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Research Paper

Changes in the structures and directions of destination management and marketing research: A bibliometric mapping study, 2005–2016



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A B S T R A C T

The growing importance of destinations as loci for change in tourism systems has led to the recent accelerated growth of destination management and marketing (DMM) research. This paper conducts an integrated exploration of the structure and interconnections, and the dynamics of the recent growth of DMM research in terms of research fronts and trajectories. A quantitative, visualization-rich approach is proposed, based on bibliometric mapping networks comprising DMM-relevant articles extracted from 49 tourism journals published from 2005 to 2016. The results reveal a DMM structure consisting of 10 key clusters. Sustainable development, competitiveness of tourist destinations, destination development and innovation, and ICT/social media are found to have rapidly evolved as research fronts, while the more traditional research clusters on destination perception and tourist decision-making have developed more slowly. Significant interactions can be observed between management- and marketing-oriented research domains. At deeper levels of analysis, more diverse research trajectories stand out, including those focusing on destination governance; knowledge and experience-based analytical frameworks; service-related domains; subjective issues such as emotions, attachment, and identity; destination brand equity; and sustainability. The paper also shows that additional value will come from research that integrates up-to-now distant DMM topics. The results of this study can help policymakers, practitioners, and scholars understand the recent progress in, and the major trends shaping, the DMM research agenda.

1. Introduction

It is widely acknowledged that tourism fosters the economic growth and social development of cities, regions, and countries (Lee & Chang, 2008). Owing to the extremely globalized and competitive nature of the tourism industry, the survival of tourism destinations depends heavily on their ability to generate and deliver value-added services and experiences to visitors (Fabricius, Carter, & Standford, 2007). Management and marketing studies thus play a key role in gaining competitive advantage and creating value from tourist destinations. Since its formal establishment in the late 1990s (Capone, 2016a; Laws, 1995), the field of destination management and marketing (DMM) has rapidly expanded to encompass the study of the development, management, and planning of tourist destinations from multiple disciplinary perspectives, including marketing and management, psychology, economics, geography, sociology, policy, and public administration (Laesser & Beritelli, 2013). As Pike (2016) argues, DMM research provides novel perspectives in tourism research as it focuses on the causes behind the attractiveness of destinations, their activities, and their competitive advantages. In contrast, previous tourism research has mainly considered places and tourist choices.

As its name suggests, DMM research deals with the management and marketing of tourism destinations. The division between the

management and marketing domains is blurry and has been a contentious issue in the literature. For instance, Pike and Page (2014) view destination management and marketing as two separate entities under the responsibility of two different research communities. In contrast, Laesser and Beritelli (2013) consider marketing as part of destination management, together with additional activities, such as planning, lobbying, and service coordination.

As fields of research mature and become more complex, it becomes increasingly important for researchers to seek a quantitative understanding of the role, content, and directions of their knowledge-generation efforts (Rivera & Pizam, 2015). In tourism research, such review studies have been regarded as essential for its promotion as a field and for strengthening its academic foundations (Koseoglu, Rahimi, Okumus, & Liu, 2016). Many studies have reviewed the body of DMM research. However, these reports are highly qualitative, as they rely heavily on the judgment of experts (Laesser & Beritelli, 2013; Reinhold, Laesser, & Beritelli, 2015), with the exception of Capone (2016a) and Capone (2016b). Moreover, extant research efforts have focused on the study of DMM from specific points of view, such as image, branding, competitiveness, or destination sustainability (Fuchs, Höpken, & Lexhagen, 2014; Neuhofer, Buhalis, & Ladkin, 2012). Therefore, there is a need to complement the insights from previous qualitative studies with the quantitative assessment of research on the management and marketing

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of destinations.

Bibliometrics, defined as the quantitative study of bibliographic data, is a useful approach for the examination of DMM field. The use of bibliometric approaches has expanded rapidly in recent years due to the greater availability of computing power and faster and easier-to-use analytical tools (Cobo, López-Herrera, Herrera-Viedma, & Herrera, 2011). The mapping of bibliometric data through visualization and network approaches has experienced the largest growth (Cobo et al., 2011; Van Eck & Waltman, 2011). Bibliometric mapping enables the identification of main research areas, an estimation of their size, and – of particular importance for this study – an assessment of the levels of interaction between these research areas (Van Eck & Waltman, 2011). Such information can provide researchers with insights into the future trajectories of DMM research (Porter & Cunningham, 2004).

This study examines advances in the field of DMM research using bibliometric mapping approaches, focusing on the structure of DMM knowledge and its dominant directions of growth in terms of general research fronts and specific research trajectories. To this end, the present paper presents a structured approach comprising evidence-driven, visualization-rich research methods based on network approaches, including portfolio analysis charts, bibliographic coupling networks, co-word networks, and circular plots. The dataset is drawn from tourism destination-relevant publications from 49 tourism and hospitality journals indexed in Elsevier's Scopus® bibliographic database covering 2005–2016. Unlike previous research approaches, this study investigates the field of DMM through relational bibliometric techniques – focusing on the interactions between a field's research domains – which, to the authors' knowledge, the present study is the first to attempt (Koseoglu et al., 2016).

The results of this study reveal a DMM structure consisting of 10 key clusters. Research fronts such as sustainable development, the competitiveness of tourist destinations, destination development and innovation, and ICT/social media are found to have evolved rapidly. While more traditional research clusters such as destination perception and tourist decision-making have developed more slowly, the study observes significant interactions between management- and marketing-oriented research domains. At deeper levels of analysis, more diverse research trajectories stand out, including on destination governance; knowledge and experience-based analytical frameworks; service-related domains; subjective issues such as emotions, attachment, and identity; destination brand equity; and sustainability. The results show that additional value will come from research that integrates up-to-now distant DMM topics. These are used to enumerate a series of major trends shaping the DMM research agenda. The study serves to offer implications that can help policy-makers, practitioners, and scholars to better understand the progress of DMM research.

The rest of this paper is structured as follows. Section 2 reviews the relevant literature. Section 3 describes the study's data and research methods. Section 4 enumerates the results on the structure and development trajectories of DMM research. Finally, Section 5 concludes the paper and outlines its key implications.

2. Literature review

Few studies have examined global advances in the research on the management and marketing of destinations. Some studies that have focused on destination marketing are Pike and Page (2014), Dioko (2016), Fyall and Leask (2006), and Baker and Cameron (2008). Other studies have examined destination management, including Amposta (2015), Capone (2016a) and Laesser and Beritelli (2013). Of specific relevance to this study are the series of papers summarizing the major outcomes of the St. Gallen Consensus on Destination Management 2012, 2014, and 2016 (Laesser & Beritelli, 2013; Reinhold et al., 2015, 2018), in which key experts assess the future avenues of research on tourism destinations. The general results of these exercises with DMM experts are presented in Table 1.

Table 1

Ten main topics identified by St. Gallen Consensus on Destination Management 2012, 2104, and 2016 (Laesser & Beritelli, 2013; Reinhold et al., 2015).

