

## Bibliometric studies in tourism



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### ABSTRACT

This study evaluates bibliometric studies in tourism, depicts emerging themes, and offers critical discussions for theory development and future research. To achieve this aim, 190 papers with bibliometric analyses from leading hospitality and tourism journals were selected and critically analyzed. The research findings reveal that bibliometric articles published in these journals significantly increased after 2008. However, systematic review studies emerged as the major group, and relatively few studies utilized evaluative bibliometric and relational bibliometric studies. Study results suggest that paucity still exists, particularly in relational bibliometric studies in tourism. This is one of the first studies in this area that offers critical discussions and suggestions related to theory development and future research in this research vein.

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## Introduction

Scholars have been vetting the epistemology, knowledge domain, and/or intellectual structure of disciplines to elucidate how they have evolved over time. Since many disciplines have reached a level of maturity (Koseoglu, 2016), there has been a significant interest in evaluating and monitoring the evolution of disciplines based on given topics with the assistance of advanced software programs (Koseoglu, Sehitoglu, & Craft, 2015; Zupic and Čater, 2015). Hence, bibliometry or bibliometric analysis is being increasingly used to map the structure and development of scientific fields or disciplines to assess the evolution of specific disciplines (Boyack, Klavans, & Börner, 2005; Zupic and Čater, 2015).

*Bibliometric* is defined as an approach to evaluate and monitor the progress of given disciplines by sorting data, including citations, author affiliations, keywords, themes discussed, and methods employed for published studies in the disciplines via basic/advanced statistical techniques (Diodato, 1994; McBurney and Novak, 2002). Numerous studies have been conducted by utilizing bibliometric methods to illuminate methods, prolific and influential scholars and/or institutions, intellectual structure, the knowledge domain by year, the geographic area of different disciplines, specific research themes within disciplines, and the level of maturity of topics (e.g., Barrios, Borrego, Vilagínés, Ollé, & Somoza, 2008; Benckendorff, 2009; Chan and Hsu, 2016; Fagerberg, Fosaas, & Sapprasert, 2012; Fong, Law, Tang, & Yap, 2016; Gomezeli, 2016; Gregory and Weinland, 2016; Howey, Savage, Verbeeten, & Van Hoof, 1999; Landström et al., 2012; Meyer-Arendt and Justice, 2002; Page, 2003; Palmer, Sese, & Montano, 2005; Park et al., 2011; Ye, Li, & Law, 2013).

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As seen in other disciplines, in tourism there have been ongoing attempts to discuss whether tourism is a scientific discipline, or field of study, or specialism since tourism studies have been accepted fragmented, scattered, and/or eclectic (Belhassen and Caton, 2009; Benckendorff and Zehrer, 2013; Xiao and Smith, 2006a). Hence, to illustrate the maturity level of tourism, bibliometric studies have been conducted in the tourism field to identify intellectual structure, academic foundation, knowledge domain, or social structure of the field (Benckendorff, 2009; Benckendorff and Zehrer, 2013; Hu and Racherla, 2008; Koseoglu, Sehitoglu, & Graft, 2015; Ye et al., 2013) and to rank the most productive scholars, institutions, and publications (McKercher, Law, & Lam, 2006; Page, 2005; Park, Phillips, Canter, & Abbott, 2011; Pearce, 1982; Pechlaner, Zehrer, & Abfalter, 2002; Pechlaner, Zehrer, Matzler, & Abfalter, 2004; Ryan, 2005; Schmidgall et al., 2007; Sheldon, 1991; Zhao and Ritchie, 2007). However, no study has yet been conducted on how bibliometric studies have evolved in the tourism field to discuss the following questions:

- What are the research implications of bibliometric structures?
- What are the potential challenges and barriers to bibliometric studies?
- Who benefits the most by new sorts of bibliometric studies?
- How can bibliometric studies impact theory development?
- How can bibliometric studies change the politics and future research in the field?

In this article, we aim to investigate these issues in the tourism field. The paper is structured as follows. First, an in-depth literature review is provided on bibliometric and bibliometric methods, establishing an overview of studies conducted via bibliometric methods. Second, the research method employed for this study is explained. Next, the research findings are presented and discussed. Finally, the study conclusions and suggestions for future studies are provided.

## Literature review

### *What is bibliometric analysis?*

Broadus (1987, p. 376) defines *bibliometric* as “the quantitative study of physical published units, or of bibliographic units, or of the surrogates for either.” Sen Gupta (1988) refers to bibliometric as the organization, classification, and quantitative evaluation of publication patterns of all macro and micro communication along with their authorships by mathematical and statistical calculus. Bibliometric is a tool to analyze how disciplines evolve based on intellectual structure, social structure, and conceptual structure (Zupic and Čater, 2015). It looks at research outputs, including themes sought, methods employed, and samples used (Ye, Song, & Li, 2012), via applying basic or advanced statistical techniques to the data obtained from previously published studies, such as books, proceedings, and journals (Cobo, López-Herrera, Herrera-Viedma, & Herrera, 2011; Diodato, 1994; McBurney and Novak, 2002).

### *Bibliometric impacts and uses*

Bibliometric is “one of the rare truly interdisciplinary research fields to extend to almost all scientific fields” (Glanzel, 2003, p. 3). Zupic and Čater (2015) suggest that bibliometric methods are complementary to traditional methods of review and structured literature reviews, and when compared with these bibliometric methods, they increase the objectivity of these types of studies. Bibliometric is used to assess the performance of the research and publication of individuals and/or institutions, and/or map the structure and dynamics of science (Cobo et al., 2011). Hence, bibliometric studies can help researchers answer the following questions (Nerur, Rasheed, & Natarajan, 2008; Ye et al., 2012; Zupic and Čater, 2015): (a) What is the intellectual structure of the discipline and how does it evolve? (b) What is the social structure of the discipline? (c) What are the conceptual structures of the discipline? (d) What is the best way to evaluate research output? (e) How should the impacts of researchers and institutions be assessed? (f) How is the given discipline progressing on themes sought, methods employed, and samples used? By answering these questions, potential subjective biases are minimized and expert inferences are validated, leading to schools of thought and the interrelated connections among them being delineated.

There are three groups of scholars who use bibliometric and undertake bibliometric studies. The first group consists of bibliometricians, and scholars in this group engage in the methodology of bibliometric and conduct, mainly methodological research on this topic. The second group of scholars is made up of researchers from different disciplines that use bibliometric in their specialty, scientific information. This is the most diverse interest group in bibliometric. These researchers expand science information by using metrics and conducting quantitative research in information retrieval. Researchers in the third group use bibliometric for science and policy making. They evaluate the foundation of science by illustrating the national, regional, and institutional structures of disciplines (Glanzel, 2003).

### *Bibliometric methods*

Bibliometric methods vary from basic mathematic rules to advanced statistical applications. There are different categories for bibliometric methods. For instance, according to Koseoglu, Sehitoglu, and Craft (2015), there are two bibliometric methods. The first is the basic bibliometric technique, in which the researcher reviews studies via content analysis and metrics to

measure the performance of the papers and/or contributors. The second advances a variety of methods, which include co-occurrence approaches such as co-citation analysis, co-authorship analysis, and co-word analysis.

