Behaviours and Perceptions of Tourists and Residents of the Algarve: A Contribution to Enhancing Its Sustainable Development

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Abstract—Literature suggests that measuring the perceptions of all stakeholders, including tourists, residents, and public and private organizations, is required to monitor the sustainable development of a tourist destination holistically and comprehensively. There is a lack of monitoring systems of those perceptions in several tourist destinations, such as the Algarve, Portugal. The main objective of this paper is to contribute to bridging this gap by measuring the perceptions and behaviours of tourists and residents of the Algarve to inform decision-makers for designing and implementing public policies to strengthen the Algarve’s sustainable development. The research designed two questionnaires to measure the perceptions and behaviours of tourists and residents of the Algarve. Both questionnaires were based on a previously developed assessment model to monitor the Algarve’s sustainable development among four dimensions: economic, socio-cultural, environmental, and destination management. The results of these two surveys will support decision-makers in designing measures for more sustainable tourism development, considering both tourists’ behaviours and residents’ perceptions of the tourism impacts in the Algarve.

Keywords—evaluation of tourism destinations, tourist behaviour, resident perceptions, tourism impacts, loyalty

I. INTRODUCTION

Coastal beach destinations have become popular tourism hotspots in recent decades [1–3]. Roughly 40% of the world’s population lives within coastal zones [4], many of which rely on coastal tourism as a source of income [1]. Tourism affects coastal destinations through increased business activities, income generation, and employment [5, 6]. Over half of the tourists to destinations are repeat visitors [7], and attracting such is more cost-effective than reaching new ones [8, 9].

Sustainable and inclusive tourism development requires involving all destination stakeholders directly and indirectly affected by tourism [10]. Such involvement includes understanding stakeholders’ perceptions about the sustainability of current tourism practices [11]. Residents are one of the main stakeholders in the tourism sector and a crucial part of enhancing the tourism success of a destination [12, 13]. Tourists, another critical stakeholder group, influence the sustainability level of a destination with their behaviour. Such recognition justifies the effort to gather more profound data on preferences, perceptions, and attitudes concerning tourists and residents.

This study aims to add knowledge by producing new insights for coastal tourism destination research. The study’s main objectives are to assess tourist revisit intentions and loyalty towards the coastal destination, the Algarve, Portugal. It further seeks to uncover resident perceptions about the impacts of tourism and tourism development in the region. The study’s findings provide empirical insights into the post-pandemic visitor profile of tourist and resident perceptions in the Algarve. The outcomes can be helpful to decision-makers in designing measures for sustainable tourism development, considering both tourist behaviours and resident perceptions.

II. THEORETICAL FOUNDATION AND HYPOTHESES DEVELOPMENT

A. Tourist Satisfaction

Tourist satisfaction is crucial for tourism destinations as it affects visiting choices, consumption patterns, and revisit intentions [14, 15]. As such, it is one of the most highly investigated themes in tourism research [16]. Tourist satisfaction is influenced by several elements, such as socioeconomic, demographic, and behavioural factors [17].

Tourist satisfaction is achieved when the expectations of an experience are fulfilled or surpassed [18–20]. Experiencing satisfactory tourism experiences increases the chances of revisiting intentions and willingness to recommend the experience to others [15, 21–24]. Hence, satisfaction is an essential predictor of tourist loyalty [25–28].

Studies examining tourist satisfaction found a positive correlation between tourist satisfaction and recommendation to third parties, especially for Word of Mouth (WOM) [29, 30]. The recommendation of other people (WOM) is considered one of the most valuable types for tourists [22].

B. Tourist Loyalty

Loyalty is one of the most important predictors of future behaviour [22]. Several factors are suggested to impact tourist loyalty, such as pre-visit factors (motives, information search, and destination image) [31], tourism type [32], distance travelled [33], satisfaction with the travel experience [34], perceived value [35], destination image [36], and trip quality [18].

Revisit intentions and the willingness to recommend an experience or destination to others are predictors of customer loyalty [37, 38]. The intention to revisit a destination has
been reviewed in several studies as a component of loyalty [29, 39, 40]. However, some argue that repeat visitation is triggered by either loyal or habitual behaviour [41]. A study by Kozak et al. [42] suggested that repeat visitors show lower satisfaction levels but keep returning due to demographic factors, such as being older domestic travellers. It could be argued that even visitors with lower satisfaction scores can be frequent return visitors due to convenience factors, such as geographical location or their visitor profile encouraging habitual return visits.

