Social media impact of tourism managers: a decision tree approach in happiness, social marketing and sustainability

Araceli Galiano-Coronil  
*Department of Marketing and Communication, University of Cádiz, Cádiz, Spain*

Sofía Blanco-Moreno  
*Department of Business Management and Economics, University of Leon, León, Spain*

Luis Bayardo Tobar-Pesantez  
*Department of Economy, Universidad Politécnica Salesiana, Cuenca, Ecuador, and*

Guillermo Antonio Gutiérrez-Montoya  
*Don Bosco University, San Salvador, El Salvador*

**Abstract**

**Purpose** – This study aims to analyze communication from the perspective of social marketing, positive emotions, and the topics chosen by Spanish tourist destinations to show their destination image. Additionally, this research shows a message classification model, based on the aforementioned characteristics, that has generated a greater impact, offering clarity to tourism managers on the type of content they should publish to achieve greater visibility.

**Design/methodology/approach** – The methodology used in this work combines content analysis and data mining techniques. The classification tree using the chi-square automatic interaction detector (CHAID) algorithm was selected to determine predictors of like behaviour.

**Findings** – The results show that the predictor variables have been emotions, social marketing and topics. Also, the characteristics of the messages most likely to have a high impact are those related to emotions of joy or happiness, their purpose is behavioural, and they talk about rural, cultural issues, special dates, getaways, or highlights of a town or city for something specific.

**Originality/value** – This study is the first to analyze the content of the tweets shared by destination tourism managers from a social marketing, positive emotions, and sustainability perspective, determining the possible predictors of likes on Twitter. The authors contribute to the literature by deepening the understanding of how social marketing and the positive emotions promoted drive a more significant impact in tourism communication campaigns on social media. The authors provide destination managers with a way better to understand the variables relevant to users in tourism content.

**Keywords** Social marketing, Twitter, CHAID, Tourism destination, Sustainable tourism, Happiness

**Paper type** Research paper

1. Introduction

In the social media era, people are affected by the content shown to them, influencing their behaviour before travelling (*Su et al.*, 2021). Additionally, tourists feel a strong motivation to
search for different shared experiences on social media, which allows them to reduce their uncertainty (Oliveira et al., 2020). Tourist activities allow breaking into the daily routine (Xu and Zhang, 2021). In this sense, social media has become, after the COVID-19 situation, the most popular source of inspiration and opinion for target tourists to find opportunities to invest their free time, find destinations to go to, and activities to enjoy in them (Leelawat et al., 2022).

The tourism industry is one of the industries with the highest income for Spain, placing it in the last decade as the first or second country in the world with the most tourist arrivals, fighting with France for this position (UNWTO, 2019). The exchange of tourist experiences has received considerable attention from academics, yet there is not enough research analyzing the different types of content shared on social media (Dedeo et al., 2020), such as tourism manager content or tourist-generated content.

User-generated content (UGC) platforms, such as Facebook, Twitter, and Instagram, have experienced exponential growth in recent years and have become platforms that offer valuable information that allows the analysis of social trends in tourism (Leelawat et al., 2022).

For example, Twitter has more than 556 million monthly active users worldwide (Data Reportal, 2023). Additionally, this platform is known for the use of hashtags that allow finding particular topics, and analyzing the different contents and topics associated with them, together with other quantitative data such as likes and retweets, that is their impact. Various authors recommend the use of Twitter to understand tourism dynamics (Leelawat et al., 2022; Mehraliyev et al., 2022) since it is one of the platforms that has grown the most in recent years for the analysis of sentiments of user-generated content related to text and photographs (Blanco-Moreno et al., 2023). In this regard, social media impact is an important success metric for destination marketing managers, because it influences destination brand love, brand attachment, brand loyalty and corporate reputation perceived by the tourists (Mele et al., 2023).

Numerous studies in marketing and consumer behaviour have used UCG from the perspective of tourists sharing their experiences (Berezina et al., 2016; Garner et al., 2022; Narangajavana-Kaosiri et al., 2019; Timoshenko and Hauser, 2019), however, although it has been shown that the content promoted by official destination profiles has a direct influence on the behaviour of tourists (Ballester et al., 2021), there is a clear gap in the analysis of the content published by tourism managers, which can be seen by tourists or future destination consumers and can therefore be key to their decision to visit that destination.

Tourists are influenced by pre-trip information. This information shapes their future behaviour (Kim, 2014), and therefore the lived tourist experience, happiness, and satisfaction. The transmission of a tourist image related to happiness or sustainability can affect the tourist experience. For example, happiness is a topic that has been analyzed over the past few decades, but today it is much more important because consumers now seek happiness through their consumption (Garner et al., 2022). Since the marketing objective is to satisfy consumers’ needs (Kotler, 2011), academics have begun to investigate how society itself can make companies focus more on sustainability (Mcdonagh and Prothero, 2014), for example, through the development of different tourist products and services that address the new needs of tourists. In addition, there is evidence that tourists are affected by the destination image projected by tourism managers (Afshardoost and Eshaghi, 2020) and by positive emotional factors shown in this type of content, such as well-being, that is considered a way of referring to the happiness (Han and Hyun, 2015). Therefore, it is crucial to understand how tourism managers convey their destination image through social media, and if this image affects future tourists who will visit the destination.

