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## Article

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Article

# An Online Reputation Analysis of the Tourism Industry in Marbella: A Preliminary Study on Open Innovation

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**Abstract:** This research analyzed the online reputation of Marbella as a tourist destination and the profiles of the reviewers according to sociodemographic characteristics. A correlational, quantitative research technique was used in this study based on the manual extraction of more than 4000 reviews generated on TripAdvisor. The data used in this study were collected from the TripAdvisor website, taking, as a sample, tourists who had visited the city in the last three years. Ratings that did not provide full data on the variables were excluded. The findings show that Marbella is considered a luxury shopping destination. The preliminary conclusions allow us to generalize about the sociodemographic profile of its tourists. The findings of the study will provide valuable information for Marbella's Destination Management Organization (DMO). On the one hand, this study highlights the importance of ranking the attractions of the city to create better communication strategies and enhance the appeal of those attractions that receive the best ratings, establishing the true vocation of Marbella as a tourist destination. On the other hand, it provides information on what tourists perceive to be negative elements, allowing the administration to create an improvement plan. The novelty of this research paper is that it delves into Marbella's online reputation through an analysis of specific attractions' ratings. Areas that require further attention in future research have been highlighted, along with specific advice on each attraction that contributes to the tourist offerings of the city.

**Keywords:** tourism; online reputation; Marbella; TripAdvisor; reviews; comments; electronic word of mouth; Web 2.0



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## 1. Introduction

Online reputation has gained greater importance in recent years, mainly in the field of tourist destination management. The emergence of social media, which was once considered rare, has increased the participation of users in these technologies; they issue judgments, criticisms, comments, or suggestions based on their experience. Given the importance of these assessments in the management of tourist destinations, this research examines TripAdvisor reviews to understand the image of a tourist destination in a scientific and structured way. Currently, academic studies that measure online reviews tend to focus on accommodation and other touristic services' online reputations rather than attractions and tourist destinations. In an attempt to address this research gap, this study seeks to assess the latter two factors.

Marbella, one of the main tourist destinations of the Costa del Sol, due to its international reputation and its image in the collective imagination, serves as a practical case

study. This Mediterranean city, located in the south of Spain, has around 185,111 reviews on TripAdvisor. The distribution of these comments leans towards the restaurant sector (107,083), accommodation (61,429), and, finally, attractions (16,599). The “What to Do” section is divided into 540 subfolders, which contain information not only on the city’s attractions but also on specific activities that can be carried out in the city. A first analysis involves the classification of these folders, eliminating those with a low number of comments (<10) and geographical imprecision. Folders describing the same place or a nearby space are linked (e.g., the Plaza de Los Naranjos is located in the Old Town).

The results are presented in summary form, showing the main findings of the different variables analyzed. Part of the main findings shows information containing variables such as gender and nationality from the TripAdvisor website, presenting an approximation of the sociodemographic profile of tourists visiting Marbella. Furthermore, ratings given by tourists to the tourist attractions of the city in 2017, 2018, and the first half of 2019 are shown.

For discussing the online reputation of the city of Marbella, we established a generic and specific index for each attraction. Finally, tourist attractions with better subjective value and qualitative perception from tourists are identified by analyzing the frequency of particular words in online reviews. This information will be analyzed in depth in the conclusions. We will include the limitations of this study and possible new lines of research related to the topic. The results of this research will be of use to institutions at the tourist destinations since they reveal the opinions of tourists. Through these reviews, it is possible to identify which aspects of the destination and its attractions are valued and which aspects can be improved. It is also easy to deduce the main demands of tourists.

Our research, for the first time, gives scientific value to information that is generated and valued by users themselves; this is not usually taken into account by political and educational institutions. In this way, the research aims to combine official data with information from users of the tourist destination, as well as to propose a methodology for analyzing TripAdvisor comments.

## 2. Literature Review

### 2.1. Online Reputation

Online reviews continue to be treated in the hospitality and tourism industry as a problem to be solved, given the importance of online reputation [1].

Reputation can be defined, briefly, as the specific image that stakeholders have of the company. This image represents the company as a whole, what it is and how it tries to communicate and act with individual stakeholders; what its values, vision, and mission are; and what capacity it has to meet the demands and needs of customers [2].

Multiple authors have defined the concept of online reputation, mainly from the approach of business management. Del Fresno [3] describes it as a social construct around the credibility, reliability, morality, and coherence of a person, body, agency, institution, or company. Portmann et al. [4] define it as a social evaluation that is publicly maintained by an entity based on the previous use of it, adding that they relate it to what was posted by the entity and what third parties share about it on the Internet. In short, it can be considered a reflection of the prestige or esteem of a person or brand on the Internet [5].

Blogs, Twitter, Facebook, and YouTube videos can give information about hotel or restaurant rankings on TripAdvisor, and, if they are positive, they are seen as beneficial elements in the development of the digital public sphere. Experts believe that these actions contribute to an increase in online reputation, which can be seen as a new way to generate more value [6].

With the advancement of technology and the emergence of the web 2.0, new forms of interaction between tourists are emerging. Transmitting the personal experiences of each trip on a platform with considerable web traffic has changed the way in which tourists conceive and project the image and reputation of destinations. Litvin, Goldsmith, and

Pan [7] argue that, given the intangible nature of this sector, it is important that tourists generate online content that can guide others in the process of selecting their trips.

Most of the studies on online reputation and tourism include data referring to the hotel sector and, to a lesser extent, make reference to specific tourist destinations. This is the case with the study by Mendes, Biz, and Gândara [8], who compare the online reputation of different tourist destinations through social networks. Moreno Gómez [9] studied the specific case of La Rioja, while Rangel and Rivero [10] studied Zafra. Cuadra Morales and Agüero [11] carried out their study on Andalusia. Bastidas, Casado, and Sánchez [12] studied the construction of online reputation through TripAdvisor and Minube.

The hotel industry continues to develop strategies to address online feedback and respond to negative reviews, as they can have a damaging effect on a hotel's reputation [13]. Studies have been conducted to measure the impact of online consumer feedback and how it affects hotel room sales, with a significant relationship between online consumer reviews and hotel marketing [14].

