


Article

How Gastronomic Image Shapes Tourism Competitiveness: An Approach with Sentiment Analysis

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Abstract: The competitiveness of tourist destinations is influenced by their relative attractiveness, which will play an essential role in their global success; gastronomy is one of the main motivations that lead tourists to visit a given destination. This research aims to investigate gastronomy's role in the destination's competitiveness and image through the analysis of online reputation, both in terms of ratings and sentiments provided by the experience, through the creation of an index of the online reputation of gastronomic image. Online restaurant reviews retrieved from TripAdvisor, from restaurants belonging to eight tourism destination regions, considered the competitive set to the Algarve, are analysed by applying sentiment analysis algorithms. With regard to the Algarve region, it was concluded that the Costa del Sol and the Tropical coast were the most competitive regions in terms of gastronomic image, where the inclusion of seafood products in meals was one of the strategic aspects used to increase the competitiveness of this region. These results can help restaurant managers and destination management organisations to better understand the different customer needs and how to increase their competitiveness.

Keywords: destination competitiveness; gastronomic image; online reputation; machine learning; sentiment analysis



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1. Introduction

Tourism destination competitiveness is an area of interest for tourism management, both from the point of view of government officials and of entrepreneurs in tourist activity, since it allows for the analysis of whether the competitive position of a region is strong or weak and which are the factors that contribute to this reputation [1].

A general definition of tourism destination competitiveness (TDC) has not been agreed upon, according to Hanafiah and Zulkifly [2]. However, the one presented by Ritchie and Crouch [3] continues to stand out as it expresses it in terms of the capacity that a destination has to increase tourist expenses and continue to arouse the interest of tourists through the offer of memorable experiences and satisfaction, contributing to the profitability of the destination, preserving natural capital and improving the living conditions of residents.

For Dwyer and Kim [1], the competitiveness of destinations is a concept that has aroused the interest of several authors whose works have presented a diverse range of variables. However, the authors consider that “it seems reasonable to focus attention on economic prosperity” [1] (p. 375) since regions compete directly in the tourist market. Thus, they developed a model to study TDC, which identifies the characteristics and conditions associated with tourist demand as one of the main determinants of TDC.

As mentioned by Cucculelli and Goffi [4], there has been a lot of research on the development of models that explain TDC, including some that show the relationship between sustainability and TDC, which points to the fact that sustainability can be a dimension to improve competitiveness, mainly in terms of preserving the ecological balance

and the local community's empowerment on TDC as a positive impact, since the local communities are part of the tourism product.

In this context, Seyitoğlu and Ivanov [5] investigated the role of gastronomy in the competitiveness of tourist destinations, considering that it is part of the identity of the local population, has effects on tourist behaviour (enjoying the experience, motivation to experiment, desire to consume), feel/atmosphere of the place, the image provided by the food and the sensory and emotional experience.

Given the above, it is pertinent to analyse, in addition to preferences for the type of cuisine, predilections for specific dishes and meals of the day, as well as the factors that influence a restaurant's online reputation and what its relationship with competitiveness in the tourist destination, in a context in which traditional methods of data collection (surveys and questionnaires) are very time-consuming. It is not possible to reproduce, on a large scale, relevant information about the behaviour and gastronomic preferences of tourists.

This research aims to analyse restaurant reviews to understand food preferences in similar regions. It also examines online reputation and how service, price, food experience, sentiment, and ratings affect a destination's competitiveness. Data were collected from TripAdvisor in eight Mediterranean regions (destinations—competitive set), considering the top ten restaurants in each region, that is, the leaders of each region on this platform.

This paper is structured in five sections without considering the introduction. Section 1 presents the state of the art on the competitiveness of destinations and their relationship with local gastronomy. Section 2 presents the methodology considered in the research, which follows a sentiment analysis method considering a machine learning approach. Section 3 presents the results, including the calculation of Gastronomic Image Online Reputation Index. Section 4 presents the discussion, with some implications for the academy and the industry. Lastly, we present some enlightened conclusions.

2. Literature Review

2.1. Destination Competitiveness

The competitiveness of tourist destinations can be analysed in the light of several concepts arising from several scientific areas, which can be subdivided into three different perspectives [1]: comparative advantage and/or price competitiveness (price competitiveness), strategy and management (firm-specific factors), and historical and socio-cultural factors (cultural and related factors). Concerning the "comparative advantage and price competitiveness" perspective and effects on tourist demand, the role played by technology, exchange rates, government policies, and industry competition, among others, are considered [1]. Regarding the "strategy and management perspective", there is a need to ensure that the competitive advantage is sustainable, the offer is customer-oriented, information, intelligence systems and quality are used), availability of source resources, and a well-defined positioning [1]. Regarding the "cultural and related factors" and demand, there is a need to consider cultural values, the identity of the local population, and the destination image, among others [5].

For Seyitoğlu and Ivanov [5], gastronomy plays a strategic role in several tourism destinations' competitiveness. It can be considered a strategic resource, taking into account the following aspects: source, processor, and the form of the strategy that will attract tourists through the development of a gastronomic identity, which will cause changes in the behaviour of the consumer, whether in terms of motivation, experience or consumption, contributing to the authenticity, and valorisation of the place and the image of the destination.

In a tourist destination, even if it is not the main motivation for making the trip, gastronomy is essential since eating is a primary need [6], and food is a portrait of the destination's cultural heritage through the offering of flavours and palates specific to the region [7,8], which influences the way tourists experience the destination [9,10].

Gastronomy is an important element that adds value to the image of a destination and can act as a primary trip motivator for many tourists [11,12].

To improve decision-making and the development of strategic plans, tourism practitioners are demanding more information about the gastronomy preferences of tourists [13]. For some tourists, the gastronomy experience not only satisfies a need but also provides in-depth knowledge about the destination's cuisine and culture [14].

2.2. Gastronomy as a Tourist Experience

Gastronomy has become a main component of the tourist experience, thus contributing to the competitiveness of tourist destinations. The World Tourism Organization states, "With food so deeply connected to its origin, this focus allows destinations to market themselves as truly unique and appealing to those travellers who look to feel part of their destination through its flavors" [15] (p. 4). Gastronomic tourism has grown considerably, becoming one of the most dynamic and creative segments of the tourism industry globally. "Both destinations and tourism companies are aware of the importance of gastronomy to diversify tourism and stimulate local, regional and national economic development" [15] (p. 5).

The promotion of regional gastronomy, associated with locally produced products subject to traditional culinary processes, and that includes good practices and sharing experiences through marketing strategies with potential markets, can contribute to the competitiveness of destinations and meet the Sustainable Development Goals (SDGs), such as eradicating poverty and hunger, promoting dignity and equality, sustainable consumption and production, and economic and social progress.

Gastronomic tourism can contribute to the destination image [5,10,16] and consequently to its competitiveness, as Dwyer and Kim [1] include "variety of cuisine" as one of the indicators in the "Culture/Heritage" dimension, which is part of the endowed resources of a destination. According to Dixit [17], many tourist destinations have included local cuisine as one of the destination's attractions. Hsu and Scott [18] state that the experiences associated with local cuisine have been positive and have contributed to defining the destination as a brand [19].

A destination's brand can be considered as "an identity that signifies the distinctiveness and attractiveness of a place" [10] (p. 1), which has led to intensive competition in the development of strategies to create unique experiences on the part of government agents of the destination. Seyitoğlu and Ivanov [5] developed a model that classifies the gastronomic identity as "a strategic resource for destinations".

The gastronomic identity of a destination should be defined as "relating to the history, cultural and environmental impacts" [20] (p. 130) in terms of the process related to food and drink at the destination since the "how, where, when and why of eating and drinking is important to society and all participants in the food service industry" [20] (p. 130). The concept associated with "gastronomic identity" was developed by Harrington [20] and includes geography and climate as environmental influences and history and ethnic ancestries as the cultural influences producing local food differentiated by taste, textures and flavours, which contribute to differentiation to create gastronomic experiences that highlight the cultural differences [5].

Gastronomic tourism can include several kinds of activities related to food, such as eating and drinking in local restaurants, among others [21], which contribute to creating memorable experiences and creating a competitive and sustainable advantage for the destination, with a view to offering a quality experience and tourist satisfaction [7].