**Benckendorff and Zehrer (2013)** also refer to two bibliometric methods: (a) evaluative techniques and (b) relational techniques. Evaluative techniques focus on the impact of academic studies by assessing performance with productivity measures, impact metrics, and hybrid metrics (**Hall, 2011**). Relational techniques delve into relationships among published research by considering their citations, authors, author affiliations, and keywords to conduct co-occurrence analyses. These techniques help researchers and readers elucidate the intellectual structures of the fields, the social structures of the fields, and the emergence of new research topics (**Leydesdorff and Vaughan, 2006; Nerur, Rasheed, & Pandey, 2015; Pilkington & Lawton, 2014; Ronda-Pupo and Guerras-Martín, 2012; Tan and Ding, 2015**).

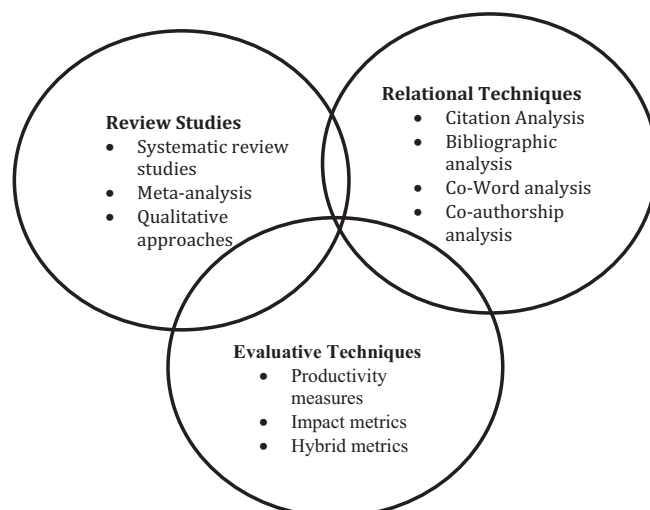
By synthesizing the guidelines from 81 bibliometric studies in management and organization, **Zupic and Čater (2015)** developed a single-source reference for management and organization scholars interested in bibliometric methods. They recommended workflow guidelines for carrying out bibliometric studies and their findings were used as one of the main resources for completing this paper. Therefore, in their study, bibliometric studies are categorized into three groups: (1) review studies, (2) evaluative studies, and (3) relational studies (**Fig. 1**).

Review techniques include structured literature reviews, systematic literature reviews, or meta-analyses/reviews, all of which are called traditional review methods (**Zupic and Čater, 2015**). They generate knowledge by using bibliographic data from published studies via frequency analysis or basic statistics. In addition to this, these techniques use a qualitative approach to assess the evolution of the disciplines. They may present a research agenda or a framework depicting the evolution in a given topic based on the authors' individual views. Hence, the subjectivity is high in this technique. To minimize this subjectivity, evaluative techniques, and relational techniques are proposed.

Evaluative techniques measure the impact of scholarly work when compared to the performance or scientific contributions of two or more individuals or groups (**Benckendorff and Zehrer, 2013**). **Hall (2011)** classifies evaluative metrics into three groups. The first group includes productivity measures, such as the number of cited papers, the number of papers per academic year, and the number of papers per individual author. The second category includes impact metrics, such as the total number of citations, number of citations per academic year, number of citations per individual author/journal, and usage log data (i.e., usage impact factors that consists of average usage rates for the articles published in a journal). The third group consists of hybrid metrics, such as an average number of citations per paper as well as various indices that aim to capture both productivity and impact in a single figure.

Relational techniques explore relationships among the research fields, the emergence of new research themes and methods, or co-citation and co-authorship patterns (**Benckendorff and Zehrer, 2013**). Relation techniques can be divided into four categories: co-citation analysis, co-word analysis, co-authorship analysis, and bibliographic coupling. These categories will be briefly explained below.

*Co-citation analysis* uses co-citation counts to construct measures of similarity between documents, authors, or journals (**McCain, 1990**). According to **Small (1973)**, co-citation refers to the frequency with which two units are cited together. There are different types of co-citation, including author co-citation analysis and journal co-citation analysis (**McCain, 1990; White and Griffith, 1981; White and McCain, 1998**). Co-citation analysis is used to evaluate the intellectual structure of different disciplines, such as marketing (**Jobber and Simpson, 1988**), operations management (**Pilkington and Fitzgerald, 2006**), services management (**Pilkington and Chai, 2008**), and tourism (**Benckendorff, 2009**).



**Fig. 1.** Bibliometric methods.

*Bibliographic coupling* uses the number of references shared by two documents as a measure of the similarity between them (Zupic and Čater, 2015). *Co-author analysis* examines the networks that scientists create socially by collaborating on scientific articles (Acedo, Barroso, Casanueva, & Galan, 2006). Co-author analysis is particularly suitable for studying research questions involving scientific collaboration (Benckendorff, 2009; Racherla and Hu, 2010; Ye et al., 2013).

*Co-word analysis* is a content analysis technique that uses the words in documents to establish relationships and build a conceptual structure of the domain (Callon, Courtial, Turner, & Bauin, 1983). The idea underlying the method is that when words frequently co-occur in documents, it means that the concepts behind those words are closely related too. The output of co-word analysis is a network of themes and their relations that represent the conceptual space of a field. This semantic map can help researchers understand its cognitive structure (Börner et al., 2003). A series of such maps produced for different time periods can trace the changes in this conceptual space (Coulter, Monarch, & Konda, 1998).

### *Bibliometric Studies in Tourism*

The greatest utilization of bibliometric in tourism literature is with respect to the evaluation of journals and those who publish in them (Hall, 2011). On the other hand, there are several related studies published in the bibliometric literature (see: Barrios et al., 2008; Tokić and Tokić, 2015; Zhang, Lyu, & Yan, 2015; Zopiatis, Theocharous, & Constanti, 2015). Additionally, several previous studies analyzed graduate dissertations in tourism studies (Bao, 2002; Hall, 1991; Laing and Weiler, 2008; Meyer-Arendt, 2000; Meyer-Arendt and Justice, 2002). Koseoglu, Sehitoglu and Craft (2015) and Koseoglu, Sehitoglu, and Parnell (2015) divided previous tourism bibliometric analysis into six categories: journals assessment and ranking studies, article identification studies, content analysis, citation analysis, disciplinary relationship analysis, and country research analysis. However, the progress of these bibliometric studies in tourism and how they influence the knowledge domain of the field or theory development have not been elucidated. Therefore, this current study aims to address this gap in the field.

## **Methodology**

### *Databases and journals selection*

Articles published in leading scientific journals are accepted as “certified knowledge” (Ramos-Rodriguez & Ruiz-Navarro, 2004). Therefore, leading tourism journals were selected as a sample for this current study. Articles related to bibliometric studies were obtained from leading hospitality and tourism journals ranked by SSCI in 2014. In particular, nine hospitality and tourism journals with high impact factors were selected. Five of these nine journals were tourism-focused journals, and four of them were more hospitality-focused. These journals are also recognized as leading journals in bibliometric studies in the tourism field (Harrington and Ottenbacher, 2011; Ip, Law, & Lee, 2011; Koseoglu, Sehitoglu, & Craft, 2015; Koseoglu, Sehitoglu, & Parnell, 2015; Racherla and Hu, 2010). The five leading tourism journals selected for this study were the *Annals of Tourism Research (ATR)*, the *Journal of Sustainable Tourism (JST)*, *Tourism Management (TM)*, the *Journal of Travel Research (JTR)* and the *International Journal of Tourism Research (IJTR)*. The four leading hospitality journals selected for this study were the *International Journal of Hospitality Management (IJHM)*, *Cornell Hospitality Quarterly (CHQ)*, the *International Journal of Contemporary Hospitality Management (IJCHM)* and the *Journal of Hospitality and Tourism Research (JHTR)*.