- (1) Definition of destination
- (2) Sustainable destination development and governance
- (3) Destination branding
- (4) Destination marketing and competitiveness
- (5) Governance and leadership in destination networks
- (6) Sustainability
- (7) Relevance of experiences to the destination concept
- (8) Destination strategy and resilience
- (9) Tourism taxation and regulation
- (10) Big data and visitor management

Despite their usefulness, the DMM topics shown in Table 1 were obtained with methods largely qualitative in nature and are highly dependent on the reviews and judgments of experts. Most of the review studies on DMM research have been confined to books and reports, including Wang (2011), Marshall (2016), and Morrison (2013) to name a few. These review studies have examined tourism destinations from specific points of view, including their branding (Balakrishnan, 2009; Blain, Levy, & Ritchie, 2005; Chen & Šegota, 2015; Dioko, 2016; Kladou, Giannopoulos, & Mavragani, 2015), image and perception (Li, Ali, & Kim, 2015; Mair, Ritchie, & Walters, 2016; Tasci & Gartner, 2007; Tasci & Kozak, 2006; White, 2004), competitiveness and benchmarking (Abreu-Novais, Ruhanen, & Arcodia, 2016; Capone, 2016b; Kozak, 2004; Tsai, Song, & Wong, 2009), collaboration and networks (Fyall, Garrod, & Wang, 2012; Meriläinen & Lemmetyinen, 2011; Van der Zee & Vanneste, 2015), and sustainability (Borges, Eusébio, & Carvalho, 2014; Njoroge, 2015; Schianetz, Kavanagh, & Lockington, 2007). Furthermore, these review studies have typically examined hundreds of publications and a handful of journals. The question of where DMM research as a whole is moving has not yet been addressed.

The accelerated generation of knowledge in the natural and social sciences, particularly in emerging fields of research such as DMM, makes it imperative to develop approaches that help researchers overcome the pervading 'flood of information' (Shibata, Kajikawa, Takeda, Sakata, & Matsushima, 2011). In this context, bibliometrics – the quantitative study of bibliographic data – is a useful approach. The field of bibliometrics has experienced rapid growth in the last decade due to the greater availability of computing power and faster and easier-to-use analytical tools (Cobo et al., 2011). In particular, the visualization of interrelations between scientific studies through network approaches, known as 'bibliometric mapping,' has received considerable attention in recent years. Bibliometric mapping allows the identification of main research areas, and the estimation of their size and levels of interaction (Van Eck & Waltman, 2011). The five fundamental bibliometric mapping approaches are shown in Table 2.

As shown in Table 2, these bibliometric mapping approaches rely on the co-occurrence or interconnection of bibliographic elements, such as keywords, authors, cited references, and citing papers.

Bibliometric methods have been widely used in tourism and hospitality studies (McKercher & Tung, 2015) that have provided valuable insights into the evaluation of the progress of tourism and hospitality research and the epistemological and ontological structures of their knowledge-creation processes (Koseoglu et al., 2016; Rivera & Pizam, 2015). Bibliometric studies are also important building blocks for the promotion of the tourism field and for the strengthening of its academic foundations (Koseoglu et al., 2016). Recently, Koseoglu et al. (2016) reviewed bibliometric-based studies in seven top tourism and hospitality journals. They collected 190 bibliometric-based studies published up to 2015, which they classified into three main categories:

- (1) *Evaluative techniques*, which focus on the impact of scholarly work and include aspects such as rankings, h-indexes, and citation counts;
- (2) *Review studies*, which build on traditional review methods through

Table 2
Classification of bibliometric mapping approaches.

Bibliometric approach	Principle	Bibliographic element	Definition	Pioneer works
Co-word or term map	Co-occurrence	Keywords	Describes the frequency with which two keywords appear together in a text	Callon, Courtial, Turner, and Bauin (1983)
Co-authorship	Co-occurrence	Authors	Defines the extent to which two authors appear together as co-authors in publications	de Beaver and Rosen (1978)
Co-citation	Co-occurrence	Cited-references	Describes the frequency with which two references are cited together by other papers	Small (1973); Marshakova (1973)
Bibliographic coupling	Co-occurrence	Citing papers	Occurs when two papers cite a common reference	Kessler (1963)
Direct citation	Interconnection	Citing and cited papers	The connection that occurs when a (citing) paper cites another (cited) paper	Garfield, Sher, and Torpie (1964)

frequency or basic statistics; and
(3) *Relational techniques*, which emphasize the interactions between publication elements.

Of the collected bibliometric-based publications, 157 review studies, 24 evaluative studies, and only nine relational studies were found. Koseoglu et al. (2016) highlighted the need for relational techniques (i.e. bibliometric mapping approaches), as they can reach stronger theoretical advances because they explore the interactions between fields.

To avoid any overlap with the studies mentioned above, we limit our review of bibliometric-driven tourism and hospitality-related research efforts to those focusing on bibliometric mapping approaches (i.e. network methods) published in the last two years. We elaborate below on some of the patterns observed in the collected literature. Fang, Yin, and Wu (2017) used the co-citation network-based CiteSpace software to study global trends and directions of the field of climate change and tourism. Using the same software, Zhang, Wang, Hao, and Yu (2016) explored the growth of scientific literature on smart tourism indexed in the Chinese bibliographic database CNKI. A handful of other publications have focused on the study of collaboration patterns in tourism scholarship through co-authorship approaches (Benckendorff & Zehrer, 2016; Casanueva, Gallego, & García-Sánchez, 2016). An additional set of studies focus on discerning the intellectual structures underlying fields relevant for tourism and hospitality research, including: the sharing economy (Cheng, 2016), social media research (Leung, Sun, & Bai, 2017), hospitality management (García-Lillo, Úbeda-García, & Marco-Lajara, 2016), and innovation research in hospitality and tourism (Gomezelj & Gomezelj, 2016). Building on research of the key citation relationships that occur between publications and their cited references, Chuang et al. (2017) explored the development of the field of e-tourism. Finally, we also found a series of relevant studies in non-tourism and hospitality journals. For instance, Lu and Liu (2015) and Zhang, Lyu, and Yan (2015) developed an approach to identifying the major research fronts of the tourism literature. In addition, Tonghui, Caihua, Wei, Qinjian, and Zhiping (2016) studied doctoral dissertations in Chinese universities using co-word approaches to map the tourism research in China. Bibliometric studies are still scarce in the DMM field. Exceptions include the study by Capone (2016a) on tourist destination research, and the efforts of Jørgensen (2016) to develop a synergistic social network analysis.

Overall, clear need was observed for studies approaching the field of DMM as a whole, both broadly and quantitatively. The following section describes the data and research methodology underlying such an approach.

3. Data and research design

This section describes the data and research methods used in this study. These approaches follow the general bibliometric methods described in Cobo et al. (2011) and Börner, Chen, and Boyack (2003).

