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Facebook as a Destination Marketing Tool: Evidence from Italian regional Destination Management Organizations

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Abstract

This work explores how Italian regional Destination Management Organisations (DMOs) strategically employ Facebook to promote and market their destinations, and improves on the current metrics for capturing user engagement. Based on big data analysis from the regional DMOs' Facebook pages, supplemented with semi-structured interviews conducted with DMO managers, the study sheds light on the factors contributing to superior level of social activity. The findings indicate that the way Facebook is tactically and strategically employed varies significantly across Italian regional DMOs. Visual content (namely photos) and moderately long posts have a statistically-significant positive impact on DMOs' Facebook engagement, whereas high post frequency, and early daily timing (in the morning) of posts have a negative impact on engagement. Last but not least, the study shows that most of the regional DMOs (except for Trentino, Tuscany, and Sicily) deploy Facebook with a top-down approach, allowing for little spontaneous user generated content (UGC).

Key words: Social media, Facebook, Big Data, Destination Management Organizations, engagement, destination marketing, Italian regions

1. Introduction

Over the last 30 years the impact of Information and Communication Technologies (ICTs) on the global economy has been dramatic, completely changing the way human activities are performed, material and immaterial resources are mobilised, wealth is generated, and business opportunities are created and seized. Among the many industries affected by technological advances, tourism is undoubtedly one where ICT-driven business process re-engineering has engendered a new paradigm shift, because: "not only do ICTs empower consumers to identify, customise and purchase tourism products but they also support the globalisation of the industry by providing effective tools for suppliers to develop, manage and distribute their offerings worldwide" (Buhalis and Law, 2008).

The Internet has deeply transformed the manner in which travellers access information, plan for and book trips, and subsequently share their travel experiences (Buhalis and Law, 2008; Chung and Buhalis, 2008; Hays et al., 2013; Xiang and Gretzel, 2010; Bilgihan et al., 2016). In the early 'Web 1.0' days of the Internet, information published online was static, and interaction with other Internet users and/or publishers almost non-existent (Hays et al., 2013). By contrast, the 'Web 2.0' Internet of today is characterised by review sites (e.g., Tripadvisor.com) and social media platforms (such as Facebook.com, Twitter.com) that have brought about a social-network revolution of the World Wide Web, leading to what has been termed 'socialnomics', i.e., an economy revolving around social media (Qualman, 2009). In fact, social media websites enable Internet users to form virtual travel communities (VTCs) that make it easier for tourists to obtain information, maintain connections, develop relationships, and eventually make travel-related decisions (Ayeh, Norman & Law, 2013; Stepchenkova et al., 2007; Wang et al., 2002).

Social media sites facilitate consumer-generated content (CGC) such as blogs, photos, videos, wikis, or reviews (Boyd and Ellison, 2008; Sigala et al., 2012; Wenger, 2008) and are widely used by online travellers (White and White, 2007), thereby marking a shift toward users rather than organisations taking charge of Internet content (Schegg et al. 2008). Sometimes CGC and online reviews (such as those published by Tripadvisor.com) might even challenge the authority of established Destination Management Organizations (DMOs) and conventional advertisements, by undermining their reputation (Dijkmans et al., 2015; Gretzel, 2006; Gretzel et al., 2000). Consequently, DMOs at both the national and local level need to pay attention to how they use social media, as this can play a crucial role in effectively promoting and marketing a tourism destination in a global context, characterised by hyper-competition not only among companies (D'Aveni, 1994) but also among destinations.

This work contributes to the extant body of 'e-tourism research'—that is, research at the intersection between tourism and ICTs-- from a number of perspectives. First, it adds to the currently scant stream

of empirically-based studies that investigate DMOs' social media marketing from both a qualitative and a quantitative perspective (Hays et al., 2013). Specifically, it explores how Italian regional DMOs employ Web 2.0--and specifically Facebook--to promote and market their destinations, illustrating their varying degrees of social-media usage. Second, this work advances the currently available quantitative methodologies for capturing Facebook-user engagement: it addresses the potential issues and biases inherent in existing engagement metrics, and employs a novel software tool, specifically developed for this study, to retrieve data from Facebook pages. Third, this work innovatively identifies and measures the factors that contribute to increased levels of social activity--also using qualitative data to help interpret the quantitative findings. Finally, by triangulating the quantitative and qualitative methods, several managerial best practices are identified that DMOs can adopt in their use of social media. The paper is organised as follows. Section 2 gives a review of relevant literature on e-tourism research and social media. Section 3 describes the methodology that was employed, while Section 4 reports the research findings and the analysis. Finally, Section 5 discusses both the managerial and policy-making implications of this study, sets out its limitations, and maps out avenues for further research.

2. E-tourism research and social media

Research on the role of ICTs in the tourism sector (commonly referred to as e-tourism research) has consolidated significantly over the last three decades, mirroring the growing number of ICT applications in the sector and the acknowledgment of the tourism industry as a leading e-commerce application (Wethner and Ricci, 2004).

Buhalis and Law (2008), in a survey of the academic articles published in top-impact academic journals, identify three major axes within e-tourism research: (1) technological innovation; (2) industry functions; (3) consumer and demand dimension. With respect to technological innovation (the first axis), in recent years a number of technologies have been identified as critical for further innovation in the tourism industry. They are related mainly to interoperability and ontology-building (Stabb and Werthner, 2002; Jakkilinki et al., 2007; Baggio, 2014), multimedia (Fiore et al., 2005, Raggam and Almer, 2005), mobile and wireless technologies (Flouri and Buhalis, 2004; Alfaro et al., 2005), wireless local area networks (WLANs) and the worldwide interoperability for microwave access (WiMax) (Odinma et al., 2007), location-based services (LBS) (Berger et al., 2003), web design in both functionality and usability (Hashim et al., 2007; Baloglu and Pekan, 2006), accessibility (Michopoulou et al., 2007), and ambient intelligence (AI) (Buhalis and O'Connor, 2005; Yovcheva et al., 2012).

The industry functions (second axis of e-tourism research) most strongly impacted by the aforementioned technologies are marketing and distribution (Go and Williams, 1993; O'Connor and Frew, 2002; Buhalis and Licata, 2002), because by helping to promote mass-customisation, these

technologies have made it possible to target niche markets of significant size in different geographical locations.

Finally, the customer and demand dimension (third axis of e-tourism research) has to do with markets and customers. This axis covers the idea that ICTs offer a range of tools to facilitate and improve the entire process, starting from information search, through to destination/product consumption, and post-experience engagement, (Gursoy and McCleary, 2004; Luo et al., 2004; Frias et al., 2011; Borges, 2009; Parra-Lopez et al., 2011). Such tools comprise pricing devices (Clemons et al., 2002), recommender systems (Fesenmeir et al., 2003; Ricci and Wethner, 2006), profiling methods (Wang et al., 2004; Tufte and Rasmussen, 2002; Matloka and Buhalis, 2010), mechanisms for dealing with complaints and electronic word-of-mouth (eWOM) (Gelb and Sundaram, 2002; Shea et al., 2004), customer-centric marketing (CCM) systems (Niininen et al., 2007), social media and VTCs (Stepchenkova et al. 2007; Wang et al., 2002; Vogt and Fesenmaier, 1998; Xiang and Gretzel, 2010; Bras et al., 2010).

