The impact of customer reviews in social media on the brand reputation for the online accommodation sector

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Abstract

Online customer reviews have become a natural part of the online marketplace for both customers and companies in the last few years. For the accommodation sector, a key factor of success is knowing what customers are saying about their services through online reviews. The main objective of this study is to find the best online platform in the accommodation sector that explain the effect of online review on brand reputation and to find the most important factors that influence online review, and how these online reviews contribute to building and boosting the brand reputation. To this aim, we apply an expert multi-criteria technique. The results of this research show that the most influential factors are the Platform characteristics, personal factors and motivation, and source of information, being Airbnb and Booking the most suitable platform for the online brand reputation

Keywords: AHP, Accommodation, Brand reputation, Online reviews.

Introduction and objetive

Traditional word of mouth is defined as an oral form of communication made by customers related to their experience with a specific product/ service or brand (Rensink, 2013). With the advent of the Internet, traditional marketing tools such as word-of-mouth communication extended to become electronic media, online discussion forum, blogs, and reviews so that everyone can share their experience and opinion related to the product or service. This new form of marketing called electronic word of mouth or online customer review is considered one of the most critical factors in influencing customer purchase behavior (Cheung & Lee, 2012) besides playing an essential role in affecting the company's image and reputation (Torres & Singh, 2016). In fact, compared to the traditional market tools, individuals consider

online reviews as the most credible marketing tool because it becomes directly from other customers related to their experience (Akyüz, 2013).

In the tourism sector, tourists with a high level of expertise that provide a favorable review are considered an essential source to increase and enhance the company's reputation (Luo et al., 2013). For the online accommodation sector, the key factor of success is knowing what clients are saying about their services through reviews on social media. Consequently, online customer reviews have become a natural part of the online marketplace for both customers and companies in the accommodation sector (Moen et al., 2017). In this context, this study aims to identify the most critical factors that influence the online review on brand reputation in the tourism sector. For this purpose, this study uses a Multi-criteria decision-making (MCDM) method, the AHP (Analytical Hierarchical Process), which allows not only to find these factors but also to find the best online platform in the tourism sector that explains the effect of online review on brand reputation.

Previous works have applied MCDM methods to study social media platforms, online customer reviews or brand reputation (Abirami & Askarunisa, 2017; Abulaish et al., 2019; Gobi & Rathinavelu, 2019; Guijarro et al., 2021; Li et al., 2016; Roy Ghatak et al., 2016). Directly connected to the research question of this study, we find (Hasan & Rahman, 2017), who conducted a study using AHP approach to prioritize the vital factors that affect customer participation in the online platforms of the service sector. (Jannach et al., 2014) analyzed the reviews in online booking platforms and travel websites databases, to get a comprehensive understanding of factors that leads to customer satisfaction based on customer segmentation differences. The researchers execute a Penalty-Reward contrast analysis to improve the prediction of customer references and increase the accuracy of the company's recommendations system. (Nilashi et al., 2018) propose a new recommender system using machine learning techniques to analyze the previous customers' reviews and other aspects of the e-tourism platform. They use Self-Organizing Map and Expectation Maximization clustering techniques.

1.Research methodology

To achieve the main objective of this research, we design a methodology composed of three main phases: (i) data collection, (ii) data analysis, and (iii) implementation to assess four online platforms used for accommodation. Fig. 1 illustrates the specific steps involved in each phase.

In the *data collection phase*, the first step was conducting a qualitative study based on the extensive literature review using computerized searches. With a large number of articles written about this topic, the main challenges were to define the appropriate keywords and filters in order to have a representative state of the art. Table 1 shows the filters used. A total of 509 papers were extracted from the Scopus database, and 6 papers were included by snowball technique. Then, in order to select the most related to our research topic, all papers

