources. However, they agree that it can contribute to increased environment damaging.

**Figure 2. Mean values of the environmental impacts perceived by each cluster**

Source: Authors’ elaboration based on own survey data

In terms of the cultural impacts, we can see in Figure 3 that the difference in opinions between the negative statements (9.10 and 9.11) and the positive one (9.13) supports the idea that, in general, respondents believe that tourism positively affects the local culture. Specifically, they seem to believe that it helps to preserve their cultural identity and heritage. However, we can observe a discrepancy between the means of the clusters, mainly of clusters 1 and 3 towards clusters 2 and 4. The respondents belonging to clusters 1 and 3 totally disagree that tourism causes damage to the value of historical, architectural, and cultural sites and that it undermines the moral standards of the local society, since the statistical means collected are very low, going from around 1 to little more than 1.5.
With a minor disagreement regarding the statements of a negative nature, members of cluster 4 do not agree or disagree that tourism helps to preserve cultural identity and heritage, and, concerning the mentioned impact, it can be concluded that cluster 4 does not have a conclusive opinion on the issue.

**Figure 3. Mean values of the cultural impacts perceived by each cluster**

![Graph showing cultural impacts per cluster]

Source: Authors’ elaboration based on own survey data

Lastly, in Figure 4, which refers to the perceptions of the social impacts, we see that the clusters with the greatest similarity of responses are 1 and 4, that is, the “skeptics” and the “indifferent or insecure.” In cluster 3, the “pragmatic optimists”, we see that there is a clear difference in the response means, as they agreed with half of the statements and disagreed with the other half. When verifying the statements in analysis, we can observe that the statements to which they show positive agreement are, among others, the following:

i) It contributes to the improvement of the quality of life of the residents,

ii) It contributes to the improvement of infrastructures and public services,

iii) It contributes to better planning practices and better territory planning, and

iv) It increases the residents pride towards their culture and self-esteem.

All of these statements generated an average score greater than 4.

On the other hand, we have a set of statements which generated answers showing disagreement towards them:

i) It leads to public insecurity and crime increase,

ii) It hinders residents’ access to bathing areas and other leisure facilities, and

iii) It leads to the increase of social inequality.
In cluster 2, members have a different vision of the social impacts that tourism entails from all the others, since they believe that, while it has positive consequences, tourism has also negative effects. The means gathered for all statements are greater than 3 on the Likert scale.

In contrast, cluster 1, the “skeptics”, disagree with all the statements, except that tourism increases the residents’ pride in their culture and self-esteem, which means that they believe neither that tourism is positive to local society nor the opposite. Generally speaking, they tend to show more disagreement regarding the impacts of a negative nature than with the ones of positive nature.

Finally, cluster 4, the “indifferent or insecures”, show for most of the statements the same opinion as cluster 3, however with different degrees of agreement and minor disagreement.

Figure 4. *Mean values of the social impacts perceived by each cluster*

Source: Authors’ elaboration based on own survey data

Keeping in mind the data we have just presented, we can now make a general characterization of the clusters according to the means achieved for the entire set of statements to which respondents were exposed.

Cluster 1 is the one with the lowest means in almost all statements. It can even be said that this group can be characterized as being against tourism. This cluster consists of 19 people, in which 10 are women and 9 are men. They are respondents of the lower age cohorts, belonging to small families and not working within the tourism industry.
In contrast to cluster 1, cluster 2 has the highest rates for both positive and negative statements. It does not take a firm position on the matters to which the survey refers. It consists of 31 women and only 11 men, the majority with a family household of 3 to 4 people, including a number of married people similar to that of singles.

Cluster 3 consists mostly of adults between the ages of 25 and 54 (32 people) and includes the least of the age cohort of 14-24 years old (only 7), including 5 respondents aged over 55 years old. Of these 44 individuals, 29 are women and 15 are men. The women are mostly married and have the least direct daily contact with tourists. Looking at the means achieved, they seem to be the ones who believe more that tourism is beneficial to the region.

Finally, in cluster 4, which can be considered to include individuals who take the least dedicated position on the issues inquired. This is the cluster in which we got response averages rated from 2.5 to 3.5 values. The mean values are higher only vis-à-vis the economic impacts, where they show to agree that tourism creates jobs for residents, benefits local firms/businesses and brings investments to the local economy.

The empirical results attained, in general, lead us to conclude that the clusters have similar opinions regarding the four impacts under analysis. Considering the opinions gathered, as a whole, it can be assumed that most residents have a positive view towards tourism on Madeira Island.

Perceived impacts: discussion of the results obtained

Given the empirical results achieved, a comparative analysis is done vis-à-vis the results we could find in the literature review.

As seen from the answers given to questions 4 to 8, most residents assessed positively the development of tourism in the region and a desire for the tourist flow to increase. They also expressed the perception that the industry does not disturb their daily activities. This is in line with the work by Ritchie and Inkari (2006); Renda, Mendes and Valle (2014); and Scalabrini, Remoalde and Lourenço (2018). In general, those authors found that residents believe that tourism is good for the local economy and for their community. Those findings are also in line with the ones of Vareiro, Remoalde and Cadima Ribeiro (2013), Garau-Vadell, Díaz-Armas, and Gutierrez-Taño (2014), and Martín, de los Salmones Sánchez and Herrero (2018), who emphasized the potential contribution of
tourism to income increase and the enhancement of employment opportunities. In this case, 71% of the respondents fully agree that one main impact of tourism is the creation of jobs for residents.