The marketing field should examine the factors that influence happiness and how to improve it (Garner et al., 2022), and a fruitful way to investigate this area is through tourist
experiences in destinations since it involves a specific context that gives a high degree of validity, along with different social marketing strategies. The transmission of a tourist image related to happiness or sustainability can affect the tourist experience.

Sustainable or responsible tourism has been extensively researched in marketing (Caruana et al., 2014), but its connection with social marketing has received little attention in terms of how this strategy can encourage tourist behaviour (Gregory-Smith et al., 2017). In addition, it has been shown that social marketing drives behaviour change (Haldeman and Turner, 2009) and that the tourism industry can apply social marketing to promote the pro-environmental behaviours of tourists (Tkaczynski et al., 2020), but the use of social marketing to guide tourism is limited in academia, despite its relevance (Schuster et al., 2015).

While social marketing research is extensive and well-established, to date, tourism companies have neglected social marketing (Truong and Hall, 2017), so it is necessary to delve into the benchmarks of social marketing to understand how tourism operators can foster tourist behaviour change (Tkaczynski et al., 2020). Indeed, some research has already applied social marketing methods to identify different tourist behaviours and segment tourists (Dinan and Sargeant, 2000), or to examine the effectiveness of social marketing in motivating tourists to create socially responsible behaviour (Filimonau et al., 2017; Mair and Laing, 2013). Although social marketing has been considered a fundamental pillar in sustainability communication (Tölkès, 2018), there is still a gap in research on the tourist image projected by destinations and its impact (Hall, 2015), and on how social marketing is reflected in the content generated and shared on social media by tourism managers, which can be classified into informative messages, dialogue messages, and behavioral messages (Guijarro et al., 2021; Guo and Saxton, 2014).

As current tourism research may be limiting its potential to foster sustainable behaviour in tourism (Tkaczynski et al., 2020), the following research is proposed. This study aims to apply the main types of social marketing to understand how tourism managers communicate their destination image, trying to influence sustainable tourist behaviours. Although there are already analyses that apply social marketing in the study of messages disseminated by users, there is no evidence of analysis of messages from tourism managers themselves (Shang et al., 2010), so the official Twitter accounts of the 17 autonomous communities of Spain have been analyzed from social marketing, happiness, and sustainability perspective. By using content analysis and data mining techniques, the content of the messages published by tourism managers is extracted, identifying the most frequent topics. Subsequently, the possible predictors of likes are determined.

In this study, we address three main questions.

1. What are the emotions conveyed in tourist posts that show the greatest impact on Twitter?
2. What type of messages from the perspective of social marketing show those tourist posts to generate a greater impact?
3. What tourist topic do those tourism managers post refer to achieve a greater impact and their relationship with sustainability?
4. Which are the variables that best predict the impact of messages?

By answering these questions, we contribute to the field of research on tourism destination managers. Firstly, we can deepen our understanding of how social marketing allows a greater impact on tourism communication campaigns on social media (Schuster et al., 2015). Secondly, we provide a deeper understanding of the multiple factors that can influence that impact, such as the type of emotion conveyed, the type of social marketing promoted, and the type of tourist experience shown (Truong and Hall, 2017). Thirdly, we provide destination
managers with a way to better understand the variables that are relevant to users in tourist posts, those that evoke memories and those that better recreate a possible tourist experience in their minds, thus getting users to interact with posts and obtaining more likes (Tkaczynski et al., 2020).

This study aims to analyze communication from the perspective of social marketing, positive emotions, and the topics chosen by Spanish tourist destinations to show their destination image. Additionally, this research shows a message classification model, based on the aforementioned characteristics, that has generated a greater impact, offering clarity to tourism managers on the type of content they should publish to achieve greater visibility.

Furthermore, this research provides a solid methodology to better understand how social marketing researchers can measure happiness in the tourism industry and determine which factors influence the impact of tourism posts on Twitter (Leelawat et al., 2022; Mehraliyev et al., 2022).

This article begins with a literature review on happiness in social marketing and how it can lead to sustainable tourist behaviour. Next, a two-phase methodology (content analysis and data mining) is proposed to address the three research questions. The results are presented and discussed in the final section.

2. Literature review

2.1 Happiness through positive emotions in social marketing. Application on Twitter

Well-being is considered a way of referring to the happiness of a group of citizens or nations. Some authors claim that happiness is a subjective matter at an individual level and an objective matter at a social level (Silva-Colmenares, 2008). In this regard, collective happiness can be analyzed as the sum of individual well-being according to different aspects collected in a synthetic indicator such as the Happy Planet Index (2012), so subjective well-being is considered the scientific term for happiness (Durahim and Coşkun, 2015). Lee et al. (2013) determine three components of well-being: (1) the absence of negative emotions, (2) satisfaction with life, and (3) the presence of positive emotions. Positive emotions are those in which pleasure or well-being predominates and allow for the cultivation of personal strengths and virtues, both of which necessarily lead to happiness. Authors such as Daniel Goleman (1996) consider emotion the bridge between need and behaviour. In this sense, it is important to note that social marketing is configured as an ideal discipline to address this topic since it is defined as: “the application of commercial marketing technologies for the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behaviour of specific recipients, to improve their well-being as well as that of society” (Andreasen, 1994).