The quality of tourist experiences that contribute to making them memorable for tourists and generate returns for destinations can be measured according to the scale developed by Kim et al. [22]. It has been used by Kokkranikal and Carabelli [21] and "has increasingly been turned into an 'attractionized' experience" and created "a unique and appealing gastronomic image" [23] (p. 89) so that destinations are promoted through the Internet, increasing their competitiveness while showing their differentiation, generating a Gastronomy Image.

2.3. Gastronomy Image

The gastronomic image can be defined as “the perceptions of tourists about what a destination supplied or offered about food and beverage products; and especially locally grown products” [24] (p. 488) or “as beliefs, emotions, and impressions about a destination about food, drinks, food and beverage activities, gastronomy culture and restaurants” [25], which affect the destination choice, satisfaction level, intention to revisit and recommendation by tourists [24] and can contribute to renovating the tourism.

This aspect contributes to the visitors sharing their memories and testimonies in different ways, including through conversations with family and friends and publishing their posts on social media. This kind of resource is so powerful that it can be used to show the identity and culture of the destination in a way that presents the cultural dimension of its competitiveness and is an essential aspect to include in marketing strategies [24].

While the gastronomy identity is related to the environment (climate and geography) and culture (religion, history, ethnic diversity, traditions, values, and beliefs), the Gastronomy Image is a result of the application of emerging strategies, with the aim of developing gastronomic tourism products to position their destination. This is a process that begins with the identification of rivals, or the competitive set, or with the offer of a product with unique characteristics that cannot be found in other destinations, followed by a process of destination branding that can be defined as communicating the destination’s identity in a unique way that sets it apart from its rivals [5,26].

The Gastronomy Image and destination branding [23] can play a strong role in defining a destination’s image, including the several “flavours” of the region. The Gastronomy Image can be analysed by five dimensions on the supply side [27]: differentiation, aestheticisation, authentication, symbolisation, and rejuvenation; two dimensions on the demand side [28]: food image and restaurant image; five cognitive dimensions: quality and safety, attractiveness, promotion of health, family-oriented, and cooking methods; and five human senses [9]: visual, tactile, auditory, taste, and olfactory. The dimensions presented by Fox [27] are also referred to as ways of presenting the gastronomic identity of the destination since they encourage the use of gastronomic products for different purposes: differentiation to accentuate the cultural difference; aestheticisation to enhance the palates in the minds of tourists with a view to awakening senses and feelings; authentication to satisfy tourists need for authenticity; symbolisation to attribute cultural value to gastronomic ingredients and processes; and rejuvenation to recall culinary and cultural heritage [23].

The gastronomic image can be seen as integrating the destination image [23], including the cognitive, affective, and overall image components. From the tourist’s perspective, Chang and Mak [23] considered seven dimensions: attractiveness, flavour profile, familiarity, cooking methods and ingredients, distinctiveness, convenience and price, and health and safety.

The role of gastronomy in the destinations and the image of the destination should start with the acquisition of knowledge about the identity of the gastronomy of the region, then follow its position, the creation of the gastronomic image, which should be communicated in a unique and differentiating way from your competitive set. That is finally, destination branding should be created, where promotions and online marketing activities are a crucial part of the DMO (Destination Management Organisation) as a way to evaluate how the destination appeals to gastronomic visitors [29]. From the tourist perspective, in addition to the information on the gastronomic identity communicated to create a gastronomic image and complement the image of the destination, they also search for testimonials expressed online, also known as electronic word of mouth (e-WOM), to investigate whether the experience was positive or negative, which increasingly influences the traveller’s purchase decision process [21].

2.4. Measuring Online Gastronomic Image Through e-WOM

Electronic word-of-mouth (e-WOM), also called online reviews (ORs), has influenced tourist decision-making in several criteria, such as choice of destination, accommodation,

attractions, and restaurants [30]. The use of e-WOM has increased very quickly, with TripAdvisor (<https://www.tripadvisor.com/>) being one of the most successful portals specialised in travel products [31].

The e-WOM is an information source about products and tourism brands based on credibility [32]. Food and beverage accounts for approximately one-third of tourism expenditures and is one of the most important motives for visiting a destination [29,32]. However, the evaluation of the other service experiences is part of the purchasing decision process, and this implies the consultation of e-WOM expressed on the Internet and helps to predict future traveller behaviour in terms of purchase decisions.

To understand the traveller's decision in selecting specific tourism products over others, it is important to consider the factors that can affect the behavioural intention in choosing a tourism destination. The analysis of the intention to consume tourism resources should be studied in depth for the successful promotion of tourism destinations where gastronomy is one of the top reasons for visiting a region [16]. In addition, the content provided by tourists can influence other travellers in their process of choosing a holiday destination [33].

There is a relationship between e-WOM and Gastronomy Image, with the first positively influencing the second [32]. Marine-Roig et al. [34] and Lin et al. [35], in their investigations, aimed to measure the effect of the gastronomic image involved in building the tourist destination image (TDI) expressed in online comments since they consider gastronomy as a factor that promotes the image and identity of destinations. When gastronomic experiences are positive, they positively influence the loyalty of tourists. The model considered by Marine-Roig [34] (p. 65) includes semiotic nomenclature, subdivided into three dimensions: designative to informative use, appraisive to evaluative use, and prescriptive to incitive use. Food and Wine is one of the nine cognitive categories —“sun, sea, sand, nature and landscape, urban environment, leisure and recreational activities, sports [34] (p. 69) —that constitute the designative aspect of the DI (Destination Image).

To analyse the insights into the relationship between gastronomy and destination competitiveness, it is necessary to analyse the destination's ability to provide gastronomic experiences to tourists while contributing to the well-being of the residents, which can be analysed from the consumer perspective. The latter can be considered by examining the online reputation associated with the destination or, more specifically in this research, the online reputation of gastronomy, which can be seen as an e-WOM.

2.5. Gastronomy Online Reputation Through Sentiment Analysis

Online reputation is closely linked with social media platforms, where users generate content about their experiences, such as TripAdvisor, which allows tourists to voluntarily share their experiences and express their opinions regarding destinations they have visited [13]. The reviews are explicit feedback, and these positive or negative opinions directly indicate what users like or dislike about the restaurants, attractions or accommodations [36].

Factors that impact online reputation are numerous, and the “internet-based evaluation is becoming an essential tool for tourists in making travel decisions, while online reputation as an intangible resource represents a sustainable competitive advantage for a tourist destination” [33] (p. 153). According to Rhee et al. [37], food, value, atmosphere, and service are important criteria when choosing gastronomic experiences.

Sentiment analysis is one of the research methods that helps companies understand the customers' needs, promote brands [38], and prepare adequate planning. One of the applications of sentiment analysis in the tourism industry is to study tourist user-generated content in terms of the sentiments, feelings and emotions expressed in the digital medium, including analysis of the sensory dimension in tourism experiences [39].

Sentiment analysis, in methodological terms, is considered a problem of polarity classification [40]. In a binary classification, it assumes that a text will be predominantly positive or negative. There may still be a ternary classification that includes the neutral class to the set of the other two. Although there are studies on the application of sentiment analysis to

online tourist reviews, there are still gaps in the theoretical knowledge of the gastronomic image and online reputation regarding TDC. Also, there is a little methodological breakthrough in understanding the online restaurant reputation and gastronomic image of a TD and in terms of creating an online reputation indicator (ORI) that can enable the positioning and comparing of the TDC of the competitive set of gastronomic image of the Algarve.

2.6. Gastronomic Image and Tourism Destination Competitiveness Online Reputation Model

The Online Reputation Model proposed to investigate the gastronomic image and tourism destination competitiveness is composed of (a) a set of indicators to measure the Gastronomic Destination Image (GDI); (b) define the positive of each region in terms of performance and importance online level; (c) a definition of the GDI; and (d) and the identification of the potential of the region through the gastronomic destination branding with the development of a Gastronomic Image Online Reputation Index (GIORI).

