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12 June 2016

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Abstract: *The purpose of this paper is to analyze the effects of co-creation of a tourist brand image projected in Twitter by using NVIVO 11. It takes the case study of the Smart Fuerteventura brand, an ecotourism association made up of a group of local firms. The brand concept is linked to the enhancement of heritage of the island of Fuerteventura, that is included in the World Network of Biosphere Reserves. The results show that there is no brand awareness and co-creation is negative. This analysis can contribute to methodologies on marketing strategies within the framework of co-creation in similar destinations.*

Keywords: Co-creation of brand image, user generated content, social networking, projected image, branding online

JEL Classification: *L83, M1, O1*

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1   INTRODUCTION

Internet has promoted new forms of multidirectional communication, giving voice to users and consumers. The maximum evidence of this change can be seen in social networks, where users have shifted from passive subjects to active players through the co-creation of content (Rafaeli & LaRose, 1993) and projection of brand images (Blanco & Herrera, 2014) known as user-generated content (UGC).

The tools of co-creation are manifested through articles, comments, tweets, blogs or vlogs, wikis, discussions in forums or chats, podcasts, or any kind of uploaded images, videos or audio files (Munar, 2012). Such is its importance that brands are beginning to create communities to empower the words of users, encouraging social interactions and making the content generated by users a part of the community that revolves around a brand (Muniz Jr & O'guinn, 2001). Social media have proven to be key elements in the processes of formation and projection of the brand image of destinations (Choi, Lehto, & Morrison, 2007b). To adapt to this new trend, destinations must reformulate their strategies and try to position themselves in the digital world.

This paper presents the results of an analysis of the management of the co-created image of the Smart Fuerteventura brand. This brand represents an association of ecotourism businesses on the island of Fuerteventura. It was created with the aim of rebranding the destination, diversifying the tourism offer through a wide range of products that highlight the island's natural and cultural heritage as an alternative and/or complement to the tourism product based on sun and sand.

The methodology used is based on the combination of the following methods:

1. Export of qualitative data (or unstructured data) using the Ncapture plugin installed on the Chrome browser on Twitter. Subsequently, these data were analyzed with qualitative analysis software Nvivo 11, which analyzes behavior.

2. Conducting semi-structured, individual interviews of different members of the Smart Fuerteventura association to find out the importance and use made of social networks.

The information obtained was subjected to cross-feedback tests. This analysis shows that Smart Fuerteventura has not established any online communication strategy. This means its recognition is virtually nonexistent in the social networks

analyzed and its effect on co-creation is negative, i.e., there is no co-creation of content on Smart Fuerteventura in social networks.

The effects of this situation could be solved, improving the relationship with the tourist market and its actors, analyzing the image transmitted by users through social networks or even managing in a controlled way the reputation of the brand as indicated by Stalman (2014).

2   LITERATURE REVIEW

2.1   Formation of online image for a tourism destination

Since the nineties (Gallarza, Saura, & García, 2002; Gartner, 1993a; Um & Crompton, 1990) brand image has tended to be considered a complex and subjective construct (Bigne, Sanchez, & Sanchez, 2001), in which consumers' emotions and reasoning merge with evaluations that compare the experience and knowledge of a destination (Santana, 2007). The process of building an image developed by Gartner (1993b) is currently the most comprehensive theoretical proposal that is similar to the Destination Branding model. This author indicates that the formation of the image of a destination is made up of "three different but hierarchically interrelated components: cognitive, affective and conative ones" (1993b, 193). The overall image is constructed from a set of mental representations of knowledge or beliefs about the physical attributes of the destination as a whole (cognitive component), combined with evaluations and feelings aroused by the destination (affective component) (Baloglu & Brinberg, 1997). These two components contribute to the generation of a conative component (or behavior by tourists) (Beerli, A. y Martín, J. D., 2002; Gartner, 1993a).