Research on emotions in social marketing has two main approaches: emotions as stimuli to influence behaviour (Vansteelandt et al., 2005) and research on positive states and emotions derived from the social marketing environment. Emotions can be positive or negative. Although recent studies have addressed the various taxonomies of emotions (Harley et al., 2017; Keltner and Cowen, 2021). Laros and Steenkamp (2005) summarized emotions in consumer behaviour and proposed the following emotional hierarchy, as shown in Figure 1. Experiments conducted by Isen (1987) over twenty years showed that when people feel positive emotions, their thinking becomes more creative, flexible, and open to information. The broadening of attentional focus and mental flexibility produced by positive emotions can lead to discovering new ideas.

Although the emotional or affective category of models used in social marketing is one in which the main effect sought is emotional impact. This engagement can be with the message, concept, or ideals of social marketing.

In this context, Twitter is configured as a powerful communication tool since its great interactive capacity allows organizations to establish quality relationships with audiences
and facilitates real-time information (Huertas et al., 2015). These characteristics of Twitter make its use increasingly important in tourism activity and go beyond general destination information (Cruz et al., 2011). Since 2005, various studies, such as Cruz (2005), have highlighted that the promotion of a tourist destination must achieve the following objectives: inform, persuade, induce, remember, communicate, and sensitize current and potential customers as well as attract and conquer their loyalty. In this sense, it should be noted that tweets must also follow the same line. This is related to social marketing in the online environment since it has been observed that messages, from this social marketing approach, present a purpose of dialogue or conversation, informative or behavioural. This category of behaviour can be linked to the way tweets induce a certain action or conduct Dann (2010), as indicated in the main objectives to be achieved in tourism promotion according to Cruz (2005).

2.2 Sustainability and happiness in tourism destination

One of the five reasons for leisure tourism is “reward maximization” (Fodness, 1994) or the pursuit of pleasure and sensations (Filieri et al., 2021). Emotions play an important role in tourism, as they have a high potential to modify the current and future behaviour of travellers towards destinations (Carballo-Fuentes et al., 2015). In the literature, the information provided by the tourist is the most popular method for capturing and measuring the emotional states of travellers in response to events, experiences, products, or stimuli (Hadinejad et al., 2019).

When tourists experience positive feelings, such as pleasure and happiness, they express them through words and hashtags such as happy, joyful, content, etc. These expressions have often been associated in academia with tourist events, weather conditions, or weekend travel typology, and act as facilitators in achieving happiness (Filieri et al., 2021).

Further, there is increasing marketing interest in how tourists behave more sustainably, as this can contribute to both higher performance and overall Sustainable Development Goals (Walsh and Dodds, 2022). A theoretical framework in the field of tourism is the economy of happiness or hedonic psychology (Kahneman, 1999), which argues that people experience different utilities in moments of travel and engage in behaviours that offer them, for example,
instant utility, to be happy (Dolnicar, 2020). An example of instant utility is environmentally
friendly tourism experiences, and people, specifically tourists, want to engage in behaviors
that are instantly useful because they make them happy through happiness. Participating in
tourism activities is inherent to the search for pleasure, for this reason hedonic psychology is
a framework that allows designing behavior change in tourism towards sustainability
(Kahneman, 1999).

Environmentally friendly behaviour by tourists essentially consists of two attitudes:
behaving responsibly in natural areas, enjoying and appreciating nature in a way that
advocates the preservation, has little tourist interference, and ultimately leads to progressive
participation of the local population (John, 2020), and being an environmentally conscious
consumer, which means buying environmentally friendly products, although tourism
characteristics make it difficult to change tourist behaviour.

For example, in research on eco-hotels and the measures that include consumer well-being,
it was found that eco-friendly features increase the intention to practice pro-environmental
actions (Trang et al., 2019). Another study showed that perceived service quality and quality
awareness have a positive impact on visitor satisfaction and pro-environmental behaviour
(He et al., 2018).

Therefore, the culture of happiness management, together with social marketing, can help
achieve sustainability goals and healthy habits also, to achieve these sustainability
objectives, companies must be aware that today’s society requires organizations to
implement these types of practices (Elías-Zambrano et al., 2021).

2.3 Social marketing and tourism
Social marketing is directly related to the well-being of tourists and sustainability. It has been
found that social marketing allows for generating changes in a population and produces a
beneficial effect on people’s well-being by promoting sustainable tourism (John, 2020).
Regarding the happiness of the tourist derived from their visit to a specific destination, it was
found that the destination image was positively correlated with life satisfaction, well-being,
and positive and negative affect (Chen and Robert, 2018).

Therefore, it is important to design tourist experiences that allow travellers to experience
instant utility, such as environmentally friendly tourism experiences (Dolnicar, 2020). Some
studies tested the effectiveness of pro-environmental appeals (Dolnicar, 2020), as long as these
appeals aimed to activate or modify known beliefs as antecedents of the desired behaviour. As
long as these strategies imply that the desired environmentally friendly behaviour is convenient,
does not take much time or effort, and occurs in a context free of restrictions (Steg and Vlek, 2009).