We can also notice the similarity of those results with those of Sdrali, Goussia-Rizou and Kiourtidou (2014). In their study (Sdrali, Goussia-Rizou & Kiourtidou, 2014), respondents felt strongly that tourism had contributed positively to the economic development of the region, enhanced the local economy, and promoted local products. However, on the other hand, they also agreed that tourism leads to an increase in the prices of goods, services, and real estate, which once again is in line with what we gathered in our survey (statement 5, Table 1).

Like the results attained by Brunt and Courtney (1999), we found a lack of a relationship between the type of respondent (keeping in mind their socio-demographic characteristics) and their response rates. On the other hand, these results do not contradict but also do not confirm the conclusions of McCool and Martin (1994) and Ryan and Montgomery (1994), who admitted that the variable time of residence in the destination was influential in the perceptions expressed, as the longer individuals lived in a community, the more they tended to raise concern on the potentially negative tourism impacts. According to our results, the cluster of respondents that showed more negative perceptions towards tourism (cluster 1) is composed of people who lived in the region for more than five years and who are all less than 55 years old.

The "skeptics," as also found by Vareiro, Remoaldo and Cadima Ribeiro (2013), are the smallest cluster (19 respondents), being characterized as very worried about the negative impacts of tourism. The main difference is that, in the case of the study carried out by the aforementioned authors, on the date the research was performed, Guimarães was an emergent tourist destination, while Madeira is a mature one.

This is perhaps indicative of the option to adopt a relatively sustainable tourism strategy for Madeira Island or, at least to some extent, the perception kept by its residents that the territory has no economic alternative to the tourist industry.

Curiously, Garau-Vadell, Díaz-Armas and Gutierrez-Taño (2014) found similar results to those of Majorca and Tenerife. As mentioned in the review of the literature, in both of
these islands, the results obtained indicate that more than 80% of residents perceived tourism as beneficial to their economy.

All these results indicated that the destination life cycle theoretical framework does not seem to provide clear insight into the Madeira Island residents’ perceptions towards tourism. Not willing to raise doubt on the validity of Butler (1980) and Dogan (1989), among others, it seems that the territory is able to follow a sustainable tourist path.

Conclusion

This research aimed to identify the perceptions of the residents of Madeira Island regarding tourism and its more relevant impacts. We believe it was important to determine, in the case of this island, which is a mature tourist destination, whether the positive effects of the industry were able to overlap the negative ones. From there, we intended to extract a few conclusions on the strategy to implement. To support the construction of the survey used and to frame the analysis, a review of the literature was previously done.

According to the literature, there is a tendency for the residents of a destination to have a better perception of the positive impacts than of the negative effects, and mainly of the economic ones. On the other hand, more critical assessments are expected to be found when we are dealing with more mature destinations vis-à-vis emerging tourism destinations.

As previously mentioned, the methodology used in the research followed that used by other authors referenced in the literature review, which also applies to the design of the survey applied to the residents of Madeira Island.

With the data collected through the survey (151 questionnaires completed), it was possible to proceed to the empirical analysis. The respondents were characterized according to several sociodemographic attributes in addition to the municipality of residence, with either a more urban or rural nature. This feature did not seem to influence much the kind of answer the survey gathered.

In addition to the above-mentioned results, one important point to keep in mind is that tourism does not seem to bother the residents, in general, who have expressed their
openness to the increase of the tourist flow on the island. This position can be explained by the way they see the impacts (economic, environmental, cultural, and social) generated. Only a minority seems to hold a more critical assessment of it.

It is interesting to notice that, taking into account the whole sample, the positive economic impacts were those that where better assessed by the respondents as a whole. There was a greater degree of disagreement regarding the cultural and social impacts. According to the way they rated the questions raised in the survey, residents generally have stated that tourism has not been moving toward the deterioration of places of historical, architectural, and cultural interest; does not led to the increase of public insecurity and crime; and has not led to the damage of the moral standards of the local society.

The cluster analysis performed helped to identify the difference in the existing opinions among residents. Using this method of segmentation among the individuals, we arrived at the following clusters: the "skeptics", who compose the smallest group; the "accommodated or followers", who agreed with virtually everything; the “pragmatic optimists”, who include those who look to tourism positively, assuming that it may have several negative effects; and the “indifferent or insecure”, characterized as those who have chosen to use the intermediate values of the scale (3 being neither disagree nor agree) to rate the statements they confronted.

Having gotten a generically positive reading of Madeira's tourism, there seems to be no need for any major change on the policies that have been implemented or the strategy for the sector adopted. This is particularly relevant, given that tourism in Madeira is neither a recent phenomenon nor has minor importance in its economy and society. To the contrary, it is the main driver of the island’s economy. So, residents must be fully aware of its positive and negative impacts.

Following the empirical results we gathered, even if no major concern was expressed by the residents in general towards the impacts of the tourism industry, we believe it would be advisable to try to better understand the reasons behind those who have shown to be more skeptical. Even if they are a minority, they are also part of the touristic product the island has to offer, as it was claimed by the Regional Secretary for Economics, Tourism, and Culture of the Regional Government of Madeira (SRETC, 2016). With this in mind, any policy measure which can be applied to prevent the increase of the members of this
cluster will enhance the sustainability of the industry and the differentiation of the destination.

Due to the efficacy and economy of effort, but also to balance the answers obtained from urban and rural social environments, it was decided to favour the application of the survey to the residents of Calheta and Funchal. This circumstance affected the amount of answers collected and also the representativeness of the sample and the robustness of the analysis that could be made. Future research could overcome these limitations by assuming the project incorporates a full representative sample. Qualitative approaches to the issue can also provide information on some dimensions that the quantitative methods cannot fully capture and explain.

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