With the emergence of Web 2.0, the concept of social networking/virtual communities applied to the tourism sector has resulted in 'Travel 2.0'--considered to be one of the "mega trends" to most significantly impact the tourism system (Leung et al., 2013). More specifically, a "virtual community is a group of people who may or may not meet one another face-to-face, and who exchange words and ideas through the mediation of computer bulletin boards and networks" (Rheingold, 1993: p. 58). A VTC is simply a tourism-themed virtual community, in which tourism-related CGC is created (Kaplan and Haenlein, 2009). TripAdvisor (www.tripadvisor.com) is one of the most successful examples of a virtual community in tourism: it facilitates the reviewing of hotels, restaurants, and destinations around the world and brings together individuals in discussion forums. The system provides users with independent travel reviews and comments written by TripAdvisor members and expert advisors, and represents a powerful platform for interaction among peers (Wang and Fesenmaier, 2004).

The recent tourism and hospitality literature has addressed the role and use of social media in travellers' decision-making, as well as in tourism operations and management (Sigala et al., 2012). While consumer-centric studies have generally focused on the use and impact of social media in the research phase of travellers' planning process (Ayeh, Norman & Law, 2013), supplier-related studies have concentrated closely on the promotion, management, and research functions (Leung et al., 2013).

Social media is becoming more and more relevant as a destination marketing tool, and accordingly must be effectively managed by DMOs looking to create a sustainable competitive advantage for their destinations within the competitive arena of global tourism (Pike and Page, 2014). This is all the more relevant in the current economic climate of public austerity, characterised by a decline in funding for both National Tourism Organisations (NTOs) and local DMOs. This state of

affairs has pushed many DMOs, albeit sometimes slowly, to turn to social media as a relatively low-cost marketing tool with a global reach. Notwithstanding this trend, research on the use of Web 2.0 and social media as destination marketing tools remains scant (Feng et al., 2003; Stankov et al., 2010; Xiang and Gretzel, 2010; Hays et al., 2013).

To help fill this research gap, we carried out a study with the following four main objectives: (1) to explore how Italian regional DMOs strategically employ Facebook to market their destinations; (2) to illustrate the varying degrees of Facebook usage among the studied DMOs; (3) to determine what factors contribute to increased engagement of tourists/users through a statistical analysis; (4) to identify several managerial best practices for the use of Facebook by Italian DMOs.

We elected to focus on Facebook, rather than on other social media (such as Twitter), because the creation and adoption of Twitter accounts on the part of Italian regional DMOs is still in its infancy, whereas a preliminary pilot study showed that Facebook is (as of November 2014) the most-used social media platform among Italian regional DMOs.

3. Methodology

This study investigates the nature and the degree of Facebook usage by regional DMOs in Italy. Following Hays et al. (2013), the research is mainly exploratory in its aim, and accordingly adopts a mixed-method approach that employs both qualitative and quantitative data.

As a pilot study, we conducted preliminary interviews with the social media managers of three major Italian DMOs (Emilia-Romagna, Tuscany, and Marche). The interviews were "informal, conversational interviews" that relied chiefly on the interaction between interviewer and respondent (Patton, 1990). The evidence obtained from those interviews was triangulated with data from publicly available documents (Gioia et al., 2013). This preliminary research highlighted a number of issues, especially relating to how major destination marketers use and make sense of social media. In fact, although Italian regional DMOs employ various social media platforms (such as Twitter, Youtube, Google Plus, Instagram, Flickr, Pinterest, Panoramio, My Space, Issuu, Foursquare, and Tumblr) Facebook--with millions of users worldwide and 18.3 million active users in Italy by the end of 2014--appears to be the one most widely adopted by Italian DMOs.

In the light of those pilot interviews and the extant literature in the field, we selected Facebook as the data source for this work and accordingly collected data from the Facebook pages of all the Italian regional DMOs. Specifically, we gathered information on the number and types of posts published on DMOs' Facebook pages, and on the user responses elicited by these posts. The data retrieval, aggregation, and analysis were performed using a novel software tool that we developed specifically for this purpose, and whose main features are presented in Section 3.2.

Facebook content is freely available on the web, and can be regarded as sufficient for this study from an empirical point of view (Hays et al., 2013). The collected data were analysed using descriptive statistics, and multivariate regression analyses were employed to explore the main determinants of users' engagement in social media activity.

After gathering and analysing the data, we carried out semi-structured interviews with social media marketers from seventeen Italian regions, in order to investigate the issues that emerged from the quantitative analysis in more depth and strengthen the validity of the findings. To capture a more complete picture of DMOs' social media activity, interviewees from DMOs were chosen on the basis of theoretical sampling (Yin, 1994), following the characteristics that had emerged as most important in the quantitative data analysis. During this stage, at least two interviewers were present at each interview. When recording was possible (the DMOs were sometimes reluctant for us to do so), the material was subsequently coded independently by each researcher (using the NVivo software) and then compared. The analysis of both the qualitative and quantitative data acquired in this way produced a series of findings that are presented and discussed in Section 4.

3.1 Relevance of the context

Italy and its regional destinations are among the most-visited destinations worldwide, with Italy ranking 5th in terms of international tourist arrivals worldwide (UNWTO, 2015), and with domestic arrivals exceeding international ones by 5 million (ISTAT, 2015). While the promotion of Italy as a country destination is handled by the Italian National Tourism Organisation ENIT (Ente Nazionale Italiano Turismo), which has only recently begun to develop a social media strategy[1], the leading role in destination marketing is played by the individual regional DMOs, which by law have a mandate to promote their tourism destinations. In Italy, the main responsibility for tourism promotion has traditionally lain with the regions rather than with the central government: Law 217 of 1983 established the "Aziende di Promozione Turistica" (APT)—that is, regional DMOs--tasked with promoting the regional destinations and providing information for tourists. For this reasons, regions (and their DMOs) in Italy have a much bigger budget (in many cases several times higher) than the national organisation, ENIT. What's more, regional DMOs individually allocate more financial resources to digital marketing than does ENIT. Consequently, the investigation focused on all the Italian regions (twenty in total), and more specifically on the DMO of each region.

Italy has 20 regions, and most of the Italian regional DMOs have their own official Facebook page and

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[1] Interestingly, Italy crafted its first Strategic Plan for Tourism (Turismo Italia 2020) only in 2013. However, that plan was never approved by the Ministry of Tourism since then, and the Italian NTO has been present on Facebook since 2011 .

provide original content to promote their destinations and enhance user engagement. Although every Italian region has an official website, not all of them have a well-developed social media presence. In all the cases analysed here, the DMO's Facebook page was linked to the official website of the DMO (and vice versa).

Since not all regional DMOs have developed Facebook pages in foreign languages, and since the pages in Italian have far more fans and social activity than their foreign counterparts, the analysis was carried out on the Italian-language pages--which by definition target domestic tourists. While this might seem a limitation, it has the advantage of ensuring consistency for the analysis and enables us to make valid comparisons across regions. Many regional DMOs have adopted social media platforms as part of their marketing efforts--mostly during the last five years, and so significantly lagging behind many of their international English-speaking counterparts. The Valle D'Aosta DMO's Facebook page was the very first one to open, in May 2009, and a record number of DMO Facebook accounts (eight) were created in 2011. By December 31, 2013, all Italian regional DMOs apart from one--Lazio--had a Facebook page publicly visible on the Internet[2].

3.2 Data gathering first phase: Facebook data

We collected data from the official Facebook pages of all Italian regional DMOs that had such a page (19 out of 20 regions did). This was done using a novel software tool that we developed specifically for this study, based upon cutting-edge technologies for managing data retrieved from the Facebook platform. The architecture of this tool, designed by one of the co-authors (who is an information scientist), is depicted in Figure 1.