Tourism managers behave as intermediaries through their social media accounts, in
which they show a predefined and strategic destination image, and intermediaries could have
an important goal in sustainable travel behaviour following both the Knowledge, Attitude,
Behavior theory (KAB) and Social Marketing theory (SMT) (Walsh and Dodds, 2022). On the
one hand, SMT implies marketing strategies designed to promote the acceptability of social
concepts and influence the behaviour of the audience (Kotler and Zaltman, 1996) and this is
also aligned with the idea that destination tourism managers can find their competitive
difference through strategies related to happiness (Ravina-Ripoll et al., 2021). On the other
hand, KAB suggests that knowledge about something leads to changes in that person’s
attitudes and ultimately their behavior (Walsh and Dodds, 2022), what is aligned with that the
environmental knowledge that the contents of destinations promote impacts attitudes and,
therefore, sustainable behavior of tourists (Lu and Wang, 2018).

Recently, research has emerged that addresses the sustainability issue from the supplier’s
perspective, using the influence of marketing strategies on sustainable behaviour (Rodriguez-
Díaz and Pulido-Fernández, 2020; Tölkes, 2018), since social marketing can be a useful
consumer-oriented approach to promote behaviour change and improve well-being (Walsh and Dodds, 2022).

Specifically, the use of social marketing has been identified as a measure to achieve behaviour change among tourists (Tölkes, 2018), and how the use of information technology, specifically social media, by online intermediaries allows for more sustainable tourism (Gössling, 2017), but there is still a need for more conversations about values and sustainability within the tourism supply chain and its research (Mossaz and Coghlan, 2017).

Social marketing specialists suggest that there is an opportunity to create good marketing messages and, therefore, more sustainable consumption, as social marketing employs concepts and tools derived from commercial marketing that can be used to pursue broader social goals (Walsh and Dodds, 2022).

Social marketing may be able to manage tourists’ expectations if travel information is provided through intermediaries, and if there is an opportunity for local tourism offices and social media sites to influence and therefore socially market positive behavioural options that can contribute to achieving sustainable travel (Walsh and Dodds, 2022).

### 3. Methodology

#### 3.1 Design of the investigation

The methodology used in this work combines content analysis and data mining techniques. The content analysis aims to obtain a series of measures (frequency, duration, order, etc.) on the elements contained in a message, regardless of its format. From a more qualitative approach, the meanings of the messages will be extracted, and the relationships between the topics addressed will be identified (Krippendorff, 1980). Concerning data mining techniques, the classification tree using the CHAID algorithm (Chi-square automatic interaction detector) was selected to determine predictors of like behaviour. This algorithm identifies possible interactions between variables to establish those categories of each variable that will best segment messages based on the obtained likes, and at the same time, it determines which independent variables have the better predictive ability (Kass, 1980; Niuniu and Yuxun, 2010). For the classification analysis, the SPSS 29.0 program, which includes the CHAID algorithm, was used. At each step, CHAID selects the independent (predictor) variable that presents the strongest interaction with the dependent variable, and the categories of each predictor are merged if they are not significantly different from the dependent variable. This technique permit to use a large number of variables that can be useful in the segmentation process, which allows operators to offer a complete market study for a specific objective using a particular criterion variable (Díaz-Pérez et al., 2020).

The classification tree and the CHAID algorithm has been used because it offers two advantages. On the one hand, one of the advantages of the classification tree over other techniques, such as neural networks or logistic regression, is that it provides more understandable information to the marketing manager when making decisions about the characteristics of the messages that produce a more significant impact. Neural networks do not provide information about the results; using a network of hidden connections and the equation provided by logistic regression is not easily reducible to Marketing rules. On the other hand, it is an appropriate technique for analyzing Twitter because classification trees are less affected by possible extreme values, and many variables on Twitter tend to have extreme values (highly skewed long-tailed Poisson distributions), such as the number of retweets or likes per tweet.

#### 3.2 Selection of the sample and determination of the variables

For the analysis, the official Twitter profiles of the most active tourism managers in the autonomous communities of Spain were selected during the period between January 1st and
December 31st, 2022. The aim is to analyze how these organizations approach online communication from a social marketing perspective, happiness, and sustainability-related topics. Additionally, the profiles of messages that best predict the obtaining of likes are to be found. A total of 9,458 messages were collected during the considered period. Once the information was collected, messages reflecting positive emotions related to happiness were selected. For this purpose, the hierarchy of emotions in consumer behaviour in the context of the social marketing model by Laros and Steenkamp (2005) was considered, as well as the Hedonometer, to contextualize positive emotions in the Twitter environment. The Hedonometer is an algorithm that, by analyzing around 50 million words from around the world in 10 languages, has selected 10,000 words classified on a scale from one to nine (the word “happy” has a score of 8.30) (Dodds et al., 2011; Dodds and Danforth, 2010). Based on these premises, the following positive emotions were considered: wonder, love, happiness, peace, joy, cheerfulness, excitement, encouragement, and calm. Once positive emotions were selected, messages reflecting these feelings were filtered, resulting in a sample of 1,082 messages (Table 1). In this database, the tweet is configured as the unit of analysis.

Regarding the identification of variables, a variable called “positive emotions” has been created, whose categories correspond to each of the positive emotions mentioned above. Another variable considered has been the user under study, that is, each of the official tourism accounts considered. Likes have also been considered as an indicator of tweet impact, which is important feedback for the organization (Wohn et al., 2016).