On the other hand, if one looks at the consequences of online reputation, researchers agree that online comments are an important factor when choosing a hotel; a favorable online reputation affects the sustainability of competitive advantage [13]. In addition, it could influence the propensity to pay a higher price, thus showing how online reputation can influence future consumer behavior [15].

Despite all of the above, a crucial element of a destination, its attractions, has never been studied using machine learning techniques. Therefore, this research focuses specifically on the use of machine learning to study attractions, which correspond to the natural, artificial, and cultural resources of a destination [16,17].

The destinations are characterized by a combination of spatial elements: geographical location, population, and activities; as well as cultural and social spaces. The way that we conceptualize and frame destinations is critical not only to the research being done but also to practical issues such as destination management and marketing [18].

## 2.2. *Electronic Word of Mouth (eWOM)*

Electronic word of mouth, or eWOM, is defined as "all informal communications addressed to other consumers through different Internet-based technologies and related to the use or characteristics of specific goods and services or their suppliers" [7].

According to Westbrook [19], eWOM is defined as all informal communication aimed at consumers through Internet technology regarding the use or characteristics of particular goods and services or their sellers. This includes communication between producers and consumers, as well as internal communications.

The scope of eWOM is extensive and organic. While, in the past, an unsatisfied consumer could recount their experiences to a limited number of people, with the advent of the Internet, such experiences can reach an unlimited audience [20]. This undoubtedly benefits Destination Management Organizations (DMOs), as territories with a good reputation have a powerful competitive situation that allows them to attract more tourists and investors [21].

In this way, eWOM on social networks can influence the decision-making processes of potential tourists. Social media has changed this process and tourism marketing managers can study these processes and thus benefit [22].

Following the argument from Sparks et al. [20], for many consumers of tourist products, knowing what is being said online is part of the process of obtaining information when choosing a particular product or service, in part due to the need to reduce the risk arising from their choice and obtain independent information from third parties.

Ejarque [23] considers that the presence of the adprosumer tourist (customer 2.0) is positive for destinations and tourism companies because, in reality, there is no better promotion (i.e., more economical and convincing) than that carried out by the customers themselves.

It is possible to identify, extract, classify, and analyze online reputation based on the opinions that users disseminate on websites that facilitate reviews and opinions about brands, products, and services of organizations and their competitors [3].

WOM has been extensively studied in the tourism sector, and it has been shown that communication on tourist destinations has to take into account the emotions that customers experience during their visits to the destination [24].

Experience products, such as tourism, require WOM to learn about the characteristics of the product before consumption [25]. In addition, communication between consumers increases credibility, which is another of the most interesting factors of eWOM, since tourists perceive that they are noncommercial sources, thus creating more authentic content than the tourist information given out by the media [26]. Credibility is also increased by influencers, bloggers, or celebrities, to whom potential tourists pay attention [27]. When WOM becomes digital (eWOM), the ephemeral, anonymous, large-scale nature of the Internet introduces new ways to analyze, interpret, and manage the influence that one consumer can have on another [7].

In addition to credibility, another important factor is user-generated content (UCC), which is growing in importance, especially regarding trips. Consumer-written reviews are increasingly available and are used to make travel decisions [28].

The importance of the tourism industry maintaining an effective presence on social networks is highlighted when it comes to increasing visibility and sales [29].

### 2.3. TripAdvisor as a Source of Information

One way to share travel experiences is through social media, increasingly used as a part of research on tourist destinations [30].

A survey was conducted via the TripAdvisor website to investigate how the opinions of other travelers influence the travel planning processes of new tourists. The results showed that almost all those who consulted the reviews posted on the app thought that it was a good way to learn more about the destination and its tourism products. It was also found that the consultation helped travelers to evaluate possible alternatives, as well as to identify which tourist sites or services to avoid. TripAdvisor also helped them to find new places to visit on their trips and get ideas about their travels [28].

Various studies employing both quantitative and qualitative approaches have based their methodologies on extracting information from the TripAdvisor database. However, it needs to be clarified that most of these have been developed from a business and not a destination approach. Some more recent ones are Kladou and Mavragani [31], Berezina et al. [32], and Yong et al. [33]. All these studies focus on the impact of eWOM on effective management in the hotel sector using information from TripAdvisor. A summary of these studies is presented in Table 1.

**Table 1.** Literature on online analysis of TripAdvisor reviews.

Authors	Purpose	Number of Reviews Analyzed on TripAdvisor	Methodology
Banerjee and Chua [34]; Schuckert, Liu, and Law [35]	To examine rating patterns for independent and chain hotels of different traveler profiles of 200 hotels in the Americas, Asia Pacific, Europe, the Middle East, and Africa.	39,747	Variance analysis (ANOVA) and qualitative analysis of the meaning of the text
Barreda and Bilgihan [36]	Identify the main topics that motivate consumers to evaluate the experiences of online hotels.	17,357	Nvivo8
Berezina et al. [32]	Examine satisfied and dissatisfied hotel customers.	2510	PASW Modeler
Bi et al. [37]	To perform an importance-performance analysis (IPA).	24,276	LDA, IOVO-SVM, ENNM
Cheng et al. [38]	To investigate the effect of content on the perception of trust of potential guests.	1485	Convolutional neural net-work (CNN)

Table 1. Cont.