The data of this study were drawn from peer-reviewed publications

extracted from 49 relevant tourism and hospitality-related journals indexed in Elsevier's Scopus bibliographic database, which provides a wider coverage of tourism and hospitality-related journals than other comparable databases. The list of peer-reviewed journals used in this study, presented in Supplementary Information 1, includes most of the top tourism and hospitality-related journals described by Law (2010) and Gursoy and Sandstrom (2016). The analysis included articles in English published between 2005 and 2016. One of the most challenging aspects of bibliometric studies is the delimitation of the field of research under study. To delimit the field of DMM, a search query was used consisting of combinations of the terms *destination* or *destinations* with a series of marketing and management terms that the authors' preliminary studies suggested were relevant for the DMM field (Supplementary information 2). This search included the titles, abstracts, and author's and indexer's keywords of publications. As the only journal with a specific scope on DMM research, this study also included the totality of articles from the Journal of Destination Marketing and Management. In addition, a series of tourism and hospitality-related publications were added that, despite not including the term 'destination(s)' in their titles, abstracts or keywords, featured cited references whose titles did contain variations of the destination management and marketing terms above. Semi-automatic filtering procedures were conducted to identify the publications that were relevant to the field of DMM. The list of cited references was then extracted from these publications.

Upon a label standardization of the collected citing papers and their cited references, a global bibliographic coupling (BC) matrix was built encompassing the sets of interactions between DMM papers. As described above, a BC connection occurs when two papers cite a common reference. Bibliometrically speaking, the more often papers share references, the greater their cognitive relationship (Yan & Ding, 2012). After publications without references and other non-relevant publications were excluded, the BC matrix was visualized into a BC network that related 2378 DMM-relevant publication nodes with each other. In this study, the BC network represents the knowledge structure underlying the DMM field. To consider the differences in frequency across publications, the BC network was normalized with the cosine similarity measure, a commonly used method in the bibliometrics field. Here, the cosine similarity measure is defined as follows (Salton & McGill, 1983):

$$S_s(i, j) = \frac{bcr(i, j)}{\sqrt{cit(i) * cit(j)}}$$

where $S_s(i, j)$ stands for the cosine-normalized bibliographic coupling strength between the citing documents i and j , $bcr(i, j)$ represents the number of bibliographic coupling relationships between the citing documents i and j , and $cit(i)$ and $cit(j)$ reflect the total number of records for the citing documents i and j , respectively. We selected a predetermined co-citation threshold \geq to 0.18 to focus on the relevant bibliographic interrelations. Cosine thresholds between 0.15 and 0.20 are common in the literature.

The normalized BC network was visualized with VOSviewer software (Van Eck & Waltman, 2010). Using this analytical software,

clusters (i.e. groups of highly interconnected papers) were extracted from the BC network. Due to the subjectivity inherent in the estimation of clusters, the present study was initiated with 45 clusters, which were analyzed and subsequently converged into 10 main clusters that characterize the main research domains of the DMM field. Relevant bibliometric data were extracted from these publications, including numbers of publications, publication years, and numbers of citations. To account for the time-dependent nature of citations, average citation counts per year were used. For this, the number of citations gathered by an article in a year was normalized by the number of years elapsed since its year of publication. These data were used to build a portfolio analysis chart to estimate the DMM research fronts. This analytical tool relates the clusters extracted from the BC network in terms of their recent growth rates in quantity (number of publications) and quality (normalized number of citations), emergence (average publication years), and productivity (amount of publications). In a subsequent analysis, the interactions between these clusters were evaluated by shrinking the BC network into their constitutive clusters by summing up the raw lines between clusters using Pajek software (De Nooy, Mrvar, & Batagelj, 2011). These cluster interactions were visualized in circular plots built with Gephi software (Bastian, Heymann, & Jacomy, 2009).

The Natural Language Processing tool in VantagePoint software (Porter & Cunningham, 2004) was then used to extract keywords from the titles, abstracts, and author's and indexer's keywords of the collected DMM-relevant publications. The collected keywords were then cleaned and sorted = for further processing. A global co-occurrence matrix was built to relate these keywords depending on the number of times they co-occurred in texts (i.e. according to the extent to which keywords appeared together in a text). The keyword co-occurrence matrix was then visualized into normalized term maps. In parallel, relevant bibliometric data for these keywords were extracted to build a portfolio analysis chart relating the number of publications, normalized citation counts, and emergence at the keyword level. For the estimation of these specific trajectories in DMM research, the term map and the portfolio analysis chart were integrated into a single analytical tool, from which the main keyword groups could be discerned.

4. Results

4.1. General longitudinal data

Fig. 1a shows the development of the number of collected publications on DMM from 2005 to 2016. This figure indicates that research on DMM steadily increased during that time.

Fig. 1b enumerates the 15 journals with the highest number of DMM-relevant publications. The results of Fig. 1b indicate the greater role played by tourism and travel journals, compared to hospitality journals, in the progress of the DMM field. Articles from these journals account for over 70% of all publications. The predominant journals on this list – those with more than 100 publications – are [TM], [JTTM], [JTR], [TA], [IJTR], and [JDMM]. From these journals, *Tourism Management* takes the largest share of DMM-relevant publications.

4.2. DMM knowledge structure

Fig. 2 presents the structure of the DMM field obtained from the bibliographic coupling interrelations between the 2378 DMM-relevant publications collected for this study. Each node represents a DMM-relevant publication. The node colors refer to the clusters (i.e. groups of highly interconnected publications) obtained from the calculations of the analytical software VOSviewer.

After a series of iterations and discussions with tourism management experts, the authors settled on a DMM structure containing 10 different clusters, as displayed in Fig. 2. This figure enumerates the clusters based on their size (i.e. the total number of publications). As indicated at the bottom of Fig. 2, these clusters were labeled according to the representative keywords extracted from the titles and abstracts of their respective publications. The divisions of knowledge delimited by these clusters are not clear-cut: in fact, as described below, they partly overlap. However, these clusters do signify the general patterns of the cognitive interrelations between DMM publications. This section presents a series of approaches conducted to characterize the contents and dynamics of the DMM clusters quantitatively.

The knowledge structure of the DMM field, displayed in Fig. 2, is organized around two main cognitive poles: destination marketing- and management-dominated clusters on the left-hand and right-hand sides of this figure, respectively. It should be noted that these divisions overlap, as evidenced in the significant number of nodes and