### *Data collection and analysis*

Three steps were followed to identify the bibliometric studies published in these nine journals. First, the first author of this study scrutinized titles of all articles published in the above-named journals from the first issue of each journal through issues published by December 2015 by screening keywords, including *review*, *meta-analysis*, *mapping*, *path*, *visualization*, *bibliometric*, *scientometrics*, *informetrics*, *networks*, *co-author*, *co-citations*, *co-word*, *co-occurrence*, and *bibliographic coupling*, in titles of all the articles. Second, by adding one more keyword “*meta-review*,” identified from the first scan, all given keywords were scanned in titles, keywords, and abstracts of all articles published in the nine journals. Last, two authors of the study examined articles sorted out from databases to determine whether they were conducted via bibliometric analysis or review studies. To end this, these authors individually answered the question, “Is the article conducted via bibliometric analysis or is it a review study?” to ensure data validity and reliability by reaching consensus on the articles selected. As a result, a total of 190 studies, published between 1988 and 2015, including full-length articles and research notes, were found for the purpose of this study. A spreadsheet was created to analyze the articles by employing content analysis for each article. It included data about the types of bibliometric methods, time periods used, types of samples utilized, databases used to extract bibliometric data, bibliometric software used, themes investigated, kinds of sources (documents, authors, and journals) used to gather data, bibliometric methods used to highlight subgroups, visualization methods, and software utilized.

## Results

### Analysis of reviewed articles

As noted earlier, bibliometric studies were evaluated based on review studies, evaluative studies, and relational studies (Zupic and Čater, 2015). Following this, the bibliometric analysis of the articles found in this process revealed 157 review studies. In other words, the review studies had the highest percentage of the 190 articles, followed by 24 evaluative studies and nine relational studies. While the number of articles conducted via bibliometric methods significantly increased after 2008, systematic review studies emerged as the major group in the whole period. On the other hand, although relational techniques were first used in 2008 based on the sample group of the study, only nine articles utilizing relational techniques were produced. The techniques included co-citation (three articles) (Benckendorff and Zehrer, 2013; Koseoglu, Sehitoglu, & Craft, 2015; Xiao and Smith, 2008), bibliographic coupling (two articles) (Yuan, Gretzel, & Tseng, 2014; Yuan, Tseng, & Chang, 2014)—Xiao and Smith's (2008) study utilized bibliographic coupling as well as co-citation-, co-authorship (three articles) (Hu and Racherla, 2008; Racherla and Hu, 2010; Ye et al., 2013), and co-word (one article) (Ying and Xiao, 2012) (Fig. 2).

Fig. 3 demonstrates the distribution of the articles by journals and years. Of the 190 articles analyzed, *TM* produced the highest number of bibliometric articles (45), followed by *IJCHM* (34), *IJHM* (34), *ATR* (26), *IJTR* (14), *CHQ* (10), *JHTR* (10), *JTR* (9), and *JST* (8). While the number of articles published in these journals increased after 2007, *IJCHM* emerged as the major journal publishing these articles in its special issues in recent years.

As shown in Fig. 4, all journals published articles conducted via review analysis and evaluative analysis, except for *IJHM*. A total of eight articles conducted via relational techniques were published, including three by *ATR* (Benckendorff and Zehrer, 2013; Racherla and Hu, 2010; Xiao and Smith, 2008; Yuan, Tseng et al., 2014), followed by two from *IJHM* (Hu and Racherla, 2008; Koseoglu, Sehitoglu, & Craft, 2015), two from *JHTR* (Ye et al., 2013; Ying and Xiao, 2012), and one from *IJTR* (Yuan, Gretzel et al., 2014). *CHQ*, *IJCHM*, *JST*, *JTR*, and *TM* had no articles conducted via these relational techniques.

In all of these articles, multiple time periods were not generally preferred. To form the sample of the studies, articles published in leading tourism journals were mainly preferred instead of books and proceedings. As seen, other bibliometric studies concluded in other fields (see: Meho and Yang, 2007; Nerur et al., 2008; Zupic and Čater, 2015), journals were selected from mainly SSCI, and/or rarely Google Scholar, and/or Scopus due to the reputation of SSCI among scholars and the design of databases for bibliometric analysis (Hall, 2011; Koseoglu, Sehitoglu, & Craft, 2015; McKercher and Tung, 2015). In this sample, authors evaluated mainly the context of the documents (articles) rather than authors (prolific and leading) or journals (e.g., rank and quality). In relational techniques, CATAR, Bibexcel, and Sitkis software programs were used to extract the data obtained from the databases. To highlight subgroups, clustering and network methods were conducted, and the visualization methods and software were network analysis, Pajek, and UCINET.

### The state of the art in bibliometric studies of tourism

This section provides discussions on how bibliometric studies progress in tourism under three subtitles: review studies, evaluative studies, and relational studies.

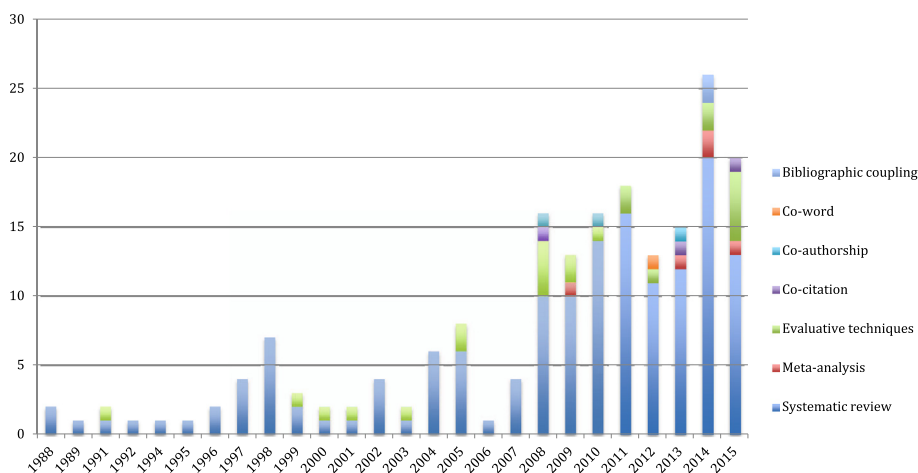


Fig. 2. Distributions of studies by bibliometric methods and year.

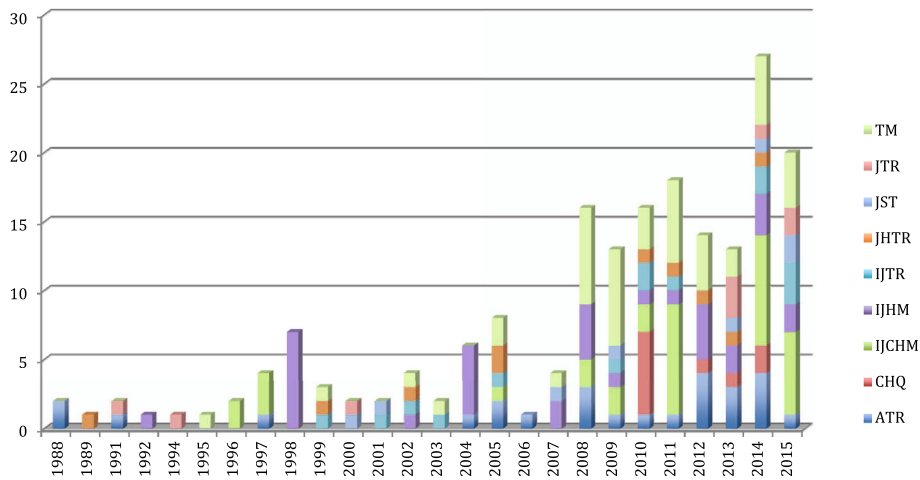


Fig. 3. Distributions of studies by journal and year.