Authors	Purpose	Number of Reviews Analyzed on TripAdvisor	Methodology
Fang et al. [39]	Investigate the effects of the characteristics of historical grade distribution.	41,061	Negative binomial regression and Tobit Regression Model
Geetha, Singha, and Sinha [40]	Establish a relationship between customer sentiments in online reviews and hotel ratings.	TripAdvisor reviews	Naive Bayes algorithm and cluster analysis
Guo, Barnes, and Jia [41]	Identify the key dimensions of customer service expressed by hotel visitors.	266,544	Latent dirichlet analysis (LDA)
Kirilenko, Stepchenkova, and Hernandez [42]	To identify attraction groups.	157,285	DIRT_LPAwb
Simeon et al. [17]	Analyze online reviews to explore tourist experiences related to cultural attractions.	12,592	Content analysis and main component analysis
Su and Teng [43]	Extract quality-of-service dimensions from museums.	286 worst TripAdvisor reviews	Nvivo8
Taecharungroj [44]	To infer potential brand identities from user-generated content.	9633	Leximancer
Wong and Qi [45]	Investigate the evolution of TripAdvisor online review content.	8007	Nvivo10 e IBM_ManyEyes
Xiang et al. [1]	Comparatively examine three platforms.	438,890	LDA
Ye, Luo, and Vu [46]	To understand location preference and detect the demand pattern.	115,649	Time series analysis

Source: Own elaboration, adapted from Taecharungroj & Mathayomchan (2019).

Consumer-generated content has provided a new means of accessing important information for tourists, transforming the way that visitors evaluate, select, and share tourism experiences. Research in this area has focused primarily on the quantitative ratings provided on websites. However, an analysis of advanced language techniques provides an opportunity to extract meaning from valuable visitor-provided feedback [41].

Most researchers agree that tourist products are more difficult to evaluate, as they depend on lived experience and are intangible and heterogeneous [7]. If we discuss tourist destinations and compare, for example, the customer satisfaction with different hotels, it is clear which attributes are being used to measure this: room quality, cleaning, services, location, etc. However, for tourist attractions, it is more difficult to quantify satisfaction [47].

According to Niezgodá and Nowacki [48], tourists who visit Marbella voluntarily post on TripAdvisor an opinion reflecting their impressions and experiences from their visit [49]. What is credible to them is what has been verified in person or by other objective consumers [50]. Beeton, Bowen, and Santos [51] found that the notion of social construction and the mass media's powerful role are important in constructing tourism and tourist experiences.

Many studies have analyzed the utility of tourist information provided by reviewers and its effects on the decision-making of other tourists to assess the reliability of information on the largest online travel community, TripAdvisor [52]. The results proved that such information had significant effects, indicating that there is high value in terms of information delivery [53,54]. TripAdvisor provides countless reviews of accommodation, restaurants, experiences, airline tickets, and cruises, and has the ability to influence approximately 500 million travelers. Travelers compare prices of hotels, flights, and cruises; book popular tours and attractions; and make restaurant reservations. Currently, TripAdvisor offers its services across 49 markets in 28 languages [55].



### 3. Methods

#### 3.1. Study Area

Marbella is a city in Southern Spain, belonging to the province of Málaga in the autonomous community of Andalusia. The municipality covers an area of 117 square km and is one of the main tourist areas in the Costa del Sol. As in most cities of the Andalusian coast, Marbella's economy revolves around tertiary activities. The main branches of the service sector are hospitality, real estate, and business services, which underscores the importance of tourism to Marbella's economy.

In recent years, improved air and land connections with Malaga have made Marbella especially popular with tourists from Northern Europe. In fact, the closest airport is the Malaga-Costa del Sol airport, located around 50 km from Marbella. This airport provides weekly connections with 17 Spanish cities, over 60 flights around Europe, and to many other destinations worldwide. Data from the National Institute of Statistics (INE) show that, at the end of 2019, Marbella received a total of 2,797,653 overnight stays, of which 555,342 were made by foreigners. Of this number, 156,772 came from the United Kingdom, 36,751 from France, 33,124 from Germany, and 23,893 from Holland.

One of the main indicators that reveals Marbella's remarkable role as a noted luxury holiday spot is the revenue per available room (RevPAR). In 2019, Marbella's RevPAR was the second highest in Spain at an average of EUR 130, 2.4% more than in 2018, indicating that it has grown from a small village to a travel destination with visitors from all over the world.

#### 3.2. Sample

The methodology carried out to analyze the online reputation of Marbella's tourist destination has been adapted to the information provided by the TripAdvisor web portal and is as follows: manual extraction of TripAdvisor reviews; a descriptive statistical analysis using SPSS statistic 20; and a qualitative data analysis using the data analysis software, NVivo, a software program that enables a count or index of specific or similar words across multiple text documents.

To select the sample, the categories of hotels, restaurants, and attractions (see Table 2) of Marbella were analyzed on the TripAdvisor website, focusing on attractions in order to understand the perceptions that tourists have of each resource in the city. The time span was 2017 through to the middle of 2019.

**Table 2.** Extraction count.

Attraction	Total Reviews	Total Extraction
Old Town	5034	1158
Promenade	534	309
Banús Harbor	5532	1552
Avenida del Mar	1039	359
Alameda Park	468	204
Constitución Park	135	47
La Cañada Shopping Center	654	250
Venus Bajadilla Beach	82	49
Cabopino Beach	163	89

Source: Own elaboration.

According to TripAdvisor, Marbella received 258,234 reviews and comments in the study period. By manual verification, it could be found that, of this number, 185,111 actually corresponded to the geographical area studied. The rest mainly evaluated hotels and restaurants in nearby cities such as Mijas, Estepona, and Benalmadena.

More specifically, in the attractions group, there were a total of 16,599 opinions. Within TripAdvisor, the "What to Do" section is divided into 540 subfolders, which contain information about not only the city's attractions but also specific activities that can be performed in the city. The preliminary analysis involves sorting these folders and eliminating those

with low numbers of comments (>10) and geographic inaccuracy. Folders that describe the same place or nearby spaces are also linked.

Once we had specified the search parameters, we could proceed to extract the comments on TripAdvisor by encoding them directly (Table 2). As mentioned above, this study focuses mainly on the perceptions that tourists had when visiting the attractions of the city and how, from these opinions, the online reputation of Marbella has been built.

The study variables taken into consideration are those provided by the TripAdvisor website, as seen in Figure 1.

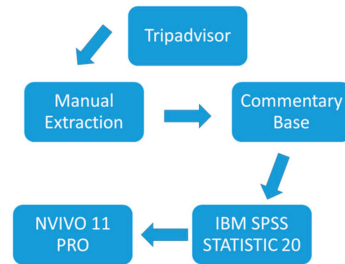


Figure 1. Methodology design. Source: Own elaboration.