**C. Resident Perceptions of Tourism Impacts**

It is crucial to understand the residents of tourism in popular tourist destinations [42, 43]. Recognizing residents’ attitudes through frequent monitoring can support the development of holistic and sustainable tourism policies [44, 45]. Including residents’ views in decision-making is becoming more common; however, such measures have yet to be effectively executed in Portugal [45].

Studies on resident perceptions of tourism impacts reported economic, socio-cultural, psychological, and environmental effects [45]. The key factors influencing resident attitudes on tourism impact are socio-demographics, the type and scale of tourism activity at the destination, the proximity of residential areas and tourist zones and residents’ awareness of sustainability measures in place [42, 45, 46]. Research shows that residents welcome the positive benefits of tourism activity while being overly perceptible to the negative ones [44–46].

**D. Resident Opinions about Tourism Development**

It is believed that a balance between locals’ opinions of the detriments and advantages of tourism plays a significant role in visitor satisfaction [47, 48]. Studies indicate that residents who benefit from tourism activity via economic gains or socio-cultural improvements are more likely to support its development, whereas those with little to no benefit are more likely to oppose it [44, 49, 50]. Others argue that residents assess tourism by the visual and ambient impacts it causes on the host community [51]. Those observing adverse effects on the quality of life, such as litter, noise, graffiti, increased traffic, and criminal activity, are more likely to oppose tourism and tourism development [49]. The failure to regard residents’ opinions and concerns can lead to a loss of support towards tourism [52], hostility towards tourists, or even a reluctance to work in the tourism industry [38].

**E. Hypotheses**

The interactions between tourists and residents, the perceived adverse effects caused by tourism, and how tourists perceive destination risk play a role in a tourism destination’s success. Based on these assumptions, the following hypotheses have been developed for this research.

**Relationship between tourists’ perceptions about the destination and revisit intentions.** Perceived risk is a subjective expectation of loss [53, 54], leading in turn to various levels of risk assessment among different people [54, 55]. Tourists’ perceived risk at a travel destination is a significant pull factor for destinations and their image [14, 56]. Safety concerns negatively influence tourists’ destination choices (Crotts, 2003). Thus, making visitors feel secure and safe at a destination is critical for the international competitiveness of a destination [57].

H1. Perceived destination risks directly affect tourist intentions to revisit the Algarve.

Visitor characteristics may influence their satisfaction levels with a destination [58], which in turn affects revisit intentions. The visitor profile is relevant for destination management strategies and sustainability practices applied to achieve tourist satisfaction [59]. The quality of tourism offer and visitors’ perception of the experiential quality are crucial for the success of a destination [60].

H2. Perceived destination quality positively influences tourists’ intentions to revisit the Algarve.

H3. Perceived price level at the destination negatively influences tourist intentions to revisit the Algarve.

H4. Perceived existence of assets at the destination influences tourists’ revisit intentions.

**Relationship between residents’ perception of tourists’ behaviour and attitudes toward tourism development.** The perceptions of residents on tourism and tourism development have been reviewed in numerous studies. However, opinions and behaviour toward tourists, in particular, have not been extensively researched [61].

The quality of interaction and relationships between residents and tourists is influenced by several factors, such as social distance theory, leading to preferred interactions with visitors from similar cultural backgrounds [62]. Interactions can also be assessed based on tourist compatibility, whereas favourite tourist groups received favourable treatment [61].

H5. Tourists’ respect, treatment, and behaviour directly affect residents’ attitudes towards tourism.

**III. METHODOLOGY**

**A. Study Area**

The Algarve is the southernmost region of Portugal, occupying an area of 4,997 km² divided into 16 municipalities. It is one of the two Portuguese regions registering a population growth over the last ten years, leading to a population of 467,495 in 2021. In 2022, the Algarve welcomed 28.9 million guests and 77 million overnight stays. In the first two months of 2023, total overnight stays grew by 23.7% for residents and 26.9% for non-residents compared to the same period in 2020 [63].

