Structural elements of articles and diachronous citation analysis among top-ranking tourism journals (1990–2010)

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A B S T R A C T

This paper analyses the influence of structural elements of articles (i.e., field-, journal-, article-, and author/reader-related factors) along with place-related factors (i.e., destination, attraction, hotel/resort, or festival/special event/mega event) on citations received by research papers in the three top-tier tourism journals: Annals of Tourism Research, Journal of Travel Research, and Tourism Management from 1990 to 2010. Multiple linear regression tests showed that number of years since an article was published, length of an article, and frequency of journal publication were significant in predicting the frequencies of articles cited in SSCI and/or Scopus. The order of articles within an issue was also a significant predictor in Scopus. In addition, the citation frequency in the three journals differed with each other across SSCI and Scopus. Lastly, mentioning of place in the title of an article had a significant relationship, although it was negative, with the frequency of citations the article received in SSCI and Scopus.

1. Introduction

For decades, citation analysis has represented a fundamental method to assess the influence of authors and their scholarly works. It involves counting the number of citations to particular authors, articles, or journals (Wade, 1975). The role that citation analysis has played in research is most prominent in three areas: 1) examining the scholarly productivity of individuals, institutions, and fields; 2) serving as a measure of journal ranking; and 3) identifying the intellectual structure of a field (Liu, 1993). Different citation methods and/or indices have been developed to fulfill the above-mentioned functions of citation analysis, among which citation counts are ultimately the basic unit of measurement. High citation counts are deemed to reflect the significance or influence of a given piece of work, an author associated with the work, a research field, or a research group such as an academic department or an institution.

By saying “citation counts”, researchers often refer to the number of citations received by an author, an article, or a journal. Additionally, citation analysis also concerns the degree to which references are cited in or by other works. For example, the number of times a particular paper is cited by others is considered diachronous while references cited in or by other works. For example, the number of times a particular paper is cited by others is considered diachronous while references cited in or by other works. For example, the number of times a particular paper is cited by others is considered diachronous while references cited in or by other works.
Citation analysis has also been utilized to rank journals of a particular interest. Such analysis is achieved by examining an Impact Factor (IF). For instance, in the Journal Citation Report (JCR)—published by the Institute for Scientific Information (ISI)—a journal’s impact factor is determined by dividing the number of current year citations to the source items published in that journal during the previous two years (Thomson ISI, 1994). In order to make it objective and reproducible, the IF must be calculated in terms of specified journals within a specified time period which citations may occur, accompanied by adjustments, such as weighting of citations as is practiced in various h-indices.

Citation analysis has been recently conducted in the tourism field as well. It has been performed to distinguish prolific scholars in the field (Jogaratnam, Chon, McCleary, Mena, & Yoo, 2005; McKercher, 2008; Ryan, 2005; Sheldon, 1991; Zhao & Ritchie, 2007) and to evaluate tourism and/or hospitality journals (e.g., Jamal, Smith, & Watson, 2008; McKercher, 2005; McKercher, Law, & Lam, 2006; Pechlaner, Zehrer, Matzler, & Abfalter, 2004; Ryan, 2005). Much of this research was conducted to rate and rank the contributions of tourism researchers and research institutes. Among the limited number of studies focusing on the citations of individual articles, Lee, Law, and Ladkin (2013) investigated the relationships between journal articles’ length, authorship, and collaboration (these factors are labeled “structural elements” of articles in their research, and this term is used by the current study as a synonym to selected field-, journal-, article-, and author/reader-related factors of articles) and their citation counts in the 300 most cited publications; however, they did not differentiate tourism journals from hospitality journals in selecting cited articles, nor did they clarify whether the citing articles were from tourism journals vs. general research journals (i.e., within-discipline citation vs. across-discipline citation). Law, Ye, Chen, and Leung (2009) identified the most cited articles in tourism journals between 2000 and 2007 without reporting their structural characteristics. Adopting the framework proposed by Bornmann and Daniel (2008) which incorporated the normative and social constructive perspectives of citing behaviors, the current study provides a relatively more comprehensive analysis of why tourism articles are cited that considers a broad selection of structural elements of articles including field-, journal-, article-, and author/reader-related factors. Additionally, this study limits the cited articles into those in the top three tourism journals and the citing articles into those solely from tourism journals, targeting more precise insight as to why top-ranked tourism journal articles are cited by their closest peers (i.e., tourism researchers) rather than a broader audience (i.e., both tourism and hospitality scholars).

While generic citation analysis and relevant techniques have been introduced in the tourism field, no analysis on the importance of a specific stream of tourism studies via the lens of citations has emerged. For such a multidisciplinary field as tourism, citation analysis can be a useful tool to track the popularity of various research topics. This study contributes to the current literature by looking into the salience of one category of tourism studies (i.e., studies in relation to place), and the influence of mentioning this particular topic (i.e., place-related variables) in article citations through a citation analysis of articles from top-tier journals in the tourism field. Places are central to tourism. They are the sites where tourism experiences occur, the contexts for social interactions, and the stages where residents and tourists encounter each other (Snepenger, Snepenger, Dalbey, & Wessol, 2007). Specifically, the current study strives to address two purposes: (1) to examine the effects of structural elements of articles in predicting the citation counts of articles in the top three tourism journals (i.e., Annals of Tourism Research, ATR; Journal of Travel Research, JTR; and Tourism Management, TM) cited in the Social Science Citation Index (SSCI) and Scopus, both in general research journals and tourism-related journals only; and (2) to examine the effect of place-related factors in particular, in predicting the citation counts of articles in the top three tourism journals cited in SSCI and Scopus both in general research journals and specifically in tourism-related journals.