The GDI considers the factors that affect the gastronomic image, as proposed by Lin et al. [35] and Marine-Roig [34], the elements that characterise the senses, by the work by Mehraliyev et al. [39], the criteria considered by Rhee et al. [37] to evaluate the gastronomic experience, and the importance and performance level, as presented in the work by Jiang et al. [38]. The set of indicators is presented in Table 1.

Table 1. Gastronomic Destination Image Indicators. Source: Adapted from [34,35,37–39].

Designative	What?	Food and Wine (cognitive category)
	Where?	Restaurants
	When?	Before COVID and During COVID
	How?	Service Performance, Value, Price
Appraisive	Affective	Positive feelings (great, happy) and Negative feelings (unfriendly, disappointed)
	Evaluative	Positive scores, Negative scores and Average overall scores
	Sensory	Sight, Smell, Sound, Taste, Touch
	Satisfaction	Attention rate and Satisfaction rate
Prescriptive	Attitudinal response	Positive recommendations (recommend, unmissable), Negative recommendations (avoid, beware)
	Behavioural response	Positive behaviour (return next time, would not stay anywhere else), Negative behaviour (not return next time)

The Gastronomic Image Online Reputation Index (GIORI) considers all the indicators defined on a scale from one to five, subdivided by the number of indicators presented in Equation (3), to deepen the reputational benchmarking of the GDI of each region considered in the competitive set, is defined by Equations (1)–(3).

$$d = \{G, R, S\}, \text{with values } 1, \dots, 5 \tag{1}$$

where *G* is the Global assessment dimension, *R* is the Rating score dimension, and *S* is the Sentiment Analysis dimension.

$$r = \{Algarve, \dots, Costa Cálida\} \tag{2}$$

where *r* is the tourism destination region, which considers each region that belongs to the competitive set.

$$GIORI_r = \frac{1}{3} \sum_{d=1}^3 \left[\frac{1}{n_c} \sum_{i=1}^{n_c} d_{r,i} \right] \tag{3}$$

where *n_c* is all the reviews for the *r* region, *i* = {1, ..., *n_c* } and *GIORI_r* is the Gastronomic Image Online Reputation Index for the region *r*.

3. Methodology

3.1. Research Objective

In the present study, we intend to define an indicator associated with the online gastronomic reputation, investigated through the comments generated online from TripAdvisor, to understand the preferences of tourists to increase competitiveness.

3.2. Sample Setting

The Algarve is one of the touristic regions of Portugal, located in the south of the country; it is bordered to the north by the Alentejo region and in the east by Spain. In 2021, the Algarve registered 33.1% of overnight stays from non-residents and 32.3% from residents, continuing to be the leading tourist destination in Portugal [41]

A comparative analysis was made of the tourist competitiveness of the Algarve with similar destinations on the south coast of Spain, with the following criteria: being part of the coast; being the dominant tourist vocation—the “sun and beach”; and geographical proximity.

The sample identified as meeting the criteria included Algarve and seven other provinces in southern Spain, namely, Algarve, Huelva, Cádiz, Málaga, Granada, Almería, Murcia, and Alicante, which can be identified on the map presented in Figure 1.



Figure 1. Algarve Region and the Tourism Destination Competitive Set. Source: Own elaboration.

3.3. Method Application/Research Design

Considering the nature of the present study, the conversion of textual content into data and the respective analysis assisted by text mining were applied to the data extracted from TripAdvisor to perform a sentiment analysis, whose methodology is represented in Figure 2.

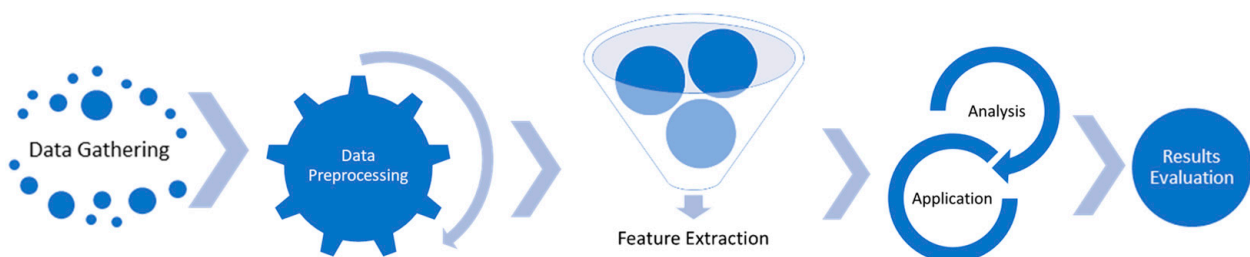


Figure 2. Sentiment Analysis Methodology. Source: El-Masri et al. [42] (p. 54).

3.4. Data Gathering and Measures

The database created came from collecting data from the largest travel platform with travel reviews—TripAdvisor [31]. The platform presents different products in different categories: accommodation, activities and catering. Different restaurants belonging to the eight provinces in the sample were selected to obtain the data. To build a base with a balanced number of instances among the different tourist destinations, the following criteria were considered: being among the ten restaurants with the highest score in each region, having a maximum of 50 comments, written in English, and being considered testimonies of international tourists. However, if a restaurant had no comments in English, they were excluded, which is why some provinces do not have ten restaurants, as shown in Table 2. To ensure that the representation of restaurants was identical and to create a balanced dataset, it was decided to consider an identical number for each region and to make it possible to collect an identical number of comments in English.

Table 2. Data Collection of Restaurant Details. Source: Own elaboration.

Province	Number of Restaurants	Number of Online Reviews	Notes
Algarve	7	350	
Alicante	10	350	
Almeria	10	252	The restaurants in the 1st and 10th positions did not have comments in English, so the two that were positioned next were considered.
Cadiz	10	273	
Granada	10	254	
Huelva	10	140	The restaurants in 1st and 11th place did not have reviews in English, which is why the next one was considered.
Málaga	10	340	The restaurants ranked 7th and 11th had only one comment in English, so the one placed next was considered.
Múrcia	10	261	

In terms of the data collected, the following information was obtained: Restaurant name, Number of reviews, Restaurant address, Location, Price, Cuisine type, Contact number, and Global evaluations.

For each restaurant was collected the variables that represent: Restaurant Identifier (RestaurantID); Tourism destination (Destination); Name of the restaurant (Restaurant Name); URL of the restaurant in the TripAdvisor platform (URL); City of the restaurant (City); Country of the restaurant (Country); Types of cuisine (Cuisine); Price category of the restaurant (Price); Number of Online reviews (OnlineReviews); Global evaluation (Global-Evaluation); Food evaluation (Food); Service evaluation (Service); Price evaluation (Value). For each online review, the following variables were collected: Rating associated with the experience (ReviewRating); Date when the online reviews were published (PublishedDate); title of the online review (Title); Text that constitutes the online review (FullText); City of the review author (AuthorCity); Country of the author; and date when the restaurant was visited (VisitDate).

3.5. Data Preprocessing and Data Feature Extractions

Data preprocessing is a process of cleaning the elements that are not necessary or that impair the analysis of the text [42], namely: tokenise text; remove stop words; remove or identify punctuation; convert text to lower or uppercase; check the spelling; remove URL.

It is also necessary to define the n-grams we intend to analyse and identify how we want the text interpreted. If $n = 1$ (unigrams, word by word) or $n = 2$ (bigrams). The grammatical classes must include a part-of-speech tagging model to classify the words in their grammatical class. Vectorisation is a process used after cleaning to convert sentences into vectors of numbers. The term frequency-inverse document frequency (TF-IDF) vectoriser is used to normalise the occurrence of each word with the size of the data set. In contrast, the inverse document frequency is used to remove the words which do not contribute much to deciding the meaning of the sentence. This technique eliminates the common words and also extracts the relevant features from the corpus [43] (p. 12).

The TF-IDF is a statistical method in natural language processing and information retrieval that is also used combined with keyword extraction, where the words/terms are codified in importance numbers by a vectorisation process associated with text data [44] and are calculated as presented in Equations (4)–(6). The importance of the word/terms within a document is relative to a collection of documents, also called a “corpus”.

$$TF(t, d) = (\text{number of times } t \text{ appears in } d) / (\text{total number of terms in } d) \quad (4)$$

where TF is the Term Frequency.

$$IDF(t) = \log\left(\frac{N}{a + df}\right) \quad (5)$$

where IDF is the Inverse Document Frequency.

$$TF - IDF(t, d) = TF(t, d) * IDF(t) \quad (6)$$

The online reviews were coded by looking for specific words and statements that identified with some aspect that is considered in the research, as in the work by Kim et al. [22], which were coded in the seven experiential dimensions to study the dimensions that were most relevant to respondents’ gastronomic experience.