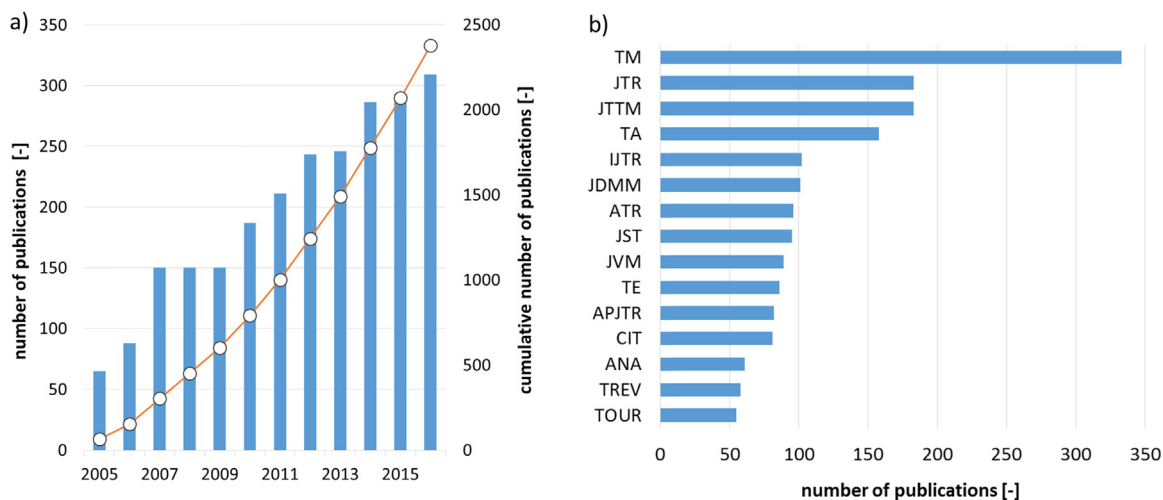
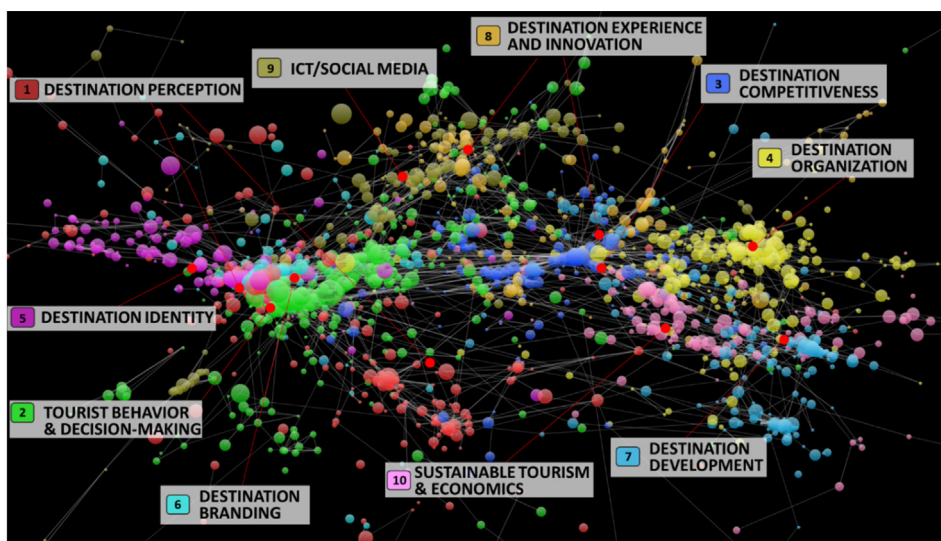


Fig. 1. General trajectories of growth observed from 2374 DMM-relevant publications. (a) Number of publications (cumulative) from 2005–2016. (b) Distribution of publications across top-15 journals. [#] indicates the total number of publications by journal. Abbreviations: TM: *Tourism Management*; JTTM: *Journal of Travel and Tourism Marketing*; JTR: *Journal of Travel Research*; TA: *Tourism Analysis*; IJTR: *International Journal of Tourism Research*; JDMM: *Journal of Destination Marketing and Management*; ATR: *Annals of Tourism Research*; JST: *Journal of Sustainable Tourism*; JVM: *Journal of Vacation Marketing*; TE: *Tourism Economics*; APJTR: *Asia Pacific Journal of Tourism Research*; CIT: *Current Issues in Tourism*; ANA: *Anatolia*; TR: *Tourism Review*; TOUR: *Tourismos*.



No.	Cluster name	Size	Representative keywords for clusters
1	Destination perception	465	Image; behaviors; marketing; perceptions; intentions; crises and disasters; satisfaction; development; risk (perception, attitudes); China
2	Tourist behavior and decision-making	445	Satisfaction; behavior; marketing; motivations; loyalty; choice (experiments, models); economics (various); intentions; segmentation; decision-making
3	Destination competitiveness	257	Competitiveness; development; marketing; economics (diverse); attractions; attributes; satisfaction; importance-performance analysis; behaviors; attractiveness
4	Destination organization	254	Stakeholders; development; networks and alliances; marketing; governance; sustainability; collaboration; DMO; tourist mobility; behaviors
5	Destination identity	238	Image; marketing; film tourism; China; development; behaviors; perceptions; heritage/cultural tourism; attractions; photo images
6	Destination branding	210	Image; branding; marketing; behaviors; perceptions; brand equity; personality; destination marketing; development; intentions
7	Destination development	200	Development; sustainability; economics (various); residents (perceptions/attitudes); lifecycle; social (various); ecotourism; environment; behaviors; impact
8	Destination experience and innovation	164	Development; food tourism; marketing; competitiveness; knowledge management; economics (various); experience; innovation; culture; performance
9	ICT/social media in DMM	162	E-tourism; marketing; destination marketing; information; websites; ICT; DMO; internet; social media; behaviors
10	Sustainable tourism and economics	139	Sustainability; climate change; development; demand; economics (various); marketing; ecotourism; policy-making; behaviors; adaptation management

Fig. 2. DMM knowledge structure and clusters. Each node represents one of the 2378 DMM-relevant publications collected in this study. Lines depict bibliographic coupling (BC) relationships between nodes. Only the strongest 9000 lines are displayed in this figure. The colors of the BC network define groups of highly interconnected nodes, or clusters. In total, 10 clusters were obtained, which we labeled based on keywords extracted from these publications, as displayed in the table.

interconnections lying between both node agglomerations. The composition of the clusters of Fig. 2 is further characterized by examining their influential top 15 publications per cluster in terms of their average number of citations per year, as described below. Due to space limitations, only a handful of citations is presented below. The full list of most-cited publications per cluster is presented in Supplementary Information 3.

Cluster 1, *Destination perception*, the largest cluster with 464 publications, includes the study of the factors influencing the formation of a destination's image. This cluster involves studies focusing on the investigation of the relationships of destination image with cognitive-affective and psychological factors (del Bosque & San Martín, 2008). In particular, it includes the influence of risk perception for destinations on destination choice, destination image, and tourism (Lepp & Gibson, 2003). It also encompasses additional aspects shaping image formation for destinations (Qu, Kim, & Im, 2011).

Cluster 2, *Tourist behavior and decision-making*, focuses on the aspects of tourists or travelers visiting destinations. The bulk of the representative works in this cluster deal with the study of the behavioral intentions of tourists (i.e. their intention to revisit and their willingness to recommend a destination) (Lam & Hsu, 2006). In particular, this cluster investigates the relationships between tourist intentions and destination image, travel motivation, novelty-seeking, and quality and

visitor satisfaction (Chen & Tsai, 2007). This cluster also includes papers that unravel decision-making processes to understand and predict tourist's destination choice (Sirakaya & Woodside, 2005). Another stream of research observed in this cluster is related to the emotional aspects of visitors towards tourist destinations, such as attachment, loyalty, and emotional experiences (Yoon & Uysal, 2005).