**B. Data Collection Process**

Tourist survey. The questionnaire was conducted in the Algarve in the high season, between June and August 2022. The tourist questionnaire was distributed at Faro Airport and selected popular tourist sites of the Algarve. It was available in English, German, French, Spanish, and Portuguese, allowing respondents to answer in their preferred language. The questionnaire consisted of 27 closed-ended and 14 open-ended questions and was self-administered by respondents.

The population consisted of international and national tourists to the Algarve over 18 years old who spent at least one night and a maximum of 12 months in the Algarve. Respondents were personally approached by the interviewers applying a random sampling approach. Stratified targets were assessed to ensure the target group reflected the distribution of tourism numbers per country of origin, and correlating flights were chosen for data collection.
Resident survey. The survey of residents was run in all 16 municipalities of the Algarve region during the high season between July and August 2022. The eligibility criteria for participants include residing in the Algarve for at least one year, being 18 years or older, and speaking Portuguese fluently. Consequently, the questionnaire was only provided in Portuguese.

The questionnaire consisted of 23 closed-ended questions. After explaining the research objectives, it was distributed to participants who agreed to collaborate. Residents were approached by random selection in each of the municipalities in the Algarve.

C. Sampling

The resident and tourist surveys were conducted under stratified sampling to represent each population subgroup accurately. For the tourist questionnaire, stratified samples were based on the country of origin to ensure the target group reflected the distribution of tourism numbers per country of origin correlating flights were chosen for data collection. The resident questionnaire was stratified based on 2022 data of the 467,343 inhabitants by municipality, gender, and age group.

The sample size was calculated for a 95% confidence level and a margin of error of 3%. A total of 1,047 tourists and 1,000 respondents completed the survey, of which 974 (tourists) and 990 (residents) were valid questionnaires. Incomplete questionnaires with non-response rates above 10% were discarded, as the missing data could compromise the study’s statistical results [64]. It was ensured that the sample representativeness was maintained despite the discarded questionnaires.

D. Data Analysis

After reaching the targeted sample size, the data were processed and analyzed using SPSS software.

The resident survey was disaggregated according to sociodemographic characteristics such as the area of residence in the Algarve, time of residence, age group, education level, and individuals’ dependency on the tourism sector. The statistical data analysis was done through descriptive statistics.

The tourist survey data was analyzed using descriptive statistics and the logistic regression model to estimate determinants of tourists’ loyalty. A dummy variable was assigned to measure tourist loyalty (coded as 1 for ‘yes’ and 0 for ‘no’); the intention to revisit the destination in the next five years. Since 100% of respondents stated their intention to return, the variable of willingness to pay was chosen as a proxy for loyalty. The independent variables were selected from the ones that revealed an explanatory relationship in the literature review and are as follows: perceived risks, quality, level of prices, and the existence of assets at the destination. The literature on this topic reports that characteristics, such as the tourist type (domestic and international) and frequency of visiting the destination (first-time or repeat visitor), are predictors of tourist loyalty [24, 32, 39].

IV. RESULTS

Fifty-eight nationalities’ views are included in the survey. The tourist sample characteristics reflect the distribution of origin markets highlighted in the statistics of priority markets of the Algarve Tourism Board, with the majority originating from Portugal, the UK, and Germany.

