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Guest-Editors: Javier Perez-Aranda and Manuela Guerreiro

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Journal of Spatial and Organizational Dynamics

Insights of User Generated Content in Tourism

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EVOLUTION OF THE PRESENCE AND ENGAGEMENT OF OFFICIAL SOCIAL NETWORKS IN PROMOTING TOURISM IN SPAIN

Miguel Ángel Sánchez Jiménez¹

Nelson de Matos²

Marisol B. Correia³

ABSTRACT

The recent growth in scale and relevance of social networks has generated new possibilities for communication and interaction with and among their users in the tourism sector. As Spain is among the world's top tourism destinations, it is valuable to study its presence and engagement with users of official social networks. These social networks are used to promote Spain as a tourist destination. This study's methodology focused on measuring a series of indicators of destination performance through the online analysis tool 'Fanpage Karma'. Data were obtained for each of the last four full years (2015 to 2018), with the purpose of deepening understanding of destination performance, including its evolution. The findings show that Facebook's importance increasingly declined, despite maintaining a large number of followers, it has seen reduced publications and, above all, less interactions with users. By contrast, Instagram has experienced continuous growth in promoting Spain as a tourist destination, demonstrating increasing levels of interaction with potential travellers. Implications for academia and industry are drawn from the findings.

Keywords: Social Networks, Engagement, Tourism, Spain.

JEL Classification: M31

1. INTRODUCTION

Information communication technologies (ICT) and the Internet have changed how companies and tourist destinations approach the design, marketing, and communication of their products, just as the ways that tourists reserve and live their tourist experiences have changed (Munar, 2012). The scenario created by the Internet and ICT has undoubtedly favoured the incorporation of various resources and processes that generate information on tourist consumption preferences, enabling countries and operators to more effectively respond to revealed needs and, thereby, improve the competitiveness of destinations' tourism offering (Arroyo, 2016).

Tourism has been potentiated with the social web since it has facilitated the use of social media involving online communication platforms where the content is created by users themselves, facilitating aspects such as editing, publication, and exchange of information (Perdomo Castellano et al., 2014). Blogs, social networks, recommendation systems, content integration, audio, and video contribute to the process of anticipation, experience, and

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recreation of a tourist trip (Caro et al., 2015). Organisations can use these online channels to improve user experiences, leading ultimately to the achievement of long-term customer loyalty (Lemon & Verhoef, 2016; Leva & Ziliani, 2018).

In this relatively new reality of users having access to huge amounts of information, the phenomenon of Web 2.0 offers new channels for user interaction (Domínguez Vila & Araujo Vila, 2012). According to Martínez (2013), social media entails users becoming part of the web, rather than merely spectators who receive information. Social media offers consumers the opportunity to share opinions, recommendations, and experiences with other users through comments, images, or videos, which can be viewed and discussed among them. Consequently, many tourism companies have launched to try it, pursuing the opportunity to both analyse information and communicate with consumers, thus tailoring sales promotion to create customer-focused messages.

Given this environment, Becerra & Badrinarayanan (2013) determine that members of a brand's online community contribute to a greater extent to disseminating information about that brand. In addition, the characteristics of the tourism sector make its impact through social media especially important: as a service sector, it sells intangible products that are characteristically inseparable, perishable, and heterogeneous, making the communication process a vital element of the offering (Chen & Wu, 2019). Therefore, it is of great interest to understand how users intervene in brands' online communities and to discover what benefits they perceive. In this sense, it is essential to analyse the engagement of consumers. Consumer engagement towards a tourist destination adds value as it is based on increased interactivity and enhanced relations with the consumer (Vivek et al., 2014).

The document presents the following structure: first, the introduction and the objectives of the study are specified. Secondly, the most significant aspects of the theoretical framework regarding the importance of the tourism sector in Spain, involvement of social networks and the concept of engagement are explored. Third, the methodology is presented. Fourth, the conclusions, limitations and future research lines are discussed.

2. OBJECTIVE

This study's general objective is to identify how Spain engages as a tourist destination via four official social networks through presence and engagement, as measured through a series of performance indicators provided by the online analysis tool 'Fanpage Karma'. Spain is one of the most important tourism destinations in the world, but there is a lack of studies that provide insights and knowledge about social networks for tourism promotion are used. Thus, three specific objectives were set:

Objective 1: Determine the number of followers on the four official social networks of Spain as a tourist destination.

Objective 2: Establish whether any social network stands out in terms of the number of publications.

Objective 3: Test whether engagement has allowed more interactions on each social network.

Data were obtained for each of the last four full years, from 2015 to 2018, making it possible to discern the evolution of the results. The public body in charge of managing the official social networks is TURESPAÑA: attached to the Ministry of Industry, Trade and Tourism through the Secretary of State for Tourism, it is responsible for marketing Spain as a travel destination around the world (TURESPAÑA, 2019).

3. SPAIN'S TOURISM SECTOR

The tourism sector makes a fundamental contribution to the overall Spanish economy. According to the annual report of the World Travel and Tourism Council (WTTC, 2019), tourism in Spain contributed 178 billion euros to the country's gross domestic product (GDP) in 2018, accounting for 14.6% of total GDP, which was 2.4% higher than in 2017. This study forecasts that tourism's total contribution to Spanish GDP will increase by 2.8% in 2019 and by an annual average of 2.3% until 2028. In addition, the total contribution of tourism to the world economy in 2018 amounted to 8.3 trillion dollars (6.7 trillion euros), accounting for 10.4% of global GDP, and a 4.6% increase on the 2017 level.

The tourism industry has also become a fundamental source of employment in Spain. Tourism employment is defined as the number of jobs generated by or attributable to visitors' consumption of the goods and services produced by that industry (Perona et al., 2016). A study published by the Survey of Active Population (INE, 2019a) indicates that in Q1 of 2018, the tourism sector had 2,854,775 active workers (employed and unemployed), which was 1.9% more than in Q1 of 2017. Since 2014, employment linked to tourism activities has grown annually; in 2018, 2,420,680 were employed in the tourism sector, which was 89,874 (or 3.6%) higher than in 2017. Those employed in the tourism sector accounted for 12.8% of total employment in the Spanish economy. The percentage of unemployed over assets in tourism activities has also improved, decreasing from 16.6% in 2017 to 15.2% in 2018.

In 2018, tourism sector employment increased across all branches of tourism activities: compared to the same period in 2017, employment in accommodation services, food and beverage services, transportation and travel, and other tourism activities respectively increased by 1.6%, 5.9%, 0.7%, and 2.6%, contributing to an overall increase of 4.9%.

The importance of the Spanish tourism sector as a key pillar in national economic growth is reinforced by the fact that Spain is among the world's most popular tourist destinations (Cuadrado Roura & López Morales, 2015). According to provisional data from the Ministry of Energy, Tourism and Digital Agenda (2019), Spain was behind only France in terms of the most international tourist arrivals with more than 82 million in 2018, representing an increase of 0.9% on 2017 (Table 1).

Table 1. Countries with the most international tourist arrivals (in millions of people) from 2014-2018

	2015	2016	2017	2018
1. France	84.5	82.6	89.3	96.18
2. Spain	68.2	75.3	82.0	82.74
3. USA	77.5	75.9	72.9	77.93
4. China	56.9	59.3	59.3	60.66
5. Italy	50.7	52.4	57.5	60.32
9. Turkey	39.5	30.3	39.2	48.06
6. Germany	35	35.6	37.5	38.96
8. Thailand	32.1	32.6	35.1	37.87
7. United Kingdom	34.4	35.6	38.2	36.18
10. Russia	31.3	24.6	23.9	24.23

Source: Own elaboration based on data from the Ministry of Energy, Tourism and Digital Agenda (2019)

According to this study, Spain also broke the record for total expenditure by tourists, which reached 89.856 billion euros. In this sense, the average expenditure per tourist grew by 3.1% in 2018, while, in absolute terms, each tourist spent an average of 1,094 euros during their stay in Spain. The international tourists visiting Spanish destinations in 2018 came mostly from three countries: the UK (18.5 million), Germany (11.4 million), and France (11.3 million) (INE, 2019b). In this scenario, destination managers face a difficult task in promoting themselves in this market. One way to reach tourists is through consumer engagement.

4. SOCIAL NETWORKS IN THE TOURISM SECTOR

Over the past decade, researchers have shown a growing interest in the role of social networks in the tourism field. The literature review conducted suggests that social media platforms play an important role in many tourism issues, especially consumer behavior (information search and decision making), marketing and communication, tourist interaction and even business process management (Leung et al., 2013; Gretzel & Yoo, 2013; Law et al., 2014; Bilgihan et al., 2016).

According to Xiang & Gretzel (2010), web 2.0 has been the beginning of two fundamental trends: the emergence of social media and the increase of information generated. These are two elements that are closely linked, since the web 2.0 enabled the information coming from the social networks and tourism sector during user's engagement to increase, either due to visitors' interactions or because of the companies responsible for managing tourist destinations content (Hudson & Thal, 2013; Sotiriadis & Van Zyl, 2013).

The information shared on social media is recognised by academia and industry as a fundamental facilitator of travel scheduling, which is capable of influencing the decision-making of potential tourists (Kang & Schuett, 2013). However, these tourists are also often influenced by the experiences and opinions of third parties when making decisions regarding their trip (Zeng & Gerritsen, 2014). For these reasons, social media has transformed the way users design and buy their trips. The social networks have diminished the importance of the *web of the past* (i.e., web 1.0), since in quantitative and qualitative terms, the information available has improved considerably due to users' sharing their own experiences.

The destination image and the online reputation in the field of tourism is in general of vital importance, since the products offered are intangible and cannot be evaluated before consumption. This makes the experience of the other users to be of great value for the purchase decision (Lim, 2010). Various studies such as Inversini et al. (2010) and Liu & Park (2015) clarify the importance of social networks for the online reputation, because users become creators and influencers of the information and content they share. Blogs, reviews, ratings, forums, are common elements of this online reputation process. For these social media tools, collaboration, exchange and user-generated content are critical factors for any marketing manager. For instance, users opinions can be converted into product or service prescriptions. This in turn transformed into a viral marketing campaigns, influencing in a decisive way the decision-making process and the value of the shared online content, generating great value for the construction and empowerment of positive online reputation.

The destination image and the online reputation are metrics that make sense due to the huge amount of content generated by online users in social networks. Moreover, the content generated by users allows bi-directional communication on social media and as such this content is gaining special relevance in the tourism sector. Due to the characteristics of the services (intangibility, inseparability, perishability and heterogeneity) the destination image and the online reputation are considered crucial. Thus, it is possible to argue that the

construction of an online reputation in social media can be managed by organizations in a vital way to attract more tourists. In addition, destination managers must be aware that marketing in the tourism sector and social networks must take into account the growing number of users, diversity of opinions and influencers, factors that increase the difficulty to succeed in this environment.

Nevertheless, social media is an important source of information that can be used for the development of a series of business strategies in the tourism sector, including the improvement of customer satisfaction through the improvement of the customer service, visitor experience, product image and reputation.

One of the main functions of social media is to establish an interactive communication channel, which is mutually beneficial for all the parties involved, since it offers a way for users (i.e., tourists) to express their wishes, while at the same time provides tourism service providers an opportunity to obtain customer feedback (Leung et al., 2013; Oz, 2015). These platforms have also been recognized as knowledge exchange networks because they allow tourists to connect, share and interact with others (Oz, 2015).

For this reason, social networks, such as interactive platforms, are attracting the attention of the tourism industry, leading to the extensive use of social media with an influential impact on the marketing (strategic and operational) management functions (Law et al., 2014). The characteristics of the tourism sector, in general, and the hotel sector, in particular, make the impact of social media greater. The tourism sector like any service sector sells intangible products, hence the communication process is a vital element of the offer side. For this reason, the use of social media permits new communication possibilities and has provided a substantial impact on tourism demand and supply (María-Dolores et al., 2013).

An essential aspect in social media is the KPIs (key performance indicator) measurement by companies or company brands. For them, the creation of a set of unique indicators and metrics is needed to measure the campaigns impact on users and to determine how successful the brand efforts are on the social web. These two examples can also serve as a competitive analysis (González Fernández-Villavicencio, 2016).

Key performance indicators are metrics used to quantify objectives that reflect the performance of an organization. The act of monitoring the key performance indicators in real time is known as *business activity monitoring*. KPIs are communication vehicles and are usually tied to the strategy of the organization. For Castelló Martínez (2012) KPI is a key performance indicator, a variable that is linked to an objective in social media with the purpose of monitoring the progress status or degree of compliance with the objective. The KPIs provide inputs on how to energize the brand's channels in social networks and will give clues about how to continue applying the strategy.

In this context, this study will take into consideration the use of a series of indicators derived from the PRGS model that will measure the presence (number of followers and publications) and the engagement of Spain as a tourist destination in social networks. This approach focuses on the analysis of social media interactions between a brand and its fans / followers and then explores how relationships can be more fruitful (Geho & Dangelo, 2012). Due to the importance of the concept of engagement in social networks this concept will be studied in the next section.

5. ENGAGEMENT

Researchers have focused on identifying brand engagement, exploring the relationships between brands, consumers, and social networks (Schau et al., 2009; Oh et al., 2017; Lee et al., 2018), including some studies focusing specifically on the tourism sector (Harrigan et al.,

2017; Mariani et al., 2018). The literature recognises customer engagement as a predictor of consumer behaviour, including brand loyalty (Avnet & Higgins, 2006; Hapsari et al., 2017).

In essence, the concept of engagement is related to participation and interactivity, two factors that reflect consumers' attention to or interest in a brand or company, and considers cognitive, emotional, and behavioural aspects (Brodie et al., 2013; Pansari & Kumar, 2017). Greater client engagement to the brand also positively influences results, including sales growth, cost reductions, or a greater client contribution to collaborative product development (Bijmolt et al., 2010; Nambisan & Baron, 2010; Kumar et al., 2017). However, despite the evident interest in client engagement, empirical research has not yet advanced sufficiently, thus limiting understanding of the concept and its quantification (Verhoef et al., 2010; Bolton, 2011).

Among the main definitions of customer engagement are the following:

- The intensity of individual participation in and connection with an organisation's offering and/or activities that the consumer and the organisation start (Vivek et al., 2012; Chan et al., 2018).
- The cognitive and affective engagement of the client to the brand, characterised by dimensions such as knowledge of and satisfaction with the brand (Pansari & Kumar, 2017; Zhang et al., 2017).
- The outcome of consumer experiences in interacting with the brand, including via ICT and social networks (Sashi, 2012; Lee et al., 2018).
- A psychological state produced by the client's interaction with the brand through a specific service (Brodie et al., 2013).

Client engagement to a brand appears to be multidimensional, combining elements such as attention, dialogue, interaction, emotions, and sensory pleasure (Gambetti et al., 2012). Client engagement behaviours go beyond purchases and are defined as manifestations of a client's behaviour towards a brand or company (Van Doorn et al., 2010). Client engagement is a motivational state resulting from the client's experiences in interacting with an agent/object (e.g. a brand). The concept comprises cognitive, emotional, and behavioural dimensions, and entails a state of being involved or absorbed in something, generating consequences such as feeling a special attraction.

Researchers have highlighted the multidimensional aspects of client engagement and the variables that influence it. Hollebeek (2011), Pansari & Kumar (2017), and Brodie et al. (2013) have revealed three dimensions: immersion; passion, and interaction (availability of spending time with a brand). In this sense, they maintain that the client's engagement has cognitive, emotional, and behavioural dimensions. Calder et al. (2009) suggest two types of engagement online: personal and social. The first is relevant to newspapers, assuming ideas such as learning or stimulation. The second is more relevant to social networks and involves participation with other users.

Therefore, the emergence of the Internet and social networks has allowed new marketing strategies to develop (Han & Windsor, 2011). Social network communities and consumer groups dedicated to particular brands are increasingly emerging, facilitating interaction with and among consumers. The communities and groups of online consumers are characterised by communication through technologies and the interactions that occur between users (Potgieter & Naidoo, 2017). Consumer engagement in social networks involves a variety of activities, from consuming content to participating in discussions and interacting with other consumers; therefore, consumer engagement in social networks increases the possibility of viral messages and creates a forum for constant information exchange (Oh et al., 2017).