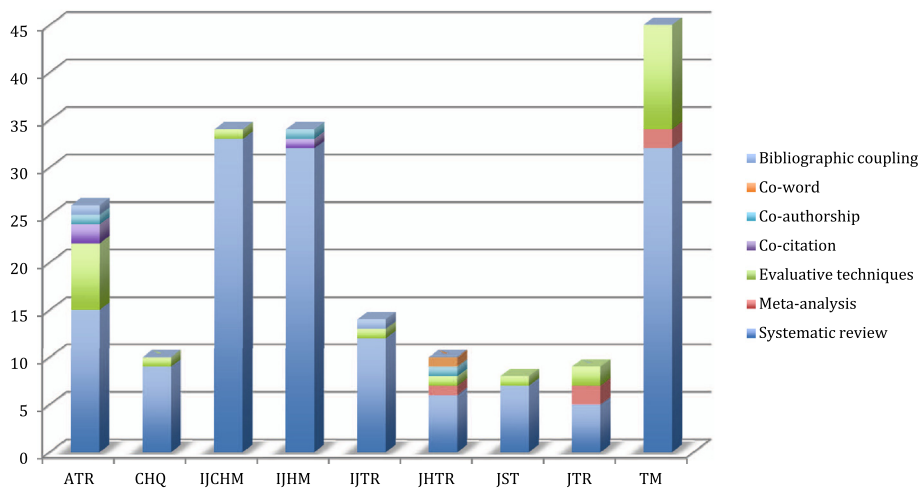


Fig. 4. Distributions of studies by bibliometric methods and journals.

Review studies

As discussed earlier, review studies are classified as disciplined-focused, theme-focused, methodology/method/statistics-focused, sample-focused, contributor-focused, and journal-focused studies (Koseoglu, Sehitoglu, Ross, & Parnell, 2016).

*Disciplined-focused review studies.* Discipline-focused studies include articles that assess the progress on the entire tourism area by focusing on one or more dimensions. For instance, Eccles and Costa (1996) examined the themes on articles published in *ATR*, *TM*, and *Travel and Tourism Analyst* during 1989–1995. Xiao and Smith (2006b) sought the major subject areas on articles published in *ATR* between 1973 and 2003. They found 27 major subjects and identified two meta-categories of subject domains as “methodology and theory” and “development and impacts.” Wickham, Dunn, and Sweeney (2012) assessed three leading tourism journals (*ATR*, *TM*, and *JTR*) to identify research themes in tourism between 1999 and 2008. They identified the 12 most popular themes, including business development, tourist behavior, consumer behavior, attractions, hospitality management, niche-tourism, cultural tourism, impacts of tourism, external influences, transportation, related industries, and tourism education. In another study, Pearce (2014) investigated the internationalization of tourism research by comparing articles published in the *Journal of Travel Research* and *Estudios y Perspectivas de Turismo*.

A few studies have assessed the progress on hospitality research in the leading hospitality-focused journals. Blum (1997) discussed the progress of six themes: people and organizations, service quality and customers, strategy and operations, food service, education, and eco-tourism and legal issues. Other studies (Baloglu and Assante, 1999; Chon, Evans, & Sutherlin, 1989; Crawford-Welch and McCleary, 1992) identified both subject areas and research methods in the field. It appears that



there is a gap in the tourism and hospitality research, as there is no review on how the fields have been progressing by considering bibliometric indicators, such as themes discussed, methods employed, samples used, and contributors over time.

*Theme-focused review studies.* Theme-focused studies include articles on discussing how one or more themes, such as marketing or human resources, have evolved in the entire discipline. Table 1 presents these studies based on related subdisciplines. These studies assessed the progress of the theme by using bibliometric indicators (e.g., Lucas and Deery, 2004; Morosan, Bowen, & Atwood, 2014; Oh, Kim, & Shin, 2004; Song and Li, 2008; Yoo and Bai, 2013) or suggested new frameworks on the themes and/or research agendas (e.g., Ashworth and Page, 2011; Kandampully, Zhang, & Bilgihan, 2015; Kim, Wang, & Mattila, 2010; Law, Qi, & Buhalis, 2010; Morrison, 2002; Tracey, 2014).

As presented in Table 1, theme-focused review studies varied from marketing to tourism history, or from travel medicine to demand issues. Subdisciplines and subjects related to the business and management dimension of tourism have mainly been reviewed (Athiyaman, 1995). Other dimensions of tourism, such as human factors (e.g., psychology and health), and place (e.g., geography, roads, airports, and the environment) (Athiyaman, 1995) have rarely been discussed. The sample of these studies was formed generally from articles published in leading tourism journals or indexed by well-known databases, such as ABI/Inform, Science Direct, Google Scholar, and Ebscohost. Several articles, including Dev, Buschman, and Bowen (2010) and Harrington et al. (2014), employed longitudinal approaches to evaluate the progress of the subjects or disciplines. A few studies (e.g., Lucas and Deery, 2004) compared the progress of a discipline in hospitality journals with other related journals. Many theme-focused review studies seen in Table 1 have been conducted via qualitative review rather than a quantitative review. There was no study reviewing some important subdisciplines and/or subjects, such as family business, organization theory, and crisis management.

*Methodology/method/statistics-focused review studies.* Methodology/method/statistics-focused review studies constituted articles directly focusing on how methodology/method/statistics have evolved in the tourism literature. Both macro level and micro level review studies have been conducted. The macro level studies have focused on the progress of research methods in the tourism field. For example, Palmer et al. (2005) ranked 24 most often used statistical methods in articles published in 12 tourism journals between 1998 and 2005. Rivera and Pizam (2015) illuminated the progress of the methodology in hospitality research by combining the qualitative and quantitative review approaches. They used articles published between 2000 and 2012 in *IJHM* for quantitative review. They identified the four phases in this progress as story tellers (1930–1950), profilers (1950–1970), copy cats (1970–2005), and innovators (since 2000).

When the focus shifted to the micro level, Ro (2012) showed the effects of moderator and mediator variables in the hospitality research published in *IJHM* from 2001 to 2011. Hung and Law (2011) investigated how internet-based surveys were conducted in tourism research indexed in the EBSCO host. They assessed authorship, geographical scales, topics, research designs, and response rates. More specifically, the progress and usage of importance-performance analysis (Azzopardi and Nash, 2013) and structural equation modeling (Nunkoo, Ramkissoon, & Gursoy, 2013) were addressed.

*Sample-focused review studies.* Sample-focused review studies focus on studies based on their samples. These studies can be categorized into three groups: industry, people, and place. There are two studies focusing on the industry as samples. While one of them reviewed the food industry and consumer behavior (Johns and Pine, 2002), the other one reviewed the restaurant industry and revenue management (Thompson, 2010). People-based studies addressed two issues related to children in tourism studies (Porja and Timothy, 2014) and hotel general managers (Ladkin, 1999).