Within these processes, the tourist plays a leading role in the formation and transmission of the tourism image to other people through word-of-mouth (WOM) (Camprubí, Guia, & Comas, 2009). Social networks, described by Dellarocas (2003) as the digitization of WOM communication, have caused a radical change in the tourists' behavior. They also contribute to and influence travel and tourism decision-making processes in other users (Tussyadiah & Zach, 2013). This paradigm shift means tourism companies have to change their way of communicating. Based on the above, the first hypothesis proposed is:

- **H1.** The image of a brand that has not been positioned in digital media is projected and built by users on the online social networks, without the intermediation of creative companies.

2.2   Co-creating the brand image projected through user-generated content (UGC)

Reviews and comments published about tourist destinations are valuable sources of information and have a high degree of influence on other users. This type of content has a higher degree of credibility than the image published by companies (Ordozgoiti, 2010). Thus, each public rating given affects the perception of the brand image as well as product purchase decisions about destinations (Choi, Lehto, & Morrison, 2007a; Milano, Baggio, & Piattelli, 2011; Santana, 2007; Xiang & Gretzel, 2010). This makes the Electronic Word-Of-Mouth a critical element that determines the brand awareness (image and reputation) through users' opinions (Jansen, Zhang, Sobel, & Chowdury, 2009).

Many researchers from a combination of quantitative and qualitative methodologies (Darias, Rodríguez, & Talavera, 2012; Jacobsen & Munar, 2012; Jalilvand, Ebrahimi, & Samiei, 2013; Költringer & Dickinger, 2015; Mariné Roig, 2013; Mariné-Roig & Clavé, 2015; Munar & Jacobsen, 2014; Planas Rodríguez, 2009; Stepchenkova & Zhan, 2013a; Zafiropoulos et al., 2015) highlight the importance of user generated content (UGC) on building the brand image of a destination. However, UGC is only one way, among many, to generate knowledge. Brand awareness represents the result of the interplay of several components that are configured in consumers' memories and include identity, image and brand recognition (Busacca, 2000; Keller, 1993). To strengthen the brand awareness of a destination, there must be a well-defined strategy in which users are placed at the center (Ayestarán Crespo, Rangel Pérez, & Sebastián Morillas, 2012). Thus, the second hypothesis put forward is that:

- **H2**. User-generated content (UGC) is part of the projection of the brand image and positively affects (its viral effect means publications have greater range and generate notoriety) brand awareness.

2.3   Content analysis

In the context of social media, the data generated on platforms such as Facebook, Twitter, and in tourism, Tripadvisor involve enormous amounts (petabytes). The scope of publication and content generation is vast spanning blogs, forums, review sites, image repositories, social networks, wikis, bookmarking (Mariné Roig, 2013). Consequently, there are search tools that compile UGC from various social media. With these tools, companies can monitor their reputation through concepts such as Strength (the number of times that the brand has been mentioned); Feeling (if comments are positive, negative or neutral); Passion (the frequency which the brand is mentioned); Reach (the number of users who talk about the brand) (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011)

In tourism literature, some works focus their interest on the image of the destination through content generated by users (Choi et al., 2007a; Költringer & Dickinger, 2015; Stepchenkova & Li, 2014; Stepchenkova & Morrison, 2006; Stepchenkova & Zhan,

2013a). While many researchers have compiled the information manually (Choi et al., 2007a; Illum, Ivanov, & Liang, 2010; Tang, Choi, Morrison, & Lehto, 2009; Valeri, 2016), others have opted for the analysis of massive data, minimizing time-employed and data storage capacity limits (Mariné-Roig & Clavé, 2015). In particular, Mariné (2015) makes use of Big Data as a tool to analyze the image of Barcelona as a tourist destination. Mariné (2015) states that the exploitation and analysis of massive data (Big Data) generated by users in social networks provide sufficient information on the image users receive and transmit about tourist destinations. This huge amount of information, characterized by its volume, accuracy and speed (Beyer & Laney, 2012; Soubra, 2012), is a powerful and useful tool for: (a) discovering new insights, (b) improving the relationship with current market (Di Meglio, 2013), (c) analyzing the image transmitted by users (Darias et al., 2012; Mariné-Roig & Clavé, 2015; Stepchenkova & Zhan, 2013b) and (d) managing in a controlled manner the brand reputation (Stalman, 2014). This collation and information processing of massive data related to UGC in social media is a much more convenient and efficient way for tourist destinations to reconfigure their branding strategy and improve their relations with tourists.