Add Figure 1 about here

The data-acquisition tool is composed of four main software modules, acting on a pipeline: (i) An extractor module, which retrieves the data publicly available on the DMOs' Facebook pages, through data queries based on the Graph API technology (Facebook Graph API 2.0, 2014); (ii) A parser module (written in Python language), which processes the results of each query (in JSON language format), and computes per-post statistics and reports; (iii) An analyser module, which computes aggregated

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[2] The Lazio region maintained only an intermittent online presence during the analysed period owing to a number of political issues. As a consequence, its Facebook page was not visible.

engagement metrics over a time window defined by the user (in our case, one month), and (iv) A data visualisation module, which displays the results through graphs, and allows exporting reports in .CSV data format. Although there are several general-purpose software packages available on the market that provide social-media analytics functionality, this tool provides some unique features that justify its novel deployment from scratch. Specifically: (*i*) it is natively *multi-metric*, i.e. it is able to compute and return to researchers a large variety of engagement metrics (some of these are reported in Table 2 and Table 3), to provide a comprehensive understanding of social media activities from a variety of perspectives, (*ii*) it is highly *modular*, i.e. the pipeline of Figure 1 can be easily extended with additional block components without modifying the core architecture of the tool; in fact, we are currently working on a new component for performing semantic analysis of extracted posts, that acts on the output of the analyser module, (*iii*) it can be customised for different types of social-media analysis, by appropriately tuning a large set of parameters that control both the data extraction and data aggregation stages (e.g. time window of the analysis, time granularity, contents to process) through its graphical user interface (GUI). It should also be noted that the capabilities of this tool, as developed thus far, are already sufficiently powerful to justify its use also for other social-media related analysis.

For this study, we extracted the overall population of posts (including the related 'Likes', 'Shares' and 'Comments') present on the Facebook pages of Italian regional DMOs during the year 2013 (from the 1st of January to the 31st of December 2013), obtaining a total of 33,597 posts[3].

The contents of those posts were analysed using measures adapted from Hays et al. (2013), as well as six additional measures which we developed specifically for this research (see Table 1 for details).

Add Table 1 about here

Additionally, based on Frick (2010), we calculated a number of metrics to assess engagement: generic engagement, brand engagement, and user engagement (see Table 2 for details).

Add Table 2 about here

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[3] All the collected data were publicly available on the Facebook pages of the DMOs.

We also computed those same measures of engagement on a rolling basis, in a two- and seven-day time window after the posting date. These rolling metrics were based solely on the 'Comments' and did not include 'Likes' and 'Shares', for which we did not have an exact timestamp (provided by the combination of date and exact hour/minute of the liking/sharing event). Because they also capture the longitudinal dimension, these rolling measures of engagement are an advance over the existing empirical methods that have sought to gauge user engagement with social media in the tourism sector (Hays et al., 2013; Oviedo et al., 2014).

Finally, we included three additional measures of engagement which only take into account user activity, without normalising it by the number of fans (see Table 3 for details). In so doing, we sought to overcome one of the chief shortcomings of the normalised engagement measures usually adopted in the literature (Oviedo et al., 2014), whose value over time tends to decrease as the number of fans increases, because they include the number of fans in the denominator. . These new measures are in line with recent methodological developments in the marketing literature (Oviedo et al., 2014) and also with the recommendations issued by Socialbakers--the most popular provider of social-media analytic tools--which suggest that normalising by fan size does not yield reliable engagement metrics when public data are extracted over a long period of time with benchmarking objectives, "because the size of the community that sees promoted posts is flexible" (Socialbakers, 2015).

Add Table 3 about here

The aforementioned metrics of engagement were calculated by applying different weightings to Likes(weight=20%), Shares (weight=30%) and Comments (weight=50%). These differential weights are a proxy for the degree of involvement implied by the underlying activities of respectively liking, sharing, or commenting. The selected setting of the weights (20-30-50) is based on an important antecedent of users' activity (the time required to complete the action) and on an outcome (the visibility and effectiveness of dissemination of the users' actions and content).

Commenting on a post implies that a user has invested time in writing and sharing an opinion (Sabate et al., 2014): writing a comment will typically take more time and effort than merely sharing or liking a post, with the two latter actions being simple binary decisions, accomplished by a single click. Consequently, we hypothesise that 'commenting' is associated with higher levels of user involvement than 'sharing' or 'liking'. Furthermore, 'sharing' is weighted more than 'liking' because it leads to more effective dissemination of the message to other potential users through the Facebook algorithm (Moore

and McElroy, 2012; Ruiz-Mafe et al., 2014). It is important to note that this weighting scheme is an improvement over those used by previous empirical studies for gauging user engagement for social media marketing (Oviedo et al., 2014). We also conducted a robustness analysis of this new scheme by using different weights. Although changing the weight percentages yielded different absolute values of the engagement variable, the resultant ranking of DMO Facebook pages in terms of engagement did not change (as we will show in Section 4.1) and so the weightings did not have an impact on the analysis of the determinants of engagement (Section 4.2). In other words, the results presented in this study are independent of the weighting scheme adopted for computing the engagement metric.

3.3 Data gathering second phase: semi-structured interviews

Based on the pilot interviews and on publicly available documents, we prepared a list of information needs and interview instructions, as well as a list of open-ended questions that we used for conducting semi-structured interviews (see Table 4).

Add Table 4 about here

Semi-structured interviews were conducted with social media marketers of seventeen regions: Abruzzo, Basilicata, Calabria, Emilia-Romagna, Friuli Venezia-Giulia, Liguria, Lombardia, Marche, Piedmont, Puglia, Sicily, Sardinia, Trentino, Tuscany, Umbria, Valle d'Aosta, and Veneto[4]. The information from those interviews served to complement the data obtained from quantitative research, to yield a fuller understanding of how Italian regional DMOs implement and deploy their social media strategies. The researchers conducting the interviews posed open-ended questions and took notes of the responses.

3.4 Data triangulation

The field note transcripts from the semi-structured interviews were independently coded by two of the three researchers using NVIVO, to separately identify terms and patterns in the data. Overall, a number of themes emerged from this process (e.g., interaction of DMOs with Facebook users, topics and themes of social activity, audience development, staff and training related to social media and Facebook, tools to assess the effectiveness of Facebook use) that provided a deeper understanding of

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[4] Interviewees included social media managers, social media strategists, community managers, and digital strategists of the aforementioned regions.

the results of the quantitative analysis. The coding process was carried out adopting an iterative approach of data comparison and contrast (Miles and Huberman, 1994), and considering the extant literature on social media marketing in tourism.

Combining the quantitative results with this interview data made it possible to refine the analysis (Jick, 1979). In fact, the triangulation of data from multiple sources reduces construct validity problems and the risk of retrospectively imposing meaning on historical events based on knowledge of the outcomes. By leveraging the qualitative evidence collected through the interviews, we were able to further validate the descriptions and interpretations of the quantitative analysis (Miles & Huberman, 1984). All the interviewees were also invited to read a preliminary draft of this paper, and provide their comments and feedback.

4. Analysis and results

During 2013, the Facebook pages of Italian regional DMOs recorded a total of 33,597 posts, of which 18,046 (53.7%) were posts made by the DMOs themselves (Table 5). This percentage suggests that the goal of two-way communication between DMO managers and fans has been achieved, given that half the posts come from users. The clear-cut leader in terms of total posts was the Trentino DMO page, followed by Emilia-Romagna and Marche. Trentino also had a very high percentage of posts by users[5], as did Tuscany and Sicily.

Add Table 5 about here

Overall there does not appear to be any stark 'social media divide' between the north and south of Italy. However, it is true that the top five DMOs in terms of total Facebook posts (Trentino, Emilia-Romagna, Marche, Liguria and Tuscany) are concentrated in northern and central Italy (Figure 2).