As results were created, a document term matrix (DTM), which is a mathematical matrix explaining the frequency of words/terms/aspect/features, whereby the row represents the online review and the columns the term (feature) [45].

Some data also needs to be normalised to make possible the comparison between different variables, which need to be represented in the interval values; the formula utilised to normalize a value [46] is presented in Equation (7).

$$x'_i = (x_i - x_{min}) / (x_{max} - x_{min}) \quad (7)$$

where x'_i is the result of the normalisation x_i is the data to be normalised, x_{min} and x_{max} represent the minimum and maximum values in the data set, respectively.

According to Marine-Roig and Huertas [47], content analysis is a technique that is necessary to create categories that allow the grouping of data into groups that share similarities. The present study applied an a priori method to categorise the data—that is, the data went through a manual categorisation process that groups opinions into different categories, and each category was subdivided into several subcategories.

3.6. Sentiment Analysis Application

Sentiment analysis is an opinion mining based on sentiment orientation that examines the customer’s online review to study the perceptions and characteristics of their author [40]. It can be performed using three different methods: (1) machine learning, (2) lexicon-based, and (3) hybrid or combined methods [42] (p. 53). The machine learning method is the most common.

Sentiment analysis is a type of data mining that measures people’s opinions through natural language processing (NLP) and has two components of application—feature extraction and valence [38]. Feature extraction can be applied when it is important to discover

information about a product or service, such as topics, keywords, and interests of customers. Valence is useful for categorising reviews into positive and negative sentiments.

In opinion mining, emotions such as joy and love are considered positive; anger, fear, and sadness are considered negative; and surprise can be positive or negative. These are the six basic emotions [48].

To apply the sentiment analysis, the Orange Data Mining Software (<https://orangedatamining.com/>) is used, which provides six different methods: Liu Hu (lexicon-based sentiment analysis); Vader (lexicon- and rule-based sentiment analysis); Multilingual sentiment (lexicon-based sentiment analysis for several languages); SentiArt (sentiment analysis based on vector space models returning text valence); LiLaH sentiment (manual translations of the NRC Emotion Lexicon); and Custom dictionary (you add your own positive and negative sentiment dictionaries and the final score is computed in the same way as Liu Hu). In terms of precision regarding the performance of the aforementioned algorithms, Vader will be chosen as it demonstrates greater precision and, consequently, makes the results closer to reality [49].

4. Results Evaluation

4.1. Characterization of the Restaurants Sample

The data sample constituted the TripAdvisor Top10 restaurants for each tourism destination belonging to the competitive set of the Algarve region. For each restaurant, up to a maximum of 50 online reviews in English were collected.

Regarding Tourism destinations, as presented in Table 3, Costa del Sol has the highest review rating (4.9), followed by the Algarve, Costa Blanca and Costa Tropical (4.8). The lowest review rating average is for Costa de la Luz (Huelva). In terms of the variability of the evaluations, Costa de La Luz (Cádiz) has more variability, which means that we have a greater amplitude in the tourist evaluations since the standard deviation is the largest (0.9365). On the other hand, Costa del Sol (Málaga) is the one with the least variability in the opinions expressed in the review ratings, which means that the opinion of consumers is more consistent since the standard deviation is smaller (0.5337), followed by Algarve (0.6017).

Table 3. Statistic Descriptive about Review Rating. Source: Own elaboration.

City	Tourism Destination	Review Rating Average	Review Rating StDev	Number of Reviews	%
Faro	Algarve	4.8	0.6017	350	15.8%
Alicante	Costa Blanca	4.8	0.6707	351	15.8%
Almeria	Costa Almeria	4.7	0.7870	252	11.4%
Cadiz	Costa de la Luz (Cadiz)	4.6	0.9365	273	12.3%
Granada	Costa Tropical	4.8	0.5504	253	11.4%
Huelva	Costa de la Luz (Huelva)	4.6	0.7673	139	6.3%
Malaga	Costa del Sol	4.9	0.5337	339	15.3%
Múrcia	Costa Cálida	4.7	0.6362	261	11.8%
Total		4.8	0.6911	2218	100.0%

In terms of the maximum and minimum of the review ratings, all the tourism destinations present the same values for minimum (1.0) and maximum (5.0). Figure 3 shows the distribution of the number of reviews by tourist origin country for each destination, in relative terms, and presents the relative count (%) of reviews by region, with the total (100%) of a country distributed for each region to understand the frequency of reviews in each country of tourist origin.

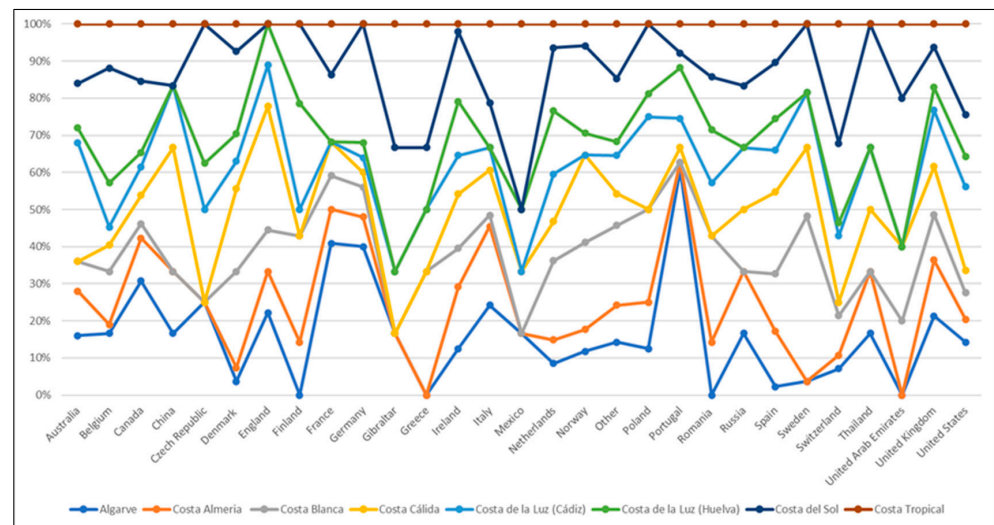


Figure 3. Distribution of the Number of Reviews by Tourist Origin Country. Source: Own elaboration.

The data collected from the 77 restaurants characterises several types of cuisine. Table 4 presents the number of reviews collected for restaurants that offer that particular kind of food. However, since there is a great variety of cuisines, only the types with more than 100 reviews associated with restaurants that offer this type of cuisine are presented.

Table 4. Tourism Destination and Cuisine Types. Source: Own elaboration.

Tourism Destination	City	American	Fusion	Healthy	Italian	Mediterranean	Mexican	Portuguese	Sea Food	Spanish	Steakhouse	Total
Algarve	Faro	50	50	150	100	150	50	150	100	0	0	350
Costa Blanca	Alicante	0	59	193	50	175	50	0	0	125	50	351
Costa Almeria	Almeria	11	50	2	49	239	11	0	0	173	0	252
Costa de la Luz (Cádiz)	Cadiz	0	0	102	50	243	30	0	41	193	14	273
Costa Tropical	Granada	0	16	206	33	163	21	0	0	106	35	253
Costa de la Luz (Huelva)	Huelva	0	0	54	0	132	0	0	11	132	0	139
Costa del Sol	Malaga	4	109	259	61	235	0	0	0	274	0	339
Costa Cálida	Múrcia	50	34	114	100	125	0	0	0	149	5	261
	Total	115	318	1080	443	1462	162	150	152	1152	104	2218

As seen in Table 4, the types of cuisine offered in the restaurants considered as a sample for the present investigation are diverse and from different regions. However, for future analysis, only the top three cuisines, as presented in the shaded area in Table 4, with the top three comments, Mediterranean (1462), Spanish, and Portuguese (1152 plus 150), will be designated by Country. This only exists for each country, so we decided to put only one column with the data from the two columns, and the third will be Healthy (1080).