The analysis was first carried out using descriptive statistical techniques, extracting the frequency and percentage tables with SPSS 20 statistical software. On the other hand, nominal variables, whose responses were more open and therefore noncodifiable, were processed in NVivo 11 Pro. Table 3 gives the study variables.

Table 3. Study variables.

Place	Nationality	Gender	Month
To rank the attractions that, in addition to generating the most opinions, are the ones that receive the greatest flow of tourists in Marbella.	To define an approximation of the sociodemographic profile of tourists, defining the most important markets for the city.	To compare the percentage of men and women who issue positive or negative comments.	To analyze the season of the year in which the greatest online content is generated and to investigate whether there is a correlation between it and the seasonality of a coastal city.
Year	Title	Reviews	Valuation
To chart the growth or decline in the volume of opinions generated annually.	To know the initial concept or image of the judgments issued and orient the comment towards a negative, positive, or neutral position.	To measure the level of satisfaction that tourists have regarding each specific attraction. The qualitative variable represents the medullary part of this study.	To calculate the online reputation index of an attraction, TripAdvisor uses a Likert (1-5 points) scale to set the ranking of hotels, restaurants, and attractions. These values equate to lousy, bad, normal, good, and excellent.

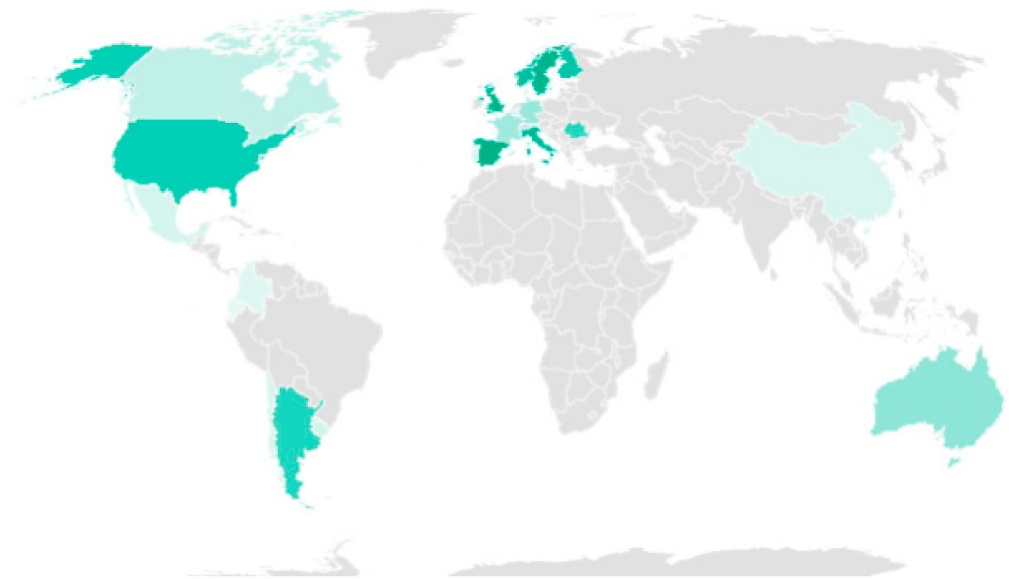
Source: Own elaboration.

#### 4. Results

The choropleth map in Figure 2 shows the geographical distribution of tourists who have posted reviews on TripAdvisor, rating their experience of visiting Marbella’s attractions.

The colors in the figure are proportional to the density of users coming from the corresponding country. Most of the comments came from British and Spanish tourists. This reflects a trend of provenance, with the majority of European origins being Spain at 23.8%, the United Kingdom at 29.4%, France at 8.2%, Sweden at 6.3%, Belgium at 5.6%, Norway at 2.8%, and Italy at 3.1%. This reaffirms the United Kingdom’s position as the main outbound tourist market for the Costa del Sol. The map highlights that, among extra-European countries, most tourist reviews come from Argentina, Canada, the USA, and Australia.





**Figure 2.** Choropleth map of frequency of reviews per country. Source: Own elaboration from TripAdvisor data.

It is important to note that tourists posting on TripAdvisor have the option to share their data or not. The demographic characteristics posted usually refer to nationality and gender, while other characteristics, such as age, occupation, and income, are not generally added by the reviewers. To classify gender, two indicators were considered in this study. The first one refers to the name of the reviewer (name or username) and the second one is based on the profile picture. Cases where both indicators were inconclusive were excluded.

Regarding gender, the data reflect that men have written more comments about the city. The proportion of male reviews is around 63.5% of the total, with their total reviews numbering 4009. There is no significant difference between the rating received by tourists of different gender. In other words, both men and women tend to issue more positive than negative comments.

#### 4.1. Distribution of Attractions

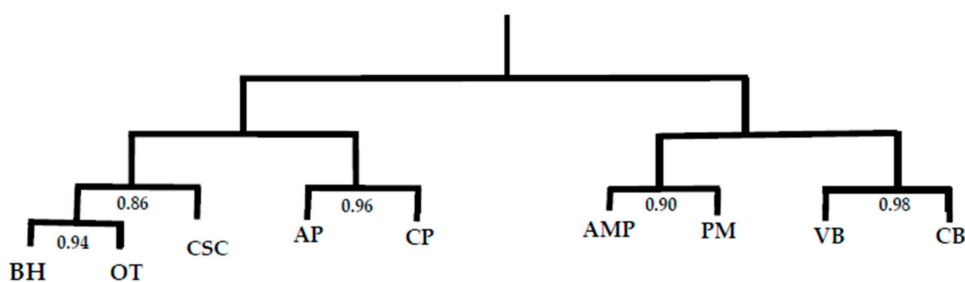
Marbella is characterized by several attractions, mainly of natural and cultural character. The main areas that generate the most content on this website are sites of historical and commercial interest. Table 4 shows the main attractions in Marbella.