were examined and a total of 101 papers especially related to the tourism sector were chosen. As a result, we extract the most important factors that are related to online customer review and brand reputation in the tourism sector, and an expert who has experience in the tourism and social media field verifies and validates the selection.
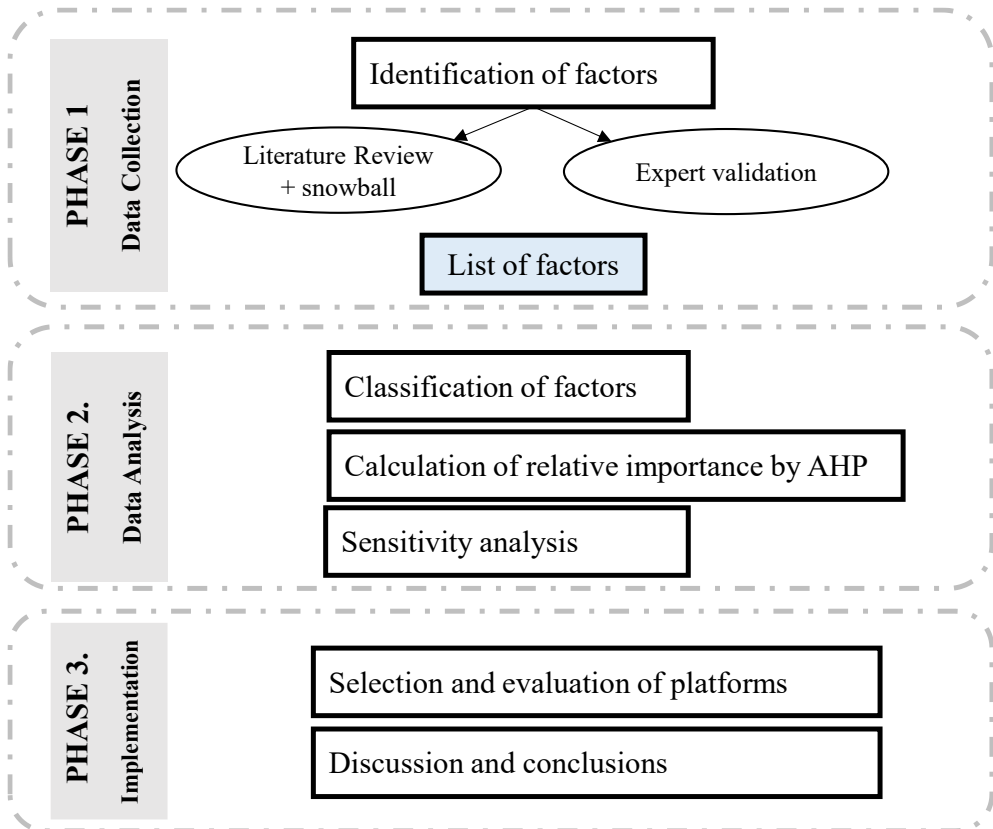

Fig. 1 Research Methodology. Source: Own elaboration

In the second phase, *data analysis*, the relative importance of each factor was assigned by developing an AHP model. To this end, factors were firstly classified into four clusters based on their relatedness: (i) organizational cluster, (ii) customer cluster, (iii) technological cluster, and (iv) activity cluster. Then, AHP model was used to assign weights to each factor. AHP was the most appropriate method related to our study for different reasons. First, according to our analysis of related studies, there are a few studies in the same field using the AHP model. Second, AHP provides a unique model, easily understandable and flexible. In this sense, applied to a range of unstructured problems, AHP is useful for analyzing and

organizing complex decisions and for identifying the most important criteria. Third AHP offers a numerical scale to measure the imponderables, known as Saaty's scale (Wind & Saaty, 1980), which has been widely used and theoretically and empirically validated. This scale ranges from 1 to 9, and each value is assigned a verbal label so that it is more understandable and easier to use by any type of decision-maker. In this step, questionnaires were conducted with the expert who rated the relative importance of the factors in pairwise comparison. To this end, she compared a pair of factors and answered the question "which factor has the greatest influence on the model?". Finally, and given the subjectivism of the decision process, a sensitivity analysis was performed to measure the consistency of the judgments made by the expert and validate the model.

Table 1. Filters used in literature review search. Source: Own elaboration

Search fields	Search		
Keywords	Online customer review * social media **OR** Online customer review * brand reputation **OR** Electronic word of mouth * social media **OR** Electronic word of mouth * brand reputation **OR** Social media * brand reputation		
Research fields (categories)	Article title, Abstract, Keywords	Source type	Journals
Period	2004 – 2019	Total number of articles founded	515
Language	English	Total number of articles reviewed	101
Document type	Article, Review, and Article in Press		

The last phase was the *implementation* of the model in the case study. More concretely, we used the previous list of factors and their relative importance to assess online platforms focused on the accommodation tourism sector where the characteristics of the platforms and the online reviews are similar. The expert chooses four online platforms for this study: Booking, Airbnb, Agoda, and Hotels.com.

Once the platforms were chosen, the AHP model was applied. In the model, the selected platforms represent the alternatives, the factors the criteria, and the relative importance of each factor obtained in phase two are the weight of each factor. As a result, we find the best online platform that explains the effects of online reviews on brand reputation in the accommodation sector.

2. Empirical study: results and discusión

2.1. Factors that explain the impact of online reviews on brand reputation

After a deep review of the 101 articles subtracted from the literature search, we identified 18 factors that directly influence the online review is tourism platforms. This list of factors (Table 1.2) was validated by the expert. According to her opinion, two factors were removed from the model: "Employee performance" and "number of reviews" (grey cells in Table 2). The two main reasons for their exclusion were, firstly, because having enough information to evaluate the variables is hardly complicated and the evaluation could be biased by external information, and secondly, these two factors included a lot of information by themselves so it requires a complete study that combines both quantitative and qualitative techniques, which escapes the goal of this work. Therefore, a total of 16 factors were chosen for the model.