As Cawsey & Rowley (2016) contend, organisations have begun to recognise social networks as a tool to establish relationships with consumers and form the aforementioned

communities of users around a specific company. More advanced businesses have started using social networks to increase brand awareness. However, companies using social networks such as Facebook need to devote time and energy to monitoring the results and influencing consumer engagement to the brand.

6. METHODOLOGY

To study presence and engagement, this study monitored and analysed the official social networks used to promote Spain as a tourist destination. To perform the analysis, this study employed the PRGS model, proposed by IAB Spain Research as a basis for researching brands' social media activities. This model has previously been used in various studies (see, e.g. Casado & Cardona, 2015; Bueno et al., 2017; Cardona & María-Dolores, 2017).

This model is based on four variables (Presence, Response, Generation, and Suggestion), which are used to measure the presence and activity of brands in social networks (Cardona & María-Dolores, 2017):

- P (Presence) is obtained by two indicators, the first referred as the number of fans or followers and the second by the number of brand publications on the page.
- R (Response) is calculated as the number of user likes generated by brand publications, divided by the number of fans.
- G (Generation) is calculated as the number of user comments generated by brand publications, divided by the number of fans.
- S (Suggestion) is calculated by the number of shares or recommendations by users of brand publications, divided by the number of fans.

This study combines 'Response', 'Generation', and 'Suggestion' in a single variable called 'Engagement', calculated as the sum of these three variables. The formulation and calculation of engagement have been addressed in several studies (see, e.g. Castelló Martínez, 2012; Oviedo-García et al., 2014; Buhalis & Mamalakis, 2015). The study's variables and their performance indicators are presented in Table 2.

Table 2. Variables and performance indicators used in the analysis

Variable	Indicators	Description
Presence	Number of followers	The number of followers of the destination's social network
	Number of publications	The number of publications made by the destination's social network
Engagement	Total number of interactions / number of publications	The total number of user interactions per publication, in terms of reactions (I like, I love, surprised, laugh, etc.), comments, and shares, divided by the total number of publications

Source: Own Elaboration

To measure the indicators of the variables, Fanpage Karma was employed to analyse and monitor social networks. This online tool has been used in several research studies to analyse social networks (see, in particular, Jayasingh & Venkatesh, 2015; Huertas & Marine-Roig, 2016; Márquez-Domínguez et al., 2017). It has also been specifically used for tourism studies (see, e.g. Amboage, 2015; Wozniak et al., 2017).

The database was obtained from Spain tourism official pages of Facebook, Twitter, Instagram and YouTube. These social networks were chosen because Tourism Spain officially uses them in its tourism promotion and, in addition, they are the most used in the tourism

sector (CEPETCONCULTING, 2018; IAB Spain, 2018). The data were obtained for 2015 to 2018 (four full years), which was considered a sufficient time period to obtain significant data on the engagement by Spain in its official tourism social networks, allowing insight into the evolution of the results. Due to the seasonality of tourism, the quarterly evolution of the data was analysed from January 2015 to December 2018.

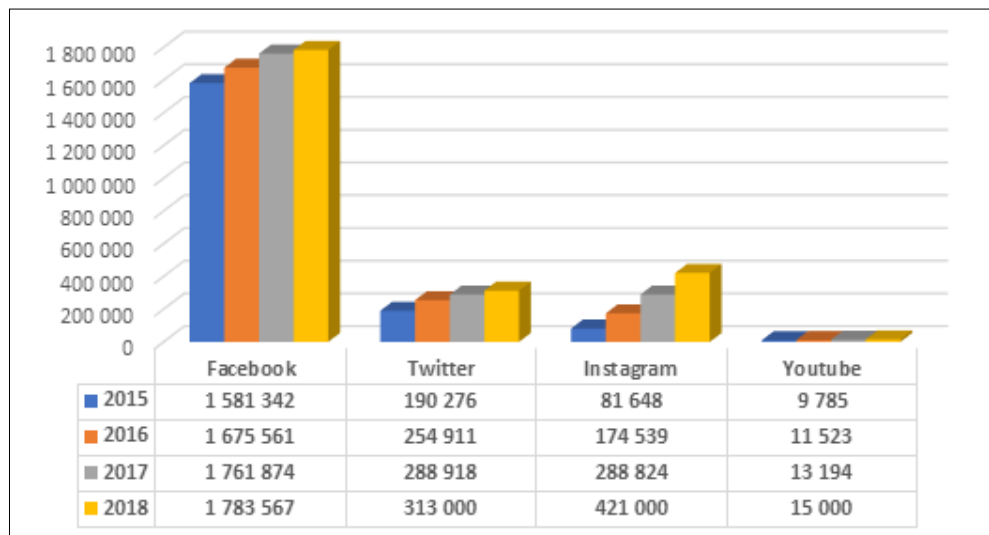
The official pages for the tourist promotion of Spain in the social networks studied were: a) Facebook: <https://es-es.facebook.com/spain.info>; b) Twitter: <https://twitter.com/spain>; c) Instagram: <https://www.instagram.com/spain/>; d) YouTube: <https://www.youtube.com/spain>

7. RESULTS

7.1 Presence

To determine the presence of official social networks for promoting tourism in Spain, the number of followers and the number of publications on Facebook, Twitter, Instagram, and YouTube were analysed. In terms of the number of followers, presence on Facebook was by far the largest in 2018, with 1,783,000 followers. Second largest was Instagram with 421,000 followers, after experiencing a large increase compared to 2017 to surpass Twitter, which had 313,000 followers in 2018. Finally, there were 15,000 followers on YouTube. The number of followers gradually increased on all four social networks from 2015 to 2018, with the growth on Instagram especially prominent, increasing from half the number of followers on Twitter in 2015 to exceeding Twitter's number in 2018. Overall, the data show that most users prefer to be followers on Facebook, but the great development of Instagram is noteworthy (Figure 1).

Figure 1. Average number of followers per year on each social network

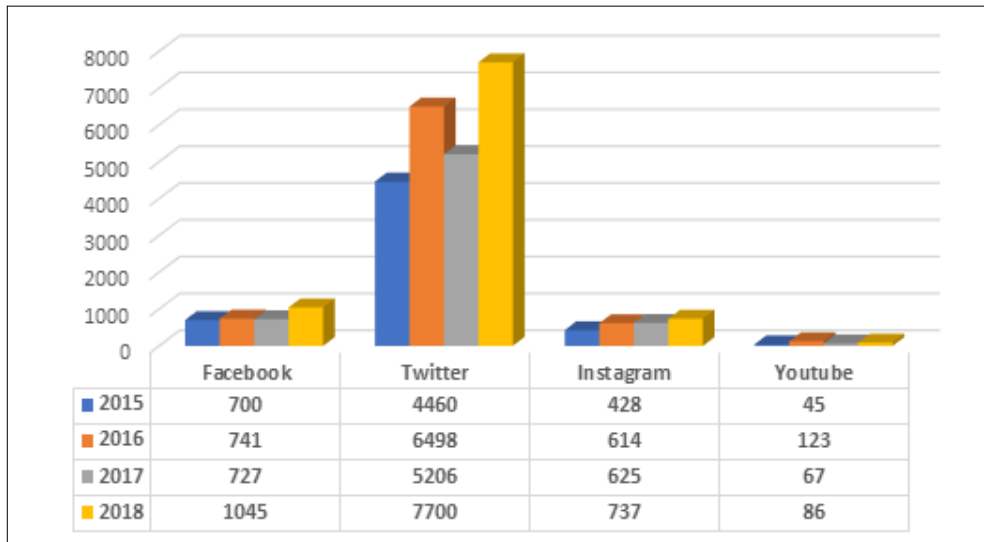


Source: Own Elaboration

In terms of the number of publications, presence on Twitter was by far the largest, with 7,700 messages in 2018. There were far fewer publications on Facebook (1,045), Instagram (737), and YouTube (86). Regarding the evolution in publication numbers, it is interesting to observe that significant increases from 2015 to 2016 were followed by significant declines from 2016 to 2017, except for Instagram, which is the only social network on which the number of publications increased every year during the study period. Subsequently, the number of publications notably increased on all four social networks in 2018, with almost

2,000 more messages on Twitter and 300 more on Facebook compared to 2017. Twitter is evidently used most for brand publications, and 2018 saw greater activity in promoting Spain as a tourist destination on all social networks compared to 2017 (Figure 2).

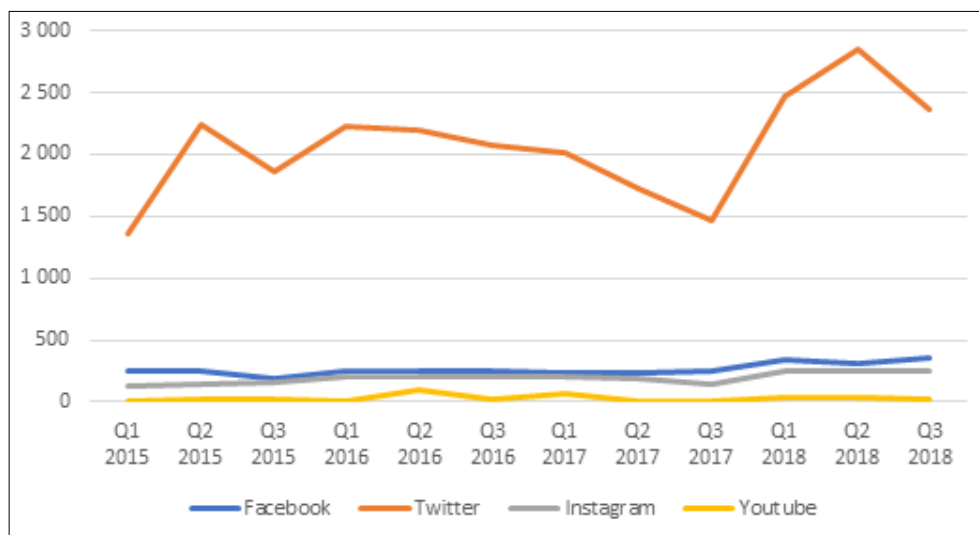
Figure 2. Number of publications per year on each social network



Source: Own Elaboration

As noted above, the seasonality of the tourism sector necessitates analysing the quarterly evolution in the number of publications per social network from January 2015 to December 2018. As Figure 3 shows, there is a slight decline in the summer months (Q2). The figure also confirms the previously identified fall in the number of publications in 2017 on all social networks except Instagram, and its subsequent general increase during 2018.

Figure 3. Number of quarterly publications on each social network



Source: Own Elaboration

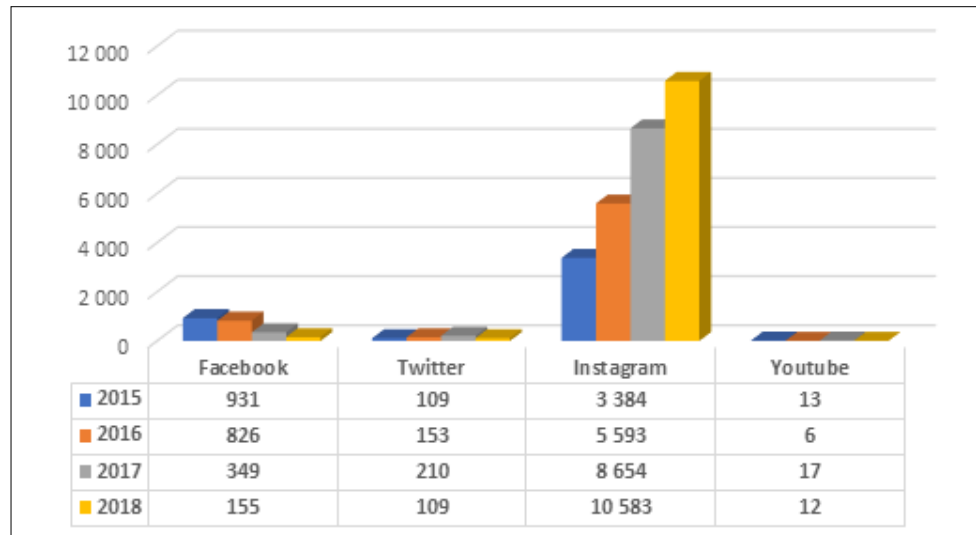
7.2 Engagement

To calculate the engagement of each official tourism social network, the following formula was used:

Engagement = total number of interactions (number of reactions + number of comments + number of times shared) / number of publications

As Figure 4 shows, engagement was by far the largest on Instagram in 2018, with more than 10,500 interactions per publication, followed distantly by Facebook (155), Twitter (109), and YouTube (12). Regarding the evolution of engagement over the last four years, Facebook declined every year, with the number of interactions in 2018 less than half of the number in 2017. This may be due to several factors, such as a shift in preferences among young people and the general public towards using other social networks (especially Instagram), as well as the changes to Facebook's algorithm, which now allows fewer publications to reach users' newsfeeds. By contrast, Instagram experienced a large continuous rise over the last four years, especially in 2017 and 2018, increasing by more than 2,000 interactions per publication each year. Meanwhile, Twitter and YouTube experienced slight fluctuations over the past four years. Therefore, for the social tourist networks of Spain, many users have evidently migrated from Facebook to Instagram, where interactions are now significantly higher.

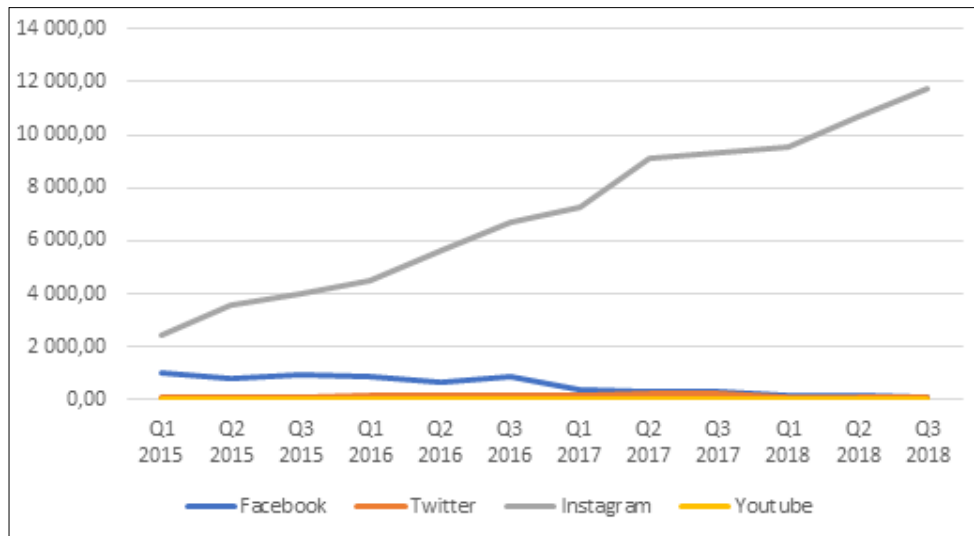
Figure 4. Average number of engagements per publication on each social network



Source: Own Elaboration

As for presence, it is important to analyse quarterly evolution in the number of interactions with publications on the social networks. Figure 5 confirms the previously identified the great rise of Instagram and the decline of Facebook, especially during 2017 and 2018. As for the number of publications, the data show a greater increase or a lower fall in Q2 (the summer months).

Figure 5. Number of quarterly interactions per publication on each social network



Source: Own Elaboration

8. CONCLUSION

Considering the great importance of the tourism sector for Spain and the increasing relevance of social networks in recent years, this study analysed the use of official social networks to promote Spain as a tourist destination from 2015 to 2018. The findings revealed that Spain as a tourist destination actively engages on the four social networks analysed, which has generally led to high interaction with tourists.

Regarding objective 1, which was to determine the number of followers on the four official social networks of Spain as a tourist destination, the study verified that the number of followers remains highest on Facebook, followed by Twitter and Instagram. However, while the number of followers has progressively increased on all four social networks, the data indicates stagnation or maturity on Facebook, Twitter, and YouTube. By contrast, more pronounced growth in the number of followers on Instagram suggests that this social network is still growing.