Add Figures 2 and 3 about here

If we now look only at the posting activity of the DMOs themselves (excluding that of users), the general results do not change much, except that the leaders now are Trentino, Emilia-Romagna, Marche, Piedmont, and Liguria (Figure 3). The regions with the highest percentage of posts by users are

[5] The figure for Campania is not relevant due to the very limited number of total posts

instead Campania[6], Sicily, Trentino, and Tuscany. Setting aside Campania (owing to its very low total posts), this means that Sicily, Trentino, and Tuscany are the regions whose users post most actively.

Most of the content posted by DMOs includes photos (81.2% on average for the overall population in 2013), followed by links (10.4%) and videos (5.9%). The content-type breakdown for each regional DMO is presented in Figure 4:

Add Figure 4 about here

Campania, Emilia-Romagna, Tuscany, Trentino, Veneto, and Sardinia are the regions with the strongest preference for posting photos, as well as being among those that post most actively in general. If we exclude the outliers Molise and Campania (which have a very low number of total posts), the cases of Sicily and Piedmont seem to stand out from the overall picture, mostly due to their extensively use of links for highlighting events.

Turning now to focus on user activity (see Table 6), we find that Trentino, Tuscany, Marche, Sicily, and Liguria are the leading DMOs in terms of Likes (with 712,071 ; 607,644 ; 309,767 ; 268,439 ; and 259,598 Likes respectively) while at the bottom of this ranking are Campania, Valle D'Aosta, and Molise (with 872, 844 and 0 Likes respectively, and so well below the psychological threshold of 1000 Likes, which is instead surpassed by the fourth-from-last region, Piedmont, with 1921 Likes). The top 5 DMOs in terms of Likes are also those that lead the ranking for Comments (Trentino, Tuscany, Sicily, Liguria, and Marche with 81,341 ; 30,929 ; 19,508 ; 15,688 ; and 12,032 Comments respectively), while at the bottom of this ranking we again find Campania, Valle D'Aosta, and Molise (with 30, 24, and 0 Comments respectively). Finally, the top 5 DMOs in terms of Likes and Comments are also those that lead the ranking for number of Shares (Trentino, Tuscany, Marche, Sicily, and Liguria with 215,297 ; 172,619 ; 144,706 ; 134,622 ; and 70,701 Shares respectively), while among the worst performers we again find Valle D'Aosta, Campania, and Molise (with 34, 0, and 0 Shares respectively).

Examining the last 6 columns of Table 6, it is clear that the majority of Likes, Comments and Shares are generated by users. Overall, the top 5 regional DMOs in terms of user

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[6] Again, the figure for the Campania region is not relevant

activity are also the top 5 regional DMOs in terms of posts. Therefore, it appears that high posting activity (in terms of number of posts) on a DMO page coincides with high user activity.

With a few exceptions (see Umbria, Basilicata, and Lombardy in terms of the proportion of comments made by users), most of the Likes, Shares and Comments originate from users (i.e., the DMO engages in posting activity but is rarely involved in liking/sharing/commenting activities).

Interestingly, although Trentino and Emilia-Romagna have a similar number of posts made by the DMO (see Table 5), the Trentino users tend to interact more (by commenting, liking, and sharing more items). This may be ascribable to the higher loyalty of Trentino users, resulting from that DMO's adoption of managerial best practices (as will be discussed further in Section 4.3. "Interaction with consumers and users"). Figure 5 visually illustrates the situation across DMOs.

Add Table 6 about here

Add Figure 5 about here

The regions that had the highest number of fans at the end of 2013 are mostly the same as those with the highest numbers of Likes, Shares, and Comments--with the exception of Puglia which, despite modest user activity, had a strong rise in its following to reach 60,246 fans. However, as is clear from Table 7, the largest percentage increases over the course of 2013 occurred for DMOs of smaller regions such as Umbria (+7429%) and Calabria (+1925%)--either because they were the ones to most recently open a Facebook page, or because their original fan base on January 1st 2013 was very thin.

Add Table 7 about here

4.1 Active users and engagement metrics

The descriptive statistics reported thus far do not include a proper assessment of user activity. In fact, the users totalled above may be active or inactive. Figure 6 shows that the number of active users (defined as those who posted at least one comment in 2013) is far less than the total number of fans for each DMO page. This suggests that the fan base of a DMO page is not a reliable normalisation variable to be used for computing engagement metrics.

Add Figure 6 about here

Overall, the five regions most active in posting (except for Emilia-Romagna) are also those with the highest number of active users.

Looking more in depth at the distribution of the number of comments made by active users, a significant finding emerges-- on average, almost 95% of active users (i.e., users who posted at least 1 comment during the year), posted less than 5 comments in total during 2013 (Figure 7).

Add Figure 7 about here

Trentino shows the highest percentage of 'repeat users'--meaning users who intervened more than once in threads initiated by the DMO. This might partially explain why the Trentino DMO has more comments than any other DMO (see Table 6). Technically, we can say that the active users of the Trentino DMO page show stronger loyalty than those of other regional DMOs. The reasons for this are explained in Section 4.3.

Turning now to focus on the engagement metrics, we find that for generic and brand monthly engagement metrics (Figure 8), regions such as Calabria, Umbria, and Veneto display the highest values. This seems to contradict the preceding results for user-generated activity in terms of Likes, Shares, and Comments. However, it can be explained by noting the construction of the metrics, which incorporate the overall number of fans and posts (respectively "total" and "by the DMO") into the denominator of the ratio—thereby favouring those regions that have few fans.

Add Figure 8 about here

If we assess the level of activity linked to each individual post and do not normalise it by the fan base (but only by the posts by users), as suggested in the most recent literature (Oviedo et al., 2014), the results of the analysis change completely: Trentino, Tuscany, Marche, Sicily, Liguria instead become the top performers in terms of engagement (Figure 9).

Add Figure 9 about here

These engagement results seem a more adequate proxy for capturing the actual involvement of users, and are consistent with the results shown in Table 6 and Figure 5.

If we refine the metric even further, so that engagement is normalised neither by fan base nor by number of posts, the results become closer to those of the preceding figure (Figure 9) and more consistent with those obtained from Table 6 and Figure 5:

Add Figure 10 about here

The DMOs with the highest values of 'user' and 'user-to-DMO' interaction are Trentino, Tuscany, Marche, Sicily, and Liguria (see Figure 10). Interestingly, 'user-to-user' interaction is instead extremely low, suggesting that posts written by users do not attract the attention of other users, often because they are in plain text (they do not include pictures, videos, etc.). This result also seems to indicate that Italian regions still deploy social media in a traditional top-down fashion, rather than exploring ways to foster a bottom-up UGC-driven approach. This might simply be due to the fact that UGC is on average less interesting and 'professional' than content generated by the DMO.

As mentioned in the methodology section, the engagement metrics were computed applying an innovative scheme to differentially weight Comments, Shares, and Likes. To ensure methodological accuracy, we conducted a robustness check by using different weights. Figure 11 shows the Generic Engagement for Users' Activity (the yellow bar in Figure 9) obtained by using three different tunings of the weight factors, defined as follows: Setting1 (Comment=50%, Share=30%, Like=20%), Setting2 (Commens=20%, Share=30%, Like=50%) and Setting3 (Comment=20%, Share=50%, Like=30%). Figure 12 shows the rankings of the DMO Facebook pages according to the engagement metric

computed with each setting. Comparing the results of Figures 11 and 12, we can conclude that different weight settings generate different absolute values of user engagement, but do not alter the ranking of DMO Facebook pages in terms of engagement. Therefore, the new engagement variable has no impact on the analysis of the determinants of engagement which we carry out in the next section.