Cluster 3, *Destination competitiveness*, focuses on the building of the competitiveness of tourism destinations. Included here are studies investigating the attributes that impact the competitiveness of tourism destinations; the evaluation of models of competitiveness and its measurement of competitiveness through different indicators; and the role of entrepreneurs in enhancing the competitiveness of rural regions (Crouch, 2011). Several studies have evaluated destination competitiveness through importance-performance analysis (Azzopardi & Nash, 2013). A series of studies approached destination management and organization from a more futuristic perspective (Dwyer, Edwards, Mistilis, Roman, & Scott, 2009).

Cluster 4, *Destination organization*, emphasizes advance in the organizational structures that underlie tourism destinations. The role of destination management organizations (DMOs) in the planning, coordination, and organization of destinations is of relevance in this cluster (Blain et al., 2005). Included here are discussions on the role of governance and governments in the organizations of destinations

(Beritelli, Bieger, & Laesser, 2007). At the core of this cluster are collaborative and cooperative arrangements among the different actors involved in tourist destinations, including collaborative marketing, destination networks, and policy networks (Dredge, 2006). Some of the works of this cluster highlight the role of the stakeholders' perspective (Bornhorst, Ritchie, & Sheehan, 2010). In addition, this cluster includes studies on the spatial movement patterns of tourists.

Cluster 5, *Destination identity*, is closely related to Cluster 1 *Destination image*. However, its studies focus on the impact of information sources (e.g. websites, blogs, social media, or 'traditional' media) as agents of image formation in tourism destinations, including its influence on destination choice through electronic word-of-mouth (Choi, Lehto, & Morrison, 2007). It also includes works emphasizing the role of promotion in destination image (Govers, Go, & Kumar, 2007). This cluster involves studies on wine tourism destinations, the impact of films and dramas on the development of tourism destinations, and the role of tourism experiences. Also of interest for this cluster is the role played by authenticity on the place attachment experienced by travelers (Ram, Björk, & Weidenfeld, 2016).

Cluster 6, *Destination branding*, is closely related to *Destination perception* as it includes a series of studies on destination image from the national perspective, and a couple of reviews on destination image (Nadeau, Heslop, O'Reilly, & Luk, 2008). At its core, this cluster emphasizes the study of destination personality and brand personality and their relationship to other aspects such as destination image (Ekinci & Hosany, 2006). It also involves studies investigating the inclusion of destination branding and customer-based brand equity on the strategy building processes of destinations (Boo, Busser, & Baloglu, 2009).

Cluster 7, *Destination development*, is dominated by research focusing on the development of tourism destinations from different viewpoints. The most influential works in this cluster focus on evaluating the development of destinations from the perspective of their local residents, including their attitudes, perceptions, and empowerment (Látková & Vogt, 2012). The concept of the 'lifecycle' is often used to model the evolution of tourism destinations, including its implications for the sustainability of destinations and the impact of demographic aspects such as population ageing (Claver-Cortés, Molina-Azorín, & Pereira-Moliner, 2007; Glover & Prideaux, 2009). This cluster also includes a series of studies focusing on the interactions between development and sustainability (Dolnicar & Leisch, 2008).

Cluster 8, *Destination experience and innovation*, contains a series of influential publications touching on the contexts and aspects of the building of tourists' experiences of destinations (Neuhof et al., 2012). One common topic in this cluster is the role of cuisine and food as important elements in destination marketing, identity, and branding (Okumus, Okumus, & McKercher, 2007). Also included in this cluster are studies on medical tourism in destinations, as well as the role of culture and heritage (Yu & Ko, 2012). This cluster includes a series of publications that approach the performance and competitiveness of tourism destinations from resource/competence and innovation-oriented perspectives (Craocolici & Nijkamp, 2009).

Cluster 9, *ICT/social media-enabled marketing and management*, includes studies using information technologies and social media to enable destination management and marketing. The use of travel blogs as tools for assessing service quality and traveler's experiences receives the largest number of citations (Pan, MacLaurin, & Crotts, 2007). This cluster also includes studies on the use of online travel information search and its impact on destination choice, gender differences, and the representation of the tourism domain on the internet (Jacobsen & Munar, 2012). Another important topic is the role of websites for touristic destinations and their influence on travelers. This cluster also includes the use of social media (e.g. Facebook) as destination-marketing tools for DMOs, the social media strategies and practices of these organizations, and their impact on destination branding and destination choice (Hays, Page, & Buhalis, 2013). Other prominent topics in this cluster include the development of a knowledge infrastructure based on

'big data' analytics for destinations and the use of near-field communication (i.e. short-range and wireless technologies) for tourism (Fuchs et al., 2014).

Cluster 10, *Sustainable tourism and economics*, is based on studies of sustainability and climate change, including issues such as the paths in the implementation of sustainable mass tourism and barriers to its implementation, as well as dialectic studies on sustainable tourism (Weaver, 2012). This cluster also includes the study of adaptation in the field of tourism, the assessment of vulnerability to climatic changes for coastal tourism, and projections of the impacts of climate change on the tourism industry (Kaján & Saarinen, 2013). This cluster also includes studies evaluating the impact of infrastructure such as transportation and water management on destinations (Khadaroo & Seetanah, 2008). Additional studies investigate more general issues, such as estimations of greenhouse gases emitted by the tourism industry. Another pole of research in this cluster involves economic studies related to tourism demand, such as the determinants of domestic and international tourist flows and their characterization (Naudé & Saayman, 2005). It also includes studies on the relationship between climate and destination choice and the heterogeneities of tourists during economic crises (Eugenio-Martin & Campos-Soria, 2010).

4.3. DMM general and specific research trajectories

The paper now proceeds to an analysis of the general research fronts and specific research trajectories in DMM research. The former are based on the clusters obtained from the network shown in Fig. 2, and the latter rely on the relevant keywords extracted from the DMM publications.

Fig. 3 shows the general trajectories of DMM research. The portfolio analysis chart in Fig. 3 relates the DMM clusters depending on their *rates of growth*, in terms of their cumulative number of publications (x-axis) and cumulative time-normalized citations (y-axis); *size*, as inferred from their shares of publications (size of bubbles); and *emergence*, in terms of the average of their publication years (color of bubbles).

The results seen in Fig. 3 point to differences in the quantity and quality of the main research topics in the DMM field, as inferred from the different patterns of publication and citation growth observed in DMM clusters. Three main groups of DMM clusters can be discerned from Fig. 3. First, there are four research clusters with high levels of importance and predominance: 'Destination competitiveness,' 'Destination experience and innovation,' 'Sustainable and economic development,' and to a lesser degree 'ICT/social media.' The last of these clusters is located at the fringes of the average values for the rates of growth in the number of publications and normalized citations. Second, a group of five clusters are characterized by mid-tier locations in the research portfolio in Fig. 3: 'Destination perception,' 'Destination branding,' 'Destination organization,' 'Tourist behavior and decision-making,' and 'Destination development.' These clusters show more slowly moving dynamics. The sizes and colors of their bubbles indicate that this group of DMM clusters includes more mature and traditional DMM research topics. Of those, only 'Destination branding' shows a high prominence, as its rates of growth in cumulative citations attest. Third, one cluster, 'Destination identity,' falls behind the rest of clusters, as it displays the lowest levels of prominence and importance. In general, the results in Fig. 3 suggest a recent shift in the DMM research agenda to more management-oriented and sustainability-related topics; however, as shown below, the growth patterns in the DMM field are more complex, as management and marketing-oriented destination topics interrelate with each other.