The second objective, tried to establish whether any social network stands out in terms of the number of publications. Twitter had by far the largest number of publications, followed by Facebook and Instagram. Therefore, Twitter has been consolidated as the main communication channel for informing users 'in real time' about Spain's tourist environment through more direct messages. The study also observed a significant reduction in the number of publications on Facebook, Twitter, and YouTube in 2017, compared to a slight increase on Instagram. However, in 2018, the generation of content on all four social networks increased again, demonstrating renewed interest by the tourism of Spain in communicating with consumers via social networks.

The objective 3, sought to test whether engagement has allowed more interactions on each social network. The most notable finding in this regard, is the drastic fall in interactions with publications on Facebook during 2017 and 2018 compared to previous years, and the great growth experienced annually by Instagram, doubling even the results obtained in 2015. The fall in interactions on Facebook may be due to several factors, such as a drop-in interest among young people and the general public, who increasingly prefer to use other social networks (especially Instagram), as well as the changes to Facebook's algorithm. Therefore,

for Spain's social tourist networks, many consumers seem to have migrated from Facebook to Instagram, where levels of interaction are now much higher.

Finally, it should be noted that although the activity and interaction of videos on YouTube is not very high, it can be used as a means of online advertising, attracting attention and visually making tourist destinations known, which is why it is considered a type of Interesting content to show users.

Finally, although few videos are published on YouTube and achieve a low level of interaction, such publications can be used as online advertising and allow users to visually discover tourist destinations, which makes this type of content of particular interest to them.

In this context, tourist destinations would have to consider these trends that social networks are experiencing in order to gain users attention, since constant updates occur in the digital environment. Thus, the use of a differentiated strategy for each social network is recommended, since findings in this study showed that each of them would be useful depending on the objective that is sought.

Thus, it is essential for attractive, dynamic and constant information and engagement to be made on the social networks, especially on Instagram, since it is the social network with the greatest growth and, by far, the one with the greatest interaction. Twitter is a good option for the launch of news, events and offers. On the other hand, Facebook requires more attention due to its maturity and because of the rise of new and trendy social network platforms. Despite of these facts, Facebook is still a social network that has a good interaction and highest number of followers worldwide. Thus, an active and frequent intervention on both Instagram and Facebook is essential for developing an effective content marketing strategy, without neglecting that the various social networks generate different levels of interactions. For example, twitter can serve as a communication and information channel. Moreover, when considering YouTube, it seems to be a social network more oriented for long-term objectives, trying to harness the potential of the video to gain visibility and interest among users. Regarding the limitations of the study, an analysis regarding the type of content (e.g., photos, videos, text, sounds), interactions and reasons for the interactions is somewhat lacking. Thus, it would be interesting for future lines of research to carry out a content analysis to examine the publications and interactions that are made in the social networks of the tourism sector through qualitative research software such as Atlas or Nvivo.

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EXAMINING THE RELATIONSHIP BETWEEN HOTELIERS' REVIEW SITE USE INTENSITY AND HOTEL CHARACTERISTICS - MOROCCAN HOTELS

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ABSTRACT

Due to rapid development and consumer adoption of technology, the hospitality industry has dramatically increased online-based user-generated reviews for a variety of services, such as those found in eWOM communities (e.g., TripAdvisor). Few studies have tested—among eWOM communities—the correlation between hoteliers' review site use intensity and hotel characteristics. The purpose of this paper is to examine the predictors of TripAdvisor use intensity, as perceived by Moroccan hoteliers. After the literature review on user-generated content, a quantitative study based on a structured questionnaire survey was developed, and correlation analyses were conducted to empirically validate the relationship between hotel characteristics and the use of TripAdvisor among a population of 48 hotel managers. The results showed that all variables studied commitment, competence, hotel size (number of beds), hotel category, and type of ownership were positively related to the intensity of use of review sites. This study deepens hotel practitioners' understanding of the importance of user-generated content and offers suggestions on how to improve eWOM advocacy. Moreover, this paper contributes to the recent and still scanty research line on eWOM from the hoteliers' perspective. The novelty lies in the positive relationships between hotel features (commitment, competence, hotel size, hotel category, and type of ownership) and user-generated review sites (TripAdvisor). It extends current literature and provides practitioners with some guidance on user-generated content and hotel characteristics.

Keywords: eWOM, User-generated Content, TripAdvisor, Hotel Management, Online Reputation Management.

JEL Classification: Z32

1. INTRODUCTION

In recent decades, the Internet has provided extensive opportunities for tourists to share their shopping experiences and feelings with others. Previous research has referred to such online communications between consumers as electronic word-of-mouth (eWOM). According to Hennig-Thurau, Gwinner, Walsh & Gremler, (2004: 39) "Word-of-mouth could be any positive or negative statement made by potential, actual, and former customers about a product or a company via the Internet". Currently, tourists may be exposed to eWOM information

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virtually everywhere on the Internet, such as blogs, portal websites, review websites, social media, emails, professional eWOM forums, and so on (Huete-Alcocer, 2017). Moreover, previous research (Okazaki, Andreu & Campo, 2016) suggests that prospective tourists use eWOM information (i.e., user-generated online reviews) to make judgments about products and services. Rensink (2013) find that eWOM information can have a positive impact on consumer perception of product value and their likelihood of recommending the product. In the same vein, Okazaki et al. (2016) findings show that eWOM information plays a significant role in the growth of new products in the marketplace, and other authors (Zhang, Ye, Law & Li, 2010; Yoo, Sanders & Moon, 2013) further observe that eWOM information had a stronger effect on consumer attitudes compared to other types of information, such as professional editors' recommendations.

Previous studies on user-generated content (UGC) highlight the impact of product reviews on online purchasing (Fu, Zhang, Xie, Xiao & Che, 2011; Bahtar, 2016) and on tourist destination choice (Buzulukova, Sheresheva, Berezka & Andreev, 2018). Moreover, these studies analyzed the influence of UGC on consumer's online product purchase intention (Bahtar, 2016), the effect of hotel size on hotel operational performance (Ko, Tsai & Chen, 2013), the impact of online reviews on hotel booking intentions, and perception of trust (Sparks & Browning, 2011), or the reasons why travelers trust (Filieri, Alguezaui & McLeay, 2015). However, more research on the use of TripAdvisor and how to measure its results is needed (Garrido-Moreno & Lockett, 2016; Perez-Aranda, Anaya-Sanchez & Ruizalba, 2017).

Hence, this research contributes to the literature by analyzing the correlation between hoteliers' review site use intensity, and five critical variables: commitment, competence, hotel size (number of beds), hotel category, and type of ownership in a sample of lodging establishments in Morocco.

This paper consists of three parts. The first part is an overview of the existing literature to provide an understanding of user-generated content and eWOM metrics, then the methodology is described and the main results of the empirical study are presented. Finally, this paper ends with a conclusion and discussion where the authors provide some valuable contribution to practical use and future research.

2. LITERATURE REVIEW

2.1 ElectronicWord-of-mouth (eWOM)

Before Web 2.0 technologies appeared, Web 1.0 was the first stage of the World Wide Web (the web). At this stage, the web was not very interactive and was used mainly to push out information to comparatively passive readers, the concept of 'ownership' of websites was strong, and the owners were responsible for the content. It was mostly used for reading, so users who accessed this kind of websites did not participate or engage in content creation (Huete-Alcocer, 2017). Since 2004, with the arrival of social and collaborative software applications (e.g., Facebook and LinkedIn...etc.), things have changed. These applications have provided opportunities for users to express their opinions and knowledge (Schuckert, Liu & Law, 2015). Internet development has given consumers the opportunity to increase their search options and to disseminate information, allowing them to post their own reviews and experiences on products and services purchased (Bahtar, 2016). This development has changed the way consumers communicate and has overcome some limitations of traditional word of mouth (Moliner-Velázquez, Fuentes-Blasco & Gil-Saura, 2019). Users can share their opinions about products or brands through forums, chats, opinion pages, blogs, social networks, or any other web application (Cheung & Thadani, 2012). These contents are

generally published on UGC (user-generated content) websites, term used to describe any form of content such as video, blogs, discussion forum posts, digital images, audio files, and other forms of media that were created by consumers or end-users of an online system or service and is publicly available to others consumers and end-users (Lugmayr & Dal Zotto, 2015). However, electronic word-of-mouth (eWOM) and user-generated content (UGC) might be related and interdependent concepts since “UGC requires eWOM to get awareness and influence; eWOM requires UGC as object of dissemination” (Burmam, 2010: 83).

Marketing literature refers to electronic word-of-mouth as all the user’s recommendations of a product or a company, including the relevant purchase information made on the internet (White, 2017). Thus, online valuations are the main source of communication of eWOM and have been studied in previous research (Kumar, 2013; Filieri et al., 2015). In terms of user behavior, it can be distinguished between active and passive consumers. Active users share their opinions with other consumers, publishing their ratings on various forums or websites. By contrast, passive users are mainly engaged in information search, allocating most of the time reading comments and experiences shared by other consumers in the network (Chiu, Wang, Shih & Fan, 2011; Pai, Chu, Wang & Chen, 2013). Therefore, electronic word-of-mouth could be “any positive or negative statement made by potential, actual or former customers about a product or company, that is made available to a multitude of people and institutions via the internet” (Hennig-Thurau et al., 2004: 39).

In terms of tourism, electronic word-of-mouth could be measured as noncommercial, authentic, and experiential detailed information about destinations and operators that are generally considered to be more reliable because they are not managed by the company. Therefore, travelers check feedbacks and read about the experiences of other people before choosing a destination, a hotel, etc., and then share their experience during the trip (Sparks & Browning, 2011; Yoo et al., 2013).

2.2 The role of user-generated content in leisure travel planning

In the travel and tourism industry, the Internet has changed market structures, practices, communication, and distribution channels (Yoo et al., 2013), making it critical for the industry to be aware that tourists are increasingly influenced by travel sites (Filieri et al., 2015).

User-generated content (UGC) encompasses of all the data, information, or media produced by the general public (rather than by professionals) on the Internet (McKenzie et al., 2012; Taecharungroj, 2019). In all UGC activities, the user has the key role being not only the consumer but also content contributor, simultaneously producer and consumer of the content (Yoo et al., 2013). Many travelers like to share their travel experiences and recommendations with others on the Internet (Okazaki et al., 2016) being the web increasingly the primary source of information for planning a trip. According to Tanford and Montgomery (2015) and Tsiakali (2018) the data generated by online consumers play an increasing pivotal role in travel decision-making processes. Kumar (2013) points out that online travel reviews written by tourists and posted in virtual communities are being used more frequently to communicate and share travel-related information

It is quite a while since eWOM was well thought out as essential in supporting travel decision making. Likewise, in hotels, restaurants, and travel destinations (Buzulukova et al., 2018), user-generated content sites provide large amounts of data on customer searches. Thus, prospective travelers rely on eWOM to support the decision-making process (Luo, Luo, Xu, Warkentin & Sia, 2015). Virtual communities like TripAdvisor, booking.com, hotels.com, Expedia... etc., are excellent platforms for interacting and participating for travelers and tourism organizations (Filieri et al., 2015).

Many researchers have revealed that products and services discussed on the Internet have more influence on consumers than those marketed traditionally (Pai et al., 2013). A lot of persons can access easily to the internet, mostly looking at what others comment about services, products, and companies. Basically, these comments become a reference for a potential customer (Moliner-Velázquez et al., 2019; Taecharungroj, 2019). Thailand, namely, Khaosan Road and Yaowarat (Bangkok's Chinatown).

2.3 Electronic word of mouth in the hospitality industry

Despite the fundamental technological structure of hotels, previous studies on the role of technologies in hotel management, show that managers fail to realize the importance of ICTs in the development of strategies (Law & Jogaratnam, 2005).

Internet provides the hospitality industry participation and interaction tools with consumers and customers. Potential customers access to websites or tourist blogs that allow them to review and evaluate the popular hotels or learn through the experience of other users, for instance, characteristics of the service or tourist destination in order to make a rational decision (Verma, Stock & McCarthy, 2012; Filieri et al., 2015; Zhang, Takanashi, Gemba & Ishida, 2015; Amorim & Rodrigues, 2019). Thus, in the hotel sector, opinions of virtual users provide consumers with greater knowledge about the characteristics of a specific offer. For example, consumer ratings have a strong impact on hotel booking intention. An establishment that gets positive reviews has twice the possibility of being booked than those with negative reviews (Verma, Stock & McCarthy, 2012).

Actually hotels have a very plausible alternative communication, less expensive than advertising, in the implementation of data collection information systems which allow to obtain information about their customers and support the company's decision-making process (Lee, Shi, Cheung, Lim & Sia, 2011; Melián-González, Bulchand-Gidumal & González López-Valcárcel, 2013; Yoo et al., 2013). Moreover, the higher the presence of the hotel on the internet and social networks, the higher the intention of its customers to generate comments on the network that can be seen by a large number of users (Rensink, 2013).

Notably, user-generated websites offer hotels the opportunity to get ideas for improving, information that would be otherwise difficult to access (Burmann, 2010). For instance the improvement of the physical environment of the hotel and others elements that create satisfaction and loyalty (Yoo et al., 2013). However, the use of these ideas must consider that the sender and the receiver of WOM are not known, which means that the latter must rely on the honesty of the first. The success of e-WOM as recommendation system depends upon trust; in fact, both businesses and individuals can manipulate the discussion forums with positive reviews on a product under the assumption that consumers are more likely to buy when a product receives more positive reviews. There are many cases of companies that manipulate or have manipulated strategically online reviews to influence consumers purchase decisions (Dellarocas, 2006; Lee et al., 2011). This type of communication is called "exogenous WOM" (Szmigin & Piacentini, 2018: 319), which focuses on proactive actions of companies that encourage consumers to spread information about their online products. Van der Lans, van Bruggen, Eliashberg and Wierenga (2010) state that hotel managers can build trust among customers through individualized actions, in this sense, e-WOM can be a tool that operates in both directions, as a confidence builder and as a precursor of positive results, satisfaction, and loyalty.

E-WOM would not be used so randomly but as a key to the marketing manager that can be controlled and directed towards desired results. In fact, it is accepted that the widespread use of e-WOM and ORs (online reviews) about the hotel may be more an opportunity

than a threat to the establishment management (Litvin, Goldsmith & Pan, 2008; Garrido-Moreno & Lockett, 2016). Furthermore, it is an important source of information for the development of new concepts, improving existing products, or creating new product lines. Thus, through e-WOM, hotels can enhance the level of customer satisfaction to meet the requirements; get new ideas to develop products, and generating an increase in sales. This would improve their financial short and long term (customer loyalty) situation (Yoo et al., 2013).

2.4 User-generated review sites (TripAdvisor)

The general theoretical framework of this study is based on TripAdvisor network use intensity (Guesalaga, 2016; Perez-Aranda et al., 2017). With the growing influence of consumer-generated hotel review sites like TripAdvisor, hoteliers are undoubtedly going to see a change in their revenue (Ko et al., 2013). TripAdvisor as one of the user-generated travel review website where people can share their experience with written details, pictures, and videos about a hotel has grown over the last eleven years to become a household name (TripAdvisor, 2016).

User-generated travel websites are considered as electronic word of mouth and one of the most influential sources of travel information (Luo et al., 2015; Bahtar, 2016). Potential travelers often rely on advice from friends, family, and other groups of individuals, especially when planning to travel to a destination not previously visited (Burmman, 2010). The UGC has an essential role in travel decision-making (Cai, Feng & Breiter, 2004; Kumar, 2013) with different platforms providing tourists with information on alternatives —e.g. TripAdvisor.com, IgoUgo.com, Virtualtourist.com, Trekshare.com and LonelyPlanet.com (Litvin et al., 2008).

To achieve the objectives of this study, we selected hotels on the social media platform TripAdvisor. Based on previous studies (Perez-Aranda et al., 2017), the following items were included in the questionnaire: review site use intensity (Garrido-Moreno & Lockett, 2016; Guesalaga, 2016), commitment and competence, factors collected from the interactional theory according to Guesalaga's methodology (Guesalaga, 2016), and ownership structure, category, and size from Garrido-Moreno and Lockett, 2016. Moreover, the objective of this study is to examine the relationship between use, competence, and commitment and the characteristics of the organization (category, hotel size, and type of ownership).