Place-based studies generally focused on the progress of the tourism literature related to a country. For instance, Carter, Thok, O'Rourke, and Pearce (2015) looked at progress in Cambodia's sustainable tourism. Silva, Rodrigues, Mendes, and Pereira (2010) and Galani-Moutafi (2004) provided research agendas for Portugal and Greece, respectively. Hing (1997a) and Hing (1997b) demonstrated thematic development in the Asia-Pacific region. More studies focused on China have related to hotel development (Kong and Cheung, 2009), service quality research (Tsang, Lee, & Qu, 2015), pro-poor tourism (Zeng and Ryan, 2012), and hospitality research (Law, Buhalis, & Cobanoglu, 2014; Tsang and Hsu, 2011). Tsang and Hsu (2011) focused on authorship, contributors, and methodological procedures in six leading tourism and hospitality journals (English language) published from 1978 to 2008. These review studies generate opportunities for researchers to contribute to the fields by comparing evaluations of the literature based on people, industry, and place.

*Contributor-focused review studies.* Contributor-focused review studies demonstrate the leading authors in the fields (e.g., Zhao and Ritchie, 2007) and the leading institutions or countries (e.g., Jogaratnam, Chon, McCleary, Mena, & Yoo, 2005; Jogaratnam, McCleary, Mena, & Yoo, 2005). Additionally, these studies assessed editorial contributions in the field (e.g., Law, Leung, & Buhalis, 2010). Jogaratnam, McCleary et al. (2005) provided a comprehensive assessment of institutional contributions to 11 leading tourism hospitality journals.

*Journal-focused review studies.* Journal-focused review studies show the evolution of journals. For example, Lu and Nepal (2009) analyzed *JST* longitudinally by considering several bibliometric indicators, including journal expansion, study location, volume, number, year, areas, forms of tourism, subject themes, research perspectives, concept and measurement, and methodology. Law, Leung, and Cheung (2012) evaluated the progress of *CHQ* from 2008 to 2011 on research fields, affiliated hospitality sectors, data collection methods, major data analysis methods, geographical coverage, data collection

**Table 1**  
Theme-focused review studies in leading hospital and tourism journals.

Sub-disciplines		
Fields	Topics	Studies
<i>Business and management</i>		
General management	Management developments	Watson (2008)
	Hotel performance	Sainaghi (2010)
Strategic management	Hospitality quality	Crick and Spencer (2011), Riley (2007)
	Sustainability issues and strategies	Aragon-Correa et al. (2015)
Leadership	General	Harrington and Ottenbacher (2011), Harrington, Chathoth, Ottenbacher, and Altinay (2014), Olsen and Roper (1998), Olsen (2004)
	Strategy	Athiyaman (1995)
Marketing	Strategic planning	Phillips and Moutinho (2014)
	General	Pittaway, Carmouche, & Chell (1998)
Small business Management	General	Bowen and Sparks (1998), Dolnicar and Ring (2014), Hu (1996), Line and Runyan (2012), Morosan et al. (2014), Oh et al. (2004), Yoo, Lee, & Bai (2011)
	Customer loyalty	Kandampully et al., 2015; Yoo and Bai, 2013
	Consumer behavior	Wen, 2009; Kim et al., 2010; Johns and Pine, 2002; Mattila, 2004
	Website evaluation studies	Ip et al. (2011), Law et al. (2010)
	Word-of-mouth studies	Cantallops and Salvi (2014), Confente (2014)
	Destination marketing	Pike and Page (2014)
	Seasonality research	Koenig-Lewis and Bischoff (2005)
	Souvenirs	Swanson and Timothy (2012)
	Destination image	Pike (2002)
	Consumer experience	Ritchie and Hudson (2009), Walls, Okumus, Wang, and Kwun (2011)
	City branding	Oguztimur and Akturan (2015)
	Event segmentation	Tkaczynski and Rundle-Thiele (2011)
	Destination loyalty formation	Gursoy, Chen, and Chi (2014)
	Customer choice	Verma (2010)
	Service related	Kandampully, Keating, Kim, Mattila, and Solnet (2014)
Information systems	Small tourism business research	Thomas, Shaw, and Page (2011), Morrison et al. (2010)
	Information technology and/or communication	Buhalis and Law (2008), Kirk and Pine (1998), O'Connor and Murphy (2004), Law, Leung, & Au, 2013, Law et al., 2014, Ip, Leung, & Law, 2011
	Knowledge transfer and/or management	Hallin and Marnburg, 2008; Shaw and Williams, 2009
Entrepreneurship	Intelligent systems	Gretzel (2011)
	General	Li (2008)
Human resource management	Innovation	Hjilager (2010)
	General	Davidson, McPhail, and Barry (2011), Guerrier and Deery (1998), Kusluvan, Kusluvan, Ilhan, and Buyruk (2010), Lucas and Deery (2004), Singh, Hu, and Roehl (2007), Tracey (2014)
Organizational behavior	Talent management	Deery and Jago (2015)
	General	Guerrier and Deery (1998)
	Abusive work practices and bullying	Bloisi and Hoel (2008)
Accounting and finance	Workforce diversity	Sourouklis and Tsagdis (2013)
	Culture	Chen, Cheung, and Law (2012), Li (2012)
	General	Harris and Brown (1998)
Operation management	Finance and/ or managerial accounting research	Jang and Park (2011), Tsai, Pan, and Lee (2011), Park and Jang (2014)
	Revenue management	Guillet and Mohammed (2015), Anderson and Xie (2010)
	Accounting	Hesford and Potter (2010)
	Service operations research	Gummesson (2014), Jones and Lockwood (1998), O'Neill and McGinley (2014)
	Capacity management	Pullman and Rodgers, 2010
Supply Chain Management	Supply Chain Management	Sigala (2013), Zhang et al. (2009)
<i>Economy</i>		
Economics	General	Mohammed, Guillet, and Law (2015), Song, Dwyer, Li, and Cao (2012)
Demand	GDP	Castro-Nuno, Molina-Toucedo, and Pablo-Romero (2013)
	Demand modeling and forecasting	Song and Li (2008)
Economic aspects	International tourism demand forecasting	Lim (1997), Peng, Song, and Crouch (2014)
	Demand elasticity	Peng, Song, Crouch, and Witt (2015)
	Summer Olympics	Kasimati (2003)
<i>Health</i>		
Diseases	Lyme disease	Donohoe et al. (2015)
Healthiness	Health and wellness benefits	Chen and Petrick (2013)
Medicine	Travel medicine	Page (2009)

(continued on next page)