The resident survey sample follows the 2022 resident distribution of inhabitants by the municipality based on gender and age group. Table 1 highlights the main characteristics of the resident and tourist samples.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Tourists (n = 974)</th>
<th>Residents (n = 990)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>442</td>
<td>424</td>
</tr>
<tr>
<td>Female</td>
<td>524</td>
<td>565</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Age Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18–24 years</td>
<td>163</td>
<td>120</td>
</tr>
<tr>
<td>25–64 years</td>
<td>670</td>
<td>773</td>
</tr>
<tr>
<td>65 and more</td>
<td>25</td>
<td>97</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>342</td>
<td>366</td>
</tr>
<tr>
<td>Married/Living together</td>
<td>541</td>
<td>477</td>
</tr>
<tr>
<td>Divorced/Separated</td>
<td>64</td>
<td>106</td>
</tr>
<tr>
<td>Widowed</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>Education Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary School</td>
<td>45</td>
<td>147</td>
</tr>
<tr>
<td>High School</td>
<td>342</td>
<td>495</td>
</tr>
<tr>
<td>University</td>
<td>534</td>
<td>330</td>
</tr>
<tr>
<td>Employment Situation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>632</td>
<td>707</td>
</tr>
<tr>
<td>Entrepreneur</td>
<td>148</td>
<td>155</td>
</tr>
<tr>
<td>Unemployed</td>
<td>23</td>
<td>9</td>
</tr>
<tr>
<td>Student</td>
<td>103</td>
<td>46</td>
</tr>
<tr>
<td>Retired</td>
<td>34</td>
<td>24</td>
</tr>
<tr>
<td>Homemaker</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Fifty-nine percent of respondents were first-time visitors to the Algarve (n = 578). Only a small percentage (16%) of respondents indicated having visited sun, sand, and sea destinations offering a similar tourism product as the Algarve. Respondents who could compare their experience in the Algarve with that at other destinations rated the destination as positive, rating them the same (39%) or better (52%). A similar evaluation was provided on the Algarve’s safety, with the majority rating the Algarve as a safe destination (42%) or safer destination than other similar destinations (56%).

One important factor influencing residents’ support of tourism in their municipality or region is their dependency on the sector. In this study, most respondents indicated not being employed or receiving monetary gain from tourism. With the Algarve being a prime tourism location in Portugal, the relatively low number of people not employed in tourism jobs in the summer of 2022 may be attributed to the aftermath of the COVID-19 pandemic. Unemployment rates in accommodation, food, and similar services peaked in 2021, and though on the road to recovery in 2022, employment has yet to fully recover to pre-COVID levels at the point of this study [65]. The results in Table 2 highlight that the support of residents for tourism in their municipality is moderate, with little variation in opinions among the surveyed group. The pro-tourism behaviour of residents is slightly lower than the support for tourism while maintaining a moderate ratio with a low between responses.
The assessment of the tourists’ perceptions of the primary features of the Algarve shows that the perceived risk is low (mean 2.3), with a low rating of the Algarve as an unsafe tourism destination (mean 1.8). Further highlights of Table 3 include the moderately high-rated quality (mean 3.9) and assets (mean 3.9) at the Algarve as well as the average price level (mean 3.2). The Cronbach’s alpha coefficients range from 0.56 to 0.86, which indicates satisfactory construct reliability.

**Determinants of loyalty.** The logistic regression model was used to identify determinants of the intention to revisit the Algarve. First, a multicollinearity check was run to confirm that there was no strong collinearity among the covariables.

The results presented in Table 4 show that the null hypothesis of the test of overall model significance (Lagrange multiplier test) is rejected ($p < 0.001$), but the null hypothesis of the Hosmer–Lemeshow test is not rejected ($p = 0.441$), which shows that the fitted model is correct. Pseudo-$R^2$ measures indicate a good model fit (e.g., Nagelkerke $R^2 = 0.347$).

The Wald tests for each coefficient indicate that control variables (first-time visitor and tourist type) influence the intention to revisit the destination. The logistic model identifies first-time visitors as a specific characteristic that explains heterogeneity in loyalty and indicates that first-time visitors and higher levels of revisit intentions [66]. Considering tourist type, the odds of revisiting the destination are 17 times higher for domestic than international tourists (odds ratio 16.97).

The results of Table 4 meet the model’s hypothesis regarding dimensions as predictors of tourists’ revisit intention. Firstly, the estimates of the logit model reveal that perceived risk is statistically significant ($p < 0.001$), implying that a one-unit decrease in tourists’ perceived risk will increase the odds of intention to revisit the destination by 2 (odds ratio 2.17). Thus, H1 (Perceived destination risks directly affect tourist intentions to revisit the Algarve) is supported.
Results show that when there is a one-unit increase in the level of perceived quality of the destination, it increases the probability of tourists’ revisit intention by 211% (odds ratio of 3.11), which supports H2 (Perceived destination quality positively influences tourists’ intentions to revisit the Algarve).