Add Figures 11 and 12 about here

4.2 Factors influencing user activity and user engagement

In this section, we focus on the determinants of engagement and analyse them separately. More specifically, we consider the overall population of posts generated by Italian regional DMOs in 2013 and analyse how they relate to the following variables: a) type of post; b) length of the post; c) posting time of day; d) posting day of the week; e) posting month of the year; f) frequency of posting.

Type of post. As noted previously, most of the Italian regional DMOs tend to post mainly photos. Our analysis shows that photos and videos are also the type of content that elicits most comments (Figure 13).

Add Figure 13 about here

Length of post. The analysis on the overall population of posts shows that the majority of comments are between 100 to 400 characters long, with posts of around 200 characters being the most frequent (they appear in 30% of cases):

Add Figure 14 about here

It also emerges that the length of the post can have an impact on engagement, with posts between 100 and 200 characters in length (which are incidentally the most frequent) generating the peaks of engagement (Figure 15).

Add Figure 15 about here

Posting time of day. The analysis on the overall population of posts also shows that the majority of DMO posts are made in the morning or afternoon (ordinary working hours), although several also post overnight.

Add Figure 16 about here

Content posted in the evening seems to have a positive effect on generic engagement, probably because such posts are fewer in number (and therefore more visible), and also because users can more easily access Facebook in the evening (see Figure 17).

Add Figure 17 about here

Posting day of the week. The analysis shows that the majority of DMO posts are made during the working week (Monday to Friday), with just 17% of DMO content being posted during the weekend.
It is difficult to identify a clear-cut relationship between the day of the week when content is posted and the resultant engagement. That said, it does seem that content posted over the weekend elicits higher engagement (Figure 18).

Add Figure 18 about here

It appears that DMO posting activities and the responses to those posts by users are asymmetric: DMOs post mainly during the working week whereas users interact more during the weekend.

Frequency of posting. In 28% of cases, DMOs generate less than one post per day, whereas in 10% of the cases DMOs post more than 6 posts a day (Figure 19).

Add Figure 19 about here

The effect of posting frequency on engagement is illustrated in Figure 20, which shows that maximum engagement occurs when the daily frequency is low. In other words, the lower the frequency of posting, the higher the engagement. This can be interpreted to mean that overwhelming Facebook users with too many posts is counterproductive, and does not command higher engagement.

Add Figure 20 about here

Posting month of the year. The empirical analysis shows that, on average, DMOs post the most during the months of May, July and September, whereas activity is lowest in April and August.

Engagement, on the other hand, is highest in January, after which it drops significantly in February, and then continues declining smoothly until May. Thereafter it begins to rise again, reaching a relative peak in July, before starting to fall off again during the autumn. The January peak might be explained by the visits of tourists interested in winter holidays (or busy with Christmas-holiday post-trip assessments), while the July peak may be ascribed to people preparing for their summer trips (August, when most Italian businesses close, is the month of highest domestic tourism flows). However there seems not to be any clear-cut relationship between the month of posting and the engagement metrics.

The variables presented in this section are summarised in Table 8, which also shows the correlation between these variables and engagement.

Add Table 8 about here

Based on the observations made thus far, concerning the relationships between individual variables and engagement, we formulate the following research hypotheses:

H1: The type of posts made by a regional DMO has an impact on engagement; more specifically, visual types of posts (such as photos) have a positive impact on engagement

H2: High frequency of posting by a regional DMO has a negative impact on engagement

H3: The length of the posts made by a regional DMO has a positive impact on engagement

H4: Evening posts by a regional DMO have a positive impact on engagement

H5: Weekend posts by a regional DMO have a positive impact on engagement

These hypotheses were validated using multivariate ordinary least squares (OLS) regressions. OLS regression is a generalised linear modelling technique that may be used to model a single response variable on a number of different independent variables. OLS regression proves to be particularly useful when variables display multivariate normality, as in the case of our study (highest skewness .44 for weekend posts, higher kurtosis .60 for morning posts). The following variables were included in the model: *Engagement* was used as the dependent variable, regressed against *Type_ photo, Type_status, Post frequency, Average length of post, Evening posts, Morning posts, Week-end posts* used as independent variables. Additionally, two control variables were included, namely *Posting month* (each month was first included as an explanatory variable, and then a dummy was created including just those months identified as having the relative peaks of engagement: i.e. January, July, and November) and *Geography* (four dummy variables coded as South; Centre; North; Islands). Table 9 shows the results of the regression analysis.

Add Table 9 about here

The proposed model was found to have a good fit, explaining 31% of the variance. Considering the proposed hypotheses: H1 cannot be rejected (with 10% statistical significance); H2 and H3 likewise cannot be rejected (with 1% statistical significance); whereas H4 and H5 generate results that are not statistically significant. Thus, the regression results suggest that Italian regional DMOs increase their engagement if they post less frequently, and if they select mainly visual content (such as photos), possibly accompanied by moderately long text. Posting during the weekend positively affects engagement, but not to a statistically significant extent. By contrast, posting in the morning has a significant negative impact on engagement--possibly simply because DMOs are most active during the morning, while their Facebook fans are much less active at that time.

The significant link between visual content and engagement confirms that tourists (or potential travellers) who use online social networks are attracted by images of the sights and destinations that they have visited or plan to visit. This is consistent with the strong relationship between tourism and image-making media related to sightseeing traditionally featured in tourism studies (e.g. Beeton, 2004), and the fact that DMOs recognise tourists' preference for visual content sharing (Munar and Jacobsen, 2014). As far as post length is concerned, the positive link between moderately long posts and engagement could be explained by the fact that when the DMOs task is to disseminate

information they produce narrative content rich in details: this behaviour seems symmetric with the behaviour that tourists adopt when producing narrative content (Stoeckl, Rohrmeier, & Hess, 2007).

The negative impact of posting frequency on engagement is likely ascribable to user's time constraints. Frequent posting implies sharing larger amount of content during a given day/week. However, Internet users will not have enough time during a given day/week to engage with all the content posted within that time frame. Moreover, since users tend to look only at the latest content available on a Facebook page, any older posts they have not yet seen will anyhow be displaced by the newer ones, and so receive fewer comments, likes or shares, thereby resulting in lower engagement.

Morning posts likely have a negative impact on engagement because Facebook users seem to spend more time on DMO Facebook pages during the evening and at night. Since users react mainly to the more recent posts, this will favour content that has been posted in the evening. These results are in line with statistics about the usage of the Facebook platform, which show that most users access Facebook during the early or late evening (Vitrue, 2010).

The control variable "geography" has a positive impact on engagement, but with a higher magnitude for the Centre and the Islands, where several of the most active DMOs (i.e., Tuscany, Emilia Romagna, Marche, and Sicily) are located. Finally, the month of posting seems to have no influence on engagement.

4.3 Social media strategies employed by Italian regional DMOs: interaction with consumers and users

Interviews conducted with relevant key informants at 17 of the 20 Italian regional DMOs revealed that, to some extent, Italian regional DMOs use social media simply to advertise and promote in a conventional way. However several DMOs (such as Trentino and Emilia Romagna) believe that social platforms should be used as a form of social narration, rather than as just another channel for advertising. In the words of Giovanna Arata, community manager for the Emilia-Romagna Facebook page:

"Social media in general, and Facebook in particular, must be a platform for a collective expression and narration, not just another medium through which to serve advertising"

This reveals what appears to be a divide. On one side, a significant number of regions use social media (Facebook, Twitter, etc.) simply as just another advertising and marketing channel, changing little about the content of the message (in other words, the ads and messages displayed on the official website are essentially replicated on the Facebook pages and Twitter accounts). On the other side, a small number of regions are instead using social media in a more experimental way, to communicate differently and

with differentiated content. Among these, we can identify Trentino, Tuscany, Sicily, Marche, Liguria, and Emilia-Romagna.