Considering the data collected for each restaurant, the chart presented in Table 5 was created, which positions each region in relation to the others regarding the competitive set of the Algarve region, in the indicators referring to the evaluation attributed to Food, Service, Value, and Global assessment average.

In Table 5, it can be seen that in terms of food evaluation, Costa Tropical is ranked first (4.83), followed by Costa del Sol (4.72) and the Algarve (4.71). About the positioning associated with the service, Costa Tropical appears in first place (4.88), followed by the Algarve (4.86), Costa Blanca (4.81) and Costa del Sol (4.80). Concerning positioning in terms of value, all destinations have very similar values; however, the Algarve appears in first place (4.64), followed by Costa Tropical (4.63) and Costa del Sol (4.59). Regarding

the positioning regarding the global assessment, Costa del Sol appears in first place (4.93), followed by Costa Tropical (4.90), Costa Blanca (4.81) and the Algarve (4.79).

Table 5. Algarve Region and the Competitive Destinations, in Terms of Food Service, Value and Overall Assessment. Source: Own elaboration.

Tourism Destination	Food Average	Service Average	Value Average	Global Assessment Average
Algarve	4.71	4.86	4.64	4.79
Costa Blanca	4.70	4.81	4.57	4.81
Costa Almeria	4.62	4.60	4.48	4.50
Costa de la Luz (Cádiz)	4.48	4.56	4.48	4.66
Costa Tropical	4.83	4.88	4.63	4.90
Costa de la Luz (Huelva)	4.50	4.37	4.12	4.40
Costa del Sol	4.72	4.80	4.59	4.93
Costa Cálida	4.61	4.51	4.20	4.53

4.2. Feature Extraction

The TF-IDF analysis, presented in Table 6, is useful in extracting keywords present in all opinions and, based on the premise that the relevance of each term expresses the most important aspects of the content created by tourists, it is possible to obtain valuable information about the gastronomy of each destiny. When it comes to gastronomic dishes, in the Algarve, the “lobster” stands out, in the Costa Blanca, the “jamon”, in the Costa Almeria, the “cheek”, in the Costa de la Luz, the “bistro” and “Orange”, in the Costa Tropical the “hummus”, “orange”, “bone” and “soup”; on the Costa del Sol no dish stands out, and finally, on the Costa Cálida it is “hummus”. These terms can help define a gastronomic image that is more in line with the preferences of gastronomic consumers who visit and/or reside in the region.

Table 6. TF-IDF Analysis Applied to Comments on the Gastronomy of Each Region. Source: Own elaboration.

City	Tourism Destination	First Keyword		Second Keyword		Third Keyword		Fourth Keyword		Five Keywords	
		Keyword	TF-IDF	Keyword	TF-IDF	Keyword	TF-IDF	Keyword	TF-IDF	Keyword	TF-IDF
Faro	Algarve	streets	0.012	country	0.009	discover	0.009	lobster	0.007	balanced	0.006
Alicante	Costa Blanca	jamon	0.043	lively	0.026	square	0.018	bravas	0.014	corner	0.014
Almeria	Costa Almeria	bravas	0.020	cheek	0.015	melted	0.011	positive	0.011	willing	0.011
Cadiz	Costa de la Luz (Cádiz)	bistro	0.018	buenavista	0.013	meats	0.012	balanced	0.011	orange	0.011
Granada	Costa Tropical	September	0.017	hummus	0.014	orange	0.011	bone	0.009	soup	0.008
Huelva	Costa de la Luz (Huelva)	upstairs	0.024	quirky	0.021	foodie	0.013	creamy	0.012	tataki	0.012
Malaga	Costa del Sol	journey	0.021	buenavista	0.015	luckily	0.013	spectacular	0.011	travel	0.010
Múrcia	Costa Cálida	Google	0.009	hummus	0.009	terrible	0.008	balanced	0.006	blown	0.006

4.3. Sentiment Analysis Result

Regarding sentiment analysis, the VADER algorithm [50] was applied to the comments analysed by region. The Algarve has the highest positive reviews ratio of 0.21%, followed

by the Costa Tropical region, with 0.20%. However, the Costa del Sol region presents a higher average sentiment obtained and the average review rating, followed by the Costa Tropical and the Algarve with identical scores. In the Costa Tropical, more reviews were obtained. However, it is in the Costa Cálida that the comments are longer, as they consist, on average, of the largest number of words and characters, as shown in Table 7. Although Spanish food is integrated into Mediterranean cuisine, it has its own traditions and unique dishes that distinguish it within the broader context of the Mediterranean diet. Spanish food consists of typical dishes such as paella, tapas, gazpacho, and jamón ibérico. The Mediterranean is based on a balanced diet, emphasising vegetables, fruits, cereals, fish, and olive oil.

Table 7. Characterisation of the Analysed Comments and Comparison with the Results of Sentiment Analysis. Source: Own elaboration.

Tourism Destination	Gastronomy Type (Predominant)	N°. Online Reviews	% of Total	Average Number of Evaluations	Average Number of Words	Average Number of Characters	Average of Review Rating	Average of Sentiment (Normalised)	Positive Reviews	Negative Reviews	Positive Reviews Ratio
Algarve	Mediterranean	161,050	11.14%	460.1	56.0	249.6	4.8	4.7	343	5	0.21%
Costa Almeria	Mediterranean	159,108	11.00%	631.4	71.5	317.3	4.7	4.6	241	10	0.15%
Costa Blanca	Mediterranean	207,394	14.34%	590.9	52.0	232.1	4.8	4.6	339	10	0.16%
Costa Cálida	Spanish	243,500	16.84%	933.0	73.8	329.9	4.7	4.6	253	7	0.10%
Costa de la Luz (Cádiz)	Mediterranean	150,314	10.39%	550.6	63.6	276.7	4.6	4.5	257	16	0.17%
Costa de la Luz (Huelva)	Mediterranean	95,815	6.63%	689.3	56.7	250.7	4.6	4.5	132	6	0.14%
Costa del Sol	Spanish	168,994	11.69%	498.5	60.9	273.4	4.9	4.8	336	3	0.20%
Costa Tropical	Mediterranean	260,004	17.98%	1027.7	60.1	267.7	4.8	4.7	248	4	0.10%
	Average	180,772.4	12.50%	672.68	61.82	274.69	4.74	4.63	268.63	7.63	0.15%

4.4. Gastronomic Image Online Reputation Index

In terms of the gastronomic image positioning, as referred to by Dwyer and Kim [1], the price and the restaurant service are firm-specific facts, the food is a representative of the cultural dimension of the region, the value attributed to the gastronomic experience in terms of the feeling provided by enjoying the cultural experience through gastronomy, the environment, culture and tradition were all considered to evaluate the entire global experience. To explain the overall evaluation, a model consisting of the explanatory variables Food, Value, Service and Price was considered for each record, and regression was applied [39] to identify the most significant variables that have the most impact on the global evaluation of the results of which are presented in Table 7.

After collecting the data for the variables considered, a regression was carried out for each region to obtain the coefficients for the equation that defines the straight line that best fits the data and obtain the *p*-values to ascertain the significance of each variable. Finally, the coefficient of determination was obtained to determine the proportion of variability of the dependent variable explained by the independent variables, the results of which can be seen in Table 8.

Through the analysis of Table 8, the coefficient of determination for each region presents a high value, where the Costa del Sol region stands out with $R^2 = 99.1\%$, followed by the Algarve region with 98.6% and the Costa Tropical (Granada) with 96.5%. Considering the *p*-value of each explanatory variable and for each region, we can reject the null hypothesis; that is, the following variables have the explanatory capacity to explain the dependent variable.

Table 8. Regression Results to Explain the Overall Evaluation. Source: Own elaboration.