Thus, the final hypothesis proposed is that:

- **H3.** The content analysis in online social networks is determinant to define the brand image, perceived as well as projected, of the destination.

2.4 Case study: Smart Fuerteventura

According to the theoretical model of the phases of a tourist destination proposed by Agarwal (2006), Fuerteventura is a mature tourist destination that presents a model based on the offer of "sun and sand". Since early 2000, there has been a need to renew Fuerteventura's tourism offer and renew its image. Several objectives were set by the Cabildo (Island Council) of Fuerteventura (2010) in the Strategic Tourism Plan for the island in coordination with Spain's Horizon Tourism Plan 2020. These objectives include the promotion of sustainable tourism and diversification of the tourism sector into segments associated with a respectful use of the island's resources within the framework of a Biosphere Reserve. Another aim is to use tourism as a driving force for the development of island's productive sectors especially those promoting sustainable activities. In this context, the "Smart Fuerteventura" brand was created. It is an association of ecotourism in Fuerteventura composed of twelve companies involved in rural accommodation, activity and nature tourism and artisanal business activities.

Figure 1: Logo of Smart Fuerteventura

It aims to encourage and promote a model of quality and environmental tourism development on the island of Fuerteventura. Its mission is to contribute to an orderly and sustainable development of Fuerteventura as a tourist destination respecting the environment, sustainable economic development and the recovery and maintenance of cultural traditions. Among its key values, it includes contact with the local population and the enhancement of the connection with local lifestyles and culture, with special emphasis on experiences in rural areas, local cuisine, architecture, ethnography and the environment by identifying and promoting environmentally-friendly and sustainable products. So far, communication of the concept has been limited, but the association has had the help of the Tourist Board in some promotional activities (focused on international fairs). This complementary offer together with the main sun and beach proposal of the Fuerteventura Tourist Board and Smart Fuerteventura makes up the following cognitive image (see Figure 2).

Figure 2: Attributes of cognitive image projected by SmartFuerteventura.

3   RESEARCH METHODOLOGY

This study analyzes the perceived and projected image of the SmartFuerteventura brand to determine the effectiveness of online brand communication as well as the effects of co-creation of the image.

This was analyzed in a first phase:

a) First, the image projected by the brand and users of Twitter through the content generated by them, under the concept, Fuerteventura. This content was captured by browsing advanced Twitter search, where you can access data for any year. We used the Ncapture plugin that was installed in the Chrome browser. This plugin, that belongs to the software Nvivo was used to capture and export all the conversations and keywords most used.

b) Secondly, it was necessary to know the main markets of Fuerteventura, and for that the statistical data provided by the Canary Islands Statistical Institute (ISTAC) and the Fuerteventura Tourist Board were used, detecting that the main markets of the island are: Germany, France, UK and Spain.

c) Third, the annual report generated by "We Are Social and Global Web Index" (2015) indicates that the social networks most used by Germany, UK, France and Spain are Facebook and Twitter. Twitter gives you the opportunity to search for content by language, so, through the codes "lang: en" "lang: fr" "lang: de" tweets already classified by nationality were found. One of the problems that was detected is the small amount of content generated by and about Smart Fuerteventura. Therefore, it has also been necessary to analyze the content of users in a broader way, in order to discover what kind of topics they cover and are associated with the destination of Fuerteventura. In this way, you will know what aspects need improvement in the management of the brand and communication of Smart Fuerteventura.

d) Fourth, to analyze these data, we have mainly used Nvivo 11. This software is designed to help you to organize, analyze and find insights in unstructured, or qualitative data like: interviews, open-ended survey responses, articles, social media and web content. This program has been used previously in studies of social sciences, as in tourism. Pan et al. (2007) used it to analyze the content of travel blogs and created categories on each keyword. Bosangit & Mena (2009) also used it to analyze blog content.