2. Literature review

2.1. Factors influencing the citation of an article

Citation analysis has been conducted in various fields and subfields. The source of citable items could be an individual scholar and his/her work (e.g., Anderson, 2006; García-Pérez, 2010), a dedicated topic, field, institution (e.g., Kajikawa & Takeda, 2009; Mishra et al., 2010; Uysal, 2009), and articles in particular journals over a period of time (e.g., Casagrandi & Guariso, 2009; Frosch et al., 2010; Smith, 2009).

Citation count and subsequent index calculation will yield different results due to pulling records out of different databases. For example, Martell (2009) compared the citation retrieval strengths of Yahoo, Google, Google Scholar (GS), and ISI Web of Knowledge (WOK) in retrieving references to articles in College & Research Libraries (C&RL). He found that the average number of citations per C&RL article received is relatively close between Yahoo, Google, and ISI WOK, while Google Scholar’s coverage is broader. It should be noted that beyond journal articles, Martell (2009) also counted books, book chapters, conference papers, proceedings, technical reports, theses, dissertations, and scholarly bibliography citing target C&RL publications. Moreover, García-Pérez (2010) investigated whether the h-index can be reliably computed through alternative sources of citation record. The Web of Science (WoS), PsycINFO, and GS were used to collect citation records for known publications of four Spanish psychologists. Compared with WoS, PsycINFO included a larger percentage of publication records, whereas GS outperformed WoS and PsycINFO in this respect. Compared with WoS, PsycINFO retrieved a larger number of citations in unique areas of psychology, but it retrieved a smaller number of citations in areas that were close to statistics or the neurosciences, whereas GS retrieved the largest numbers of citations in all cases, thus applying different penalties on the h-index of researchers working in different fields.

Aside from the database from which a particular article is produced, other factors also can play a role in determining the article’s citation count. A stream of citing behavior literature (Bornmann & Daniel, 2008; Case & Higgins, 2000; Frosch et al., 2010; Krampen, 2010; Shadish, Tolliver, Gray, & Gupta, 1995) explains why some studies are cited and others not. In terms of citing motivation, three types of judgments about cited works were found to best predict citation in the discipline of communication by Case and Higgins (2000): (1) that the work was novel, well-known, and a “concept-marker” representing a genre of studies; (2) that citing it might promote the authority of one’s own work; and (3) that the work deserved criticism. Shadish et al. (1995) created scales for author judgment of citations, proximity to source items, and creativity and examined their relationships with citation count. The authors found that exemplary and high quality (e.g., recognized authors, representing a genre of studies, novel research-provoking and falsification resisting), and older works received more citations, while more creative works tended to get fewer citations.

Other than the above “normative” logic of citing behavior, the “social constructivist” (Bornmann & Daniel, 2008) view of citing behavior argues that citing motivations are “socially constructed” which vary depending on the intellectual and practical environment. Bornmann and Daniel (2008) reviewed the theory and empirical studies in both normative (i.e., the reason that certain work is cited attributes to their intellectual content, measured by evaluative bibliometric analyses) and social constructive (i.e., other than cognitive factors, some socially constructed factors such as the authority of a paper would explain why a scientist(s) decides to cite one instead of another) perspectives of citing behavior. The reasons the authors cited that may influence the probability of citations include but are not limited to: 1) field-dependent factors, e.g., the breadth of a field (King, 1987), or the comparative “up-to-dateness” of publications (Peters & Van Raan, 1994); 2) journal-dependent factors, including the impact, quality, or prestige of the journal.
(Boyack & Klavans, 2005; Cronin, 1984; Meadows, 1998; Moed, Burger, Frankfurt, & Van Raan, 1985; Seglen, 1989; Tainer, 1991; Van Dalen & Henkens, 2004), journal accessibility, visibility, and internationality (Vinkler, 1987; Yue & Wilson, 2004), the frequency of publication of journals containing related articles (Stewart, 1983), and the order in which an article is listed in a journal issue (Ayres & Vars, 2000; Laband & Piette, 1994; Smart & Waldhofel, 1996); 3) article-dependent factors, such as the number of co-authors of the work (Baldi, 1998; Beaver, 2004; Lawani, 1986), the number (Peters & Van Raan, 1994), the impact (Boyack & Klavans, 2005) of the references within the work, the length of the article (Abt, 1993; Baldi, 1998; Laband, 1990; Stewart, 1990), and whether a statement or an assumption is substantiated in the article (Spiegel-Rösing, 1977); and 4) author/reader-dependent factors, e.g., culture barriers (Carpenter & Narin, 1981; Menou, 1983), personal acquaintance with other authors (Cronin, 2005; Mählisch & Persson, 2000; Sandström, Wadskog, & Karlsson, 2005; White, 2001) and gender of authors (Baldi, 1998; Cole & Singer, 1991; Meadows, 1998; Stack, 2004).