	N	R ²	F Significance	Coefficient	Food	Value	Service	Price
Algarve <i>p-value</i>	350	98.6%	0	0	0.0714 0.7070	0.5700 0.0000	0.1979 0.2582	0.4108 0.0004
Costa Blanca <i>p-value</i>	351	97.7%	3.1737×10^{-281}	0	-0.2778 0.2232	0.8276 0.0000	0.3953 0.0457	0.1327 0.0290
Costa Almeria <i>p-value</i>	252	97.2%	2.0542×10^{-190}	0	-0.3967 0.5182	0.2567 0.2965	1.1840 0.0630	-0.0796 0.5086
Costa de la Luz (Cádiz) <i>p-value</i>	273	95.9%	7.6165×10^{-185}	0	0.0545 0.8831	0.3005 0.2586	0.7280 0.0767	-0.2814 0.1344
Costa Tropical <i>p-value</i>	245	98.5%	4.7271×10^{-219}	0	-0.2541 0.3196	0.3344 0.0383	0.7269 0.0053	0.4284 0.0173
Costa de la Luz (Huelva) <i>p-value</i>	139	97.1%	1.1508×10^{-101}	0	1.1755 0.0061	-0.2644 0.4160	0.0985 0.7488	-0.0759 0.6925
Costa del Sol <i>p-value</i>	324	99.1%	0	0	1.2561 0.0000	1.1680 0.0000	-1.3352 0.0001	-0.0685 0.2823
Costa Cálida <i>p-value</i>	261	97.9%	1.1361×10^{-213}	0	0.2644 0.2642	0.1346 0.6843	0.5761 0.0318	0.1045 0.4673

For the Algarve, the explanatory variables are Value and Price; for the Costa Blanca (Alicante) and Costa Tropical (Granada) they are Value, Service and Price; for Costa Almeria (Almeria) and Costa de la Luz (Cádiz) and Costa Cálida (Murcia) the explanatory variable is the Service; for the Costa de la Luz (Huelva) it is Food; and for the Costa del Sol (Málaga) the explanatory variables are Food, Value and Service.

To explain the global assessment, each region has aspects that help to measure this value. However, it is important to analyse the positioning of each region, not only in relation to the global assessment but also to the assessment attributed to each experience through the dimension of online reputation expressed by the Review Rating variable and the dimension associated with the feeling provided by the tourist experience and shared through the comment expressed online, measured through the Sentiment Average variable, which can be analysed through Figure 4.

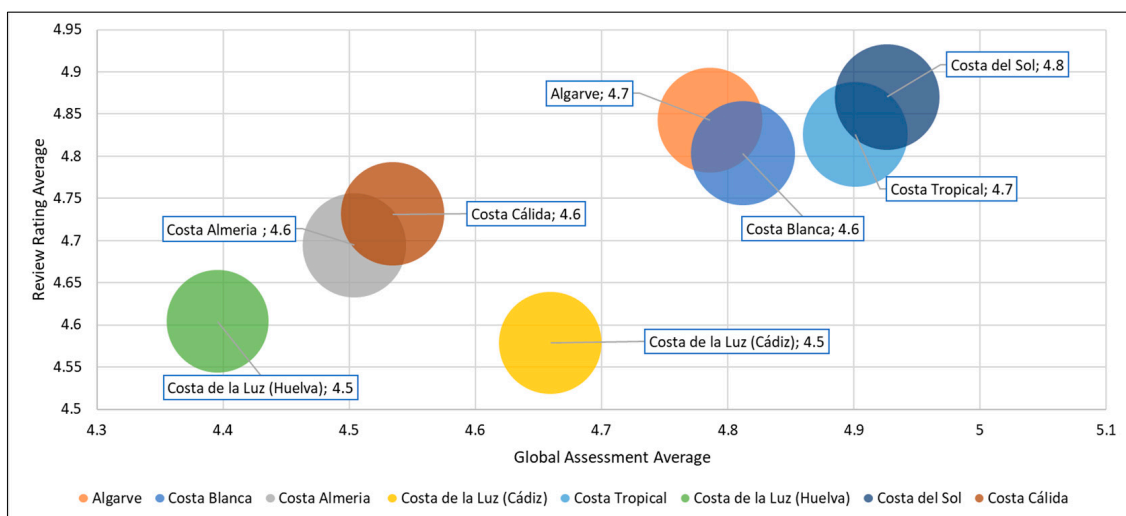


Figure 4. Positioning Map between the Review Ratings, Global Assessment and Sentiment Analysis for each TD. Source: Own elaboration.

In Figure 4, it can be seen that, in terms of positioning, the Algarve region is positioned in the upper quadrant, being the second in terms of average review ratings with 4.8, when compared to the Costa del Sol (Málaga). In first place is the Costa del Sol with 4.93, the Costa Tropical (Granada) with 4.90 and the Costa Blanca (Alicante) with 4.81.

Finally, in terms of the results of the sentiment analysis, it appears that the Algarve region is positioned in second place, tied with the Costa Tropical (Granada) with 4.7, compared to the Costa del Sol (Málaga), which came in first place with 4.8.

Regarding the GIORI (Gastronomic Image Online Reputation Index) calculation, the results can be consulted in Figure 5. The Algarve region appears to be positioned in third place with 4.78, the Costa Tropical (Granada) in second place with 4.81 and the Costa del Sol (Málaga) in first place with 4.85. Given the results obtained, the factors that have room for improvement and the factors that contribute to the destination's reputation must be analysed.

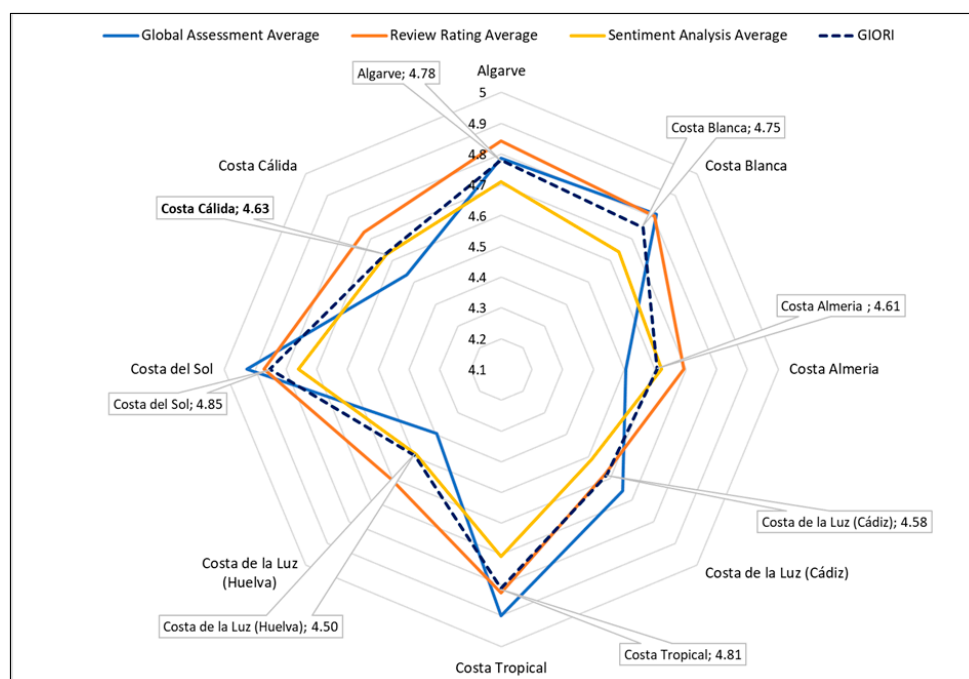


Figure 5. Comparison between Online Reputation Dimensions and the GIORI for each TD. Source: Own elaboration.

5. Discussion

With regard to the type of cuisine, this is Mediterranean, focusing on the country in which each region is located. The most valued aspects of the Costa del Sol are gastronomy, value and service. However, the latter contributes negatively to the overall assessment of gastronomic reputation, where natural heritage and the views provided by restaurants stand out, by analysing the keywords presented in Table 6.

On Costa Tropical, the most positively significant aspects are the value of the experience, the price and the service provided, where different types of gastronomic products highlighted in Table 6 stand out, such as “hummus”, “Orange”, “bone” and the “soup”. Of the three regions under discussion, this has the lowest positive reviews ratio.

In the Algarve region, the most significant aspects of the overall assessment are the value attributed to the experience and the price charged. With regard to the aspects highlighted in gastronomy, the “lobster” highlights the appreciation of dishes related to seafood, identified through the keywords present in Table 6. This region has the highest positive reviews ratio of the three under discussion.