As emerges clearly from the extensive analysis of posts/content conducted on the overall population of Italian regional DMOs' Facebook pages, the regions with the highest proportion of posts by users (Trentino, Tuscany and Sicily, see Table 7) are also among those that manage to leverage visual content in a more creative and experimental way.

Generally speaking the content analysis shows that, in 2013, the posts which generated more than 100 comments were 142 in total, distributed as follows: 86 (60.6%) for Trentino, 26 (18.3%) for Tuscany, 19 (13.4%) for Sicily, 6 (4.2%) for Liguria, 3 (2.1%) for Abruzzo and 1 (0.7%) for both Puglia and Emilia-Romagna. Of these, the type of post which generated the highest engagement in terms of comments was photos: 138 (97.2%), followed by status changes 4 (2.8%). Most of the pictures were associated with opinion polls, quizzes, or games. Table 10 summarises the features of the top ten posts, in terms of number of comments, in 2013:

Add Table 10 about here

As Table 10 clearly shows, the managers of the Tuscany Facebook page often organise opinion polls asking users which of the presented photos/images they would like as a cover (see Picture 1). This proves to be an excellent strategy for involving and engaging users, as borne out by the number of Likes (1,263) related to the picture.

Add Picture 1 about here

Another technique frequently used by several Italian DMOs is quizzes. In Picture 2, the marketers of Visit Trentino ask for the meaning of a term in Trentino dialect (i.e., *prosac*, a kind of white wine known as *prosecco*), inviting users to submit their answers through comments. Users who know the answer will be stimulated to respond, thereby raising the visibility of the Facebook page and prompting other users to be involved in the quiz.

Add Picture 2 about here

As nearly all the interviewees asserted (and the analysis of the posted content confirms) images have an unparalleled power for marketing a destination through Facebook, and when this power is leveraged through opinion polls, quizzes, and games, the capability to attract Likes, Comments, and Shares, and thereby boost user engagement, is significantly increased. Trentino, Tuscany, and Sicily are certainly destinations that have understood this point very well.

4.4 Facebook and topics

The analysis shows that most of the Italian regional DMOs use social platforms (in this case Facebook) to convey a wide array of information to their users. The information relayed on social platforms covers a variety of topics that have a bearing on tourism. For example, the Tuscany DMO focuses on three main thematic areas: arts, food and wine, and 'around Tuscany' (which collects travel and general information). The Emilia Romagna DMO includes content related to the Adriatic coast (especially during the summer), art and culture, nature, well-being and sports, motor valley, and wine and food. The Marche DMO organises its information into clusters centred on different specific types of tourism (rather than tourism in general) and tourism experiences (rather than tourism destinations).

The strategic objectives of regional DMOs for social-media development vary widely. For example, the Emilia-Romagna DMO is investing in further internationalisation (at present the content is available in Italian, English, and German, and is being developed in Portuguese and Spanish as well). It is also planning to differentiate its accounts based on topic areas (i.e., wine and food, motor valley, arts and culture), and trying to increasingly integrate its online and offline activities, for example by organising visits to museums, excursions, bike tours, family events, or photographic walks, often linked to online contests.

The Tuscany regional DMO, as underlined by Costanza Giovannini, social media manager for Fondazione Sistema Toscana, is developing a strategy based on the main brand "Tuscany", which is present on all the digital platforms and is also used on other websites such as "Voglio vivere cosi – Turismo.inToscana.it" on Facebook, and "Diari Toscani" on Twitter.

The Marche regional DMO, the only one that has a presence on all 10 most important social networks for tourism (Facebook, Twitter, Flickr, Pinterest, Instagram, Forsquare, Panoramio, Google+, YouTube and Issuu) is working to develop the region's brand reputation through the

involvement of 'influencers', whose online activity can become 'viral'. Moreover, Mr. Giorgetti, social media strategist of the Marche DMO underlines that:

"The style used should be friendly, politically correct, colloquial and sympathetic, but simultaneously also kind of authoritative because it comes from a public organisation".

4.5 DMOs' organisational structure and social media

The roles and job titles of the professionals who manage DMOs' social media efforts vary significantly across organisations. For example, the Emilia-Romagna DMO manages its web marketing strategy through a community manager, Giovanni Arata, and 5 editors. Of these, a total of 3 people work specifically on social media (2 full-time and 1 part-time).

In the Tuscany DMO, 18 people work in the web marketing department. The original social media team consisted 12 people and was outsourced until mid-2012 to another company, called Fondazione Sistema Toscana. Since then, the team has been internalised and now counts 10 members (9 full-time, and 1 part-time). Of these, 1 is the head of web marketing and communication, 1 is a social media analyst, 2 are social media strategists, 5 are content managers, and 1 is a technology specialist.

The Veneto DMO has a total of 5 people dealing with its web presence, of which 2 work on social media: one full-time, and the second part-time.

The Social Media Team of the Marche DMO consists of 1 coordinator/team leader (the social media strategist) and 4 more members. All of them also work on social media.

In the Valle D'Aosta DMO, the web marketing team consists of 4 people (1 web marketing strategist, 2 community managers and 1 editor[7]) who are permanently employed in the web marketing department: of these, 2.5 people work on social media (meaning that two people are totally dedicated to social media while a third works part-time on social media).

For the Friuli-Venezia-Giulia DMO, 4 permanent employees are in charge of web marketing, but only 2 of them work part-time directly on social media. The web marketing team consists of 1 web marketing coordinator and strategist, while the other 3 professionals are editors (with a varying degree of specialisation).

Within the Abruzzo DMO, 7 permanent employees are in charge of web marketing: all of them work part-time on social media. The Abruzzo region has recently hired 2 more people as content managers. Overall there is not a clear cut specialisation in terms of roles and job titles: everyone deals with a number of tasks.

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[7] The community managers and the editor work on content so they could be defined as content managers as well.

For the Basilicata DMO, web marketing and social media are dealt with by an external company consisting of 1 person working full-time as web coordinator, and another working part-time (as content manager). Just one of these two people works part-time on social media

Within the Lombardy DMO, 8 permanent employees work on web marketing; of these, 3 work on social media (2 full-time and 1 part-time). For the Piedmont DMO, 5 permanent employees deal with web marketing: of these, 1 person works full-time on social media. In the Sicilian DMO, 2 permanent employees work on web marketing and 1 works full-time on social media. Surprisingly, the representative of the Campania DMO did not respond to our questions.

Taken together, the above empirical evidence reveals some interesting features and trends: a) web and social media marketing activities are very rarely outsourced; b) in general, only employees who work full-time on web marketing are permanent employees, and they typically deal with strategic and coordination tasks related to web marketing; c) for more specific tasks (related for example to content generation) young professionals are typically hired with temporary contracts on specific projects[8], which in some cases are later transformed into permanent contracts. The data collected are summarised in Table 11:

Add Table 11 about here

The above results have to be interpreted with caution for a number of reasons. First, most of the staff working on web marketing do not necessarily dedicate 100% of their time to marketing tasks, but typically deal with administrative duties as well. This is especially true for permanent employees of the DMO. Additionally, it is often not easy to distinguish how much a specific staff member works on social media, as they might handle social media along with other web marketing activities.

4.6 Funding

Information about financial resource allocation to regional DMOs' web marketing was extremely difficult to collect. Unfortunately, many DMOs replied that either the information was too confidential to be shared, or that they simply did not have a specific break-down that would allow them to identify exactly what share of their promotional budget is spent on web marketing. Table 12 summarises the data collected through the interviews.