**Table 4.** Marbella attractions.

	Frequency	Percentage
Old Town	1159	28.9
Promenade	309	7.7
Banús Harbor	1551	38.7
Avenida del Mar Promenade	351	8.8
Alameda Park	204	5.1
Constitución Park	47	1.2
La Cañada Shopping Center	250	6.2
Venus-Bajadilla Beach	49	1.2
Cabopino Beach	89	2.2
Total	4009	100.0

Source: Own elaboration.

According to the analysis of conglomerates by similarity of words in comments, Figure 3 shows the correlation between words.



BH: Banus Harbor OT: Old Town CSC: Cañada Shopping Center AP: Alameda Park CP: Constitution Park AMP: Avenida del Mar Promenade. PM: Promenade VBB: Venus Bajadilla Beach CB: Cabopino Beach

**Figure 3.** Dendrogram nodes clustered by words’ similarity. Source: Own elaboration.

A high correlation is observed between attractions located in specific and nearby geographical areas. Through the specific count of the frequency of words used to describe each of these, it is concluded that there is a strong association between Playa Venus and Bajodilla, with Playa de Cabopino obtaining, where appropriate, a coefficient of 0.98. The high correlation is due to the repetition of the words when describing or evaluating both beaches. Although there is a geographical separation between the two beaches, in the collective imagination of tourists, this difference does not represent a reason to evaluate them separately.

Comments describing natural spaces in the urban core have linked Parque Alameda with La Constitución Park, given the similar characteristics of each attraction. In this case, the coefficient is 0.96.

Tourists who posted their opinions online linked the Old Town and Puerto Banus, with a coefficient of 0.94. In addition, the Paseo Marítimo was correlated by 0.90 with Avenida del Mar.

On the other hand, from the review of the comments, one can see that the image of Marbella has a strong association with shopping. In fact, of the 4009 reviews extracted from TripAdvisor, more than 73% refer to spaces in which this type of activity can be performed.

Table 5 shows the most frequent words used for Marbella’s attractions by tourists.

**Table 5.** Commenters’ most frequently used words.

Word	Length	Frequency	Weighted Percentage (%)
Stores	7	1562	1.62%
Restaurants	12	1451	1.51%
Marbella	8	1323	1.37%
Port	6	1284	1.33%
Place	5	1132	1.17%
Promenade	5	950	0.99%
Old Town	5	678	0.70%
Town	7	674	0.70%
Bars	5	666	0.69%
Streets	6	613	0.64%
Beach	5	596	0.62%
Nice	9	590	0.61%
Yachts	5	542	0.56%
People	5	484	0.50%
Strolling	6	454	0.47%
Downtown	6	446	0.46%
Cars	5	442	0.46%

Source: Own elaboration.

For the timely analysis of these attractions, based on the above criteria and taking up the outline of the dendrogram provided by NVivo, these resources are grouped into the following categories: beach, leisure, nature, and commerce.

Each grouping obtained from the dendrogram is then analyzed.

#### 4.2. Beaches

According to data from the Delegation of Environment, Beaches, and Ports of the City of Marbella, the city has 27 km of coastline. Table 6 lists the main beaches in Marbella.

**Table 6.** Marbella's beaches.

MARBELLA'S BEACHES	Guadalmina
	Linda Vista
	San Pedro
	Rodeito
	Puerto Banús
	Río Verde
	Casa Blanca
	Faro
	Venus
	Bajadilla
	El Cable
	Bahía Marbella
	Pinomar
	Laurel
	Cabopino

Source: Own elaboration.

For the purposes of this research, and following the criterion of volume of comments, only Venus, Bajadilla, and Cabopino beaches are analyzed. These are grouped into a single study object due to the indexing of these attractions in the web portal. The results of the extracted information reflect the following reputation indices:

The perceived quality of Venus Beach–Bajadilla ranges from normal to bad, and that of Cabopino ranges from normal to very good, according to the scale proposed by TripAdvisor. As contradictory as it may seem, the appreciation of tourists for the beaches of the city is very low compared to the rest of the attractions. It is therefore inferred that the beaches are not the main reason that they visit Marbella.

The average rating, indicated by the number of stars on Google, gives Venus Bajadilla a weight of 4.2 and Cabopino 4.4. This indicates a marked difference in the opinions expressed on the two platforms but confirms that these beaches are equal in evaluation.

As for the words most used in comments by tourists when describing their experience of visiting these beaches and why they would recommend visiting them, the attractions show similarities, although, in the case of Cabopino beach, the association with words such as nudist and parking tends to be negative.

#### 4.3. Leisure

In this category, we have included the promenade and avenue of the sea. These attractions function to connect the urban area of Marbella and the central beaches of the city. Because they distribute the tourist flow, they are busy spaces, mainly used for hiking and resting.

In comparative terms, their average rating is higher than the category discussed above. The same goes for ratings from Google, with more favorable results of 4.5 and 4.6, respectively.

Although Paseo Marítimo suffered a drop of 0.11 in 2018, it is true that both attractions show a positive evolution of their reputation.

In the case of Avenida del Mar, the most used words refer to the sculptures of Salvador Dalí, describing the surroundings as pleasant for a walk or rest. The promenade stands out

for the number of restaurants that can be found and resembles, in descriptive terms, the previous appeal because the adjectives used in the comments are similar.

#### 4.4. Nature

Although Marbella has numerous natural spaces, most of them are located on the outskirts of the city, so they are little known and therefore not recommended on this platform. Alameda Park and La Constitución were analyzed both by proximity to the urban center and by the number of comments generated. The online reputation index obtained for both attractions is as follows:

The similarities between the two attractions are apparently very reasonable. In the case of Alameda Park, the word “source” refers to the Virgin Fountain of the Rocío, which is located in the center of it. Also noteworthy are the colorful, elaborate tiled benches and the abundant shade, which creates a very comfortable space.

#### 4.5. Trade

One of the strengths of Marbella is its shopping opportunities. The three attractions studied are highly commercial areas, full of shops.