3. METHODOLOGY

For this study, correlation analysis was conducted to examine the relationship between hoteliers' review site use intensity on TripAdvisor and hotel characteristics. For data source collection, we selected hotels present in the user-generated review site TripAdvisor, one of the widely used UGC platforms for accessing information (Xiang, Du, Ma & Fan, 2017). According to Xiang et al. (2017), the platform has been extensively used for tourism studies, especially in mixed methods research and content analysis, to examine issues related to the hotel industry, eWOM, readability, reviewer characteristics, rating, and so on (Chiu et al., 2011; Sparks, So & Bradley, 2016; Rubio Gil, Jiménez Barandalla & Mercado Idoeta, 2017).

3.1 Study population and sample

The population of this study was the lodging industry in Morocco listed under TripAdvisor's "selected for you". We collected data from a directory of 352 Moroccan hotels listed on TripAdvisor in May 2016, followed by data from key-informants, consisting of hotel managers

and review sites managers. The information regarding this target population was collected using systematic random sampling, with the first element chosen at random from said population and other elements selected at regular intervals (i.e. systematizing item selection using a lift coefficient). In this case, the assumed margin of error was 5%, so we sampled 61 participants, hence $352/61=5.7$ (lift coefficient). As we work with a finite population the study has estimated a margin of error of 4.8%. After excluding incomplete questionnaires, the sample size was 48 hotels. The fieldwork data was collected in Morocco. One of the world's most sought-after tourist destinations, over 12.3 million tourists received in 2018 (Bazza, 2018). Table 1 shows the technical specifications of the fieldwork conducted.

Table 1. Collection Information

Population	Moroccan hotels in TripAdvisor
Sampling element	Key-informant
Sample size design	61
Sample seize	48
Sampling Method	Random sampling
Sampling fieldwork	March to May 2016
Sampling technic	Telephone interview
Margin of error	5%

Source: Own Elaboration

3.2 Variables and dimensions

To investigate the relationship between hoteliers' review site use intensity on TripAdvisor and hotel characteristics, all independents variables were identified. Table 2 shows the main features of the scale and sources.

Table 2. Variables and Dimensions

Variables and Dimensions	Items number	Authors
Hotel category	1	Garrido-Moreno & Lockett, 2016; Haro del Rosario et al., 2013; Orfila-Sintesetal., 2005
Hotel size (number of beds)	1	Garrido-Moreno & Lockett, 2016; Haro del Rosario et al., 2013; Orfila-Sintesetal., 2005
Hotel size (number of employees)	1	Garrido-Moreno & Lockett, 2016; Haro del Rosario et al., 2013; Orfila-Sintesetal., 2005
Ownership structure	1	Garrido-Moreno & Lockett, 2016; Haro del Rosario et al., 2013; Orfila-Sintesetal., 2005
Use intensity	1	Guesalaga, 2016; Hameed et al., 2012
Competence	4	Guesalaga, 2016; Hameed et al., 2012
Commitment	3	Guesalaga, 2016; Hameed et al., 2012

Source: Own Elaboration

In social research, questionnaire surveys are considered one of the most important methods of data collection from a sample of respondents (Levine & Hogg, 2010). To conduct this study, a questionnaire comprising 12 questions was developed, including information about the sample characteristics: hotel category, size by number of beds, size by number of employees, ownership structure, use of review sites, competence, and commitment to the

review platforms (see Table 3). The final questionnaire, obtained after being pre-tested, is shown in Appendix 1 (at the end of paper).

4. RESULTS

4.1 Descriptive results

All data analyses were run in SPSS (version 21.0). Before formal analysis, data were screened for accuracy of data entry, normality of distribution, and outliers. The first part of the questionnaire contains general descriptive data for the research that provides some valuable information about the sample. Table 3 shows descriptive statistics for the sample studied.

Table 3. Descriptive Results

Variables	%
Category	
5-star and luxury hotel	4.2%
4-star hotels	18.8%
3-star hotels	43.8%
Other (1-and-2 star hotels, rural hotels, villas, apartments, etc.)	33.3%
Size (number of beds)	
Familiar (<100 beds)	58.3%
Small (101-150 beds)	20.8%
Medium (151-300 beds)	18.8%
Large (>300 beds)	2.1%
Size (number of employees)	
Less than 10 employees	52.1%
From 11 to 50 employees	39.6%
More than 50 employees	8.3%
Ownership structure	
Independent hotels	54.2%
Part of an association of independent hotels	25.0%
Part of a hotel chain	20.8%

Source: Own Elaboration

The variables competence and commitment, with four and three items respectively, were re-codified into one-item variables to simplify research results. Thus, items related to the use of review platforms for sales management, the competence of using review platforms, and commitment to the review platforms, are being organized into three categories: low, medium, or high.

4.2 Correlation analysis

In order to reach the objective of this research, a correlation analysis was conducted. Considering that the types of variables employed are ordinal, the coefficients Kendall's Tau-B and Spearman's Rho were used. Both statistics are nonparametric correlation coefficients which measure the dependence between two categorical variables. Their value can vary between -1 and 1: a value of 1 indicates a perfect positive linear relationship; a value of -1 indicates perfect negative linear relationship; while a value of 0 indicates no linear relationship. Hence, both variables are correlated when the probability of the associated t-statistic is lower than 0.05. For the variable ownership structure, as it is a nominal variable, a chi-square analysis was conducted for studying the association with use intensity, competence, and commitment. Table 5 shows the statistical values of Kendall's Tau-B, Spearman's Rho, and Pearson's chi-square, including their significances.

Table 4. Correlation Analysis

Variables	Kendall's Tau-b coefficient	Sig.	Spearman's Rho coefficient	Sig.	Variables
Category-Use	0.660	0.000	0.769	0.000	accepted
Size (number of beds)-Use	0.337	0.006	0.403	0.005	accepted
Size (number of employees)-Use	0.305	0.014	0.362	0.012	accepted
Category-Competence	0.501	0.000	0.605	0.000	accepted
Size (number of beds)-Competence	0.231	0.048	0.294	0.043	accepted
Size (number of employees)-Competence	0.290	0.015	0.349	.015	accepted
Category-Commitment	0.586	0.000	0.692	0.000	accepted
Size (number of beds)-Commitment	0.271	0.022	0.343	0.017	accepted
Size (number of employees)-Commitment	0.294	0.015	0.353	0.014	accepted
Variables	Pearson's Chi-square		Sig		Variables
Ownership structure-Use	25.300		0.001		accepted
Ownership structure-Competence	30.200		0.049		accepted
Ownership structure-Commitment	29.333		0.022		accepted

Source: Own Elaboration

The results from this analysis confirm our expectations regarding the relationship between the characteristics of the hotels (i.e. category, size measured by number of beds and number of employees, and ownership structure) are correlated/associated with the use of review platforms.

Results shows that there is a strong correlation between hotel category and review site use intensity from hoteliers perception with ($r=0.769$) spearman's correlation coefficient, in others words hotels with a higher category are correlated with higher use of review platforms, while there is a moderate positive relationship between hoteliers' use intensity and the two variables number of beds and employees.

Regarding competence, there is a moderate positive correlation between competence and the studied variables; hotel category ($r=0.605$), and employees ($r=0.349$), the same goes respectively for commitment with a positive medium correlation coefficients, hotel category ($r=0.692$), number of beds ($r=0.343$), and employees ($r=0.353$). Both competence and commitment using review sites are higher in hotels with larger size and higher category, and in those which are integrated in hotel associations or chains. Regarding the ownership structure, since the p-value (0.001) is less than the significance level (0.05), hotels which are part of a chain or an association, shows higher use of these platforms than those which act independently.

To sum up, these findings are in line with the previous researches (Perez-Aranda et al., 2017). It can be concluded that hotels with higher category, more beds and employees are related with a higher use of these platforms.

5. CONCLUSION

The aim of this paper was to highlight the importance of user-generated travel website for organizations as well as to test the pilot questionnaire investigation with Moroccan hotel characteristics (size, ownership structure, and category) that could be related to the use of valuation platforms. It contributes to the existing literature by identifying and determining

the magnitude of the different factors in the hospitality industry and by making valuable suggestions on how the pilot questionnaire should be constructed and can be improved to support future studies.

5.1 Theoretical implications

User-generated travel websites and the possibilities of Web 2.0 have a huge impact on eWOM communication between consumers. Today's potential customers access to these UGC platforms or tourist blogs allows people to review and rate popular hotels or learn through the experience of other users (Rubio Gil et al., 2017). eWOM involves positive or negative statements made by consumers and experts about a product or service, providing consumers with indirect experience. In online shopping, the consumer cannot use all of their senses (e.g. smelling, touching, trying, testing) (Hennig-Thurau et al., 2004), therefore, eWOM helps Internet consumers to make buying decisions through online reviews. The literature review shows that there are several factors of online reviews that might predict the use of review sites (Guesalaga, 2016; Perez-Aranda et al., 2017). Based on this, three factors have been tested with a sample of the Moroccan hospitality industry: competence, commitment, and the characteristics of the organization (category, hotel size, and type of ownership). While analyzing this information, we found that the organization's characteristics regarding the suggested factors commitment, and competence are related with review site use as perceived by hoteliers. Thus, all study variables—size (number of beds and number of employees), ownership structure, commitment, and competence—are related to the use intensity of review sites. Our findings are consistent with the suggested framework by Perez-Aranda et al. (2017). The factor that has the highest influence is competence. According to hoteliers' perception, Hotels with a higher category, larger number of beds and employees make a higher use of these platforms. Regarding the ownership structure, hotels which are part of a chain or an association shows a higher use of these platforms than those which act independently. Similarly, commitment and competence of hotels using these user-generated travel websites are higher in hotels with larger size and higher category, and in those which are integrated in hotel associations or chains. In addition, this study is based on interactional psychology and research on human behavior in organizations (Terborg, 1981), adding new insights to the tourism literature.

5.2 Practical implications

This research has also important practical implications for user-generated travel communities and hospitality industry adopting eWOM marketing strategies. The findings of this study could guide the implementation of precise eWOM marketing strategies that satisfy different members' information requirements. These findings demonstrated that there is a positive relationship between hoteliers' review site use intensity and lodging industry characteristics from Moroccan hoteliers' perception. Therefore, in this study, it is suggested that hoteliers and related companies should take into account hoteliers' perception and own characteristics when defining its review site usage politics. This work also provides relevant data for specialists in this field regarding the factors influencing the use intensity of user-generated travel websites, particularly TripAdvisor.

5.3 Limitations and future research

Research of this nature will always have limitations, and this study is no exception. Due to the accessibility, availability, and cost, it was not feasible to collect and analyze the information pertaining to the entire population. Future researchers may consider conducting a similar study using additional quantitative data as the main method and combining qualitative

data (customer reviews, customer engagement, negative eWOM etc.) to elicit more detailed information than merely depending on hoteliers and their perceptions of a specific hotel market. Moreover, using more than one travel-related website (e.g., TripAdvisor, Booking, Trivago...) may also be a useful to reveal additional factors that vary in ratings within a valid period. Lastly, this study contributes to an emerging understanding of the predictors of hoteliers' review site use intensity, especially for lodging properties in the Moroccan markets. Since this study only reviewed lodging properties listed on "selected for you" TripAdvisor feature, which may cause biased results based on this specific national sample. For example, the level of development of a country may bias the causes of rating differences. Therefore, more research is needed to understand the drivers of review sites use by hotels.

To sum up, the research on hoteliers' review site use intensity need more attention to overcome some of the limitations mentioned. It is recommended that future research conduct a larger scale survey with random sample of participants to achieve better generalizability. Moreover, other studies may consider analyzing more hotels characteristics that might have an impact on user-generated content engagement. Furthermore, it would be interesting to examine the ways in which hoteliers can manage user-generated travel websites more efficiently and effectively.

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Appendix 1

Hotel characteristics	X0.1 Hotel category	3 stars; 4 stars; 5 stars; luxury hotel; others
	X0.2 Number of beds	Familiar (>100 beds); Small (101-150 beds); Medium (151-300 beds); Large (>300 beds)
	X0.3 Number of employees	Small (<10 employees); Medium (11-50 employees); Large (>50 employees)
	X0.4 Ownership structure	Independent; member of an association of independent hotels; member of a hotel's chain; hotel's franchise
Use intensity	X0.5 Choose the number that best describes the intensity of your company's TripAdvisor usage in the sales organization. (1 = min. use intensity to 10 = max. use intensity).	10-item Likert scale
Competence	X0.6 My organization makes productive use of social media. X0.7 Our sales organization is innovative and forward-thinking when it comes to adopting productivity-enhancing technology. X0.8 My organization's senior leadership is knowledgeable about social media. X0.9 My organization's leadership actively uses social media.	10-item Likert scale/each question (1 = strongly disagree; 10 = strongly agree).
Commitment	X0.10 My organization has communicated a social media usage policy to me. X0.11 My (total) organization has a social media strategy. X0.12 I have received enough training from my organization on using social media.	10-item Likert scale/each question (1 = strongly disagree; 10 = strongly agree).

SOCIAL NETWORKS AND DIGITAL INFLUENCERS: THEIR ROLE IN CUSTOMER DECISION JOURNEY IN TOURISM

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ABSTRACT

Several studies have shown the impact of social media on tourism and the role of digital influencers. However, the relationship between social media, digital influencers, and the customer decision journey has not been much studied. To help fill this gap, the present study examines the role of digital influencers during each phase of the customer decision journey using an online survey. The findings from 244 social media users show that the majority use social networks when planning a trip, however, sharing the experiences of other travellers is not a relevant aspect. While, overall, digital influencers have no significant impact, their followers tend to value their content, visit the sites they suggest, and share their own experiences, mostly through Instagram.

Keywords: eWOM, Digital Influencers, User Generated Content, Customer Decision Journey.

JEL Classification: M31

1. INTRODUCTION

Web 2.0, and the resulting digital revolution, provided the conditions for individuals to connect, communicate, and interact across social media platforms. Users have the power to co-create potentially engaging and therefore strongly influential content (Rinka & Pratt, 2018). Ordinary citizens can even become recognized opinion leaders (Rinka & Pratt, 2018).

The popularity of online social networks (OSN) has led to the emergence of social media influencers, also known as Internet celebrities. The rapid change in the way we communicate, along with the creation of content by users, has brought a new dynamic in marketing communication in various business areas, namely tourism (Cox, Burgess, Sellitto, & Buultjens, 2009).

In this new scenario, tourists use OSN to share experiences, emotions and comments, research, and acquire information about destinations and tourism products (Cox, et al., 2009; Kang & Schuett, 2013; Howison, Finger, & Hauschka, 2014; Nandagiri & Philip, 2018; Rinka & Pratt, 2018). The social dynamics that emerge in social networks give rise to informal influence relationships within which digital influencers emerge. They are opinion leaders, recognized by the following audiences as experts. Through the content generated by their activities on social networks, digital influencers can shape the behaviours and attitudes of consumers who tend to be loyal to them (Sahelices-Pinto & Rodríguez-Santos, 2014; Createasphere, 2018; Magno & Cassia, 2018).

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The attention the subject has been receiving, both by professionals and academics, justifies the interest of research in this area. The impact of digital influencers, specifically through the mechanisms underlying the role of e-Wom and eUGC associated with spontaneous and disinterested reviews and ratings posted by tourists, has caught scholars' attention (Cox, et al., 2009; Sahelices-Pinto & Rodríguez-Santos, 2014; Alic, Pestek, & Sadinlija, 2017). The reasons and motivations that justify the influence of eWoM, and the role of digital influencers in the holiday destination decision making process, remain poorly understood (Cox et al. 2009; Ayeh, Leung, Au, & Law, 2012; Gohil, 2015; Varkaris & Neuhofer, 2017). Due to the relevance of social networks/digital influencers in tourism and its implications on the marketing strategy of tourism organizations and destinations, this study, which is exploratory in nature, investigates the following research question: do informal influence relationships within social media actively impact "the journey" consumers make from need or desire to post-purchase experience?