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[8] The most frequently used form of contract is the CO.CO.PRO. (Contratto di Collaborazione a Progetto), which basically implies that the employee is hired for a limited number of months to work on a specific project.

Add Table 12 about here

Since most of the money that regional DMOs spend on promotional activities is public money levied at the regional level, it is rather surprising that this information is in many cases not disclosed. Also, even those figures that have been disclosed must be interpreted with caution. The direct costs related to web marketing are relatively easy to identify when the human resources devoted to web marketing are short-term employees hired specifically for that task. On the other hand, such costs are extremely difficult to determine when social media and web marketing are managed by permanent employees (because permanent staff typically also perform also other tasks). Furthermore, some DMOs include expense items for personnel wages within their web marketing and social media marketing budgets, while other do not. Finally, even for staff directly employed in a DMO's web marketing department, it is in many cases difficult to quantify how much time they devote exclusively to social media.

Despite the aforementioned methodological issues, the collected data seem to indicate that the regions that allocate more money to web marketing and social media are also those which appear to be more effective and experimental in their approaches to the web (see the case of Tuscany).

4.7 Audience development

The empirical evidence of this study shows that the Italian regional DMOs which most successfully increased their Facebook fan base in 2013 were Umbria and Calabria—although both started from a very thin fan base (around 100 fans for each). However, among the DMOs with the largest fan bases, Tuscany and Sicily recorded significant increases (up 50% during the year, thanks also to the massive investment in social media, in the case of Tuscany, as is apparent from the section on funding).

There is significant variance across organisations in terms of strategies for audience development. As yet, no DMO uses its social platforms for commercial purposes. For example, Turismo Emilia Romagna (TER) is investing substantially in social media because it believes this can enable it to reach a wider audience, particularly segments that cannot be reached through more traditional media. The community manager of TER, Giovanni Arata says that:

"Social media are not yet being used for commercial purposes because users do not perceive social media as an area in which to carry out transactions"

This philosophy is shared by Costanza Giovannini, social media manager of the Tuscany DMO, who is however planning to create an ad-hoc page for commercial purposes. As far as audience development is concerned, Mrs. Giovannini maintains that:

"We do not deploy any specific strategy to increase the number of fans on Facebook (or followers on Twitter), but we try to focus our efforts on call to action on Twitter. We believe that, to capture the attention of Internet users, it is crucial to use the right tone of voice and language, with an emphasis on emotional aspects rather than commercial ones."

In line with this approach, the Tuscany DMO is starting up a new project aimed at telling the story of Tuscany through people, rather than through places. In April 2013 this DMO also started a project called Play Your Tuscany, consisting of a blog tour for bloggers, photographers, and video professionals, who are invited to participate in themed itineraries and recount their travel experiences through photos, stories, and videos on their blogs.

The Marche DMO has never engaged in advertising activities, and its number of fans is a result of a social strategy that was implemented mainly through the involvement of influencers--as is clear from the words of its social media strategist. There is no direct use of social media for commercial purposes.

4.8 Success in social media

How do we measure the success of the social media strategies crafted and deployed by Italian regional DMOs? The preceding analysis shows that engagement outcomes can vary significantly depending on how the engagement metrics are constructed. If we deploy metrics normalised by the number of fans on a monthly basis (see Table 3) and on a rolling basis, the best performers are: Calabria, Umbria, and Veneto (Figure 8) for the monthly basis; and Umbria, Calabria, and Abruzzo for the rolling basis. However, if we instead use metrics not normalised by the number of fans, the picture changes and Trentino, Tuscany, and Marche are the best performers (see Figure 10). This distinction is a significant contribution of this paper, which helps to highlight how engagement metrics can potentially be misleading, when it is unclear how those metrics are constructed.

Although the literature on social media ROI is rapidly developing (see Fisher, 2009; Frick, 2010), the results of the quantitative content analysis, combined with the qualitative data collected through interviews with DMOs, suggest that there is no general agreement on a single dominant metric for gauging success in social media strategies.

More specifically, the interviews highlighted that there is no specific set of metrics deployed consistently across organisations to assess the success of social media. Indeed, many interviewees said that their regional DMO is not particularly interested simply in the number of Likes or followers garnered on social media. On the other hand, during 2013 many DMOs adopted Facebook Ads to help promote their pages. As pointed out by Mr. Arata from the Emilia Romagna DMO, the Return On Investment (ROI) of social media strategies for the Emilia Romagna regional DMO is measured through a combination of different tools: Blogmeter and Radian 6 (paid service) and Google Analytics, Facebook Insights, Pinreach (free service).

The Tuscany DMO, in evaluating the success of its social media campaigns, also takes into account the level of engagement. According to Mrs. Giovannini, its social media manager, it is more important to notice how people "react" to a Facebook post in terms of sentiment, rather than merely deploying "cold numbers" to assess the effectiveness of social media strategies.

In addition, none of the interviewed social media managers are measuring commercial outcomes: that is, to what extent their strategies on Facebook and other social media are increasing the number of tourism packages and services purchased at the destination. They say that this is far beyond their capabilities, since the majority of DMO sites are set up mainly for promotion, and do not directly sell tourism products and services.

In any event, many DMO managers do not seem particularly concerned with the monetary ROI of their Facebook page, because they consider public money spent on e-promotion to be anyhow well spent (this looks like an a priori assumption for many of them). Nevertheless, greater transparency is needed concerning the way promotional budgets are allocated by individual DMOs, since it is Italian taxpayers' money that Italian regional DMOs are spending for their promotional activities.

5. Conclusions and implications

The results of this analysis clearly show that each Italian regional DMO has its own distinctive manner of using and interpreting social media strategies on Facebook. At first sight, one might (inaccurately) conclude there is a 'social media divide' between the north and south of Italy, since the top 5 DMOs in terms of number of Facebook posts (Trentino, Emilia Romagna, Marche, Tuscany, and Liguria) are all located in northern and central Italy . However, looking more carefully at the engagement data and the managerial practices in place, a more fine-grained distinction emerges, between regional DMOs that use/interpret social media in an active and experimental fashion vs. those that use/interpret social media in a more passive way. The former group includes Trentino, Tuscany, Sicily (which is nowhere near northern or central Italy), Emilia Romagna, and Marche—all of which are striving to develop

effective social media strategies aimed at enhancing engagement and interaction with Internet users. These same regions also tend to be present on a number of additional social media platforms, such as YouTube, Pinterest, Flickr, and Foursquare.

On the passive side are several DMOs (typically those of smaller regions such as Molise) that use social media merely to share information and news that has already bee published on the DMO's official website or YouTube channel, without involving Internet users. Moreover, minor regions such as Molise are present on Facebook with just an ordinary profile (rather than a fan page), which entails a number of limitations. For example, the number of friends is limited to 5,000, and to be able to follow the profile users must send a 'friend request' to the account (in the case of Molise, the "Molisani nel mondo" account). Several DMOs have given their Facebook page the same name as the region (see the Liguria DMO), which helps make the Facebook page highly recognisable (with a potentially positive impact on the number of fans).

Our findings indicate that visual content (namely photos) and moderately long posts have a statistically-significant positive impact on DMOs' Facebook engagement metrics, whereas higher post frequency and early daily timing (in the morning) of posts have a negative impact on engagement. The strong link between visual content and engagement may be ascribed to the well-established relationship between tourism and image-making media (e.g. Beeton, 2004), and the prevalence of images in DMOs posts also shows that DMOs recognise tourists' preference for visual content sharing (Munar and Jacobsen, 2014). The fact that moderately long posts boost engagement may be ascribed to the fact that, when the DMOs disseminate information they produce narrative content rich in details: this behaviour seems symmetric with the behaviour that tourist adopt when producing narrative content (Stoeckl, Rohrmeier, & Hess, 2007).