The average index of online reputation obtained positions the Old Town as the main attraction, this being the one that receives the most comments and better evaluations from tourists. Puerto Banus, for its conditions of luxury and eccentricity, receives less favorable reviews.

Puerto Banus receives the best average score in the star rankings prepared by Google, obtaining 4.4, the same as La Cañada. The Old Town receives a slightly lower 4.2.

There is a steady increase in ratings for these attractions. Puerto Banus has significantly improved in terms of tourist perceptions, increasing from 3.85 in the first year to 4.07 in the last.

Many of the reviews on TripAdvisor regarding La Cañada Mall point to this environment as a means of distraction, especially in the winter. This certainly benefits the city in terms of decreasing seasonality.

The Old Town stands out with positive qualifying adjectives: pleasant, beautiful, charming, beautiful, atmosphere, flowers, etc. Its link to the category of commerce is due to the number of shops that can be found when walking its streets.

Puerto Banus, from this website, is seen as an eccentric and luxurious place, full of expensive shops, exhibition cars, and yachts. The association with St. Tropez, one of the most important and exclusive resorts on the French coast, is reflected in this study.

The reduction in the percentage of negative comments is proportional to the decrease in comments, in general terms, in the years analyzed, i.e., the graph shows a decrease in comments as a whole. Of the 4009 reviews issued in the period analyzed, 1910 (47.6%) were from 2017, while in 2018, there were 1542 (38.5%), representing a content reduction of 9.1%. There is a less encouraging picture when we consider the first half of 2019. This is shown in Table 7.

**Table 7.** Temporal evolution of content.

	Frequency	Percentage
2017	1910	47.6
2018	1542	38.5
2019	557	13.9
Total	4009	100.0

Source: Own elaboration.

## 5. Discussion

The generic online reputation index of the city of Marbella, according to the sample taken, is 4.26 out of 5, using the TripAdvisor scale. This reflects that the experience of tourists when visiting the attractions of the city has been very satisfying but not excellent.

It was noted that the information extracted corresponds to very specific tourist areas. It can be inferred that this high concentration of opinions renders other resources that are potentially attractive invisible; therefore, they remain in the background for tourists who make use of this platform and are seeking inspiration and making decisions about which sites to visit in Marbella.

At the same time, there is a significant contrast between the comments and the average score received for each attraction studied in this research.

With this heterogeneity, one can easily see which attractions receive more positive ratings and contrast them with the rest.

The attractions linked to the category of trade are the ones that stand out most, both for the valuations and for the volume of opinions that they have generated in recent years. The rest of the categories related to leisure, nature, and beaches, although they have received fewer comments, project a reputation index very similar to the generic average of the city.

The categories proposed reflect Marbella's tourist offerings; resources linked to culture, history, nautical pursuits, gastronomy, and nightlife, although implicitly included, are less important in terms of content generation.

### 5.1. Tour Industry Open Innovation

The tourism industry in general needs open innovation in order to improve and distinguish itself from other tourist destinations. Cities need new arguments to maintain their success and positioning, and, to do so, it is essential that a culture of open innovation is fostered among companies in the sector. According to the study by Yun, Park, Shin, and Zhao [56], organizations and entrepreneurs need to better understand the role of open innovation dynamics in order to implement them.

Previous studies have shown the usefulness of open innovation. Studies on restaurants, such as Yun, Park, Gaudio, and Corte [57], state that open innovation is essential to their success as adopting such strategies can generate additional revenue. Yung, Park, Im, Shin, and Zhao [58] claim that the success of social enterprises depends on the extent to which they strive to move towards open innovation. Adopting open innovation strategies seems to be a fruitful way for social enterprises to progress and grow in their operations. If social enterprises in the city implement these strategies, cities such as Marbella will benefit.

In the hotel industry, studies such as that of Orfila and Mattson [59] also support open innovation for success in the hotel industry through its main drivers: the additional services offered, that bookings are made through tour operators, that hotels are part of a hotel chain, and that the hotel owners run the business.

### 5.2. Policy Implications

The attractions are managed by public administrations. The lack of response to negative comments, as well as the geographical imprecision and linking to other areas of tourist interests that do not correspond to Marbella, are sufficient evidence that there is a low level of proactive management of the online reputation, which is why adopting a more proactive attitude and engaging in more exhaustive monitoring of these tools is needed, which, if properly managed, could bring great benefits to the municipality.

### 5.3. Limitations

This study is restricted to reviews from a single website, which limits the dataset. For better clarity on these issues, further research using a questionnaire or interviews with tourists at the destination may need to be conducted.