An important issue to consider is how likes, which is the dependent variable in the classification tree, will be measured. Considering the date of message publication, the longer a message has been exposed, the more likely it is to achieve greater impact or number of likes, i.e. the date it starts participating in the community (Bhattacharya et al., 2014; Xing and Gao, 2018). Based on this premise, to measure likes, a variable has been created that takes into account the number of days from when the message was posted until December 31st, 2022 (the last day of the considered period). This variable, called impact, is the average of likes per day of each message, which has been differentiated into four intervals: tweets that have not received any likes; very low impact (more than 0 likes and less than or equal to 0.05 likes per day); low impact (between 0.05 and 0.2 likes per day inclusive); medium impact (between 0.2 and 0.5 likes per day inclusive); and high impact (more than 0.5 likes per day).

<table>
<thead>
<tr>
<th>Twitter profile</th>
<th>No tweets/sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>@viveandalucia</td>
<td>312</td>
</tr>
<tr>
<td>@TurismoMadrid</td>
<td>158</td>
</tr>
<tr>
<td>@turismormurcia</td>
<td>215</td>
</tr>
<tr>
<td>@c_valenciana</td>
<td>55</td>
</tr>
<tr>
<td>@cant_infinita</td>
<td>45</td>
</tr>
<tr>
<td>@catexperience</td>
<td>24</td>
</tr>
<tr>
<td>@CyLesVida</td>
<td>23</td>
</tr>
<tr>
<td>@Extremadura_tur</td>
<td>23</td>
</tr>
<tr>
<td>@lariojaturismo</td>
<td>47</td>
</tr>
<tr>
<td>@Turgalicia</td>
<td>80</td>
</tr>
<tr>
<td>@TurismeBalears</td>
<td>32</td>
</tr>
<tr>
<td>@TurismoAsturias</td>
<td>26</td>
</tr>
<tr>
<td>@TurismoDeCeuta</td>
<td>22</td>
</tr>
<tr>
<td>@i_Euskadi</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>1,082</td>
</tr>
</tbody>
</table>

Source(s): Own elaboration

Table 1. The number of tweets that make up the sample
Continuing with the analysis of variables, the principles that define sustainable tourism according to the World Tourism Organization (UNWTO, 2023) have been considered.

1. Natural and cultural resources are conserved for continuous use in the future while providing benefits.
2. Tourism development is planned and managed in such a way that it does not cause serious environmental or socio-cultural problems.
3. Environmental quality is maintained and improved.
4. A high level of visitor satisfaction is sought, and the destination retains its prestige and commercial potential.
5. The benefits of tourism are widely distributed throughout society.

Taking into account these principles and after a thorough examination of the message content, the following categories of the thematic variable have been determined: Gastronomy, nature, plans, rural, sport, culture, city, weekend trip/day, and special dates. To validate these categories, two experts have coded a sample of messages, and the degree of agreement between their evaluations has been measured using Cohen’s Kappa coefficient, resulting in a cross-tabulation table for data classification based on the coders’ results. The Kappa coefficient results show a significance level lower than 0.05, indicating that there is a relationship between the two classifications, and the null hypothesis of no agreement between the two experts’ results is rejected. Additionally, the value of this parameter is 0.7, indicating that the agreement between the two coders is satisfactory according to the scale used by Lombard et al. (2002).

Finally, it has been considered important to take into account the perspective of social marketing in the analysis, as the adaptation of this discipline to the Twitter environment can help understand whether messages that stimulate certain behaviours can be significant in obtaining a higher number of likes. Based on the research by Guijarro et al. (2021) and Guo and Saxton (2014), three categories have been determined for the independent variable “social marketing”: informative messages, dialogue messages, and behavioural messages.

4. Results
4.1 Descriptive results
Firstly, the general results on the most relevant or most widely published topics and the impact they have achieved are presented. Table 2 shows that messages about special dates, culture, and nature have achieved a more significant impact. An example of this type of message can be seen in Figure 3. Suppose the association between the thematic variable or topics and the impact variable is verified. In that case, the Chi-square test yields a p-value <0.001, so it can be affirmed that said relationship occurs.

The following are the descriptive results corresponding to the variables “social marketing” and “positive emotions,” and their relationship with likes, as a measure of the public’s reaction impact. As shown in Table 3, from the social marketing perspective, the most frequently posted messages by organizations are informative ones, followed by dialogue ones, and finally, behavioral ones. On the other hand, the most commonly published positive emotion is related to joy, and the last published is happiness (messages containing the term happiness or related terms such as happy). It is noteworthy that the high volume of messages about joy is largely due to the #DateUnaAlegria hashtag, as this tag appears in many messages, even though the term joy may not be explicitly mentioned in the content. If we examine the message content, we see that the term joy appears in a context related to leisure, vacations, parties, and hope (Figure 2). It also stands out as part of the slogan “No hay
alegría pequeña” (There is no small joy), for which Andalusia received the award for the best tourism campaign in the world for a region, awarded by the International Circuit of Tourism Film Festivals. This award considered the Oscar of tourism advertising communication, is given to Andalusia’s campaign after being awarded throughout the year at the best international festivals, such as those held in Japan, South Africa, Greece, Croatia, Serbia, Portugal, and Spain (Regional Ministry of Tourism, Culture and Sports, 2022).