The TDC examines the competitiveness and value attributed to price, quality of offerings, and cultural characteristics, as discussed by Dwyer and Kim [1]. This study analysed

various categories, as shown in Table 8, highlighting the Algarve's value in experience and price. This aligns with Ritchie and Crouch's work [3], which emphasises creating memorable experiences and satisfaction, as shown in Table 7. Sentiment analysis reveals that the Algarve has a higher ratio of positive reviews compared to other regions, enhancing the destination's profitability and sustainability, as noted by Ritchie and Crouch [3] and Cucculelli and Goffi [4].

These benefits contribute to TDC, supporting Seyitoğlu and Ivanov's [5] argument that gastronomy plays a crucial role in the competitiveness of tourist destinations. As part of the local identity, gastronomy influences tourist behaviour and satisfaction through the enjoyment of the experience and atmosphere, contributing to the emotional experience. Therefore, understanding food preferences in similar regions, especially competition ones, and monitoring online restaurant reputations is vital. This helps gauge opinions on service, price, and food experience, which affect tourist sentiments and the destination's online reputation and competitiveness. Seyitoğlu and Ivanov [5] state that gastronomy can be considered a strategic resource for TDC.

In scientific terms, the analysis of the gastronomic image of a region and its online reputation is an aspect to be considered in academia to identify aspects associated with each of the dimensions analysed—for example, what stands out positively or negatively, especially in terms of the service, or in value or in food, which is one of the main motivations for travelling. In addition, it is important to analyse the aspects that contribute to the definition of positive sentiments and what emotions are associated with them, as this contributes to creating memories associated with the trip [51], along with the analysis of the attention and satisfaction rates.

In terms of the industry, it is important to point out that, as a strategy, the Algarve DMO must consider focusing on significant aspects when promoting the Algarve destination, that is, the value of the experience and prices. However, it must invest in regional incentives to increase service quality and identify aspects associated with gastronomy that can contribute to improving the reputation and value of the region's gastronomic products, where seafood products must be considered as a starting point.

6. Conclusions

The analysis of the restaurant reviews can provide a better understanding of the favourite gastronomic dishes and features of a tourism region when compared to its competitive set, as well as studying the region's online reputation and its relationship with restaurants' service, prices, gastronomic experience, sentiment and ratings in the competitiveness, and investigating the positioning of a region compared to others.

Gastronomy must be a strategic resource to be considered in TDC and must be included in promoting tourist products; for example, for the Algarve, according to Table 6, seafood (lobster) and the environment surrounding gastronomic spaces must be highlighted. (streets), full of traditions, culture and heritage. The price and value attributed to the experience help explain the positive feeling associated with the Overall evaluation of the tourist experience (Table 8) and the feelings and emotions experienced by tourists (Figures 4 and 5).

In terms of positioning, the Algarve tourist destination is below the Costa del Sol and Costa Tropical, where gastronomy is more valued in these regions, so it is important to define strategies to improve the gastronomic image of the Algarve, such as the result obtained at GIORI, investing in more seafood.

In terms of limitations, much remains to be investigated, whereby aspects associated with service, food and value need to be analysed in more detail, as well as the emotions underlying each feeling—both positive and negative—to understand the most and least valued aspects in emotional terms when it comes to the gastronomic tourist experience. Another limitation of the present study is that we only considered comments in English; despite each language having its own structure, there are already automatic translation facilities on all sites, the quality of which is good. We also add another aspect to include

in the limitations, which is that although we tried to ensure that the representation of restaurants was identical and create a balanced dataset, it was decided to consider an identical number for each region; many restaurants could have been included in addition to those considered.

The identified limitations form part of the work to be developed in the future, to go into more detail on those aspects that remain to be exposed and the emotions that remain to be discovered to understand what contributions are relevant to creating memories and travel stories when visiting the destination—in this case, the Algarve. Other languages will also be considered to study the perceptions of other cultures, in which the automatic translation provided by the websites will be considered, and many more restaurants will be included than the ten for each region, as considered in the present study.

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References

1. Dwyer, L.; Kim, C. Destination competitiveness: Determinants and indicators. *Curr. Issues Tour.* **2003**, *6*, 369–414. [[CrossRef](#)]
2. Hanafiah, M.H.; Zulkifly, M.I. Tourism destination competitiveness and tourism performance: A secondary data approach. *Compet. Rev.* **2019**, *29*, 592–621. [[CrossRef](#)]
3. Ritchie, J.R.B.; Crouch, G.I. *Competitiveness in International Tourism: A Framework for Understanding and Analysis*; World Tourism Education and Research Centre, University of Calgary: Calgary, AB, Canada, 1993.
4. Cucculelli, M.; Goffi, G. Does sustainability enhance tourism destination competitiveness? Evidence from Italian Destinations of Excellence. *J. Clean. Prod.* **2016**, *111*, 370–382. [[CrossRef](#)]
5. Seyitoğlu, F.; Ivanov, S. A conceptual study of the strategic role of gastronomy in tourism destinations. *Int. J. Gastron. Food Sci.* **2020**, *21*, 100230. [[CrossRef](#)]
6. Kumar, G.M.K. Gastronomic tourism—A way of supplementing tourism in the Andaman & Nicobar Islands. *Int. J. Gastron. Food Sci.* **2019**, *16*, 100139. [[CrossRef](#)]
7. Widjaja, D.C.; Jokom, R.; Kristanti, M.; Wijaya, S. Tourist behavioural intentions towards gastronomy destination: Evidence from international tourists in Indonesia. *Anatolia* **2020**, *31*, 376–392. [[CrossRef](#)]
8. Berbel-Pineda, J.M.; Palacios-Florencio, B.; Ramírez-Hurtado, J.M.; Santos-Roldán, L. Gastronomic experience as a factor of motivation in the tourist movements. *Int. J. Gastron. Food Sci.* **2019**, *18*, 100171. [[CrossRef](#)]
9. Kivela, J.; Crotts, J.C. Tourism and gastronomy: Gastronomy's influence on how tourists experience a destination. *J. Hosp. Tour. Res.* **2006**, *30*, 354–377. [[CrossRef](#)]
10. Sio, K.P.; Fraser, B.; Fredline, L. A contemporary systematic literature review of gastronomy tourism and destination image. *Tour. Recreat. Res.* **2024**, *49*, 312–328. [[CrossRef](#)]
11. Valverde-Roda, J.; Medina Viruel, M.J.; Castano Prieto, L.; Solano Sanchez, M.A. Interests, motivations and gastronomic experiences in the world heritage site destination of Granada (Spain): Satisfaction analysis. *Br. Food J.* **2022**, *125*, 61–80. [[CrossRef](#)]
12. Zvirbule, A.; Auzina, A.; Grinberga-Zalite, G. Gastronomic tourism and smart solutions used for its development: The case of a region of Latvia. *Worldw. Hosp. Tour. Themes* **2023**, *15*, 570–580. [[CrossRef](#)]
13. Vu, H.Q.; Li, G.; Law, R.; Zhang, Y. Exploring Tourist Dining Preferences Based on Restaurant Reviews. *J. Travel Res.* **2019**, *58*, 149–167. [[CrossRef](#)]
14. Soonsan, N.; Somkai, U. Dimensions of gastronomic experience affecting on sharing experience: Place attachment as a mediator and length of stay as a moderator. *J. Hosp. Tour. Insights* **2023**, *6*, 344–361. [[CrossRef](#)]