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## References

- Xiang, Z.; Du, Q.; Ma, Y.; Fan, W. A comparative analysis of major online review platforms: Implications for social media analytics in hospitality and tourism. *Tour. Manag.* **2017**, *58*, 51–65. [[CrossRef](#)]
- Zraková, D.; Demjanovičová, M.; Kubina, M. Online reputation in the transport and logistics field. *Transp. Res. Procedia* **2019**, *40*, 1231–1237. [[CrossRef](#)]
- Del Fresno, M. *El Consumidor Social: Reputación Online y Social Media*, 1st ed.; UOC: Barcelona, Spain, 2012.
- Portmann, E.; Meier, A.; Cudré-Mauroux, P.; Pedrycz, W. FOR A—A fuzzy set based framework for online reputation management. *Fuzzy Sets Syst.* **2015**, *269*, 90–114. [[CrossRef](#)]
- Del Santo, O.; Álvarez, D. Marketing de Atracción 2.0. Creative Commons 3.0. 2012. Available online: <https://www.juancmejia.com/wp-content/uploads/2012/06/Marketing-de-Atraccion-20.pdf> (accessed on 11 April 2021).
- Hearn, A. Structuring feeling: Web 2.0, online ranking and rating, and the digital ‘reputation’ economy. *Ephemer. Theory Politics Organ.* **2010**, *10*, 421–438.
- Litvin, S.W.; Goldsmith, R.E.; Pan, B. Electronic word-of-mouth in hospitality and tourism management. *Tour. Manag.* **2008**, *29*, 458–468. [[CrossRef](#)]
- Mendes Thomaz, G.; Biz, A.; Gândara, J.M. Innovación en la promoción turística en medios y redes sociales: Un estudio comparativo entre destinos turísticos. *Estudios y Perspectivas en Turismo* **2013**, *22*, 102–119.
- Moreno Gómez, L. La reputación Online del destino turístico de La Rioja. 2019. Available online: <https://repositorio.unican.es/xmlui/handle/10902/17540> (accessed on 11 April 2021).
- Rangel, M.C.R.; Rivero, M.S. Análisis cualitativo de la imagen turística online de Zafra (España) a través de los comentarios en Tripadvisor. *Investigaciones Turísticas* **2021**, *21*, 128–151. [[CrossRef](#)]
- Cuadra, S.M.; Morales, P.C.; Agüera, F.O. Reputación online, redes sociales y turismo. Un estudio de caso en Andalucía. 2014. Available online: <https://www.eumed.net/rev/curydes/16/redes-sociales-turismo.pdf> (accessed on 11 April 2021).
- Bastidas Manzano, A.B.; Casado Aranda, L.A.; Sánchez-Fernández, J. La influencia de la Web en la reputación online: El caso de Tripadvisor y Minube. *Revista Internacional de Turismo y Empresa. RITUREM* **2018**, *2*, 3–27. [[CrossRef](#)]
- Levy, S.E.; Duan, W.; Boo, S. An Analysis of One-Star Online Reviews and Responses in the Washington, D.C., Lodging Market. *Cornell Hosp. Q.* **2013**, *54*, 49–63. [[CrossRef](#)]
- Ye, B.H.; Luo, J.M.; Vu, H.Q. Spatial and temporal analysis of accommodation preference based on online reviews. *J. Destin. Mark. Manag.* **2018**, *9*, 288–299. [[CrossRef](#)]
- Keh, H.T.; Xie, Y. Corporate reputation and customer behavioral intentions: The roles of trust, identification and commitment. *Ind. Mark. Manag.* **2009**, *38*, 732–742. [[CrossRef](#)]
- 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](#)]
- Simeon, M.I.; Buonincontri, P.; Cinquegrani, F.; Martone, A. Exploring tourists’ cultural experiences in Naples through online reviews. *J. Hosp. Tour. Technol.* **2017**, *8*, 220–238. [[CrossRef](#)]
- Pearce, D.G. Toward an Integrative Conceptual Framework of Destinations. *J. Travel Res.* **2013**, *53*, 141–153. [[CrossRef](#)]
- Westbrook, R.A. Product/consumption-based affective responses and postpurchase processes. *J. Mark. Res.* **1987**, *24*, 258–270. [[CrossRef](#)]
- Sparks, B.A.; Browning, V. Complaining in Cyberspace: The Motives and Forms of Hotel Guests’ Complaints Online. *J. Hosp. Mark. Manag.* **2010**, *19*, 797–818. [[CrossRef](#)]
- Anholt, S. Branding Places and Nations. In *Brands and branding*; Clifton, R., Simmons, J., Ahmad, S., Eds.; Bloomberg Press: New York, NY, USA, 2004.
- Hudson, S.; Thal, K. The impact of social media on the consumer decision process: Implications for tourism marketing. *J. Travel Tour. Mark.* **2013**, *30*, 156–160. [[CrossRef](#)]
- Ejarque, J. *Marketing y Gestión de Destinos Turísticos*; Comercial Grupo Anaya, SA: Santa Cruz de Tenerife, Spain, 2016.
- Carrasco-Santos, M.J.; Padilla-Melendez, A. The role of satisfaction in cultural activities’ word-of-mouth. A case study in the Picasso Museum of Málaga (Spain). *Tour. Manag. Stud.* **2016**, *12*, 145–152. [[CrossRef](#)]
- Gavilan, D.; Avello, M.; Martínez-Navarro, G. The influence of online ratings and reviews on hotel booking consideration. *Tour. Manag.* **2018**, *66*, 53–61. [[CrossRef](#)]
- Dellarocas, C. Reputation Mechanism Design in Online Trading Environments with Pure Moral Hazard. *Inf. Syst. Res.* **2005**, *16*, 209–230. [[CrossRef](#)]
- Hilligoss, B.; Rieh, S.Y. Developing a unifying framework of credibility assessment: Construct, heuristics, and interaction in context. *Inf. Process. Manag.* **2008**, *44*, 1467–1484. [[CrossRef](#)]
- Gretzel, U.; Yoo, K.H. Use and Impact of Online Travel Reviews. *Inf. Commun. Tech. Tour.* **2008**, *1*, 35–46.