**Table 1** (continued)

Sub-disciplines		
Fields	Topics	Studies
<i>Sociology</i>		
Sociology	Sociological approaches	Cohen and Cohen (2012)
	Residents' attitudes to tourism	Nunkoo et al. (2013)
	Urban tourism research	Ashworth and Page (2011)
	Social impacts of tourism	Deery, Jago, and Fredline (2012)
	Sustainable tourism	Buckley (2012)
	Host perceptions	Sharpley (2014)
	Resilience in tourism	Luthe and Wyss (2014)
Travel/ Tourism experience	General	Ritchie, Tung, and Ritchie (2011)
	Family and Relationship benefits of travel experiences	Durko and Petrick (2013)
	Educational benefits of travel experiences	Stone and Petrick (2013)
<i>Alternative tourism</i>		
Alternative Tourism Fields	Volunteer tourism	Taplin, Dredge, and Scherrer (2014), Wearing and McGehee (2013)
	Zoo tourism	Mason (2000)
	Gay travel	Vorobjovas-Pinta and Hardy (2015)
	Film tourism	Connell (2012)
	Convention tourism	Yoo and Weber (2005)
	Sport Tourism	Hinch and Higham (2001), Weed (2009)
<i>Other sub-disciplines</i>		
Tourism Planning and Policy	General	Dredge and Jamal (2015)
Psychology	General	Pearce and Packer (2013)
Geography	Geographical information systems	Bahaire and Elliott-White (1999)
	Geography of tourism	Hall and Page (2009)
History	Tourism History	Walton (2009)
Ecotourism	General	Weaver and Lawton (2007)
	Nature-based tourism	Ardoin, Wheaton, Bowers, Hunt, and Durham (2015)
Event management	Event tourism	Getz (2008)
	convention and meeting management	Lee and Back (2005)
	visitor attraction research	Leask (2010)
Hospitality	Hospitality definitions	Morrison (2002)
Sustainable and environment	Environmentally related research	Myung, McClaren, and Li (2012)
	Artificial reefs for scuba diving	Stolk et al. (2007)
Education techniques	Simulation in hospitality	Feinstein and Parks (2002)

countries, regions, number of authors, positions of authors, and institutions with the greatest number of contributions. Svensson, Svaeri, and Einarsen (2009), Svensson, Svaeri, and Einarsen (2009) assessed six tourism journals based on empirical and scientific characteristics, respectively. Finally, Rivera and Upchurch (2008) utilized articles published in *IJHM* between 2000 and 2005. They sorted the articles out into five groups (policy research, managerial research, evaluation research, action research, and operational research) and then assessed them via bibliometric indicators.

#### *Evaluative studies in tourism*

Twenty-four studies were found that used at least one evaluative indicator to assess progress in the tourism literature. They may be accepted as review studies. However, these studies are different from review studies, as they may be conducted via at least one evaluative technique or an advanced statistical method as well as frequency analysis. These studies used one or more indicators to evaluate the progress in the field from groups including productivity, impact, and hybrid measures. Hence, the usage of the measures varied and overlapped in the studies. These studies particularly focused on the development of tourism journals (Cheng, Li, Petrick, & O'Leary, 2011; Jamal, Smith, & Watson, 2008; Law & van der Veen, 2008; Ryan, 2005), productivity of authors (McKercher and Tung, 2015; Park et al., 2011; Ryan, 2005; Sheldon, 1991; Zhong, Wu, & Morrison, 2015), ranks and positions of authors (Sheldon, 1991), productivity in a research field (Carter, Baxter, & Hockings, 2001; Figueroa-Domecq, Pritchard, Segovia-Perez, Morgan, & Villace-Molinero, 2015; Frew, 2000), and contributors as universities and countries (Page, 2003; Park et al., 2011; Sheldon, 1991). Weilder, Moyle, and McLennan (2012) studied the growth of disciplines that influence tourism doctoral research from four online databases that catalog and inventory doctoral research in the United States, Canada, Australia, and New Zealand.

Several studies have focused on citations to assess the impacts of articles, authors, or journals, including citation sources and/or frequency (Dev et al., 2010; Howey et al., 1999; Kim, Savage, Howey, & Van Hoof, 2009; McKercher and Tung, 2015),

tourism citations in other disciplines (Wardle and Buckley, 2014), main paths in a subject (Chuang, Liu, Lu, & Lee, 2014), and ranking of cited journals and age of citations (Crouch and Perdue, 2015). According to the research findings, bibliometric studies using hybrid measures were rare. These studies ranked journals (Hall, 2011; Murphy and Law, 2008), or authors (McKercher, 2008) via an h-index and/or a g-index. In this respect, one might ask why these types of studies using metrics (i.e. number of papers, citations, indices, web hits, view counts, etc.) are rare. One of the main reasons is that although authors produce a number of related studies, these types of studies are rejected by editors/reviewers since such rankings are now readily available in real time and studies repeating this data add little value. Another reason is that the philosophy of these methods conducted in studies is not reflected or integrated into the studies to add value.

Zhong et al. (2015) investigated research on China's tourism based on authorship analysis in subperiods between 1978 and 2012. For example, Page (2003) assessed the research performance of universities in the United Kingdom. Yet, there is still a paucity of studies focusing on the evaluation of literature in certain countries and in the general management and/or the tourism literature. On the other hand, only three themes in tourism have been assessed by evaluation measures, including medical tourism (Chuang et al., 2014), resource management (Carter, Baxter, & Hockings, 2001), and information and communications technology (Frew, 2000). Additionally, hospitality marketing was sought via citation analysis based on one journal (Dev et al., 2010).

#### *Relational studies in tourism*

In recent years, the interest in relational studies has been increasing in the management literature. However, in the tourism literature, only eight articles were found. These studies are assessed and discussed below.

*Studies conducted via co-citation analysis.* Although co-citation analysis is a popular method in other disciplines (Zupic and Čater, 2015), only three research studies were conducted via this method in the selected tourism journals. For example, Xiao and Smith (2008) investigated the knowledge impacts of 17 scientific literature classics in the sociology and anthropology of tourism via co-citation and bibliographical coupling analysis. They found that these titles had a strong and lasting impact on academics. Benckendorff and Zehrer (2013) identified influential authors, studies, and ranked scholars via co-citation network analysis. They used the reference lists of studies published in three leading tourism journals (*ATR*, *JTR*, and *TM*) between 1996 and 2010 by extracting data via the Sitkis package program and visualizing via the UCINET package program. They found that the social sciences have been influential in the field. However, they also found that business-related citations were increasing.

Koseoglu, Sehitoglu and Craft (2015) conducted a citation and a journal co-citation analysis to explore the academic foundations of tourism from reference lists of articles focusing on an emerging country, Turkey. They extracted the data from articles related to Turkey published in nine leading tourism journals indexed within the SSCI category, including *ATR*, *CHQ*, *Current Issues in Tourism*, *IJCHM*, *IJHM*, *IJTR*, *JHTR*, the *Journal of Travel and Tourism Marketing*, and *TM*. They analyzed the data obtained on the articles published from the journals' first issues to the last issues by 2013 via Excel, Bibexcel, SPSS, and Pajek software programs. They observed changes in the academic foundation of tourism research with regard to Turkey and visualized these changes by creating subperiods (2000–2006 and 2007–2013). They found that over half of the citations were from publications engaging outside of the tourism field and cited similar patterns among hospitality/tourism, marketing, and psychology fields. However, it was found that the intradisciplinary maturity constituted by the tourism journals was weak.

*Studies conducted via bibliographic coupling analysis.* Two studies conducted via bibliographic coupling were found. The first study by Yuan, Tseng et al. (2014) focused on identifying recent subject areas and citation patterns of tourism research published between 2008 and 2012 in 10 leading tourism journals, including *ATR*, *Current Issues in Tourism*, *IJTR*, *JTR*, the *Journal of Travel and Tourism Marketing*, *JST*, the *Scandinavian Journal of Hospitality and Tourism*, *Tourism Economics*, *Tourism Geographies*, and *TM*. By assessing full-length articles, they illustrated 12 subject areas with 40 subtopics. Additionally, they presented the number of articles by topic and year, topic distribution for each journal, the geographic distribution of topics, and most cited documents by subject area. The second study was also by Yuan, Gretzel et al. (2014) and identified tourism subfields by clustering journals via bibliographic coupling analysis on the bibliographic data of 37 journals in the hospitality, leisure, sport, and tourism category from 2008 and 2012. They identified five tourism subfields: tourism, hospitality, sports psychology, the sociology of leisure and sports, and sport economy.