In this case, the program is used to search, in social networks, patterns of repetitive words, trends from 2006 to present, correlation of concepts and interesting information to contrast with the hypotheses. From the side of the brand, we analyzed the main strategies carried out by the Tourism Board, from its account @ifuerteventura to see how they are transmitting the image. We also analyzed the strategies that are being carried out by the members of the association Smart Fuerteventura independently. For this analysis, the minimum requirements laid down by the CTIC Foundation (2012) have been taken into account in order to execute basic practices in online positioning.

Thus, data has been compiled manually from the associated companies, such as number of companies that have accounts in the main social networks, number of companies that tweet with hashtags, number of fans, number of posts, frequency of publications and time of users' feedback. The sample of the diagnostic of digital presence has been configured by a total of 12 companies, representing the association.

The methodological process of analyzing online content consists of 4 phases: (see Figure 3): (1) Data compilation, (2) Data processing, (3) Analyzing data and (4) Actionable results.

Figure 3: Methodological process of analysis of social data
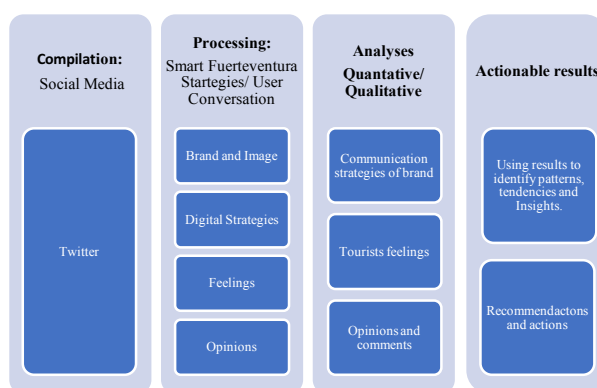
Source: Adapted from Bazeley, P. (2013).

A second phase of work consisted in the compilation of the results of the co-creation of the projected image with the UGC of the users, taking into account the three components of the image (cognitive, affective and conative) (see table 1). It was sought to reveal, as the image of the "Fuerteventura" brand was being formed following Gartner (1993) and what were the attributes most valued by users, as well as comments more remarkable. This would lead us to have a more efficient labeling of concepts, to adjust the online strategy of the "Smart Fuerteventura" brand.

Table 1: Analysis of online image components

Components of image	Analysis
Cognitive	Identifying brand attributes that are being shown to the public, as well as the attributes tourists associate with the destination. Messages, comments, images or links to videos and meta tags or labels assigned to user-generated content and SmartFuerteventura were extracted. (Hai-Jew, 2014).
Affective	The emotional attributes that users associate with the brand can be measured and analyzed. In the context of social networks, affective image is measured by the feelings generated by the brand, which are classified as positive, negative and neutral from online content analysis (Költringer & Dickinger, 2015). Thus, the most frequently used words were collated that encompassed feelings about Fuerteventura.
Conative	The conative image shows the subsequent behavior of tourists caused by the image, loyalty and promotion of the destination through UGC, content marketing and viral marketing, whose main purpose is to recommend other users to visit the destination (Alvarez-Sousa, 2015). This allows the brand reputation to be measured through negative or positive comments, and recommendations by tourists who have consumed ecotourism products in Fuerteventura (Agapito, Oom do Valle, & da Costa Mendes, 2013; Alvarez-Sousa, 2015).

In summary, quantitative and qualitative analyses of user-generated content were conducted to obtain information about (1) Feelings towards the brand, (2) Key words repeated by users, (3) Comments and opinions.

4   RESULTS

From the results obtained, certain patterns of repeated words related to the Island and SmartFuerteventura brand were identified. The aim was to link these words to attributes and tourists' emotions about the destination and to study how these can affect co-creation and the projected image. Insights and certain problems were identified.