Below are the results regarding the impact of tweets considering the time the message has been exposed within the period considered. From a social marketing perspective, in Table 4, it is observed that informative messages are those that have received 0 likes in a higher proportion, while in behavioural ones, there is a higher proportion of messages (14.29%) that have achieved a high impact. An example of this type of message is shown in Figure 3, which encourages exploring the streets of Andalusia considered some of the most beautiful in the world. It is a behaviour-type message because it provides all the necessary information in the link. From an emotional standpoint, it is a message characterized by its cheerful tone, as the hashtag #DateUnaAlegria appears and highlights the specific beauty of some Andalusian villages.

Regarding emotions, Table 4 shows that messages containing terms related to happiness and joy have received a high impact. However, those containing terms such as enthusiasm and love have received 0 likes in a higher proportion.

### Table 2. Percentage of tweets published according to impact

<table>
<thead>
<tr>
<th>Topics/Impact</th>
<th>No likes</th>
<th>Very low impact</th>
<th>Low impact</th>
<th>Medium impact</th>
<th>High impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastronomy</td>
<td>0.83%</td>
<td>3.14%</td>
<td>1.94%</td>
<td>1.11%</td>
<td>0.65%</td>
</tr>
<tr>
<td>Nature</td>
<td>3.97%</td>
<td>9.70%</td>
<td>7.49%</td>
<td>5.73%</td>
<td>2.40%</td>
</tr>
<tr>
<td>Plan</td>
<td>0.74%</td>
<td>2.03%</td>
<td>1.66%</td>
<td>1.29%</td>
<td>0.92%</td>
</tr>
<tr>
<td>Rural</td>
<td>0.18%</td>
<td>0.74%</td>
<td>0.65%</td>
<td>0.55%</td>
<td>0.37%</td>
</tr>
<tr>
<td>Sport</td>
<td>0.37%</td>
<td>2.13%</td>
<td>0.74%</td>
<td>0.18%</td>
<td>0.09%</td>
</tr>
<tr>
<td>Culture</td>
<td>3.79%</td>
<td>4.25%</td>
<td>3.70%</td>
<td>4.25%</td>
<td>2.59%</td>
</tr>
<tr>
<td>City</td>
<td>6.10%</td>
<td>3.60%</td>
<td>3.70%</td>
<td>4.34%</td>
<td>1.29%</td>
</tr>
<tr>
<td>Weekend trip/day out</td>
<td>0.00%</td>
<td>0.55%</td>
<td>0.74%</td>
<td>1.48%</td>
<td>0.74%</td>
</tr>
<tr>
<td>Special dates</td>
<td>2.03%</td>
<td>2.13%</td>
<td>0.74%</td>
<td>1.57%</td>
<td>2.77%</td>
</tr>
</tbody>
</table>

**Source(s):** Own elaboration

### Table 3. Percentage of tweets published according to emotion and from the perspective of social marketing

<table>
<thead>
<tr>
<th>Emotions/ Social Marketing</th>
<th>Informative</th>
<th>Dialogue</th>
<th>Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wonderful</td>
<td>3.88%</td>
<td>2.87%</td>
<td>1.20%</td>
</tr>
<tr>
<td>Love</td>
<td>11.92%</td>
<td>2.22%</td>
<td>2.50%</td>
</tr>
<tr>
<td>Happiness</td>
<td>0.18%</td>
<td>0.74%</td>
<td>0.09%</td>
</tr>
<tr>
<td>Peace</td>
<td>2.31%</td>
<td>0.55%</td>
<td>0.55%</td>
</tr>
<tr>
<td>Cheerfulness</td>
<td>19.69%</td>
<td>25.79%</td>
<td>10.72%</td>
</tr>
<tr>
<td>Excitement</td>
<td>1.76%</td>
<td>0.28%</td>
<td>1.48%</td>
</tr>
<tr>
<td>Encouragement</td>
<td>2.50%</td>
<td>3.60%</td>
<td>1.66%</td>
</tr>
<tr>
<td>Calm</td>
<td>2.50%</td>
<td>0.46%</td>
<td>0.55%</td>
</tr>
</tbody>
</table>

**Source(s):** Own elaboration
Once the data has been explored and the impact of the messages has been determined based on the topic they address and from the perspective of social marketing, the association...
between these variables (social marketing and topics) and the impact achieved, measured by the mean of likes achieved per day of exposure. In this sense, the Chi-Square tests yield a $p$-value <0.001 for each of the variables considered, so it can be affirmed that there is a relationship between the social marketing variable and the impact achieved by the messages and between the variable topic and impact.

4.2 Classification tree results

The data analysis used the CHAID algorithm in SPSS 29.0 software. The method divides the sample cases into segments or nodes that differ significantly in terms of the selected dependent variable, called the criterion variable. The objective is to identify the ability of the emotions, social marketing, and topic variables to explain the impact of tweets, measured by the proportion of likes per day obtained by those publications.

The CHAID decision tree has generated 15 nodes in three levels, where each node is considered a different message profile. Three predictor variables can be distinguished in these final nodes or tweet segments.