*Studies conducted via co-authorship analysis.* Three studies employed co-authorship network analysis. Hu and Racherla (2008) visualized a social network of the hospitality research domain via co-authorship data obtained from articles published in leading hospitality-focused journals (*IJHM*, *CHQ*, *JHTR*, and *IJCHM*) between 2001 and 2005. They showed the productivity of authors via power law and mapped the collaboration with a core-periphery, cohesive network, and contextual view of collaboration via Pajek. On the other hand, they ranked research streams, such as marketing and sales, consumer behavior, finance and accounting, human resources, and information technology, based on the density of each cohesive sub-network. Racherla and Hu (2010) vetted the social structure of tourism research on articles published between 1996 and 2005 in three top tourism journals, including *ATR*, *JTR*, and *TM*. By dividing this period into two groups, they were able to visualize total tourism researchers, a global view of collaboration based on research streams, and a contextual view of the marketing group's collaborations with other research streams. In addition to this visualization, they presented a ranking

of authors by centrality metrics, including degree, closeness, and “betweenness,” and groups classified by the number of collaborations.

Ye et al. (2013) investigated critical scholars in tourism research collaborations and demonstrated the collaboration strategies of researchers from extroversive and introversive collaboration approaches from articles in three tourism (*ATR*, *JTR*, and *TM*) and three hospitality (*CHQ*, *IJHM*, and *JHTR*) journals between 1991 and 2010. They highlighted the notion that the tourism collaboration network is a small world reflecting the characteristics of real social networks and gauged its productivity by utilizing power law. Additionally, they showed changes in the network’s structural features over five subperiods via UCINET. They ranked the authors based on centrality metrics, including degree, Bonanich power index, and betweenness.

*Studies conducted via co-word analysis.* There was only one study conducted (Ying and Xiao, 2012) via co-word analysis on dissertation subjects extracted from ProQuest Dissertations and the Theses-Full Text database (1994–2008). They employed a longitudinal examination utilizing three-year periods via UNICET, multidimensional analysis, and correspondence analysis. They identified 21 subjects as subdomains in the field and discussed the relationship between these subject areas and doctoral program distributions in tourism research. Additionally, and out of the scope of this current study’s sample, several other studies have conducted relational studies in the tourism field (Benckendorff, 2009; Garcia-Lillo, Ubeda-Garcia, & Marco-Lajara, 2016; Ozel and Kozak, 2012).

### Conclusions, recommendations and future research

This study has sought to evaluate the progress of bibliometric studies in the tourism field. Data were gathered from nine leading tourism journals (indexed within the SSCI category) between 1988 and 2015. The study findings offer clear theoretical and practical implications by addressing the progress of bibliometric studies in tourism and also discussing the role of entities (individuals, groups, and institutions) in the field.

#### *Research implications of bibliometric structures in tourism*

The study findings highlight that there is a remarkable increase in bibliometric studies conducted via systematic review. However, the studies that employed relational bibliometric methods are rare. Although during the past 40 years, there has been a considerable increase in the number of papers published in tourism journals, and a considerable research community in the tourism field which is vibrant and exciting (Cheng, Li, Petrick, & O’Leary, 2011; Hall, 2011; McKercher, 2008; McKercher and Tung, 2015), relational bibliometric methods, particularly, have not been adapted promptly or have been lagging in the tourism literature showing interdisciplinary and transdisciplinary characteristics (Park and Jang, 2014; Tribe, 2000, 2004, 2010). Therefore, particular discursive bibliometric structures in the tourism field are not enough to reveal unknown patterns in the evolution of the knowledge domain, collaborations, and contextual progress (McKercher and Tung, 2015). To enrich the debates of the epistemological and ontological structure of knowledge creation in the field and make stronger theoretical advances, more research studies conducting relational bibliometric studies are needed.

The sampling process has a critical role for running bibliometric methods and increasing validity and reliability of these research studies. There are two ways to extract the data needed for bibliometric analysis. While one of them uses databases to extract data automatically, the other way requires researchers to find data manually by creating their related sample. However, researchers generally prefer the first way since latter involves arduous work to find and enter the data into a spreadsheet or related statistical programs. The current study results demonstrate that the samples of bibliometric studies have been formed from articles mainly indexed by SSCI or Scopus, or published in leading journals highly cited in the literature. These sampling preferences can create a few challenges to illuminating the knowledge domain of the field or contributing to theory development and test. First, these databases or leading journals may not fully represent the whole field, thus capturing only one part of the big picture. Given this, bibliometric studies should not only focus on leading journals but also other journals in the field as well as textbooks and other publications. However, researchers may not always be encouraged to delve into a piece of the big picture due to the “economization of research quality and knowledge production” (Hall, 2011, p. 25) and the importance of where one publishes rather than what one publishes (Hall, 2011). Second, networks constituted from institutions, policy makers, publishers, editors, or reviewers may impose guidelines regarding how researchers should create a sample of bibliometric studies. This is problematic because it suggests that in order to publish in a top-tier journal, researchers may have to abide by the bibliometric study guidelines that the top-tier journals impose in order to ensure that the journal remains top-tier. Therefore, we may say that bibliometrics are used to endorse publishers or journals to survive in the competitive environment generated by the commercialized or politicized academic publishing industry (Hall, 2011). On the other hand, since this situation generates its own small academic community by ignoring other possible samples (like journals not indexed in popular databases or local research published in local journals) studies related to bibliometric methods will be unable underwhelmed to assess or monitor the progress of the field from epistemological, ontological, and practical perspectives.

A longitudinal comparison of such maps informs us about the changes occurring in the social construction of the field and the evolving consensus, or lack thereof, about the domain of the field (Nerur et al., 2008). According to the findings of this

study, applying a longitudinal approach is rare. Therefore, this generates barriers that prevent unknown patterns and changes among patterns in the field and the relationship between tourism and other disciplines to emerge.

The results of this current study reveal that researchers in the tourism field have mainly employed novel methods in the review studies. Such studies can be enriched further with relational bibliometric studies by developing more specific and comprehensive research questions. In this respect, the knowledge domain of subdisciplines can be further built systematically and analytically. However, current advances in the bibliometric field should be introduced to retrieve the data from databases, to lead social network analysis, and to map the structures of themes. Further, as a starting point, this study provides researchers with a broad insight into the unique research questions pertaining to the tourism field below:

- How have the subjects, research methods, samples, and utilized statistical techniques evolved over time in academic journal papers, conference proceedings, master's theses and doctoral dissertations?
- Which institutions have made the most contributions?
- How has the research changed over time and in which journal categories?
- How have research methodologies evolved over time in the tourism field?
- Are there any differences between methodologies employed in tourism and other disciplines?
- What kinds of methodological differences appear among countries and regions?
- What are the academic foundations in the tourism literature?
- How have the academic foundations of the tourism field evolved over time?
- What are the subfields of tourism? Have these subfields changed over time?
- What is the relationship between a co-authorship network and performance and quality of the papers? How do co-authorship networks influence the performance of researchers?
- What are the research groups in the fields? How have these research groups evolved over time?
- What are the conceptual structures of the tourism field? How have these structures evolved over time?