4.1   Online image projected by the Tourist Board and Smart Fuerteventura

Both the Tourist Board as well as SmartFuerteventura's association of entrepreneurs have posted tweets related to the Island and the products offered. However, SmartFuerteventura entrepreneurs published only in Spanish and when tweeting very few use the hashtag #Fuerteventura. This leads to a low reach to the rest of the community on Twitter. The following graph shows a correlation of the most common words used by SmartFuerteventura entrepreneurs in connection with Fuerteventura. The lack of comments regarding the attributes offered by this ecotourism brand can be observed, with only the hashtag #mtb referring to mountain bike activities being mentioned (see Figure 4).

The tourist Board account @ifuerteventura carries out the most tweeting using the hashtag #Fuerteventura that increasingly offers information on products. Despite the promotional activities on ecotourism in Fuerteventura in offline media, there are an abundance of tweets about its beaches, holidays and new direct flights between the island and outgoing countries. In Figure 8, the evolution of the most used hashtags from 2013 to the present can be seen. At first, only #Fuerteventura hashtag was used, but during the period 2013 to 2016, there was a higher number of hashtags employed as indicated in the graph. This demonstrates that twitter practices have improved considerably. Heritage and natural elements are the ones mentioned most with an increase in 2015, in particular the *ruta de los coroneles* (route of the colonels), the market and Biosphere Reserve are the ones most highlighted by users.

Figure 4: Frequency of words used by SmartFuerteventura members related to Fuerteventura.
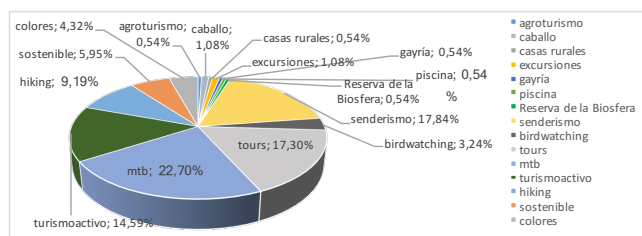
Source: Information obtained and adapted from http://www.twitter.com

Figure 5: Fuerteventura Tourist Board account (@iFuerteventura): number of hashtags used per year
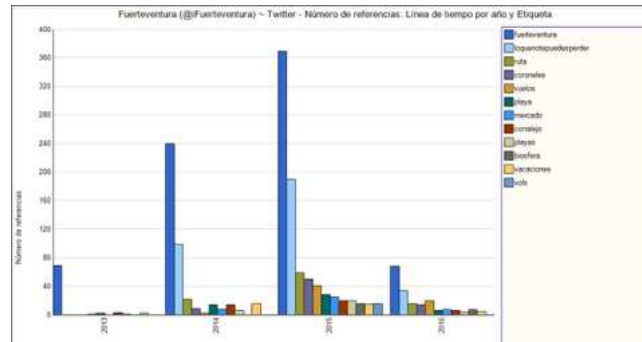
4.2　Online image projected by twitter users

A total of 1,000 tweets from between 2006 and 2016 were analyzed to see if there were any changes in user trends relating to Fuerteventura. According to the map below, tweets published about Fuerteventura belong to Germany, UK, France and Spain.

Figure 6: Geographical distribution of tweets.

The hashtag #SmartFuerteventura appears in Twitter. However, it appears to be rarely used by the public, with the main users being paid agents such as Repsol Guide journalists, bloggers about cuisine and professional chefs.

4.3　Online image projected by twitter users

When looking at Fuerteventura in Twitter, different nationality trends can be identified (Table 2). The most repeated themes are those related to the beach, good weather, and surfing or kite surfing (cognitive and characteristic components of the destination). There are some comments and posts referring to outdoor activities such as hiking, cultural and historical heritage and wildlife. These indicate that the Germans are the main tourists that show a preference for nature activities and who value the island as a Biosphere Reserve.

Users have also shown positive emotions towards the island. The most common adjectives are lovely, hot, magnificent, beautiful and paradise. Different tweets posted by tourists who have visited the island, from which the conative component of the projected image is displayed were also detected. Many of the comments talk about the good experiences on the island, and the intention to repeat the trip and the level of recommendations to visit the island is quite high.

Table 2: Cognitive, affective and conative components of the Image of Fuerteventura in Twitter.