Regarding the purpose of the research, it was employed an online survey. To ensure the operationalization of the study, the snowball method was chosen. This data collection strategy was considered suitable given that the study population is users of social networks that use them as a source of inspiration to support travel decisions.

2. LITERATURE REVIEW

2.1 Electronic word of mouth and consumer reviews in tourism

Word-of-mouth (WoM) is a term dating back to sixty years ago that is still current and referred to in new studies (Sahelices-Pinto & Rodríguez-Santos, 2014; Chen, Nguyen, Klaus, & Wu, 2015). WoM refers to personal and non-commercial content, generated and shared by citizens regarding their own consumer experiences (Arndt, 1967). Such content must be informal, interpersonal, and spontaneous, occurring outside the business environment; it is selfless by nature and should not have compensation; it can be positive or negative depending on whether the reported experience was satisfactory (Dichter, 1996; Sahelices-Pinto & Rodríguez-Santos, 2014). The author of the message shared on social networks refers to a product, brand, or experience with their consumer group followers (Dichter, 1996). This is a widely known and recognized reality for tourism and hospitality professionals (Fine, Girona, & Petrescu, 2017).

The spread of the World Wide Web and the use of accessible communication technologies (like smartphones, and social networks) has enabled consumers—ordinary citizens—to share their opinions on products and services, positive and negative travel experiences, through online channels that allow them to reach significantly larger audiences (Liljander & Gummerus, 2015) and impact consumers' purchasing decisions (Chen et al., 2015). When shared over digital channels, word-of-mouth is called electronic word-of-mouth (eWoM) (Chen, et al., 2015).

In this new reality, the concept of prosumer is born to refer to how consumers have become more influential thanks to their ability to share their consumer experiences quickly, easily, and openly with an increasing number of people (Fine et al., 2017). Since content generated on social networks (Facebook, Instagram, Twitter, Snapchat, Pinterest) and review platforms (TripAdvisor, HolidayCheck) derive from content posted by its members, they become "cocreators" or "producer-consumers" (i.e. prosumers) (Fine et al., 2017). Members of a community, while generating content (cocreators), also support their decisions as consumers in the content generated by others, thus fully assuming the role of prosumer.

Virtual communities (e.g. Lonely Planet), reviews (TripAdvisor), Blogs (Tumblr), social networks (Facebook, LinkedIn), media sharing tools (YouTube) and wikis (Wikipedia) are all

examples of formats in which co-created content can be shared by the user (Xiang & Gretzel, 2010; Perez-Aranda, Vallespin, & Molinillo, 2018). Previous studies (Hsu & Lin, 2008; Li, Zhou, Kashyap, & Yang, 2008; Chu & Kim, 2011; Shiau & Luo, 2013; Magno, 2017) have identified the topics of greatest interest by consumers on social networks: Travel & Tourist Destinations; Fashion & Beauty; Sport & Healthy Living; Culture & Art; Celebrities; Cooking; News and Other. Without financial or other counterpart involvement, consumer-generated content is perceived as reputable and highly credible (Liljander & Gummerus, 2015; Perez-Aranda, Soderlund, 2016; Vallespin, & Molinillo, 2018). New generations of consumers, especially millennials (Rinka & Pratt, 2018) are particularly receptive and susceptible to information shared by their membership and reference groups, acting simultaneously as active content generators. In this context, online advertising and sponsored publications tend to lose ground within this segment and consumer choices are increasingly based on information shared by other consumers through social networks (Carusona et al., 2017). In this new global village, the traditional recommendation of friends and family has been losing ground in view of the growing relevance of online sources to support consumer decision-making especially in travel and tourism (Chen et al., 2015).

This activity, due to the impact it has on decision-making processes and shaping the image of companies, brands, and tourist destinations, has attracted increasing interest from practitioners and academics alike (Varkaris & Neuhofer, 2017).

According to Gretzel and Yoo (2008) eUGC is a widely used practice by consumers in the tourism industry, notably the sharing information that can actively support decision making. The literature recognises that the experiential and intangible nature of tourism products (Oh, Fiore, & Jeoung, 2007) enhances the role of UGC in shaping the image of tourist destinations, companies, and brands operating in the sector and in supporting consumer decision-making processes (Cox et al., 2009; Crotts, Mason, & Davis, 2009; Pietro, Virgilio, & Pantano, 2012; Cantallops & Salvi, 2014; Boykin, 2015; Fine et al., 2017; Perez-Aranda et al., 2018).

The intangible nature of the tourist experience and the high perceived risk associated with shopping emphasizes the role prosumers play in tourism and hospitality (Litvin, Goldsmith, & Pan, 2008; Cox et al., 2009; Kang & Schuett, 2013; Howison et al., 2014; Nandagiri & Philip, 2018; Rinka & Pratt, 2018). In this industry, eWoM focusses especially on issues related to quality of service, destination image and reputation, experience sharing and mobility (Lu & Stepchenkova, 2012) and is recognized as one of the most important communication tools in the form of online reviews (positive and negative) created and shared by customers themselves (Fine et al., 2017).

About 81% of consumers consider online reviews to be a major source of inspiration and support in their hotel selection process, of which 49% say they would not book a hotel without first knowing reviews from other consumers (Boykin, 2015).

2.2 Digital influencers and their roles

This evolution and prevalence of eWOM or eUGC through the active role of community members also raises another issue, which is the impact of different individuals on a given social network. In fact, influence is not equal across network members, and there is a very active primary group that collects and disseminates information, influencing all other levels of the social system (Sahelices-Pinto & Rodríguez-Santos, 2014). Members of this primary group are generally referred to as opinion leaders (Sahelices-Pinto & Rodríguez-Santos, 2014; Nandagiri & Philip, 2018).

Research on the subject in the social sciences dates back to the middle of the last century with pioneering studies at Columbia University where Lazarsfeld, Berelson and Gaudet

(1944) identified the presence of opinion leaders, defined as individuals who exercise an almost invisible and certainly unconscious leadership, on a person-to-person, daily, close and informal manner (Katz & Lazarsfeld, 2006) and having the ability to influence others with regard to behaviour, opinions, and attitudes.

Opinion leaders, generally present in small and informal groups, exert their influence personally and directly. Leadership is involuntary, invisible, and unconscious, based on relationships of trust and credibility. Most studies have been conducted in the academic field, and particularly in the field of political science (Weimann, 1994). Keller and Berry (2003), in the early 21st century, popularized the term with a best seller called “The Influentials: One American in Ten Tells the Other Nine How to Vote, Where to Eat, and What to Buy”.

With the emergence of the Internet and social networks, social influencers theory has gained momentum among professionals and academics, especially in the tourism industry (Halvorsen, Hoffman, Coste-Manière, & Stankeviciute, 2013).

And what is a digital influencer? A digital influencer is a brand advocate, an expert, a pioneer in his or her field, recognized by followers (Createasphere, 2018). Digital influencers are therefore opinion leaders who characterize themselves as a new independent type of endorsers who shape audience attitudes through blogs, tweets, and the use of social networks through which they publish generated content (Sahelices-Pinto & Rodríguez-Santos, 2014; Magno & Cassia, 2018).

This concept finds in the literature other expressions, namely *leader*, *informal leader*, *information leader*, *consumption leader*, *wielder of influence*, *influencer*, among others (Sahelices-Pinto & Rodríguez-Santos, 2014).

For users with popular social media accounts (Nandagiri & Philip, 2018) it is common to find the expression *social media influencers* (Freberg, Graham, McGaughey, & Freberg, 2010; Nandagiri & Philip, 2018).

Their role is to influence (endorse) the behaviour of their followers through posts on online social networks, often based on their own consumer experiences (Primetag, 2017; Nandagiri & Philip, 2018). These individuals influence the behaviour and decisions of other consumers through interpersonal communication, also becoming reference points for those to whom they are connected (Primetag, 2017).

A community that “listens” to a particular influencer tends to be loyal to him or her, and the content produced by the influencer ultimately impacts some of their consumer choices (Alic et al., 2017). This trend is increasingly evident in brand communication, as the advertising overload users are faced with on a daily basis make traditional techniques less effective (Halvorsen et al., 2013; Primetag, 2017), leading marketers taking advantage of new opportunities created by technology developments, finding new and less intrusive methods to reach consumers, including through blogs (Halvorsen et al., 2013). Therefore, due to their recognized influence on followers, companies eagerly recruit social influencers to endorse their brands (Belagatti, 2017).

Content creation and its sharing on social networks has become a critical aspect of tourism, widely recognized and valued by industry professionals, by marketing experts (Cox, Burgess, Sellitto, & Buultjens, 2009; Varkaris & Neuhofer, 2017). The proliferation of social media platforms available to citizens has significantly changed the way individuals search, evaluate, rank, buy and consume products and services in this sector (Buhalis & Law, 2008; Hudson & Thal, 2013).

In general, social networks have contributed to alter the decision-making process by the consumer. Especially over the last decade, it has been witnessing the emergence of a more sophisticated view of how consumers relate to brands. The ways of communicating that social networks provide actively impact “the journey” that consumers make from need or

desire to actual purchase (Hudson & Thal, 2013; Chen et al., 2015; Nguyen, Klaus, & Wu, 2015).

2.3 Customer decision journey in tourism

Since the 1960s, several authors in the marketing field (e.g. Howard & Sheth, 1969), have been studying the purchase decision process in order to assist companies on “how to design and manage the entire process the customer goes through” (Lemon & Verhoef, 2016). Overall, proposed models explore the consumer’s path from recognizing need to finding information based on which he evaluates existing offers, decides purchase and finally evaluates experience after consumption. In the scope of the customer experience literature, it is reassigned as “customer decision journey” or “customer purchase journey” (Lemon & Verhoef, 2016). The customer decision journey comprises a set of four stages through which the consumer draws a pathway from 1) consideration of existing offers (awareness), 2) evaluation, 3) purchase, 4) post purchase experience (Court, Elzinga, Mulder, & Vetvik, 2009; Hudson & Thal, 2013; Vazquez et al., 2014).

In general, user-generated content shared in social media influence the consumers’ decision-making process, or the customer decision journey, in the tourism sector. Some scholars point out that this influence can occur before, during and after the trip (Fotis, Buhalis, & Rossides, 2012; Varkaris & Neuhofer, 2017). Chen et al. (2015: 962) found that “the consumers’ decision-making process in the context of online holiday purchases consists of three stages: information search, evaluation, and purchase”.

During the first stage of this journey (pre-purchase), consumers first contact the product, organization, or brand. The formation of the desire for purchasing is underpinned by information conveyed through a variety of offline or online communication sources and techniques, and campaigns through social networks intended to generate traffic (Tussyadiah & Fesenmaier, 2009). At this stage information search occurs, which will then be subject to comparative evaluation (stage 2) and the influence of shared content, in particular by credible digital influencers, is widely reported in the literature (Hudson & Thal, 2013; Kang & Schuett, 2013; Kapitan & Silvera, 2015; Alic et al., 2017). Travel blogs, review platforms, and online brand communities play a relevant role at the evaluation of the travel and tourism buying decision process (Bagozzi & Dholakia, 2006; Hudson & Thal, 2013; Chen et al., 2015). Chen et al. (2015) found that people tend to use online reviews prior to purchase searching for recommended activities to be engaged in once at the place. The awareness and the evaluation stages make part of the prepurchase stage (Lemon & Verhoef, 2016).

In purchase stage consumers decide about what to choose, how to order, and payment (Lemon & Verhoef, 2016). In tourism, buying often occurs through online channels. At the beginning of the second decade of the 21st century, tourism accounted for about one third of global e-commerce activities (Hudson & Thal, 2013).

The post-purchase phase refers to the consumption experience in which the critical touchpoint is the contact with the product or service itself (Lemon & Verhoef, 2016). In this stage, consumers use social networks to share their personal consumer experiences (Kang & Schuett, 2013) through content that can be positive or negative. Negative reviews affect brand credibility and reputation and impact consumer decisions about replacing one brand with another (Ruiz-Mafe, Aldas-Manzano, & Veloutsou, 2016). Companies here can mitigate negative reviews and comments. In Europe, according to Rinka and Pratt (2018), the preferred social networks for sharing experiences are Facebook, Instagram, Twitter, Snapchat, Pinterest, and personal blogs. The role of digital influencers in tourism has been widely recognized and— as Magno and Cassia (2018) point out—followers’ intentions

to adopt the suggestions made by bloggers is manifest in particular when the credibility (trustworthiness) and quality of the information they share is recognized.

Source credibility is a key quality impacting follower behaviour with effective consequences for buying decisions and brand attitudes (Liljander & Gummerus, 2015; Magno & Cassia, 2018). This is a characteristic strongly associated with situational factors (Rieh & Danielson, 2007; Francke, Sundin, & Limberg, 2011). Therefore, a digital influencer (or blogger) needs to be recognized as credible for his or her recommendations to be considered by their followers (Liljander & Gummerus, 2015; Magno & Cassia, 2018). Trust is therefore an essential component of credibility (Rieh & Danielson, 2007; Francke et al., 2011; Liljander & Gummerus, 2015). Source credibility and trust placed in the blogger affect the perceived quality of information shared on social networks (Magno, 2017; Magno & Cassia, 2018).

Given the active role that co-created and shared content on social networks plays in consumer behaviour, marketers should consider how best to intervene and through which means to intervene at each stage of customer decision-making journey. Considering the influential character that opinion leaders hold through social networks (Liljander & Gummerus, 2015; Magno, 2017; Magno & Cassia, 2018), knowledge about the role that digital influencers play in the process of choosing the vacation destination will help support the decision making by marketers in tourist organizations and destinations. Studies in areas other than tourism, such as fashion (Wiedmann, Hennigs, & Langner, 2012; Esteban-Santos et al., 2018) and culture (Magno, 2017) highlight the importance of digital influencers and the mechanisms by which they affect attitude formation and behaviour of their followers (Kapitan & Silvera, 2015; Alic et al., 2017; Pestek & Alic, 2017; Magno & Cassia, 2018; Rinka & Pratt, 2018). They act as mediators as they compile information and then share it with a large community of followers.

Digital influencers and bloggers' impact on consumer destination choice is recognized as a new type of endorser with the ability to shape audience attitudes through social networks (Pestek & Alic, 2017; Magno & Cassia, 2018). Rinka and Pratt (2018) point to digital influencers as spokespersons of a tourist destination, a marketing strategy that encourages the decision to choose a vacation destination because it contributes to elevating the image of the place.

In this context, organizations benefit from digital influencers endorsement, as they represent an important channel for reaching larger or smaller audiences and influencing their behaviours at various stages of the consumer journey (Magno, 2017).

3. METHODOLOGY

3.1 Research question and study objectives

In line with the research question, the main objective of this study is to investigate the role of social networks/digital influencers throughout the customer decision journey regarding the choice of holiday destination. Thus, the following specific objectives were defined:

- To characterize the use of social networks;
- To analyse the impact of social networks/digital influencers on travel behaviour, according to the Customer Decision Journey model;
- To identify the socio-demographic profile of respondents.

3.2 Questionnaire design

The data collection instrument consists of four main sections, namely: (a) use of social networks, (b) travel; c) Customer Decision Journey; d) attributes and profile of digital influencers; e) socio-demographic.

The first part of the questionnaire includes questions to characterise the use of social networks in terms of time spent, preferred social networks, and the main topics of interest. Next, we intend to know the behaviour of the audience in terms of travel planning and its relationship with the use of social networks, content sharing in the context of travel and the preferred social networks for this purpose.

The third part of the questionnaire covered the relationship of respondents with digital influencers in the process of travel inspiration and planning, their perceptions about shared content, and the role they play in travel decisions. Finally, a set of questions addressed socio-demographic information.

Table 1 shows the variables, their items and authors used in the study.