Results also show that a one-unit increase in the perceived level of prices at the destination decreases the odds of revisit intention by 40%; that is, intention to revisit the Algarve is 0.60 times as likely with a one-unit increase in the perception of high price levels at the destination (e.g., from 1 to 2, or 2 to 3). As a result, H3 (The perceived price level at the destination negatively influences tourist intentions to revisit the Algarve) is supported.

Finally, results display that a one-unit increase in the perceived assets existent in the destination increases the odds of revisit intention by 123%; that is, the intention to revisit the Algarve is 2.23 times as likely with a one-unit increase in the perception of assets at the destination.

Table 5 presents the Spearman correlation coefficient between residents’ perceptions of tourist behaviour and their attitudes toward tourism (support for tourism and pro-tourism behaviour). The results indicate a weak correlation between tourist spending and resident attitudes towards tourism support and the pro-tourism behaviour of residents. Slightly higher, however still weak, positive correlations are observable between the way tourists treat residents and the respect they exhibit and an increase in residents’ attitudes towards tourism support or pro-tourism behaviour, leading to the rejection of H5 (Tourists’ respect, treatment, and behaviour directly affect residents’ attitudes towards tourism).

Table 5. Correlation between residents’ perception of tourist behaviour and their attitudes toward tourism

<table>
<thead>
<tr>
<th>Evaluation of tourist behaviour in terms of…</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Tourism Support</th>
<th>Pro-Tourism Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>…respect for residents</td>
<td>3.13</td>
<td>1.25</td>
<td>0.313**</td>
<td>0.206**</td>
</tr>
<tr>
<td>…the way they treat residents</td>
<td>3.16</td>
<td>0.72</td>
<td>0.323**</td>
<td>0.201**</td>
</tr>
<tr>
<td>…their spending</td>
<td>3.04</td>
<td>0.81</td>
<td>0.193**</td>
<td>0.106**</td>
</tr>
</tbody>
</table>

Note: * p-value < 0.05; ** p-value < 0.01; *** p-value < 0.001.

V. CONCLUSION

The results obtained through the questionnaire reveal that the Algarve is a destination viewed positively by the tourists who visit it. The overall satisfaction with the Algarve is high or very high, and it compares favourably with alternative Sun & Sand tourist destinations. Crime, violence, and lack of security are not primary concerns for tourists visiting the region. Finally, many tourists, including domestic ones, intend to revisit the region.

Several conclusions about the behaviours and perceptions of tourists and residents could be drawn. Firstly, an influence of the perceived destination risk on tourists’ revisit intentions was observed. Factors positively influencing the revisit intentions of tourists at the Algarve, which affect loyalty, are the perceived destination risk, quality price levels, and destination assets.

This study did not confirm a connection between the respect and treatment exhibited by tourists towards residents and their support for tourism or pro-tourism behaviour.

A. Practical Implications

The findings of this study provide knowledge to policymakers, businesses, and tourism bodies in the Algarve and similar destinations on the effects of tourist perceptions and behaviours and residents. The learnings can inform the design and implementation of public policies to strengthen the Algarve’s sustainable development. Some of the findings to consider in future policies may be the limited correlation between tourist spending and the treatment of residents of tourist support and pro-tourism behaviour.

Furthermore, tourism boards and providers may utilize the result indicating an effect on tourist loyalty to improve the tourism offer and services at the Algarve. This study suggests a connection between safety, destination quality, perceived price levels, destination assets, and revisit intentions. These factors should receive additional attention in tourism planning and policies implemented at coastal destinations.

B. Limitations

The following limitations are highlighted for this study:

1. This study was carried out in the high season of 2022 and thus captured the opinions and views of individuals in the first high season after lifting COVID-19 restrictions. The results may not be easily comparable with previous studies on tourist and resident data in the Algarve.

2. The paper only reflects the results of high-season data collection. Therefore, the results cannot be applied to assess the behaviours and perceptions of tourists and residents in the low season. Further studies are needed to examine this period and compare the various visitors’ profiles and resident attitudes at different times of the year. The authors declare no conflict of interest.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

L.N.P. conducted the statistical analysis and data interpretation; C.M. developed the literature review and supported the writing of the paper; J.A.S., J.A., and R.N. provided suggestions for improvement; all authors approved the final version of the paper.

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