As CHAID is a statistical methodology that ranks the available variables based on their explanatory power in descending order, emotion stands out as the first predictor of the percentage of likes per day. In the first phase (Figure 4), three profiles with different emotions that explain the dependent variable based on the independent variable “emotions” appear. The profile corresponding to node 1 refers to those messages in which “joy” and “happiness” appear. In this case, it stands out that 27.3% of these tweets have obtained a high impact. The profile identified with node 3 corresponds to the tweets in which the positive emotions of “love” and “enthusiasm” appear. In these messages, it stands out that 42.4% have yet to receive likes. Finally, node number 2 corresponds to the messages that contain the positive emotions of “calm”, “peace”, “wonder”, and “encouragement”, which stand out because 41.2% of them have obtained a low impact, although there is also a considerable percentage, 15.5% of the tweets, which have achieved a high impact.

In the second phase of the division of the tree, the variable “social marketing” appears as a predictor (Figure 5). In this sense, the messages identified in node 6 stand out. The tweets
corresponding to this node reflect the positive emotions of happiness and joy, and their purpose is behavioural. The particularity of these messages is that 36.8% have obtained a high impact. Likewise, 35.9% of these tweets have achieved a medium impact during the days of exposure. This result is relevant from the social marketing perspective since it shows the impact of the publications in which a specific action is encouraged or encouraged, with all the information necessary to carry it out. An example of this type of tweet is presented in Figure 3. It is also necessary to highlight the messages identified in node 7 because they show that 50% of the messages are informative, which reflects the emotions of love and enthusiasm. They have not gotten any likes.

In the third phase, the predictor variable appears as the “topic” the tweets deal with (Figures 6 and 7). In this sense, the messages identified with node 14 stand out, which are behavioural publications that talk about culture, rural activities, special dates, and getaways or highlight a specific town or city. 50% of these publications have achieved a high impact. An example of this type of message is the one issued by @aragonturismo, which shows the following: “From December 6 to January 6, walk the Ruta del Belén de Aragón and share the joy of the Christmas holidays.” This publication details how to access the route mentioned above and highlights the joy of enjoying them on certain holidays such as Christmas.

5. Conclusion and discussion
This study highlights the value of using Twitter as a communication tool from the perspective of happiness and social marketing in the context of destination tourism. In this sense, the conclusions of this work have focused on three main issues. Firstly, the importance of emotions has been the primary predictor variable of the impact of the publications achieved, with three groups of categories: the first refers to joy and happiness, the second to terms such as love and enthusiasm, and the third to words like wonder, peace, calm, and encouragement. It is worth highlighting the relevance of positive emotions of happiness and
joy as they are present in most positive opinions of tourists, which coincides with other research (Benetti et al., 2018; Lee et al., 2021; Seresinhe et al., 2019). Furthermore, messages that reflect these positive emotions are the ones that have achieved a higher percentage of likes per day of exposure.

Second, the importance of social marketing in the impact of tweets. Traditionally the study of engagement has been measured subjectively through self-reported measures (Barta et al., 2023). However, in this work, since we know the actual behavior of users on Twitter, the impact has been measured through likes, which is a much more realistic approximation. In

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Source(s): Own Elaboration

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Twitter impact of social marketing in tourism

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Figure 5. Nodes corresponding to the second phase of the classification tree
In this sense, more behavioural messages are significantly impacted than dialogue and behavioural ones. These messages are characterized by promoting or inducing a particular action, which in the examined tweets refers to discovering new destinations, trying unique dishes or enjoying a getaway on a special date. This approach focuses on the experiential factor, which, combined with the search for new emotions, adds value to the tourist product (Kotler et al., 2013).

Regarding topics, it is worth noting that the topics that have achieved a higher impact are those that comment on specific aspects, such as places to enjoy on a getaway, specific cultural spaces, special dates, or some particularly characteristic town or city. This result is interesting because it coincides with other research, such as that of Gulati (2022) who points out that positive emotions such as trust, which were identified to a greater extent, indicate that visitors experience happiness while visiting specific cultural spaces such as the Taj Mahal, Red Fort, and Golden Temple, which are part of the UNESCO World Heritage Sites. Conversely, research such as that of Leelawat et al. (2022) has identified that topics associated with positive feelings, such as beauty, refer to terms such as “Food,” “Beach,” “Pool,” “Bedroom,” and “Luxury,” revealing that Twitter users enjoy Thai food, tourist destinations, and hospitality. In the case of the object of study, the impact of topics such as nature and gastronomy has been less than half of what has been obtained by other topics discussed earlier, such as culture, rural tourism, getaways, or special dates. It should be noted that some of the themes that have achieved a more significant impact, such as those related to nature and culture, are considered within the principles that define sustainable tourism.

Regarding academic literature, we contributed to it in three ways. First, due to the growing interest of marketers in the sustainable behavior of users, we consider very relevant how our findings align with the Sustainable Development Goals (Walsh and Dodds, 2022) and we contribute to the development of the framework of hedonic psychology (Kahneman, 1999). Our results show that users react more strongly to activities that they consider could give them pleasure on a tourism trip. Tourism destination managers must understand what type
of content on social media causes the greatest impact on users, in order to adapt their marketing strategy.