Table 1. Measurement scales and literature sources

Use of social networks	
Average time you spend on social media: Less than 1 hour; Between 1 and 3 hours; Between 3 and 5 hours; More than 5 hours.	(Magno, 2017)
Which social network you use the most: Facebook; Instagram; Twitter; Snapchat; Pinterest; LinkedIn; Other	(Rinka & Pratt, 2018)
Which thematic do you frequently follow on social media? Travel & Destinations; Fashion & Beauty; Sports & Healthy Lifestyle; Culture & Art; Celebrities; Culinary; News; Other	(Magno, 2017)
Customer Decision Journey	
Pre-purchase	
I research on social media when I am planning a trip.	(Kang & Schuett, 2013)
I research online by reading about other traveller's experiences via social media.	(Kang & Schuett, 2013)
I am likely to visit the places reviewed by digital influencers.	(Magno & Cassia, 2018)
When I have to make travel-related decisions, I will take suggestions from digital influencers;	(Magno & Cassia, 2018)
I am likely to consider digital influencer's travel experiences when making my travel decisions.	(Magno & Cassia, 2018)
Most used social networks when searching for inspiration and information about travel and destinations:-Facebook; Instagram; Twitter; Snapchat; Pinterest; LinkedIn; Specialized Blogs; Other	(Rinka & Pratt, 2018)
Purchase decision	
I am likely to visit the places reviewed by digital influencers;	(Magno & Cassia, 2018)
Post-purchase	
Do you share travel experiences from your most recent trip on online social networking websites, photo sharing websites, travel review websites, personal blogs, and/or websites?	(Kang & Schuett, 2013)
In which social networks do you share your travel experiences? Facebook; Instagram; Twitter; Snapchat; Pinterest; Personal; Blog; Other	(Rinka & Pratt, 2018)
Attributes and profile of digital influencers	
My perception of the digital influencer is that he/she should...be trustworthy; be sincere; inspires trust	(Magno & Cassia, 2018)
Content quality: I am likely to follow digital influencers who provide accurate information; Updated information; High quality content.	(Magno & Cassia, 2018)
Sociodemographic profile	
Age; Gender; Marital Status; Complete Education Degree; Professional Situation; City.	(Magno, 2017) (SanMiguel & Sádaba, 2017)

Source: Own Elaboration

3.3 Pre-test and questionnaire administration

The questionnaire pre-test was applied to social network users that turn to social networking web sites for inspiration and to support their consumption decisions. The pre-test of the questionnaire took place on August 7 and 8, 2019. A link to access the data collection instrument was sent via Messenger and WhatsApp to a selected group of 7 people with different profiles and who had made at least one trip the previous year. As a result, the wording and sequence of some questions has been changed.

The final version of the questionnaire, designed on the Google forms platform, was published on Facebook, LinkedIn, and Instagram. This research makes use of the voluntary selection method and the freedom for users to share with their contacts. The publication was disseminated through a link to facilitate its access and sharing.

3.4 Population and sample

Given the stated objectives, this study is based on a quantitative survey using a questionnaire as a data collection strategy aimed at social network users that turn to social networking web sites for inspiration and to support their consumption decisions.

A non-probabilistic method was chosen and snowball sampling techniques were used (Esteban-Santos et al., 2018), which consist of identifying members of the study population and asking them to share the questionnaire thus growing the sample (Saunders, Lewis, & Thornhill, 2009). According to the authors, this method is recommended when it is difficult to identify the desired population. It is generally possible to obtain a significant number of responses thanks to the action of the respondents themselves. Data collection took place from August 8 to August 29, 2019. 244 responses were collected.

3.5 Data analysis methods

Google forms makes it possible to automatically transfer respondents' responses to the Microsoft Office Excel program and then transfer the data directly to the IBM SPSS Statistics version 25 (Statistical Package for Social Sciences). However, this transfer entails some problems, as regards the qualitative variables, requiring some recoding work. Once the database was organized, descriptive statistics techniques were used, such as constructing frequency distributions, contingency tables and calculating measures of location (mean, median, and mode) and dispersion (standard deviation). In addition to the descriptive procedures, some statistical tests were performed (t tests for dependent and independent samples, Chi-square test), all of them performed at a significance level of 5%.

4. RESULTS

4.1 Sociodemographic profile

The sociodemographic profile of the 244 respondents is shown in Table 2. The average age is 35 years, being 27 the most frequent age. Regarding gender, the participants were mostly female (74,6%).

Most respondents have completed university education (70.5%) and work for others (68%). Regarding marital status, 54.9% of respondents are single and 42.6% are married. The cities most indicated by the respondents as their city of residence were Quarteira (22.5%), Lisbon (18.9%), and Faro (17.7%). Places in North and South America are also mentioned.

Table 2. Sociodemographic profile

Age	Minimum	Maximum	Mode	Median	Mean	Stand-deviation
	17	76	27	32	34,63	11,303
Gender	Frequency		%			
Female	182		74,6%			
Male	62		25,4%			
Marital status	Frequency		%			
Married	104		42,6%			
Divorced	6		2,5%			
Not Married	134		54,9%			
Complete education degree	Frequency		%			
Basic School	8		3,3%			
Secondary School	56		23%			
University Degree	172		70,5%			
Professional qualification	8		3,3%			
Employment status	Frequency		%			
Student	21		8,6%			
Retired	6		2,5%			
Employee	166		68%			
Self-employed	42		17,2			
Searching for a job	9		3,7%			
City	Frequency		%			
Algarve Region Cities	154		63,1%			
Lisbon Region Cities	55		22,5%			
Other Portuguese Cities	9		3,6%			
European Cities	19		7,6%			
Northern & Southern American and African Cities	5		2%			

Source: Own Elaboration

4.2 Use of social networks

Most respondents report spending less than 1 hour daily on social networking (61.1%), researching topics related to Travel and Tourist Destinations (57.8%), Fashion and Beauty (40.6%), Sports and Healthy Living (36.9%) and Culture and Art (33.6%), and mostly using Instagram (57.0%), specialized blogs (49.2%) and Facebook (37.3%) (Tables 3 and 4).

Table 3. Time spent on social networking sites per day

	Frequency	%
For less than 1 hour	150	61,5
1 to 3 hours	46	18,9
3 to 5 hours	7	2,9
More than 5 hours	41	16,8
Total	244	100,0

Source: Own Elaboration

Table 4. Main topics in social networks

		Responses		Cases %
		N	%	
Main topics				
	Travel and Tourist Destinations	141	25.0	57.8
	Fashion and Beauty	99	17.5	40.6
	Sports and Healthy Living	90	15.9	36.9
	Culture and Art	82	14.5	33.6
	Celebrities	28	5.0	11.5
	Food	43	7.6	17.6
	News	62	11.0	25.4
	Other	20	3.5	8.2
Total (n=244)		565	100.0	231.6
Social media networks				
	Facebook	91	22.2	37.3
	Instagram	139	34.0	57.0
	Twitter	3	0.7	1.2
	Snapchat	2	0.5	0.8
	Pinterest	27	6.6	11.1
	LinkedIn	2	0.5	0,8
	Specialized Blogs	120	29.3	49,2
	Other	25	6.1	10,2
Total (n=244)		409	100,0	167.6

Source: Own Elaboration

4.3 Impact of social networks/digital influencers on Customer Decision Journey

As mentioned above, this section intends to analyse the behaviour of users throughout the travel choice process—according to the stages of the Customer Decision Journey—to identify the impact of social networks and digital influencers on the Awareness of existing products or services (awareness), evaluation, purchase decision, and post-purchase experience

Stage 1: Pre-Purchase

Awareness of existing products or services (*awareness*)

To identify the role of social networks in this early stage of the process, the statements regarding travel planning (variables Q6 and Q7) were analysed. The percentage of respondents searching social networks (60.3%) and those who base their search on experiences shared by other travellers (60%) is similar. Although the first statement has a slightly higher mean level of agreement, the Student t-test for dependent samples indicates that this difference is not statistically significant ($t = 0.33$; $p = 0.74$). This suggests that experiences shared by other travellers are not a major factor in travel planning research (Table 5).

Table 5. Use of social networks in travel planning

To what extent do you agree with the following statements about how often you use social media to help you plan your travels?		Totally disagree	Disagree	Neither agree/disagree	Agree	Totally agree	Mean	Standard deviation
I do social media research when I'm planning a trip	%	9.6	13.8	16.3	35.6	24.7	3.52	1.266
I do social media research based on other travellers' experiences shared on social media	%	7.0	13.0	20.0	45.5	14.5	3.48	1.107

Source: Own Elaboration

To identify significant differences in travel planning as a function of time spent on social networking, respondents were grouped into soft (less than 3 hours daily) and hard (3 hours daily or more) users. Significant differences were only found for the first statement, indicating that users who spend less time daily on social networks are, however, the ones who use them the most when it comes to planning a trip. Table 6 shows the Student's t-test results for independent samples.

Table 6. Travel Planning/Use of Social Media Networks

Using social media networks	< 3h per day		≥ 3 h per day		t Student	p value
	Mean	Standard deviation	Mean	Standard deviation		
I do social media research when I'm planning a trip	3.63	1.267	3.06	1.169	2.787	.006

Source: Own Elaboration

The same analysis, performed according to gender, also indicates that it is women who most resort to this type of research (Table 7).

Table 7. Travel Planning/Gender

Gender	Female		Male		t Student	p value
	Mean	Standard deviation	Mean	Standard deviation		
I do social media research when I'm planning a trip	3.66	1.240	3.11	1.266	2.934	.004

Source: Own Elaboration

The analysis of the trip planning according to the most used social networks allows us to conclude that it is only for Instagram that there are significant differences (Table 8),

suggesting that users of this network tend to do more research in the preparation of their trips than those who do not use it.

Table 8. Travel Planning/Social Media Networks

Instagram	Users		Non-Users		t Student	p value
	Mean	Standard deviation	Mean	Standard deviation		
I do social media research when I'm planning a trip	3.82	1.224	3.13	1.218	-4.323	.000

Source: Own Elaboration

This result is consistent with the previous one because, being the women who most use social networks for travel planning, it is also in this segment that there is a majority of Instagram users (Table 9).

Table 9. Gender*Instagram

		Instagram		Total	
		No	Yes		
Gender	Female	Frequency	70	112	182
		% Gender	38.5%	61.5%	100,0%
	Male	Frequency	35	27	62
		% Gender	56.5%	43.5%	100,0%

($\chi^2 = 6.105$; $p = .013$)

Source: Own Elaboration

Evaluation of alternatives (*evaluation*)

According to the results presented in Table 10, the opinion of digital influencers does not have a great impact on the evaluation of travel alternatives because, in both statements, the mean value is between disagreement and indifferent. The t-test for dependent samples confirms the absence of statistically significant differences ($t = -.373$; $p = 0.71$) which, like the initial consideration, suggests that shared experiences are not a predominant factor in deciding between alternatives.

Table 10. Digital influencers websites

To what extent do you agree with the following information regarding how you track travel reports by digital experts/celebrities?		Totally disagree	Disagree	Neither agree/disagree	Agree	Totally agree	Mean	Standard Deviation
I search digital influencers posts when I must make travel decisions	%	18.5	24.3	28.4	25.9	2.9	2.70	1.129
I tend to consider the travel experiences of digital influencers when I make my travel decisions	%	18.9	21.3	31.6	25.0	3.3	2.73	1.131

Source: Own Elaboration

By comparing the mean values between those who do not closely follow a digital expert/celebrity on travel topics and those who do (Table 11), the latter are more likely to refer to the digital influencers' suggestions, as well as to value their shared travel experiences.

Table 11. Influencers' social media/ Digital influencers' followers

Digital Influencer/Celebrity	Follow (49,2%)		Don't follow (50,8%)		t Student	p value
	Mean	Standard deviation	Mean	Stand deviation		
I search digital influencers posts when I must make travel decisions	3.24	.947	2.19	1.047	-8.252	.000
I tend to consider the travel experiences of digital influencers when I make my travel decisions	3.31	.951	2.16	.999	-9.181	.000

Source: Own Elaboration

Stage 2: Buying decision (purchase)

As for the buying decision, the results are similar: the mean value is between disagreement and indifference, with the opinion of digital influencers being more relevant to those who closely follow a digital expert/celebrity regarding travel topics (Table 12).

Table 12. Buying decision/Digital influencers' followers

Digital Influencer/Celebrity		Totally disagree	Disagree	Neither agree/ disagree	Agree	Totally agree	Mean	Standard deviation
I tend to visit places I've seen on influencers' social media	%	17.2	21.7	29.1	27.5	4.5	2.80	1.152
	Follow		Don't follow		t Student		p	
	Mean	Standard deviation	Mean	Standard deviation				
	3.34	.983	2.28	1.064	-8.074		.000	

Source: Own Elaboration

By grouping respondents into those whose buying decision is not influenced by digital influencers' social media and those who say they tend to visit the places mentioned therein, it was found that the latter attach greater importance to attributes of credibility, sincerity, and trustworthiness (Table 13).

Table 13. Digital influencers' attributes/Purchase decision

Tendency to visit places seen on influencers' social media	Yes (45.1%)		No (54.9%)		t Student	p
	Mean	Standard deviation	Mean	Standard deviation		
DI: trustworthy	4.62	.564	3.92	1.235	-4.932	.000
DI: sincere	4.64	.602	3.94	1.245	-4.864	.000
DI: inspires trust	4.54	.697	3.87	1.214	-4.509	.000

Source: Own Elaboration

On the other hand, being these attributes more valued by those who decide to visit the places indicated and having the digital influencers great influence on the decision of their followers, it is not surprising that they also consider of great importance the considered attributes (Table 14).

Table 14. Digital influencers' attributes/Followers

Digital influencer/Celebrity	Follow		Don't follow		t Student	p value
	Mean	Standard deviation	Mean	Standard deviation		
DI: trustworthy	4.40	.920	3.95	1.168	-3.337	.001
DI: Sincere	4.43	.923	3.95	1.200	-3.515	.001
DI: inspires trust	4.37	.925	3.84	1.219	-3.818	.000

Source: Own Elaboration

Stage 3: Post-purchase experience

Most respondents use social networks to share their travel experiences. Based on the results presented in Table 15 we can conclude that this segment shows a greater involvement in the previous stages of the purchase process referred by Hudson and Thal (2013).

Table 15. Customer Decision Journey/Share

Share	Yes (68.9%)		No (31.1%)		t	p
	Mean	Standard deviation	Mean	Standard deviation		
Stage 1: Awareness						
I do social media research when I'm planning a trip	3.68	1.291	3.16	1.139	-3.01	.003
Stage 2: Evaluation						
I search digital influencers posts when I must make travel decisions	2.88	1.068	2.32	1.176	-3.63	.000
I tend to consider the travel experiences of digital influencers when I make my travel decisions	2.92	1.080	2.30	1.132	-4.05	.000
Stage 3: Purchase						
I tend to visit places I've seen on influencers social media	2.97	1.129	2.43	1.124	-3.44	.001

Source: Own Elaboration

It is also noted that the consumer involved in the last step of the customer decision journey (post purchase experience) is the one that most values the personal attributes and profile of digital influencers' posts (Table 16).

Table 16. Attributes and profile of digital influencers' posts/share

Posts	Yes		No		t Student	p value
	Mean	Standard deviation	Mean	Standard deviation		
DI: trustworthy	4.32	1.050	3.86	1.067	-3.154	.002
DI: sincere	4.33	1.061	3.88	1.119	-2.998	.003
DI: inspires trust	4.23	1.109	3.82	1.080	-2.699	.007
I tend to follow Digital Influencers profiles that share accurate information	3.58	1.011	2.89	1.228	-4.275	.000
I tend to follow Digital Influencers profiles that share updated information	3.60	1.062	3.05	1.199	-3.547	.000
I tend to follow Digital Influencers profiles that share visual content of high quality	4.11	1.360	3.47	1.536	-3.265	.001

Source: Own Elaboration

As for the relationship between posts and the most used social networks (Table 17), we identified that posting is most prevalent in Instagram, with most respondents referring they post about their travel experiences using this social network.

Table 17. Posts * Instagram

			Instagram		Total
			No	Yes	
Do you post about travel experiences from your most recent trip on online social networking websites, photo sharing websites, travel review websites, personal blogs, and/or websites?	No	Frequency	48	28	76
		%	63.2%	36.8%	100.0%
	Yes	Frequency	57	111	168
		%	33.9%	66.1%	100.0%

$$(\chi^2=18.237; p= .000)$$

Source: Own Elaboration

It is also noted that among respondents who Post content from their travel experiences on social networks, most of them follow a digital influencer (Table 18).