To evaluate the interrelations between DMM clusters, Fig. 4 presents the shares and rates of growth in the cluster interactions through circular plots. The line values are estimated from the sum of the connecting lines obtained from the network shown in Fig. 2. To elaborate on this figure, each of the DMM clusters was classified into management- (MGT) or marketing- (MKT) oriented topics (pink and green

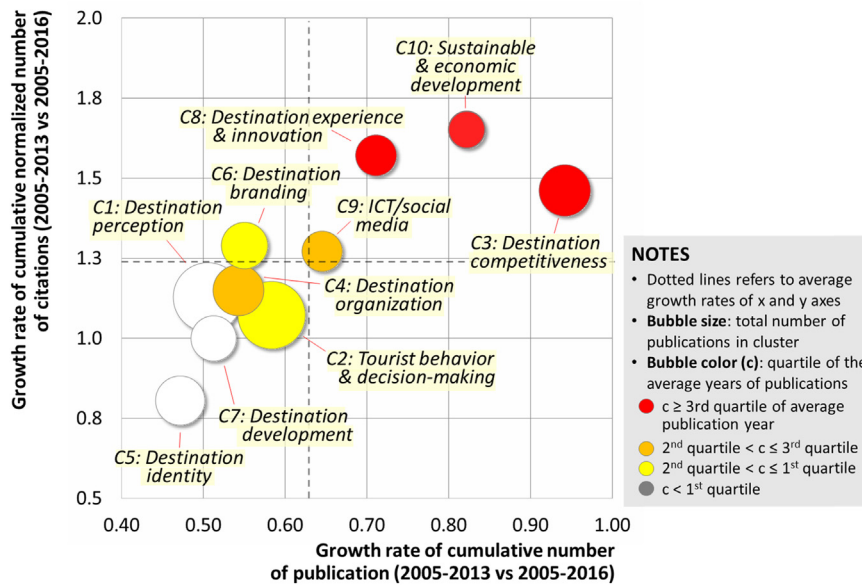


Fig. 3. Characterization of DMM clusters. The bubble chart locates DMM clusters according to their rates of growth in terms of their cumulative number of publications (x-axis) and normalized citations (y-axis) from 2005 to 2013 vs 2005–2016. The size and color of the bubbles vary depending on the number of records received by each cluster and the quartile of the average year of publication, respectively. The dotted lines on the x and y axes represent average values.

colored nodes, respectively) according to their contents, as inferred from their list of keywords seen at the bottom of Fig. 2. ICT/social media [ICT_C9] and Sustainable and economic development [SUS_C10] nodes are colored orange and blue, respectively. The red lines of these circular plots denote the interconnections between management- and marketing-dominated clusters.

Fig. 4a shows the levels of interaction between clusters in terms of their shares of interconnections from the years 2013–2016, while Fig. 4b defines the rates of growth experienced by the cluster interactions from 2009 to 2012 and 2013–2016. A series of results can be inferred from these figures.

The marketing-dominated clusters (pink nodes in Fig. 4) show greater degrees of interrelation, particularly for the clusters in which destination image dominates ('Destination perception' [MKT_C1] and 'Tourist behavior and decision-making' [MKT_C2]). Interestingly, the interactions between management- and marketing-dominated clusters account for 15.4% of all interrelations. In particular, the interactions should be highlighted between 'Destination competitiveness' [MGT_C3] with all marketing-oriented clusters and those of 'Destination

perception' [MKT_C1] and 'Tourist behavior and decision-making' [MKT_C2] with the management-dominated clusters (green nodes in Fig. 4). As described in Fig. 4b, among the interactions between management- and marketing-oriented clusters, the interactions between 'Destination competitiveness' [MGT_C3] and 'Destination experience and innovation' [MGT_C8] with the marketing-oriented clusters show the greatest rates of growth. The highest rates of growth among the cluster interactions are observed between 'ICT/social media' [ICT_C9] and 'Destination competitiveness' [MGT_C3] and 'Sustainability and economic development' [SUS_C10] and between the last of these clusters and 'Destination perception' [MKT_C1], 'Destination competitiveness' [MGT_C3] and 'Destination organization' [MGT_C4].

So far, this analysis of DMM research trajectories has been restricted to the aggregated level of research fronts, as inferred from the clusters. Additional insights into DMM research trajectories can be gained by analyzing at greater levels of granularity: for example, by using keywords, as shown in Fig. 5.

The construction of Fig. 5 relied on the integration of co-word network approaches and the portfolio analytical chart similar to that

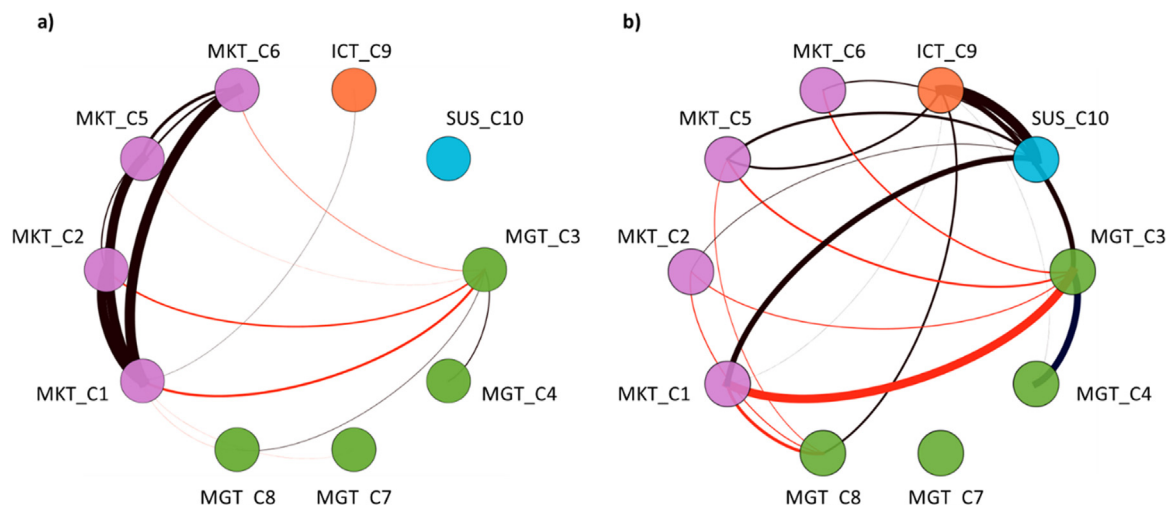


Fig. 4. Analysis of relevant interactions between clusters through circular plots. (a) Circular plot of the shares of interactions for all clusters for 2013–2016 (threshold of $\geq 1\%$). (b) Circular plot of the rates of growth experienced by the interactions between clusters for 2009–2012 and 2013–2016 (threshold 0.4). The strength of the lines defines the degree of the interactions between marketing- and management-dominated clusters. ICT = information and communications technologies; MGT = destination management; MKT = destination marketing; SUS = sustainability.