Table 2. List of factors. Source: Own elaboration

Adopting open conversation and dialogues	Manager responses	Psychological factors
Brand engagement and involvement	Number of reviews	Purchase Intention
Brand image	Online rating and scores	Review content and quality
Brand loyalty	Personal factors and motivation	Social benefits
Credibility and reliability of the information	Platform characteristics	Strategy of trust
Employee performance	Pre-purchase experience	Source of information

2.2. Relative importance of each factor calculated by AHP model

Previous to the calculation of the relative importance of each factor, the 16 factors were grouped in four clusters as follows:

> *Organizational cluster:* strategy of trust, adopting open conversations, brand image, brand engagement and involvement, and brand loyalty.

> *Customer cluster:* personal factors and motivation, social benefits, psychological factors, pre-purchase experience, purchase intention.

> *Technological cluster:* credibility and reliability of the information, platform characteristics and source of information.

> *Activity cluster:* review content and quality, manager responses and online rating and scores.

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One of the main advantages of using AHP is that it allows us to identify not only the best alternative, but also to obtain the relative importance of factor within its corresponding cluster, and each cluster within the main goal. Table 3 shows: (i) the weight obtained for each cluster, (ii) the relative importance of each factor within the cluster and (iii) the relative importance of each cluster in the model. It can be observed that the most important cluster according to the expert opinion is "C3. Technological" (58.2%) followed by ¨C2. Customer¨ (28.2%), ¨C1. Organizational¨ and ¨C4. Activity¨ (6.74% each one). According to the factors, the most important factor in the complete model is "Platform characteristics" (46%) followed by "Personal factors and motivation" (14%) and by "Source of information" (8%).

Table 3. Weights of factors. Source: Own elaboration

Factor	Weight within the cluster	Global weight
C1. ORGANIZATIONAL (Cluster weight=0.0674)		
Brand loyalty	0.0343	0.0023
Strategy of trust	0.2890	0.0194
Adopting open conversation and dialogue	0.5310	0.0357
Brand engagement and involvement	0.0918	0.0061
Brand image	0.0539	0.0036
C2. CUSTOMER (Cluster weight=0.2825)		
Social benefits	0.0319	0.0090
Personal factors and motivation	0.4935	0.1394
Psychological factors	0.3065	0.0865
Pre-purchase experience	0.0565	0.0159
Purchase Intention	0.1117	0.0315
C3. TECHNOLOGICAL (Cluster weight=0.5827)		
Source of information	0.1312	0.0764
Platform characteristics	0.7928	0.4619
Credibility and reliability of the information	0.0760	0.0442
C4. ACTIVITY (Cluster weight=0.0674)		
Manager responses	0.1047	0.0070
Online rating and scores	0.2583	0.0174
Review content and quality	0.6370	0.0429

Finally, the application of AHP model assesses the relative importance of each alternative considering the relative importance of the factors. The results obtained show that the

alternative with the high value is Airbnb (40.6%,) followed, with not a big difference, by Booking (37%), and then Hotels.com (14%) and Agoda (8%).

Conclusions

Tourism is one of the most important sectors in some countries, it revives the economic sector and helps to increase a country's development. However, one of the factors that increase the promotion of tourism in each country is the online customer reviews. These reviews not only affect tourism in their purchase decisions but also affect most of the brands on their online reputation. People spend most of their time on social media and online platforms; it's not easy for the customers to evaluate the service/product before making a buying decision. Therefore, most potential customers depend significantly on the reviews and opinions of others, especially online reviews. Most companies and hotels offer the possibility for the customers to review others' posts and comments on specific goods or services, in order to help them to evaluate and access detailed information on the quality of the product or services from others' experiences. Therefore, the main objective of this research is to find the best online platform in the tourism sector that explain the effect of online review on brand reputation in the accommodation sector and to find the most important variables that influence the online review. This topic is considered an emerging topic and according to our analysis, we found that there are a few studies that handled this topic. The interrelated nature of this problem made it difficult to qualify and quantify it. For this reason, the application of AHP model is developed in this research.

By using the hierarchy model, we prioritize the factors that influence customer reviews on online tourism platforms. From this model, we identified 16 different factors that are grouped in four clusters based on their relatedness: Organizational factors, Customer factors, Technological factors, and activity factors. As an overall result of this study, Airbnb appears to be the best and most suitable alternative for the online brand reputation, followed by Booking, Hotels.com, and Agoda respectively.

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