Table 18. Posts * Closely follows a Digital Influencer/Celebrity

		Followers		Total
		Don't follow	Follow	
Share travel experiences from your most recent trip on online social networking	No	56	20	76
		73.7%	26.3%	100.0%
	Yes	68	100	168
		40.5%	59.5%	100.0%

$$(\chi^2=23.089; p= .000)$$

Source: Own Elaboration

5. CONCLUSION

This study sought to understand the informal relationships of influence that social networks provide, namely regarding the impact on the various stages of Customer Decision Journey from awareness or desire to post-purchase experience in holiday destination choice contexts (Hudson & Thal, 2013; Lemon & Verhoef, 2016). More specifically, we intended to investigate the behaviour of choice of holiday destinations, in its relationship with digital influencers and use of social networks. Data collection was done through an online questionnaire survey using a non-probability sampling method. The data collection instrument was shared through social networks with users who use them as a source of inspiration for their travel decisions.

In the first stage of Customer Decision Journey (Pre-purchase) survey participants were asked about their use of social networks when planning their trips. The results showed that most respondents do their research on social networks to plan their trips, which meets the results found in previous studies (Fotis et al., 2012; Hudson & Thal, 2013; Kang & Schuett, 2013; Varkaris & Neuhofer, 2017). However, experiences shared by other travellers are not considered relevant in trip planning.

It is also possible to conclude according to the sample that the female audience is the most involved in travel planning, being also the segment that most researches the topic Travel and Tourist Destinations in social networks. Also, those who spend less time on these platforms reveal researching more about Travel and Tourist Destinations. Instagram has proved to be the most widely used social network for seeking inspiration and information

about travel and tourist destinations, which contrasts with the findings of Rinka and Pratt's (2018) study of the European context.

Contrary to other studies (Kapitan & Silvera, 2015; Alic et al., 2017; Pestek & Alic, 2017; Magno & Cassia, 2018; Rinka & Pratt, 2018), the results of this research regarding the evaluation, show that the opinion of digital influencers has no significant impact on respondents' assessment of travel options and that, as in the early planning phase, their shared experiences are not a decisive factor in choosing between alternatives. However, users who indicate that they are following a digital influencer/celebrity closely regarding travel and tourist destinations bloggers are more likely to look at digital influencers' pages and to value their reported travel experiences. These results confirm the relevance of followers' loyalty to digital influencer reported by Alic et al. (2017). Although, overall, the opinion shared by digital influencers does not prove to have a major impact on the purchase decision phase, it appears that those who follow them closely tend to visit the places they suggest and they value their qualities in terms of credibility, sincerity, and trust.

Consistent with Kang and Schuett's (2013) findings, in the post purchase experience, the results showed that most respondents (68.9%) use social networks to share their travel experiences, most of which follow a digital influencer and uses Instagram for content sharing. This result contrasts with the data collected by Kang and Schuett (2013), where Facebook (65%) and MySpace (59%) were the preferred social networks for this purpose.

In line with Alic et al. (2017) the results of this work support the role of digital influencers, as followers tend to be loyal to them and are impacted on their consumption choices by generated and shared content. Although there is no significant impact of digital influencers, respondents who admitted relating to digital influencers tend to value their content, visit the sites they suggest, and share their own experiences, mostly through Instagram. These users are more involved with digital influencers throughout the Customer Decision Journey, which makes it possible to answer the research question initially posed affirmatively.

5.1 Implications for research

The technological revolution associated with Web 2.0 has produced remarkable transformations in the travel and tourism industry, specifically as regards the possibilities for sharing information generated by consumers themselves. Previous work has paid attention to the role of digital influencers in tourism (Cox, 2009; Freberg et al., 2010; Kang & Schuett, 2013; Liljander & Gummerus, 2015; Fine et al., 2017; Pestek & Alic, 2017; Rinka & Pratt, 2018) and, specifically, the impact of social networks on Customer Decision Journey (Hudson & Thal, 2013).

While acknowledging the relevance of shared content on social networks and the role of e-Wom, (Sahelices-Pinto & Rodríguez-Santos, 2014; Kapitan & Silvera, 2015; Nandagiri & Philip, 2018; Perez-Aranda et al., 2018), knowledge about the influence of opinion leaders on the Customer Decision Journey stages in travel and tourism contexts is limited (Magno, 2017).

This study makes a relevant contribution to the literature in the field of Marketing as it seeks to investigate the behaviour of choice of holiday destinations, their relationship with digital influencers and the use of social networks, thus considering a comprehensive and integrated approach to the issue.

5.2 Implications for practice

Findings of this research are of interest to tourism and travel organizations as well as to travel and tourism bloggers and celebrities. Overall, the relevance and role of digital marketing strategies are recognized, notably because of their potential to share information with a

narrow group of followers with whom emotionally based relationships can be developed. Traditional marketing communication techniques have been losing credibility compared to communication through social networks. The results obtained with this study reinforce the potential of digital influencing marketing strategy in travel and tourism organizations. So, it is essential to identify relevant key persons, or opinion leaders to endorse them to act as social influencers within specific segments of consumers. They will act as mediators who will be empowered to build long term relationships with their own community of followers. To be credible and trustworthy, opinion leaders should not be rewarded, they must be persuaded to recommend the brand, the destination or the company through personal eWom.

Regarding its impact the Customer Decision Journey, online reviews on social networks, especially those posted by recognized digital influencers, should be monitored and considered within the company's marketing strategy.

Since the travel and tourism industry is composed of a set of intangible products and experiences, it is critical to build on emotional bonds with audiences and social influencers can contribute to make the Customer Decision Journey a less complex process.

5.3 Limitations and future research

This study has some limitations that could be improved in future studies in this field. It is suggested that future studies use a random sample rather than a snowball sample, which will allow a better representation of the population. In this study, digital influencers are mentioned in the overall meaning of the concept and no specific platforms, blogs or bloggers have been specified. Furthermore, only the user perspective was studied in order to generate knowledge about the role of digital influencers during Customer Decision Journey regarding the choice of vacation destination. Future studies should consider the perceptions of digital influencers and marketers in tourism and travel contexts.

Finally, an identical analysis could be applied to fields other than tourism as well as other geographic areas to generate a broader understanding of the role and influence mechanisms of digital influencers in Customer Decision Journey and the relationship of consumers in general with the social networks.

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DISCOVERING UGC COMMUNITIES TO DRIVE MARKETING STRATEGIES: LEVERAGING DATA VISUALIZATION

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ABSTRACT

The digital tourism ecosystem is changing driven by the massive use of new technologies and the increase of data generated by travelers during their trips. In this digital landscape, businesses in the tourism sector are adapting their strategies to take better advantage of new knowledge that can be extracted from the Internet, specifically from social networks. The objective of this research is to define the content strategy in social networks that businesses in the digital tourism sector should follow and to highlight the importance of new data visualization techniques for Marketing and Marketing analytics. To this end, tourist communities of Twitter users have been detected by analyzing the User Generated Content (UGC) and applying algorithms for data visualization on a sample of $n = 10.00$ tweets from the interactions between the UGC on Twitter and the 25 Top Hotels in the World as designated by TripAdvisor's Travelers' Choice Awards. A total of $n = 3.158$ tweets were analyzed, focusing specifically on comments that had hashtags and interactions with these hotels, with the aim of detecting communities according to the type of content shared, in order to measure the communities' impact and influence in the digital tourism sector. The results of this research study identify the main topics related to the tourism sector and the most active communities according to their impact, which allows CEOs and managers of tourism companies to refine their marketing strategies for the digital tourism industry.

Keywords: UGC Communities, Marketing Strategies, Data Visualization, Marketing Analytics.

JEL Classification: M2, M3

1. INTRODUCTION

It is expected that 50 times more data will be generated in 2020 than previously in 2011. It is also expected that there will be 75 times more information sources compared to the present, and that each inhabitant on planet Earth will have 6.58 devices connected to the Internet (Kim, 2016).

Companies have realized that the large amounts of data that make up Big Data datasets allow them to better know their customers, make better decisions, and improve user experience (Jovicic, 2019). That is why companies from different sectors, especially those focused on client experience in the tourism sector, are using Big Data and Business Intelligence (BI) to

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improve decision making (Lunar & Jacobsen, 2014). The problem with these companies is that the tools they use to extract information from the data are too complex, require advanced technical knowledge, or require a lengthy reporting period (Murray, 2015).

Clients expect that the information a company has about them will be used to provide them better service; for that reason, the Real Time Big Data (RTB) is one of the main trends within the management of large amounts of data (Palos-Sanchez et al., 2019). Clients share information with the company and in return expect companies to use that information to offer them a better or more personalized experience, or to provide a solution to their problems in real time (Liu et al., 2013). This process is especially important in sectors such as tourism, where the client is at the center of the strategy (Reyes-Menendez et al., 2018) and the key lies in experience.

Another main trend within the management of Big Data is the management of data produced in mobile environments, that is, through the connected devices that users have. These devices are mainly smartphones that users keep on hand to carry out their daily activities and produce large amounts of data. As for the Mobile Big Data (MBD), it is interesting to highlight the use of Social Networks by users (Hays et al., 2013).

Consumers share valuable information online, called User Generated Content (UGC), for tourism companies on social platforms. UGC is defined as “the content generated by users in social networks and digital platforms. Such content includes comments, opinions, expressions, and interactions between users and brands, or any other type of content shared publicly on the Internet that seeks to generate engagement between different profiles” (Saura & Bennett, 2019: 4). Companies should use that UGC to improve services offered in order to improve decision-making processes, streamline strategies, and obtain insights as stated by Saura and Bennett (2019). Insights are key to the consumers or users that are obtained when analyzing large amounts of data (Saura et al., 2019) in the Tourism industry.

In this context, data visualization tools that allow extraction of key information about the UGC while not requiring advanced tool programming are allowing companies to find the balance between the amount of data used and the capacity to obtain agile information key to the company (Brizirgianni & Dionysopoulou, 2013; Reyes-Menendez et al., 2019). Therefore, the main objective of this research is to present different data visualization algorithms based on UGC applicable to the Tourism sector with the exploratory purpose of understanding the results of the UGC analysis in Social Media applied to Tourism. To cover this objective, we propose 2 research questions; RQ1: Is it possible to apply data visualization algorithms in Twitter UGC to obtain insights that can be used by CEOs and Executives of tourism companies? and RQ2: Can we analyze the user communities that interact on Twitter around the tourist-type UGC and discover useful knowledge for tourism businesses?

To understand the importance of these visualization techniques and the analysis of UGC communities for the tourism sector, we collected a total of $n = 10,000$ tweets from interactions between the UGC of users on the social network Twitter and the 25 Top Hotels in the World as designated by TripAdvisor's Travelers' Choice Award. Of the total of $n = 10,000$ tweets, a total of $n = 3,158$ tweets were analyzed, focusing specifically on comments that had hashtags, with the objective of detecting communities according to the type of content shared.

The remainder of this manuscript is structured as follow: firstly, we present Introduction, next the Literature Review is presented divided into two subparts, data visualization for marketing and tourism and social media data visualization. Third, the methodological process is presented in which the algorithms used and known as Graph Distance Report (GDR), Eigenvector Centrality Report (ECR), HITS metric and Authority Distribution

(AD) are introduced. Finally, the conclusions in which practical and theoretical implications of research are highlighted.

2. LITERATURE REVIEW

2.1 Data visualization for Marketing

Shaw et al. (2001) perform a methodology based on data collection and the use of knowledge management techniques in order to manage marketing knowledge and make correct decisions for the company's purposes (Xiang et al., 2017). Likewise, Few and Edge (2007) carry out a study on the present, past, and future of data visualization in order to understand how to properly use the information provided to the company, both to make sense of the data and to enable action after the analysis of data dashboards.

Likewise, Maimon and Rokach (2005) develop a manual on Data Mining (DM) and Knowledge Discovery in Databases (KDD), organizing the concepts, standards, and most current applications on the DM for correct understanding of these marketing concepts by the company.

Following this line of research, Reddy et al. (2019) develop a survey on Business Intelligence (BI) tools for three different areas: marketing services, transport services, and financial services. Vassakis et al. (2019) develop a methodology for obtaining and analyzing the visualization of data extracted from social networks. This study focuses on the tourism sector by analyzing customer experiences.

Zarco et al. (2019) conduct a study focused on the collection of data in the social network Twitter in traditional companies, seeking the impact and positioning of each company in the social network via methods and analysis techniques that show the relevance of techniques and methods of data analysis for marketing and tourism sectors, among others.

2.2 Social Media Data Visualization for Marketing and Tourism

The research of Jimenez-Marquez et al. (2019) present an approach to analyzing content created by users in social networks to identify the value of services and products of companies, with the aim of improving their milestones in the era of big data. Also, Börner et al. (2019) classify different definitions and assessments about Data Visualization Literacy (DVL) in order to teach their application and use. They focus the study with practical exercises and examples across different sectors and industries.

Saura et al. (2018) develops a study focused on the analysis of UGC on the Twitter social network identifying comments between hotels and users, using as an international hotel ranking show. In the investigation, data analysis techniques are used showing importance to data visualization and analysis techniques (Leung et al., 2013).

Kucher (2019) performs an analysis on the data extracted by the "Social Media" using visualization techniques based on case studies and visual representations of methods for obtaining data. In this way, and also following these methodological approaches based on data, Confente et al. (2019) elaborate an analysis of corporate reputation in order to identify the differences about UGC in social networks. They then study the results, evaluating clients' opinions by performing data visualization techniques.

Likewise, Reyes-Menendez et al. (2019) develops an investigation focused on the analysis of the #WorldEnvironmentDay hashtag in which conclusions are obtained regarding the decision-making for executives linked to tourism providing information that concerns the geographical areas in which the hotel carry out their activities. Also, Saura et al. (2018) use the UGC of comments extracted from the social network TripAdvisor to obtain key

indicators related to the tourism sector analyzing the comments of the users who publish during their trips on social networks.

3. METHODOLOGY

The main objective of this research is exploratory and based on knowledge discovery, not hypothesis testing and not trying to control variables, but to discover them (Corbin & Strauss, 2015). The methodology is based on data visualization techniques and knowledge extraction from databases focused on UGC analysis following the indications presented by Saura and Bennett (2019) with the purpose of helping CEOs and executives to make better marketing decisions based in data analysis.

For data collection, we connected to the public Twitter API from September 3 to September 10, 2018 with a total of $n = 10,000$ tweets; the downloaded tweets reflect UGC published on Twitter and represent interaction with hotels included in the Top 25 Hotels in the World as designated by TripAdvisor Travelers' Choice Awards. These days they were selected randomly estimating that it did not coincide with any world tourism event with repercussion on digital or social media channels that could have affected the sample (Jia, 2018). After cleaning the dataset, a total of $n = 3,158$ tweets were analyzed focusing specifically on comments that had hashtags with the objective of detecting communities according to the type of content shared.

For data visualization we have used the Gephi software, applying the following algorithms and experiments to the dataset since all of them are Open Source type and can be used by researchers: Graph Distance Report, closeness centrality distribution and harmonic closeness centrality distribution after applying the algorithm presented by Brandes (2001); Eigenvector Centrality Report, to measure the eigenvector centrality distribution; HITS metric applying the Kleinberg, algorithm to measure the Hubs distribution and Authority Distribution; modularity report to measure the size distribution by applying the algorithm of Blondel et al. (2008) with the resolution of visualization of Lambiotte and Delvenne data (2009).

For the process of cleaning the UGC database, we followed the recommendations of Reyes-Menendez et al. (2019) and Saura and Bennett (2019). The exploratory analysis process is based on the analysis of the indicated databases classified in nodes. The nodes are small groups of information groups that link information related to different users in social networks, obtaining and being able to represent the bidirectionality of information and interaction between the users that make up a node (Saura & Bennett, 2019; Lio et al. 2019). Although they are dynamic databases, they can be analyzed visually representing the distances that exist between the main themes that compose them.

3.1 Graph Distance Report (GDR)

The GDR measures the distance between the nodes that compose the dataset. The aim of GDR is to identify similar patterns or linkages between node unions; it was developed by Brandes (2001).