15. UNWTO (United Nations World Tourism Organization). *Tourism Highlights*, 2013 ed.; United Nations World Tourism Organization: Madrid, Spain, 2013.
16. Kovalenko, A.; Dias, Á.; Pereira, L.; Simões, A. Gastronomic Experience and Consumer Behavior: Analyzing the Influence on Destination Image. *Foods* **2023**, *12*, 315. [[CrossRef](#)]
17. Dixit, S.K. Marketing gastronomic tourism experiences. In *The Routledge Handbook of Tourism Experience Management and Marketing*; Dixit, S.K., Ed.; Routledge: London, UK, 2020; pp. 322–335.
18. Hsu, F.C.; Scott, N. Food experience, place attachment, destination image and the role of food-related personality traits. *J. Hosp. Tour. Manag.* **2020**, *44*, 79–87. [[CrossRef](#)]
19. Dixit, S.K.; Prayag, G. Gastronomic tourism experiences and experiential marketing. *Tour. Recreat. Res.* **2022**, *47*, 217–220. [[CrossRef](#)]
20. Harrington, R.J. Defining Gastronomic Identity. *J. Culin. Sci. Technol.* **2005**, *4*, 129–152. [[CrossRef](#)]
21. Kokkranikal, J.; Carabelli, E. Gastronomy tourism experiences: The cooking classes of Cinque Terre. *Tour. Recreat. Res.* **2024**, *49*, 161–172. [[CrossRef](#)]
22. Kim, J.; Ritchie, J.R.B.; McCormick, B. Development of a scale to measure memorable tourism experiences. *J. Travel Res.* **2012**, *51*, 12–25. [[CrossRef](#)]
23. Chang, R.C.; Mak, A.H. Understanding gastronomic image from tourists' perspective: A repertory grid approach. *Tour. Manag.* **2018**, *68*, 89–100. [[CrossRef](#)]
24. Serdar, E.R. Gastronomic Identity and Gastronomic Image in Tourism Destinations: A Local Food Perspective. In *Social Sciences Researches in the Globalizing World*; Rusev, M., Strauss, E., Avcikurt, C., Soykan, A., Parlak, B., Eds.; St. Kliment Ohridski University Press: Sofia, Bulgaria, 2018; pp. 488–498.
25. Eren, R.; Çelik, M. Online food image: Content analysis of Tripadvisor reviews of restaurants in Turkey. *Tur. Akad. Dergis* **2017**, *4*, 121–138.
26. Rojas-Mendez, J.I.; Hine, M.J. Countries' positioning on personality traits: Analysis of 10 South American national tourism websites. *J. Vacat. Mark.* **2017**, *2*, 233–247. [[CrossRef](#)]
27. Fox, R. Reinventing the gastronomic identity of Croatian tourist destinations. *Int. J. Hosp. Manag.* **2007**, *26*, 546e559. [[CrossRef](#)]
28. Lertputtarak, S. The relationship between destination image, food image, and revisiting Pattaya, Thailand. *Int. J. Bus. Manag.* **2011**, *7*, 111e121. [[CrossRef](#)]
29. Soonsan, N.; Phakdee-auksorn, P.; Suksirisopon, P. Determining food attributes for measuring and evaluating a gastronomic destination's appeal to visitors. *J. Hosp. Tour. Insights* **2022**, *6*, 1755–1775. [[CrossRef](#)]
30. Filieri, R.; McLeay, F. E-WOM and accommodation: An analysis of the factors that influence travelers' adoption of information from online reviews. *J. Travel Res.* **2014**, *53*, 44–57. [[CrossRef](#)]
31. Buhalis, D.; Law, R. Progress in information technology and tourism management: 20 years on and 10 years after the Internet—The state of eTourism research. *Tour. Manag.* **2008**, *29*, 609–623. [[CrossRef](#)]
32. Wang, Y.C. A study on the influence of electronic word of mouth and the image of gastronomy tourism on the intentions of tourists visiting Macau. *Tour. Int. Interdiscip. J.* **2015**, *63*, 67–80.
33. Komšić, J.; Dorčić, J. Tourism Destination Competitiveness and Online Reputation: Conceptualization and Literature Framework Analysis. In *Proceedings of the Name of the Conference Tourism & Hospitality Industry 2016, Congress Proceedings, Opatija, Croatia, 28–29 April 2016*; pp. 144–157.
34. Marine-Roig, E.; Ferrer-Rosell, B.; Daries, N.; Cristobal-Fransi, E. Measuring gastronomic image online. *Int. J. Environ. Res. Public Health* **2019**, *16*, 4631. [[CrossRef](#)]
35. Lin, M.P.; Marine-Roig, E.; Llonch-Molina, N. Gastronomy Tourism and Well-Being: Evidence from Taiwan and Catalonia Michelin-Starred Restaurants. *Int. J. Environ. Res. Public Health* **2022**, *19*, 2778. [[CrossRef](#)]
36. Zhang, F.; Jing Yuan, N.; Zheng, K.; Lian, D.; Xie, X.; Rui, Y. Exploiting dining preference for restaurant recommendation. In *Proceedings of the Name of the Conference 25th International World Wide Web Conference (WWW 2016), Montreal, QC, Canada, 11–15 April 2016*; pp. 725–735. [[CrossRef](#)]
37. Rhee, H.T.; Yang, S.B.; Kim, K. Exploring the Comparative Salience of Restaurant Attributes: A Conjoint Analysis Approach. *Int. J. Inf. Manag.* **2016**, *36*, 1360–1370. [[CrossRef](#)]
38. Jiang, Q.; Chan, C.S.; Eichelberger, S.; Ma, H.; Pikkemaat, B. Sentiment analysis of online destination image of Hong Kong held by mainland Chinese tourists. *Curr. Issues Tour.* **2021**, *24*, 2501–2522. [[CrossRef](#)]
39. Mehraliyev, F.; Kirilenko, A.P.; Choi, Y. From measurement scale to sentiment scale: Examining the effect of sensory experiences on online review rating behavior. *Tour. Manag.* **2020**, *79*, 104096. [[CrossRef](#)]
40. Alaei, A.R.; Becken, S.; Stantic, B. Sentiment analysis in tourism: Capitalizing on big data. *J. Travel Res.* **2019**, *58*, 175–191. [[CrossRef](#)]
41. INE. *Tourism Statistics 2020*; Instituto Nacional de Estatística: Lisbon, Portugal, 2021.
42. El-Masri, M.; Altrabsheh, N.; Mansour, H. Successes and challenges of Arabic sentiment analysis research: A literature review. *Soc. Netw. Anal. Min.* **2017**, *7*, 54. [[CrossRef](#)]
43. Shah, K.; Patel, H.; Sanghvi, D.; Shah, M. A comparative analysis of logistic regression, random forest and KNN models for the text classification. *Augment. Hum. Res.* **2020**, *5*, 12. [[CrossRef](#)]

44. Campos, R.; Mangaravite, V.; Pasquali, A.; Jorge, A.; Nunes, C.; Jatowt, A. YAKE! Keyword extraction from single documents using multiple local features. *Inf. Sci.* **2020**, *509*, 257–289. [[CrossRef](#)]
45. Chintalapudi, N.; Battineni, G.; Di Canio, M.; Sagaro, G.G.; Amenta, F. Text mining with sentiment analysis on seafarers' medical documents. *Int. J. Inf. Manag. Data Insights* **2021**, *1*, 100005. [[CrossRef](#)]
46. Chen, W.; Xu, Z.; Zheng, X.; Yu, Q.; Luo, Y. Research on sentiment classification of online travel review text. *Appl. Sci.* **2020**, *10*, 5275. [[CrossRef](#)]
47. Marine-Roig, E.; Huertas, A. How safety affects destination image projected through online travel reviews. *J. Destin. Mark. Manag.* **2020**, *18*, 100469. [[CrossRef](#)]
48. Yadollahi, A.; Shahraki, A.G.; Zaiane, O.R. Current state of text sentiment analysis from opinion to emotion mining. *ACM Comput. Surv. CSUR* **2017**, *50*, 25. [[CrossRef](#)]
49. Lundqvist, K.; Liyanagunawardena, T.; Starkey, L. Evaluation of student feedback within a MOOC using sentiment analysis and target groups. *Int. Rev. Res. Open Distrib. Learn.* **2020**, *21*, 140–156. [[CrossRef](#)]
50. Hutto, C.; Gilbert, E. Vader: A parsimonious rule-based model for sentiment analysis of social media text. In Proceedings of the International AAAI Conference on Web and Social Media, Oxford, UK, 27–29 May 2014; Volume 8, pp. 216–225.
51. Volo, S. Emotions in tourism: From exploration to design. In *Design Science in Tourism: Foundations of Destination Management*; Springer International Publishing: Cham, Switzerland, 2017; pp. 31–40.

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