Component	TWITTER	
	Subject	Tweet
Cognitive	Windsurf	*Wind Wind Wind! Have a nice weekend dudes ⚓ #riscodelpaso #fuerte #windsurf #fuerteventura #sotavento #jandia #surf... https://t.co/tTY4eTcg4k*
	Surf	*my favourite place #atthebeach #tbt #throwback #fuerteventura #canarianislands #surfing #s... https://t.co/fIzL3opDj3 https://t.co/LwCYWXS0KR*
	Beach, sun and relax / Most beautiful Beaches in Spain	*The weather is lovely, I mean it's gonna be topped off with 27 degrees on Wednesday! #Fuerteventura #sun #hot #beach* *Schönster Strand Spaniens #cofete #fuerteventura https://t.co/8juVnwaE8z https://t.co/DVN3pzvgQb (the most beautiful beaches in Spain #cofete #fuerteventura ...)*
	Activties in nature: hiking and climbing	*Nächste Woche im Stern. Wandern auf Fuerteventura mit Uwe Grimm* *Bergsteigen in Fuerteventura! ☀️ #bergsteiger #bergssteigen #berg #fuerteventura #meer #urlaub... https://t.co/PHKFdqGKzW*
Affective	**Adjetives**	**Tweet**
	Charming	*Miss you lovely #Fuerteventura ☀️☀️☀️ https://t.co/LCkf8QBIzS*
	magnificent	*Qu'est ce que c'est magnifique fuerteventura*
	Pretty	*Came home from the beautiful island Fuerteventura last night. As you may see on this pictu... http://ift.tt/1SjqEzI*
Conative	**Twitter**	
	@Sheridansmith1 I'd recommend going to Fuerteventura. Just got back from there and it was lush *@fuertehols had a wicked holiday in Fuerteventura in October. Would recommend it to anyone*	

Source: Information exported from twitter with Ncapture

When running more specific searches on the attributes of Smart Fuerteventura (see table 4), related tweets have been found, but in a smaller amount than the one obtained when searching more generally for "#Fuerteventura". However, the hashtags that accompany in their publications are "#Fuerteventura" and related to the themes of the tourist products that are offered (gastronomy, Birdwatching & Stargazing and Rural Accommodations).

Table 3: Tweets destacados sobre Insights de usuarios

Atributos	Tweet
Gastronomy	*I have about 6 kilos of **cheese** in my Fridge. Asiago, Montasio n goat's **cheese** from **Fuerteventura**. I need more for #Christmascheeseboard* *Some of the tastiest goat's **cheese** in the world, one of the flavours of #**Fuerteventura** http://buzztrips.co.uk/posts/the-surprising-flavours-of-fuerteventura/ ...* Artisanal #**cheese** #**fuerteventura** #delicious
Birdwatching & Stargazing	Corvus Corax Tingitanus 1500m #raven #canaryislands #**birdwatching** #**fuerteventura** #roadtrip... https://www.instagram.com/p/BIuiTZBA4ZT/ #Turnstone on the rocks in #**Fuerteventura** #Canaries #**birdwatching** #photo #nikond5000 https://instagram.com/p/1YdG8wxIQW/ **Birdwatching** in #**Fuerteventura**. Hoping to see houbara etc. Looked for hoopoes all over. Just seen one next to our shopping centre! Heading to Fuerteventura where I plan on doing things like swimming with dolphins and stargazing. But what to eat?! Any recommendations?!
Museos	Such a shame this **museum** in #Antigua has been closed all my stay in #**Fuerteventura** Would've liked to see it :(
Senderismo y Excursiones	Qué hacer en #**Fuerteventura** sin sol http://scl.io/vNOoK1V0 vía @getsocial_io #mipasaporte #viajes #canarias #playa #**trekking** It was so nice to go on top of the #vulcan on #**fuerteventura** #travel #**hiking** #corralejo @... https://www.instagram.com/p/BE0Q3IjNFCS/ Finishing an intense week in **Fuerteventura**! #biking #running #**hiking** #friends #holidays #travel #CanaryIslands As I look at the window I miss **Fuerteventura** more and more - **hiking** in the west of the island... https://www.instagram.com/p/-6HDu3E370/