The GDR visually identifies the connected nodes according to diameter. The diameter is the longest distance between the two nodes of the network, visualizing the distance in which the two nodes are most distant from a given dataset. In this case, the measures that can be identified are the distance Betweenness Centrality (BC) and Closeness Centrality (CC).

As indicated by Brandes (2001), BC represents the measure of the frequency with which a node appears in the shortest routes between the nodes of a network. Likewise, the average or DC indicator measures the average distance of a given node to all the others in the

network. It is also possible to measure the distance from a specific node to the farthest node by applying filters based on Eccentricity (EC).

3.2 Eigenvector Centrality Report (ECR)

The ECR measures the importance of the node in a network based on node connections in order to identify its importance. Within graphics theory, the centrality of the eigenvector (also called eigenntality) is a measure of the influence of a node on a network. Therefore, by applying ECR one can learn what the influence of a node is on the rest of the nodes of a given dataset (Mono & Tribe, 2017). This development allows for one to measure the similarity of contents or influences of these in the composition and grouping of other nodes.

When applying ECR, relative scores are assigned to all nodes in the network according to the concept that connections to high-score nodes contribute more to the score of the node in question than to connections equal to low-score nodes. A high own-vector score means that a node is connected to many nodes that have high scores so that the similarity of the influences can be identified. Likewise, it should be indicated that in neuroscience, it has been found that the centrality of a neuron's own vector, in a model neural network or a standard dataset, can be correlated with its trigger speed or the speed at which it grows.

3.3 HITS metric report

The HITS is a data analysis and visualization algorithm that measures the links that connect different web pages or nodes of a dataset. The HITS was developed by Kleinberg (1999) with the objective of determining what the values of a page or node are in terms of metrics or key indicators related to authority, the estimation of the value of the content of the page, the value of the central nodes in the dataset, and the number of links that connect to other pages. Specifically, by applying the HITS algorithm, pages or nodes can be classified according to their authority by obtaining the HITS Authority distribution.

The Hubs distribution calculates globally two concrete scores in a differentiated way– on one hand, the centers and on the other, the authority of these. The authority score indicates the value of the page or node itself, and the distribution centers estimate the value of the outgoing links of the page or node, allowing to identify patterns as well as trends.

3.4 Modularity report

The MR was presented by Blondel (2008) and subsequently improved for visualization according to the type of resolution established by Lambiotte and Delvenne (2009). The main objective of the MR is to measure the decomposition of a network of nodes in modular communities, represent the communities based on the measurement of connections and interactions of these communities between the nodes.

Also, the MR indicates that if a dataset has a modularity score it indicates a sophisticated internal structure. This structure, often called community structure, describes how the network is divided into sub-networks that group nodes. It has been shown that these subnets (or communities) have significant meaning in the real world and in the analysis of social networks; thus, they can be used to analyze behavior or understand the contents around a community.

For the application of the algorithm, a random assignment can produce a better decomposition resulting from a higher modularity score, however, the randomization will increase the calculation time which may in turn allow identification of smaller communities centered on specific, or at least more specific, topics that do not have as much weight.

4. EXPLORATORY ANALYSIS OF RESULTS

4.1 Graph Distance Report

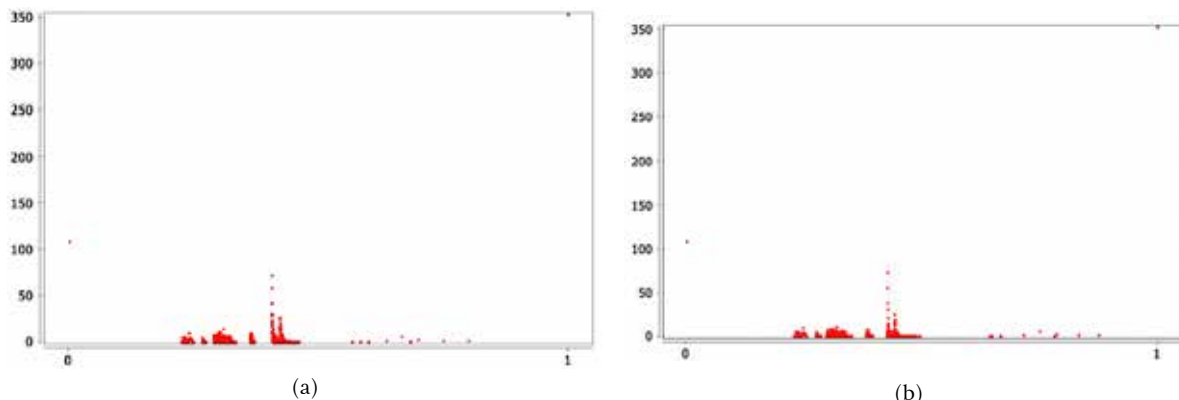
After applying the corresponding algorithm to GDR in (a), in order to be close to the subject of tourism on Twitter, topics related to travelers, vacations, photography, nature, trips, and exploration have been identified. This topics discovery allows us to understand the chatting in UGC around tourism in which comments and opinions are shared regarding the topics identified by exchanging these comments with the hotels.

Furthermore, if we look at the results of (b) shown by the HCCD, we can obtain a different order of identified topics such as travelers, photography, tours, vacations, trip, exploration, and nature, in which the subject matter of photography and photography becomes stronger. This fact shows that in the UGC collected sample, photography is considered a relevant issue when interacting with hotels and sharing opinions. Tours, as similar topics, are not directly centralized in tourism.

In this case, as indicated before, an application of this algorithm has been made with the Gephi software applying an interpretation of undirected parameters. In the results we have obtained a 6-point diameter, a Radius of 0, and an Average Path length of 2.77.

In Figure 1 (a) the Closeness Centrality Distribution is available, and in Figure 1 (b) the Harmonic Closeness Centrality Distribution is shown, in which the weight of the themes, identified with respect to the main theme of studio, tourism can be identified on the X axis.

Figure 1. Closeness Centrality Distribution and Harmonic Closeness Centrality Distribution



Source: Own Elaboration

4.2 Eigenvector Centrality Report

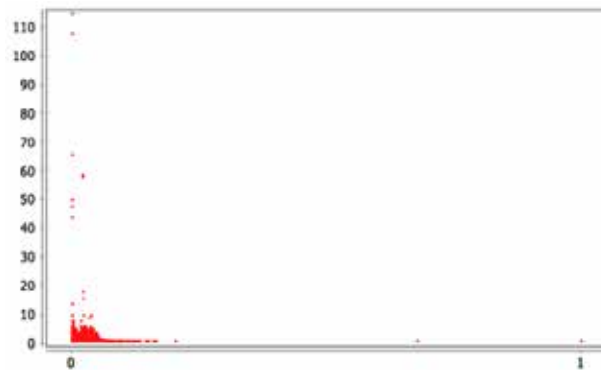
The results show that the nodes that have more importance in terms of weight of interactions related to tourism are those related to instatravel, with a weight of 0.145, nature (0.165); tourist (0.0724); traveler (0.0844); frizemedia (0.0863); photography (0.1144); and vacation (0.1453).

It is interesting that in measuring the influence of the topics and nodes, we found that the appearance of the theme of #instatravel gains weight. This demonstrates that there is a high engagement in those users talking about and in which their tweets talk about tourism and contain images related to photographs taken during the trips and posted through hashtag, according to our sample.

To visualize this data, we applied network undirected interpretation parameters in which we have obtained a number of iterations of 1.111.001 and a sum change: 0.0. Figure 2 shows the result of ECD in the dataset showing on the X axis the total number of topics and their

importance regarding the central point of the study, tourism, represented on the Y axis with 0 points.

Figure 2. Eigenvector Centrality Distribution



Source: Own Elaboration

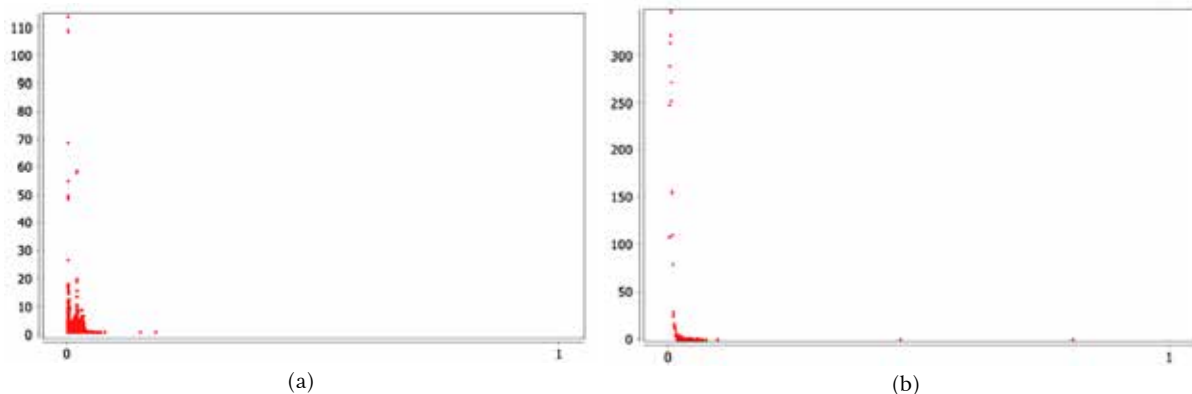
4.3 HITS metric report

In (a) the results related to the HITS distribution have identified the nodes with more links. The strongest results of HITS metric report is traveling, with an importance of (0.0848); trip (0.0764); tourist (0.0748); traveling (0.0704); holiday (0.0700); beach (0.0685); tour (0.068); and photography (0.0643). HITS distribution allows us to note that if the goal of a social media strategy for digital tourism is to get traffic to web pages born of UGC, the topics could contain content related to trip, tourist, and traveling to engage with user's, as the explorative results show.

Regarding the authority in social media (b) that is acquired when sharing content, the results have been the following: travelgram (0.0562); be (0.0541); adventure (0.0559); explore (0.0619); photography (0.0643); tour (0.0683); and beach (0.0685). So, companies that want to gain authority in social networks within the tourism ecosystem could use content to publish in their UGC strategies relative to similar topics to travelgram, adventure, and exploration.

In this way, in Figure 3 (a) the HITS distribution can be observed in (b) the HITS authority distribution.

Figure 3. HITS distribution (a) and Hits authority distribution (b)



Source: Own Elaboration

4.4 Modularity report

Two results have been obtained to measure the number of UGC communities around digital tourism on Twitter; those are available in (a) and (b). We can consider that the weight of each community means that they are active in terms of content generation and impact, as well as interaction with hotel profiles on Twitter. Therefore, in Table 1 the main communities identified in terms of their weight and the themes of content shared by users are shown. We have also highlighted those communities that are directly linked to tourism-related content and that may involve improving decisions for CEOs and executives.

Table 1. Communities around digital tourism sorted by weight and activity

Community name	Weight	Community name	Weight
grasmere	305	Pixabay*	293
derry	304	Freestock*	293
government	303	mentoring	292
western	303	tradeup	292
Camping*	302	Fitness*	291
Mountains*	300	weight	291
atomium	299	eventvenues	290
miniature	299	festivals	290
Accessibility*	297	Summervacation*	290
government	303	Summerfestival*	290
smokedmeat	296	merrimack	289
sandwich	296		
seniors	294		

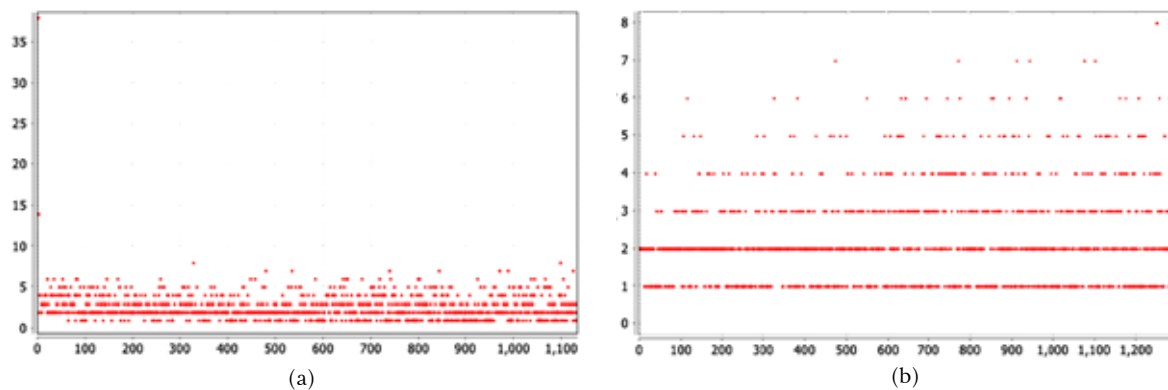
Source: Own Elaboration

Of the 24 communities identified, we highlight Camping, Mountains, Accessibility, Pixabay, Freestock, Fitness, Summervacation, and Summerfestival as those that are directly linked to the tourism sector to be defined, according to the UGC sample analyzed, some of the behaviors and preferences of tourists when sharing content on social networks.

The experiment for the visualization of data has been carried out with two different views and resolutions. On one hand, Figure 4 (a) shows the result for the modularity of 0.126 with a resolution of -0.020 that has resulted in a total number of communities of 1133. In Figure 4 (b) a modularity can be observed of 0.125 with a resolution of -0.022 and a total of 1291 user communities detected.

Although the literature indicates that these tests must be carried out to obtain a global vision of the subject analyzed in social networks, the authors have highlighted those communities that are most linked to tourism in Figure 4 according to their weight and modularity. In Figure 4, therefore, the diversity of themes and the number of communities analyzed with different resolutions can be observed, which allows us to observe that there are very specific UGC communities that are included in tourism in social networks.

Figure 4. Modularity report for digital tourism community's detection



Source: Own Elaboration

5. CONCLUSION

After the development of the proposed research we can conclude that in terms of UGC on Twitter, there have been topics identified related to Camping, Mountains, Accessibility, Pixabay, Freestock, Fitness, Summervacation, and Summerfestival; these are most directly linked to user communities. Likewise, the same topics were also found to be related to other user communities which are not within the tourism sector (e.g., derry, government, western or Grasmere). We must consider that if the objective of companies in the tourism sector is to develop strategies that increase social network interactions, they should base their communications using the tag #instravel and tourism activities on the social network Twitter according to our exploratory experiments.

This fact allows the identification of strategies related to social media in the tourism sector, considering the instantaneity and publication of contents in real time. Results have been obtained to measure the number of UGC communities that exist around digital tourism on Twitter, taking into account their activity and weight.

These results show that tourists who have a travel destination in these or similar destinations are active on social networks, which can make it clear that companies take these communities as a reference to increase the impact of their social media strategies. Our analysis results verify that users usually interact on Twitter sharing information about campsites, photographs and, comments about mountains and accessibility. This fact links to sustainability in tourism, image banks in which content is shared, as well like sports and seasonal holiday seasons.

With respect to RQ1, it should be indicated that different algorithms have been used to visualize the communications and topics that characterize the UGC of tourism on the social network Twitter, providing insights related to social media strategies that can be used by CEOS and Executives for their tourism companies. Regarding RQ2, the most important topics have been offered as a result of the analysis when structuring and planning a content strategy for social media on Twitter, it does not lose value.

The implications for practitioners or managerial staff are of great interest since this study will allow them to correctly and more effectively plan social media content, make advertising investments on the Internet, and refine the choice of keywords as well as the topic that travelers choose for their social media publications.

Also, from the point of view of the methodology, our results help to understand how to interpret UGC data on Twitter and the main topics identified can be used by researchers as variables and constructs for their quantitative models, to test whether or not there exist positive meanings among them. Also, academics can use this research to better understand

the tourism sector on social media and, in particular on Twitter, according to the type of content shared by users.

The limitations of this work lie in the exploratory nature of the research conducted. Our study is limited to comments on Twitter that link to hotels included in the Top 25 Hotels in the World as designated by TripAdvisor Travelers' Choice Awards. In addition, the results of the study are not significant enough to transfer to the whole digital tourism ecosystem. However, they continue the line of work that increasingly shows the importance of studying tweets and comments as a basis for detecting communities according to the type of content they share.

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