29. Inversini, A.; Masiero, L. Selling rooms online: The use of social media and online travel agents. *Int. J. Contemp. Hosp. Manag.* **2014**, *26*, 272–292. [[CrossRef](#)]
30. Munar, A.M.; Jacobsen, J.K.S. Motivations for sharing tourism experiences through social media. *Tour. Manag.* **2014**, *43*, 46–54. [[CrossRef](#)]
31. Kladou, S.; Mavragani, E. Assessing destination image: An online marketing approach and the case of TripAdvisor. *J. Destin. Mark. Manag.* **2015**, *4*, 187–193. [[CrossRef](#)]
32. Berezina, K.; Bilgihan, A.; Cobanoglu, C.; Okumus, F. Understanding Satisfied and Dissatisfied Hotel Customers: Text Mining of Online Hotel Reviews. *J. Hosp. Mark. Manag.* **2016**, *25*, 1–24. [[CrossRef](#)]
33. Yong, L.; Teichert, T.; Rossia, M.; Li, H.; Hub, F. Big data for big insights: Investigating language-specific drivers of hotel satisfaction with 412,784 user-generated reviews. *Tour. Manag.* **2016**, *59*, 554–563.
34. Banerjee, S.; Chua, A.Y. In search of patterns among travellers' hotel ratings in TripAdvisor. *Tour. Manag.* **2016**, *53*, 125–131. [[CrossRef](#)]
35. Schuckert, M.; Liu, X.; Law, R. Hospitality and Tourism Online Reviews: Recent Trends and Future Directions. *J. Travel Tour. Mark.* **2015**, *32*, 608–621. [[CrossRef](#)]
36. Barreda, A.; Bilgihan, A. An analysis of user-generated content for hotel experiences. *J. Hosp. Tour. Technol.* **2013**, *4*, 263–280. [[CrossRef](#)]
37. Bi, J.-W.; Liu, Y.; Fan, Z.-P.; Zhang, J. Wisdom of crowds: Conducting importance-performance analysis (IPA) through online reviews. *Tour. Manag.* **2019**, *70*, 460–478. [[CrossRef](#)]
38. Cheng, X.; Fu, S.; Sun, J.; Bilgihan, A.; Okumus, F. An investigation on online reviews in sharing economy driven hospitality platforms: A viewpoint of trust. *Tour. Manag.* **2019**, *71*, 366–377. [[CrossRef](#)]
39. Fang, B.; Ye, Q.; Kucukusta, D.; Law, R. Analysis of the perceived value of online tourism reviews: Influence of readability and reviewer characteristics. *Tour. Manag.* **2016**, *52*, 498–506. [[CrossRef](#)]
40. Geetha, M.; Singha, P.; Sinha, S. Relationship between customer sentiment and online customer ratings for hotels—An empirical analysis. *Tour. Manag.* **2017**, *61*, 43–54. [[CrossRef](#)]
41. Guo, Y.; Barnes, S.J.; Jia, Q. Mining meaning from online ratings and reviews: Tourist satisfaction analysis using latent dirichlet allocation. *Tour. Manag.* **2017**, *59*, 467–483. [[CrossRef](#)]
42. Kirilenko, A.P.; Stepchenkova, S.O.; Hernandez, J.M. Comparative clustering of destination attractions for different origin markets with network and spatial analyses of online reviews. *Tour. Manag.* **2019**, *72*, 400–410. [[CrossRef](#)]
43. Su, Y.; Teng, W. Contemplating museums' service failure: Extracting the service quality dimensions of museums from negative on-line reviews. *Tour. Manag.* **2018**, *69*, 214–222. [[CrossRef](#)]
44. Taecharungroj, V. User-generated place brand identity: Harnessing the power of content on social media platforms. *J. Place Manag. Dev.* **2019**, *12*, 39–70. [[CrossRef](#)]
45. Wong, C.U.I.; Qi, S. Tracking the evolution of a destination's image by text-mining online reviews—the case of Macau. *Tour. Manag. Perspect.* **2017**, *23*, 19–29. [[CrossRef](#)]
46. Ye, Q.; Law, R.; Gu, B. The impact of online user reviews on hotel room sales. *Int. J. Hosp. Manag.* **2009**, *28*, 180–182. [[CrossRef](#)]
47. Taecharungroj, V.; Mathayomchan, B. Analysing TripAdvisor reviews of tourist attractions in Phuket, Thailand. *Tour. Manag.* **2019**, *75*, 550–568. [[CrossRef](#)]
48. Niezgodna, A.; Nowacki, M. Experiencing Nature: Physical Activity, Beauty and Tension in Tatra National Park—Analysis of TripAdvisor Reviews. *Sustainability* **2020**, *12*, 601. [[CrossRef](#)]
49. Nowacki, M.; Niezgodna, A. Comparison of Poznań, Wrocław and Bratislava Image Attributes in the Reviews Published on TripAdvisor. *Studia Perieget.* **2019**, *2*, 63–77.
50. Smith, W.L. Experiential tourism standards: The perceptions of rural tourism providers. *Int. J. Serv. Stand.* **2006**, *2*, 273–285.
51. Beeton, S.; Bowen, H.E.; Santos, C.A. State of Knowledge: Mass Media and Its Relationship to Perceptions of Quality. In *Quality Tourism Experiences*; Jennings, G., Nickerson, N., Eds.; Elsevier BV: Burlington, MA, USA; Oxford, UK, 2006; pp. 25–37.
52. Seok, H.; Joo, Y.; Nam, Y. An Analysis of the Sustainable Tourism Value of Graffiti Tours through Social Media: Focusing on TripAdvisor Reviews of Graffiti Tours in Bogota, Colombia. *Sustainability* **2020**, *12*, 4426. [[CrossRef](#)]
53. Crotts, J.C.; Mason, P.R.; Davis, B. Measuring guest satisfaction and competitive position in the hospitality and tourism industry: An application of stance-shift analysis to travel blog narratives. *J. Travel Res.* **2009**, *48*, 139–151. [[CrossRef](#)]
54. Wang, Y.; Chan, S.C.F.; Ngai, G.; Leong, H.-V. Quantifying reviewer credibility in online tourism. In Proceedings of the International Conference on Database and Expert Systems Applications, Prague, Czech Republic, 26–29 August 2013; pp. 381–395.
55. TripAdvisor Website. Available online: [www.tripadvisor.es](http://www.tripadvisor.es) (accessed on 12 January 2020).
56. Yun, J.J.; Zhao, X.; Jung, K.; Yigitcanlar, T. The culture for open innovation dynamics. *Sustainability* **2020**, *12*, 5076. [[CrossRef](#)]
57. Yun, J.J.; Park, K.; Gaudio, G.D.; Corte, V.D. Open innovation ecosystems of restaurants: Geographical economics of successful restaurants from three cities. *Eur. Plan. Stud.* **2020**, *28*, 2348–2367. [[CrossRef](#)]
58. Yun, J.J.; Park, K.; Im, C.; Shin, C.; Zhao, X. Dynamics of social enterprises—Shift from social innovation to open innovation. *Sci. Technol. Soc.* **2017**, *22*, 425–439. [[CrossRef](#)]
59. Orfila-Sintes, F.; Mattsson, J. Innovation behavior in the hotel industry. *Omega* **2019**, *37*, 380–394. [[CrossRef](#)]