*Recommendations:* It is commonly accepted that tourism is an applied field. Given this, many scholars may strive to recommend new approaches and practices for practitioners rather than researchers. However, to promote the field and strengthen its academic foundation, researchers need to know the progress and evolution in the field. To regiment and direct the regular scholarly discussions on the evolution of all the dimensions of the fields, one may discuss the necessity of establishing a subfield (relying on bibliometric, informatics, or scientometrics) in tourism to foster both academic/theoretical and applied recommendations/techniques. Scholars in different career phases can be encouraged to support and undertake enhanced bibliometric studies by less susceptibility to publication-related pressures. Since scholars' research programs have these topics, doctoral programs should include bibliometric studies. Doctoral seminars focusing on bibliometric methods should be organized. Space for bibliometric studies may be created by top-tier journals with guidelines providing reviewers with more clarity to assess studies conducted via bibliometric methods. Academic institutions in our field should value bibliometric studies and recognize and reward researchers with a bibliometric research record with tenure and promotion opportunities or advancements. Specific sessions or workshops can be organized at leading conferences to educate attendees about the value and importance of bibliometric studies and disseminate a culture of bibliometric approaches.

#### *Improving bibliometric studies*

As noted above, bibliometric is accepted as an interdisciplinary research field to extend all scientific fields based on scientific information and science policy (Glanzel, 2003). However, according to Glanzel (2003, p. 5): "It is a common misbelief that bibliometrics is nothing else but publication and citation based gauging of scientific performance or compiling of cleaned-up bibliographies on research domains extended by citation data. In fact, scientometrics is a multifaceted endeavor encompassing subareas such as structural, dynamic, evaluative and predictive scientometrics." Since bibliometric studies highlight the unknown patterns in fields or disciplines, these studies help researchers develop theories or test hypothesis. Hence, these structural, dynamic, evaluative, and predictive models can be skillfully applied in the evaluation and prediction of a field.

The field of bibliometrics helps researchers identify publication activities, citation impact, scientific collaboration, and co-occurrences including co-word, co-heading, co-author, bibliographic coupling with latent semantic indexing (Glanzel and Thijs, 2012), and topic modeling (Blei, 2012). All methods are applicable for the tourism field to develop theories and testing. In this study, study results show that the usage of statistical package programs pertaining to relational methods is low. Therefore, the main problem is many researchers outside the bibliometrics field such as tourism do not know how they can employ these bibliometric methods and use bibliometric technologies (Glanzel, 2003) in their fields (Zupic and Čater, 2015). Thus, it may be a particular problem to alter the way (or force progress in the way) bibliometric studies are conducted in the field of tourism. Hence, since the impacts of bibliometric studies may not be clearly understood to develop theories or testable predictions in the field, these methods may not be used enough for theory development and testing.

*Recommendations.* Bibliometric studies can contribute to theory development and testing in tourism by providing heuristic power (Yadav, 2010), via evaluation of current theories and methodologies. It can be recommended that to create a strong culture of bibliometric studies in the tourism field, the main action would be to develop strategies to break misbelief about bibliometrics by inviting bibliometricians to introduce and teach applications of the methodology of bibliometrics to tourism

scholars. Collaboration opportunities can be provided with flagship schools focusing on bibliometrics as a research field. Tourism scholars should be encouraged to involve themselves in workshops held by bibliometricians at conferences.

#### *Potential challenges and barriers to bibliometric studies*

There are a few challenges and barriers to applying bibliometrics in the tourism field (see Hicks, 2004). First is the availability to resources. Bibliometric studies in tourism generally used SSCI or Scopus databases to extract bibliographic data since the other databases do not allow this kind of data collecting. Moreover, tourism literature is fragmented. Second is the type of sources used to collect the data. Bibliometric studies in tourism are generally conducted via article-based bibliometric methods since SSCI or Scopus only cover journals. Thus, researchers ignore books, book chapters, monographs, conference proceedings, etc. to assess the evolution of the field. Third is that there can be typos and errors in bibliographic data in the related databases. These typos and errors can impact the reliability of bibliometric analysis. Fourth is the omission of local research outputs. Many bibliometric studies focus on articles in English since the databases mainly consider articles written in English. Last is the scope of the samples formed for bibliometric analysis. This study shows that the samples of these studies include leading tourism journals. However, there may be other venues publishing articles that relate to tourism. Because of these biases, bibliometric outputs may be incomplete, unable to show a whole picture of the field. To increase reliability and validity of bibliometric studies in tourism the impact of these barriers should be considered and overcome where possible.

*Recommendations.* Tourism has a respectable academic community both internationally and locally around the world. Hence, this community should behave as a proactive player to enhance bibliometric studies in the field rather than as passive player watching and following the developments. Each discipline or field has their own characteristics. Given this, institutions or organizations may create their own bibliographic database and make them available online. To seek local research outputs written in non-English speaking countries, project groups can be established. Flagship journals should encourage researchers to search for patterns or evolutions in local outputs related to tourism.

#### *Who benefits the most by new bibliometric methods*

As seen from interferences no one loses in the long term when bibliometric studies, with new bibliometric methods are conducted in the tourism literature. Initially, academic journals, publishers, organizations, institutions, or even authors may worry about losing their reputations or competitive edges. However, when new bibliometric methods are applied comprehensively, minimizing the aforementioned deficiencies, new patterns and opportunities will be unveiled for researchers by (re)inventing academic foundations of the field via quantitative methods rather than just qualitative reviews. Therefore, all stakeholders of the field will win in the long run by creating the culture and support for bibliometric studies in tourism. Additionally, tourism studies are industry based and can offer industry managers benefits to formulate and implement strategies and explore solutions for their problems. Bibliometric studies can provide helpful and timely information for researchers and managers. Therefore, scholars, managers, government officials, and consultants in the tourism field can benefit from the outcomes of such bibliometric studies.

#### *Politics and future of bibliometric research*

Since bibliometric studies generate new research agendas and directions for disciplines and/or fields, researchers can identify gaps in literature and practice. The findings of the bibliometric analysis in tourism can highlight the relationship between tourism and other disciplines or fields. Thus, new politics may be developed to enrich these relationships. Additionally, these studies are useful for policy makers and senior administrators who work at universities, government agencies, and research funding organizations when making policy decisions and allocating resources. Therefore, bibliometric studies are always needed at any maturity level of fields or disciplines.

#### **Limitations and future research**

Similar to other studies, this study has its own limitations. First, the sample of the paper included only nine leading tourism journals. It is possible that there may be more bibliometric studies published in other tourism related journals or in journals in other fields. It is suggested that future studies should include a larger sample of journals. Second, as Hall (2011) stated, bibliometric analysis can be applied to any bibliometric unit, and it is not limited to studies of journal citations. However, in this current study, the sample included only articles published in nine tourism journals. Future studies may consider conference proceedings, books, and doctoral dissertations. Finally, bias might appear when the review studies are classified, since some papers cover two or more groups. In future studies, multiple authors may collectively classify these studies.

There are several other avenues for future studies. First, future studies can focus on a systematic review to identify contributors, such as authors, institutions, and countries. Second, the quality of bibliometric studies may be investigated by developing scales measuring the quality of research. Third, the performance of the bibliometric studies by using citation and/or co-citation impacts can be measured to gain more understanding in the field. Fourth, collaboration and the social net-



work in bibliometric studies should be mapped and/or visualized. Fifth, the growth of the studies and productivity of researchers working in these fields of studies should be discussed in relation to research morals, values, economics, well-being etc. Sixth, bibliometric analysis of bibliometric studies in tourism in developed and developing countries should be sought. Seventh, future studies should look at how methodological processes have been utilized in bibliometric studies. Finally, future studies may compare bibliometric studies in the tourism field with bibliometric studies in other fields or disciplines.

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