Second, tourism managers, as intermediaries in the relationship that arises between tourists and destinations, show their content trying to activate user behavior. Social Marketing theory explains how marketing strategies promote user behavior and influence the audience (Kotler and Zaltman, 1996). Our findings show that the content marketing strategy through social marketing, positive emotions and sustainability are directly impacted by users on social media.

Finally, Knowledge, Attitude, Behavior theory suggests that knowledge is transformed into attitude and behavior. Tourism marketing managers hold the key to promoting sustainable tourism behavior through the content they share on social media, and about which users give their opinion through impact (Walsh and Dodds, 2022).

Finally, note that the characteristics of the messages most likely to have a high impact are those related to emotions of joy or happiness, their purpose is behavioural, and they talk about rural, cultural issues, special dates, getaways, or highlights of a town or city for something specific.
6. Practical and theoretical implications, limitations, and future research directions

These results have implications for the tourism industry, the use and impact of sustainability terms in marketing strategies, and opportunities to mitigate ineffective strategies. Social marketing is capable of managing expectations if travel information is provided correctly through intermediaries, such as the official Twitter accounts of tourist destinations in this research.

Therefore, there is a real opportunity for Spanish local tourism managers to socially market emotions through social media, through positive behaviour that contributes to sustainable travel. But, there is also a need for commitment from private sector companies to change such behaviours.

However, there were limitations present in this study. The study was limited to the analysis of the official Twitter accounts of the 17 Autonomous Communities of Spain to try and examine the image projected by these destinations towards tourists. It would be interesting in the future to analyze the image projected by the tourists themselves. They share their experiences through social media, directly affecting the destination image that tourist destinations try to project.

This research was conducted throughout the entire territory of Spain, the second country in the world in tourist reception (UNWTO, 2019). Still, it would be convenient to replicate this study in different countries worldwide, where the expression of happiness by tourists or tourist destinations may differ from Spanish culture (Gaston-Breton et al., 2021).

Lastly, the temporal framework of this research has been limited to one year to provide greater validity, avoiding publications related to the immediate pre and post-pandemic period, as well as the pandemic itself. A future research line should allow us to know whether social marketing and sustainability terms published by tourist destinations have varied over the years, and between pre- and post-pandemic periods (Walsh and Dodds, 2022). Additionally, another area of growing interest is how social marketing can be applied to small and medium-sized tourism enterprises (Borden et al., 2017).

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About the authors

Araceli Galiano-Coronil has a PhD from the University of Cádiz and is a professor in the Department of Marketing and Communication. She has made stays at various European universities such as the University of Venice, the Business and Law Frankfurt University of Applied Sciences, Degli Studi di Verona, EDHEC Business School, Fachhochschule, Faculty of Business Augsburg University of Applied Sciences, ISM International School of Management Campus Hamburg. She has given lectures on social marketing and social networks in these universities and is a researcher at the Institute for Sustainable Social Development Institute (INDESS) of Cádiz. She has authored and co-authored articles and papers at international conferences on social networks as tools for social marketing and happiness. Araceli Galiano-Coronil is the corresponding author and can be contacted at: araceli.galiano@gm.uca.es

Sofía Blanco-Moreno is a Marketing and Tourism expert with specialization in Digital Marketing and technologies such as Machine Learning and Deep Learning applied in Tourism, Travel, Hospitality, Leisure industries and Smart Destinations. She is also a PhD student at the University of León (Spain), and she has worked as a Digital Marketing expert on international companies such as Meliá Hotels. She teaches at the University of León lectures such as Consumer Behaviour, Tourism Marketing and Cross-Cultural Marketing.

Luis Bayardo Tobar-Pesantez is a Doctor in Economics from the Spanish University of León specializing in Integration and Economic and Territorial Development. He has a degree in Economics from the University of León and a diploma in Higher Education Evaluation and Project Management. He also has two Master’s Degrees: one in Economics from the Equinociaal Technological University and another specialist in University Teaching from the University of Azuay. He is currently Dean of the Faculty of Administrative Sciences at the Salesian Polytechnic Faculty, where he develops his teaching activity and holds the Vice Rector General position. He is among the 100 leaders with the best corporate reputation in Ecuador, being president and member of various boards such as INVEC or CENCOBA CLTDA. Member of the Editorial Board of the OIKOS Magazine of Chile, he has an outstanding repertoire of publications in recognised prestigious magazines.

Guillermo Antonio Gutiérrez-Montoya is a PhD in Social and Legal Sciences from the University of Cádiz (Spain), a master’s degree in Economics from the International University of Andalusia (Spain), and completed postgraduate studies in higher education and quality management. University Professor and Researcher, he is a member of the Academic Committee of the Doctorate in Social Sciences UCA-UDB of El Salvador. He is a Professor of the Statistical area of the Doctorate Program in Social Sciences UCA-UDB. He is a Research Group on “Creativity and Happiness” member at the University of Cádiz (Spain). His lines of research are happiness, entrepreneurship, business organization and management, and strategic management. In addition, he is an international reviewer of articles for the OIKOS Magazine of the “Católica Silva Henríquez” University (Chile), RETOS Magazine of the Salesian Polytechnic University (Ecuador), Magazine of Business Studies of the University of Jaén (Spain); and from the Theory and Praxis Journal of the Don Bosco University (El Salvador).