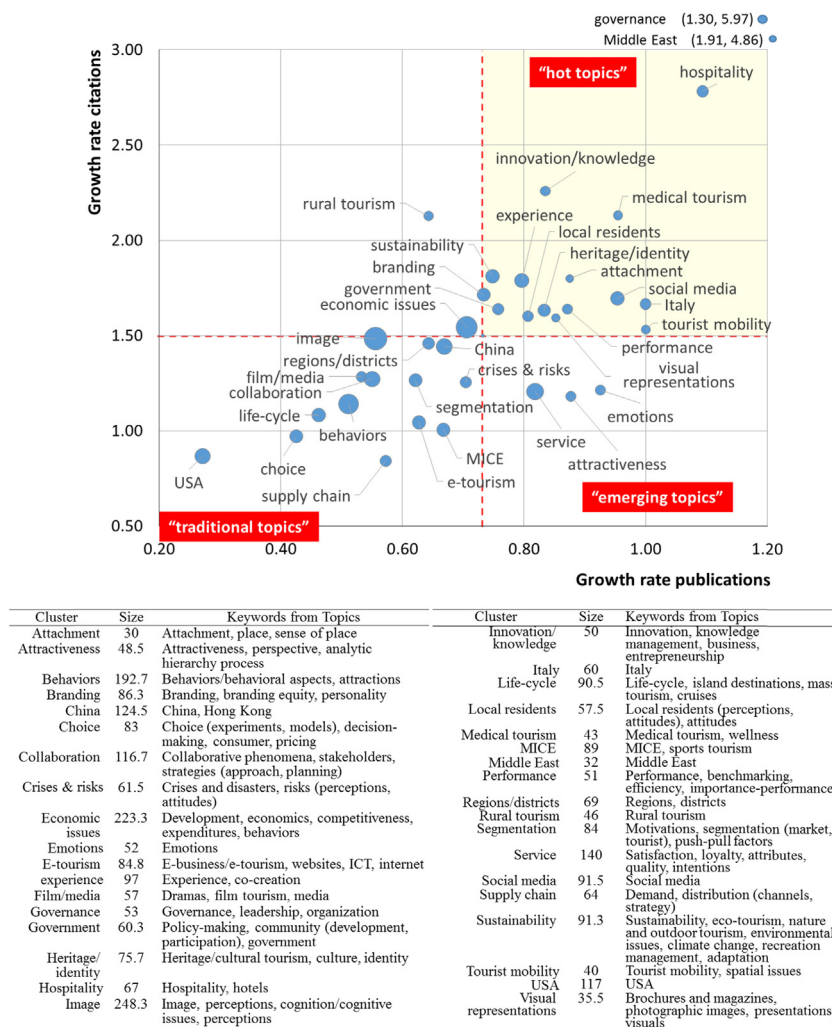


Fig. 5. Exploration of DMM research trajectories through the extraction of relevant Similar to Fig. 3, this figure top locates relevant keywords (≥ 25 records) are located based on their rates of growth in terms of their shares (y-axis) and their rates of growth of the cumulative number of publications (x-axis). The dotted lines in each graph denote average rates of growth. The encircling dotted lines of this figure bottom group together related keywords. Arrows of groups have no special meaning; they are for graphical purposes.

shown in Fig. 3, but using keywords instead of clusters. Fig. 5 relates relevant keywords extracted from DMM articles on the basis of the rates of growth in their cumulative number of publications (x-axis) and time-normalized citations (y-axis) gathered by keywords between 2005–2013 and 2005–2016. The red dotted lines of Fig. 5 give the average values of both axes. The size of the bubbles represent the number of the publications in which the keywords appear. To clarify the results in Fig. 5, groups of related keywords are included at the bottom of this figure. These keyword groups represent specific trajectories in DMM research. The further up and to the right of Fig. 5a research trajectory – embodied in a keyword or group of keywords – lies, the greater its importance and prominence in DMM research. Research trajectories with above-average importance and prominence values are referred to as ‘hot topics.’ In contrast, those research trajectories below the two average lines are referred to as ‘traditional topics.’ Owing to the time-dependent nature of citations, those research trajectories with above-average growth rates in publications and below-average growth rates in citations are regarded as ‘emerging topics.’

In line with the results of the research fronts shown in Fig. 3, Fig. 5 shows a series of destination management issues relevant to DMM research. The research trajectory ‘Governance and organizational-related aspects,’ including governance, leadership and destination management organizations, shows the greatest levels of importance. Other

organizational-related aspects, such as collaboration, lifecycle approaches, and MICE, are located as traditional topics in Fig. 5. At less-significant levels but still in the ‘hot topics’ quadrant, we find the role of government and public policy.

A highly prominent and important research trajectory is the analysis of tourist destinations from a knowledge perspective. This approach views destinations as cognitive entities whose development is closely related to the generation, management, and transfer of knowledge and the learning processes that ensue. Included in this research trajectory, although at lower levels of importance, are entrepreneurship activities and innovation-related studies on tourist destinations.

A similarly predominant and important research trajectory in DMM, as described in previous sections, is the measurement, evaluation, and analysis of the performance of destinations, including the benchmarking, efficiency, and importance-performance analysis of destinations. A related topic, though at the fringes of average levels of rates of growth in citations and publications, is the competitiveness of destinations, including their determinants, drivers, factors, and challenges.

In terms of the geographic emphasis of DMM publications, the results shown in Fig. 5 clearly suggest a trend towards Italy and, more recently, Middle Eastern countries. If mainland China were considered alone, it would assume higher levels of importance. Each of these countries/regions is characterized by different DMM topics. For

instance, the Middle East appears to be focused on destination image, behaviors, and destination development. Italy appears to focus on marketing, branding, economic-issues, and island destinations, whereas China emphasizes destination image, behaviors, development, perceptions, marketing, numerical methods, and satisfaction. Moreover, consistent with the greater influence of the experience economy in tourism, a group of keywords centers around the creation, co-creation, and enhancement of the experiences accumulated by tourists at destinations.

Service-related aspects show above-average values, although at lower levels of importance and prominence. Included in this group of keywords are demand-related issues, such as tourist satisfaction, loyalty, and intentions to revisit destinations. Studies are interested not only in elucidating the relationships within those demand-related aspects, particularly in tourist's return intentions, but also in examining how supply-related aspects (e.g. destination infrastructure, image and branding, and service quality). A related research trajectory lies in the intersection of destination and hospitality management, which examines the impact of hotels and other hospitality organizations on the development and performance of a tourist destination. Another significant service-oriented trajectory is that related to medical tourism destinations.

Following the recent technological advances in communication and social interaction, social media has become an important topic in DMM research. This topic affects a wide range of DMM aspects, including destination image formation, choice of travelers, tourist perceptions and behavior, and its use as marketing tool. Similarly, aided by GPS tracking and 'big data' technologies, the study of tourist mobility shows high degrees of relevance and prominence. Knowledge of visitors' spatial movements is crucial for the management of a destination. Another relevant topic related to tourist behavior is the expenditures spent by tourists and the ways they are influenced by tourist satisfaction. An additional tourist-oriented research trajectory is the study of the emotional/affective reactions and responses of visitors to diverse aspects of destinations, including brand personality and image. Related to emotional aspects of visitors is the attachment they experience to a destination; in particular, the concepts of place and sense of place are included in this research trajectory.