Source: Information exported from twitter with Ncapture

5   DISCUSSION

This study shows that the online brand image is projected by all users of social networks (both companies and customers) through UGC. This confirms the work of Camprubí Guide & Comas (2009), which found that tourists play an important role in the formation and transmission of tourism images to others. Twitter is an intermediary tool for projecting a destination's image by allowing interaction and e-word-of-mouth. This in turn determines the brand awareness (image and reputation) of a destination through the publication of tourists' opinions (Jansen, Zhang, Sobel & Chowdhury, 2009).

The results highlight that the SmartFuerteventura brand image has not been positioned in digital media and its projection is being built by users in social networks without the intermediation of creative companies. However, since it is quite a new and little known brand image, the amount of UGC about SmartFuerteventura is very limited. This highlights the need for better adaptation by tourism companies to new forms of social communication. That is, tourism companies must take into account the integration of communication between conventional and online channels to (1) reach the public and (2) ensure that the co-creation of the projected image is generated in social networks (Chaffey, Ellis-Chadwick, Mayer, & Johnston, 2009). This helps to reinforce brand awareness. However, previously a well-defined strategic marketing plan is required, placing the user at the center of strategy and encouraging participation in online communities (Ayestarán Crespo et al., 2012; Kiráľová & Pavlíčeka, 2015).

Data from the interviews with company managers of SmartFuerteventura reveal that there has been no prior strategic marketing plan and neither has there been constant online communication. This would justify the poor results regarding the awareness, knowledge of the SmartFuerteventura brand and its level of content generation. However, some data exist, albeit limited, evidencing the existence of some UGC related to SmartFuerteventura though compared to the huge amount of UGC related to Fuerteventura, it clearly shows the inefficiency of current communication actions carried out to highlight the Island's new values. The content generated both by tourists and by promotional agencies continues to project the same image so deeply rooted in Fuerteventura since the 70s: beaches, sun, and water sports. Thus, this study demonstrates that the second hypothesis is true: UGC is part of the projection of the brand image and causes knowledge of it.

Both the projected image as well as the UGC should be included in studies that aim to provide value to destinations and tourism businesses. In this way, assistance can be given in taking decisions related to tourism management, development and promotion (Mariné, E, 2015). In short, the methodology proposed in this study (data analysis) becomes a very useful tool. Through the collection of quantitative and qualitative data, the image being projected can be defined -and perceived- by users. This new trend in Social Data allows companies to control their online reputation, measure the effectiveness of their promotional activities off and online, and control the image projected on social networks more efficiently (Költringer & Dickinger, 2015; Mariné-Roig & Clavé, 2015).

As identified, SmartFuerteventura must realize that social networks are the main communication tool where the users have the power over brands. In this sense, the figure of the Community Manager is crucial to manage brand communication efficiently in social media, managing online reputation and maintaining a relationship with potential customers through active listening.

To sum up, the case of the SmartFuerteventura can be used to transfer the methodology of analyzing projection of brand image to other sustainable island destinations with similar characteristics. The analysis of a destination's image through social data (online monitoring conversations of users and the actions of the tourism business community) can help discover what inspires and transmits a brand to tourists. Furthermore, the methodology used herein (Analysis of Social Data) helps to find answers to problems that challenge sustainable tourism destinations. Future lines of research could involve applying the same analysis to other recently created tourism brands that belong to sustainable destinations with features and purposes similar to Fuerteventura.

6   CONCLUSIONS AND LIMITATIONS

Despite the importance given to Big Data as an analytical tool for massive amounts of data, certain limitations have been detected when collating data from social networks, especially from Twitter. One such limitation is that the API (Application Programming Interface) of this platform does not allow the export of large numbers of tweets according to search conditions. Therefore, though, it has been possible to export most of the tweets from the accounts of each company, however, when trying to export generic tweets of users for a certain time, the platform has prevented the process. That is why much of the data has had to be imported into NVIVO manually for subsequent analysis.

Acknowledgments

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