High posting frequency has a negative impact on engagement mainly because, owing to time constraints, there are limits to the amount of content that Internet users can absorb or engage with on any given day or week. Also, since users tend to consider only the newest content, older posts which they have missed will not receive an equal number of comments, likes or shares actions.

Posting in the morning has a negative impact on engagement because—as statistics on the usage of the Facebook platform show (Vitrue, 2010)--Facebook users tend to view these pages in the evening and at night, and so they will react more to the newest posts (those which were posted in the evening).

By triangulating the statistical analysis and interviews conducted in this study, we can arrive at some managerial implications for Italian regional DMOs. First, it seems that regions such as Trentino, Tuscany, and Sicily have developed some managerial best practices in the social media arena that could be usefully leveraged by other, less adept regions, which currently merely replicate on social media the content posted on their official websites. Such strategies include creating opinion polls, games, quizzes,

and contests involving visual content (e.g., to select the cover picture of the Facebook page). Our results clearly indicate that it would benefit other DMOs—also in other geographical contexts, and at any level (country, region, local)--to strategically deploy visual content to elicit their users' engagement. Given tourists' known preference for visual content sharing (Munar and Jacobsen, 2014), this approach is likely to boost social activity on their pages. Additionally, embedding such visual content in opinion polls or quizzes seems to produce an even stronger 'call to action' for users, that enhances social activity even more. Yet, as this analysis shows, only a few social media managers are currently aware that the hedonic value arising from UGC might be used to influence users' travel-planning decisions (Ayeh, Norman & Law, 2013) or to strengthen the reputation of their destination by creating positive electronic word-of-mouth (Dijkmans et al., 2015; Luo and Zhong, 2015).

Second, it seems that the apparent digital divide between the north and south of Italy--which anyhow exists only for total posts--is decreasing over time as many regions in the south (and also the islands of Sicily and Sardinia) recognise social media as an effective marketing tool. Indeed, a major culture shift is in progress, facilitated by national initiatives such as Buy Tourism Online (BTO), the conference and trade show on web marketing for tourism held annually in Florence (now preparing its 8th edition), which is attended by a growing number of Italian destination marketers. The general improvement in digital culture is a goal that regional DMO managers must pursue within their organisations, to help them face up to ever-increasing global competition among national and domestic destinations. In fact, the larger DMOs (such as Tuscany, Trentino, and Emilia-Romagna) do this already, and are trying to keep up the good work by increasing their social media budgets. However the smaller DMOs have only recently realised the importance of social media strategies, and started allocating a greater share of their promotional budgets and staff to social media in general and to Facebook in particular, and investing more in training their employees on digital marketing. This finding, concerning the importance of building a strong digital culture, might be transferable to other DMOs around the globe. Specifically, what can make a difference in increasing the social engagement of a DMO Facebook page is the ability of DMO employees to keep up to date with the latest developments in social media marketing. This in turn is tightly related to the DMO managers' attitude to digital culture, and their awareness of how social media can contribute to build a positive destination image (Frías et al., 2012; Llodra-Riera et al., 2015). The managerial best practices observed in this work can be regarded as simply the natural outcome of a new strategic management philosophy (which is not necessarily widespread among the analysed DMOs) that prioritises investments in social media and in the professional development of the marketing staff.

Third, Italian regions generally still deploy social media in a traditional top-down manner instead of exploring ways to strengthen a bottom-up UGC-driven approach and better interact and engage with

users/consumers. This might be due to the fact that UGC is simply less interesting (or less professionally produced) than content generated by DMOs themselves. Only a small number of Italian DMOs (such as Trentino and, to a certain extent, Tuscany and Emilia-Romagna) are trying to incorporate social media into an overarching flexible strategy, that allows for experimentation and for enhancing engagement and informal conversation. These results seem to corroborate the findings of a pioneering study on the use of social media by national DMOs (Hays et al. 2013) and suggest that that the approach of Italian DMOs to Web 2.0 fails to follow Kaplan and Haenlein's (2009) list of five key actions for managing a social media presence: be active, be interesting, be humble, be informal, and be honest. Overall, juxtaposing social media with other marketing tools might pave the way for Italian regional DMOs' social media marketing efforts in the near future. In this sense, we believe that Italian regional DMOs have much room for improvement and should benchmark themselves against other comparable DMOs in other parts of the world.

Fourth, it is still unclear how DMOs' social media managers tackle the issue of measuring the success and effectiveness (and efficiency) of their social media and Facebook activity. While it is clear that the largest regional DMOs have made important investments in improving their companies' digital culture, they still lack some understanding of the instruments that could be used to assess their efforts in web marketing in general, and in social media in particular. Administrators of individual Facebook accounts use different metrics (such as Facebook Insights and Google analytics) to assess their social media performance, but there is huge variance across social media managers in the way these metrics are adopted and made sense of.

Fifth, while a number of metrics and Key Performance Indicators (KPIs) are referred to in day-to-day operational activities (Socialbakers, 2015) and are used in practice, they very rarely inform strategic marketing management decisions. The reasons for this are twofold. On one hand, it is extremely difficult to assess the exact investment (in terms of financial and, especially, human resources) allocated solely to social media (separating social media marketing from other digital marketing activities). For instance, even if a metric for Social Media ROI could be theoretically agreed upon by managers and tourism management researchers, calculating it in practice would require having comparable data for the financial and human resources deployed by the social media teams of all the DMOs. On the other hand, any benchmarking exercise against competing destinations and DMOs is not feasible, because individual Facebook administrators do not share their information with competitors. To our knowledge, this is the case for a number of DMOs worldwide.

The software tool developed for this study was presented to most of the interviewed Italian DMO social media managers (covering 85% of the population of regional DMO social media managers nationwide). According to those managers, this software represents a first, crucial step toward

a solid benchmarking exercise based on public data, complemented with a reliable and robust algorithm for calculating social engagement. They also read with interest a draft version of this paper, and noted that it provides comparative evidence and a knowledge base useful for learning more about their social media presence and benchmarking themselves with their competitors.

This study has a number of limitations. First, the analysis was carried out in a specific geographical context (Italy), where tourism promotion is handled mainly by a specific level of government (i.e. the regions) rather than by the central government. Consequently, this study can only be generalised to countries where regional levels of government, or individual municipalities, play a predominant role in destination marketing (this is the case of confederate states in federal states, see for example the Länder in Germany). These findings could be further generalised by enlarging the sample to include regional and municipal DMOs in other countries. Furthermore, it might be interesting to benchmark our findings against other European destinations in Germany, the Scandinavian countries, Spain, and the UK, and by also taking National Tourism Organisations into account. A second, limit is that this analysis of Facebook content and DMO strategies and tactics was carried out over one recent year (2013). In future work the time frame of the analysis could be expanded to include several more years in the past, or updated with more recent data. Another way of extending this analysis would be to include additional specifications for the regression model, by adding such explanatory variables as the number of employees working on social media or the ratio of the social media budget to the overall web marketing budget. In addition, we are currently working on integrating a sentiment analysis module into our software tool, since the currently available tools suffer from several methodological weaknesses and generally work mostly for the English language. This development might add further nuances to our analysis. Finally, it would be interesting to explore whether--for destinations with comparable degrees of natural and cultural attraction--those DMOs that invest more and adopt managerial best practices for social media are effectively able to derive from this a sustained competitive advantage for their destinations.

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