Besides the study of the demand-side (tourists and visitors), another relatively prominent and important research trajectory is the study of the supply-side of a destination (i.e. residents and local community). This mainly involves the involvement, empowerment, and impact of the locals at destinations on the development and deployment of their tourism industry. Similarly, at low-tier levels, is sustainability-related research, involving the development and deployment of sustainable tourism strategies and policies, the vulnerability of destinations to climate change, and strategies for adapting and mitigating environmental issues.

In contrast to mass tourism issues, the results in Fig. 5 show the prominence, yet low importance of rural tourist destinations. This research trajectory includes a series of approaches for understanding rural tourism, including business effectiveness, quality, tourists' behavioral intentions, image, and satisfaction. Moving away from individual-level analysis of a destination, another research trajectory, though at relatively low levels of importance, is the study of larger geographical areas. This research trajectory involves the exploration of destination management or marketing in regions and districts.

Although a traditional topic, destination branding appears in the group of above-average keywords, including branding, brand equity, and personality. This is strongly connected to a destination's need to differentiate itself from others to attract tourists. The DMM research appears to be moving away from single concerns such as image and towards 'umbrella' destination concepts such as brand equity. Finally, a few yet prominent and important publications have focused on the identity of tourist destinations. Of particular interest for this research trajectory is the authenticity or uniqueness of the experiences and services provided to visitors. Also included here are issues related to

heritage and culture.

5. Discussion and implications

This study described a systemic and integrated bibliometric approach to investigating the DMM field covering 2005–2016 using publication data. The analysis of the progress of DMM research relied on publications extracted from 49 tourism and hospitality management studies indexed in Elsevier's Scopus bibliographic database. The study applied a wide range of evidence-based analytical methods, including bibliographic coupling networks, portfolio analysis charts, co-word relationships, and circular plots. These methods were used to explore the knowledge structure of DMM research and its interconnections, research fronts, and research trajectories.

The results of this study suggest a rapidly growing DMM structure following certain patterns of growth, especially for studies on the management, competitiveness, development, and sustainability of destinations. The interactions between the management- and marketing-oriented research domains are increasing significantly. At deeper levels of analysis, more diverse research trajectories stand out, including on destination governance; knowledge and experience-based analytical frameworks; service-related domains; subjective issues such as emotions, attachment, and identity; destination brand equity; and sustainability. These results show that current emerging DMM research emphasizes the supply side and discusses competitive advantages, marketing strategies, capability building and service innovation of destinations in attracting tourists, while previous tourism research efforts have mostly overlooked these issues.

The results of this quantitative study are closely in line with the insights obtained by the St. Gallen Consensus on Destination Management (Laesser & Beritelli, 2013; Reinhold et al., 2015), which summarize the discussions of 40 scholars and practitioners on the future avenues of tourist destination research. Our analytical methodology was able to identify a series of important topics that were not considered in the St. Gallen exercise. These include crises and natural disasters at destinations, the perceptions of residents and the local community in the development of destinations, rural destinations and regional-levels of analysis, and knowledge and innovation-based analyses of destinations. Moreover, compared to the DM consensus exercise, this study differentiated among destination management- and marketing-oriented research domains, and assessed their degrees of interaction. Overall, these results suggest the complementarity of the quantitative approach used in this study with the perceptions of scholars and practitioners on the structure of and progress in fields of research.

Based on the results of this study, it is possible to highlight several trends that seem to be influencing or can be expected to influence research on the management and marketing of destinations:

- **Shift toward the management of destinations:** This trend includes the study of the role of governance, leadership, and destination management organizations, including (to a lesser degree) the influence of government and public policies on the development of tourist destinations.
- **Technology-enabled DMM:** The study observed the impact of various enabling technologies – particularly social media and big data approaches but also smartphones, GPS technologies, and virtual reality – on progress in the DMM field. These technologies have enabled not only the quantification of subjective aspects (e.g. the emotions and perceptions of destination visitors) but also the 'mining' of previously unavailable data (e.g. visitor mobility and tracking).
- **Deeper knowledge of travelers/tourists:** In line with the development of the enabling technologies described above, a tendency can be seen toward a more detailed characterization of travelers/tourists, including their patterns of spatial and temporal movement,

as well as subjective aspects, such as emotions, perceptions, and experiences. This includes how these aspects create an attachment to and a sense of place for destinations.

- **Changing geographical focus:** Our study reveals a significant move toward specific countries such as Italy and mainland China—and particularly in the Middle East region.
- **Alternative analytical frameworks:** This study also revealed the existence of several analytical frameworks emerging in the study of tourism destinations. Two approaches should be highlighted. On the one hand, there is a strong move toward approaching destinations as places enabling the creation and co-creation of experiences for visitors. On the other hand, a trend can be observed toward greater intensity into the visualization of destinations as cognitive entities in which knowledge is generated, used, and transfer for their development and evolution, including for innovation and entrepreneurship.
- **Looking back to the supply-side:** Moving away from the emphasis on tourists and visitors, an additional trend is research on how the development of tourist destinations impact and are impacted by local residents and communities. This includes studies on identity, uniqueness, and authenticity.
- **Moving into more aggregative concepts:** This trend involves the transition of DMM studies from the perspective of a handful of measures to the use of umbrella concepts that involve multiple and highly interacting measures, such as brand equity.
- **Intermingling domains:** This trend involves the integration of multiple fields of research, such as service and hospitality.
- **Mitigation and resilience:** This trend involves issues related to the sustainable development of destinations, their adaptation strategies, and (particularly) on their resilience in the face of crises and natural disasters.

The results of this study can help researchers locate their research work within the total structure of DMM research, redefine scholars' research agendas, and support and inform policy makers. Although this study focused on strong fronts and trajectories, it can be argued that additional value will come from DMM research that integrates up-to-now distant research topics. Moreover, many scholars, business managers, and policy-makers are facing tough competition between global destinations. This study shows the need for research encompassing strategic marketing, sustainable development, and service innovation in order to help foster destination competitiveness.

Some of the limitations of this study should be highlighted. The study included a fraction of the 250–290 journals on tourism and hospitality management identified by previous studies (Gursoy & Sandstrom, 2016; McKercher & Tung, 2015). As this study relies on English documents published in peer-reviewed tourism and hospitality management journals indexed in Elsevier's Scopus bibliographic database important publication media used by social science researchers were excluded, such as books, book chapters, and monographs. In addition, research published in non-tourism journals was excluded in this study. Despite the efforts made to maximize the coverage of DMM publications, the data collection approach may have missed some relevant literature. The results of bibliometric approaches provide proxies. In this study, these approximations were drawn from the citation and keyword relationships built by DMM publications and their list of references. Despite their inherent limitations, the authors believe that evidence-based approaches such as bibliometrics are useful complements that can enrich analyses of research fields.

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Appendix A. Supplementary material

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.jdmm.2018.06.005.

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