A more recent study by Frosch et al. (2010) showed consistent findings with the above-mentioned research. They assessed the impact of *Health Psychology*, the official journal of the American Psychological Association Division of Health Psychology, by exploring how the type of citing journals (e.g., psychological, medical, public health/health policy) plus article features (e.g., types of article/study, i.e., observational, intervention/treatment/experimental, review, theoretical/conceptual, commentary/editorial), sample characteristics (e.g., sample size, source of sample, type of medical condition), and writing style, such as whether the article included a clear statement of hypotheses, theoretical/practical/policy implications of its findings influenced citing rates. They found that *Health Psychology* articles are mostly cited in psychology and medical journals. Additionally, article length (i.e., number of pages) and types of articles were found to be associated with the frequency they are cited.

Following previous research (e.g., Bornmann & Daniel, 2008; Case & Higgins, 2000; Frosch et al., 2010; Krampen, 2010; Shadish et al., 1995), this study proposed 12 hypotheses/sub-hypotheses to investigate whether a selection of the field-related, journal-related, article-, and author/reader-related factors contributed to the frequencies of article citations. Suggested by Martell (2009) and García-Pérez (2010) that databases vary in their searching coverage of subjects of interest, we assumed that citation counts retrieved from SSCI and Scopus were different from each other in the hypotheses. Furthermore, we discriminated general research journals (i.e., academic journals in all disciplines) from tourism journals (i.e., academic journals in tourism field only) within SSCI and Scopus as we formulated the following hypotheses. This was done due to differential citation frequencies in previous research (Frosch et al., 2010; Howey, Savage, Verbeeten, & Van Hoof, 1999; Kim, Savage, Howey, & Van Hoof, 2009).

The hypotheses/sub-hypotheses pertaining to the relationships between structural elements of articles or, field-related, journal-related, article-, and author/reader-related factors, and article citation frequencies are written as:

**H1.1.** There is a statistically significant relationship between the frequency of publication of a journal containing an article and the frequency of the article being cited in research journals in SSCI and Scopus, respectively.

**H1.2.** There is a statistically significant relationship between the frequency of publication of a journal containing an article and the frequency of the article being cited in tourism journals in SSCI and Scopus, respectively.

**H2.1.** There is a statistically significant relationship between the publication time of a journal containing an article and the frequency of the article being cited in research journals in SSCI and Scopus, respectively.

**H2.2.** There is a statistically significant relationship between the publication time of a journal containing an article and the frequency of the article being cited in tourism journals in SSCI and Scopus, respectively.

**H3.1.** There is a statistically significant relationship between the sequence of an article within a specific issue of a journal and the frequency of the article being cited in research journals in SSCI and Scopus, respectively.

**H3.2.** There is a statistically significant relationship between the sequence of an article within a specific issue of a journal and the frequency of the article being cited in tourism journals in SSCI and Scopus, respectively.

**H4.1.** There is a statistically significant relationship between the length of an article and the frequency of the article being cited in research journals in SSCI and Scopus, respectively.

**H4.2.** There is a statistically significant relationship between the length of an article and the frequency of the article being cited in tourism journals in SSCI and Scopus, respectively.

**H5.1.** There is a statistically significant relationship between the number of authors of an article and the frequency of the article being cited in research journals in SSCI and Scopus, respectively.

**H5.2.** There is a statistically significant relationship between the number of authors of an article and the frequency of the article being cited in tourism journals in SSCI and Scopus, respectively.

**H6.1.** There is a statistically significant relationship between the gender of the leading author of an article and the frequency of the article being cited in tourism journals in SSCI and Scopus, respectively.

**H6.2.** There is a statistically significant relationship between the gender of the leading author of an article and the frequency of the article being cited in tourism journals in SSCI and Scopus, respectively.

### 2.2. Use of citation analysis in tourism research

Citation analysis in the tourism field has two focuses. The first one is to identify contributors to the field (Jogaratnam et al., 2005; McKercher, 2008; Ryan, 2005; Sheldon, 1991; Zhao & Ritchie, 2007); the other related topic attempts at issues in rating and ranking tourism journals (e.g., Jamal et al., 2008; McKercher, 2005; McKercher et al., 2006; Pechlaner et al., 2004; Ryan, 2005), and it is of particular relevance to the current study.

Pechlaner et al. (2004) ranked tourism and hospitality journals by soliciting expert evaluation on journals’ readership frequency, their scientific and academic relevance, their reputation, and their impact on the authors’ academic careers. Their results identified that the top three journals in the tourism field are *Annals of Tourism Research* (ATR), *Journal of Travel Research* (JTR), and *Tourism Management* (TM). Ryan (2005) and McKercher et al. (2006) confirmed this result with frequency of hits in searches and peer assessment, respectively.

Ryan (2005) pointed out that ATR, JTR, and TM are long established journals with good reputations in the tourism field. These journals’ concerns are broader rather than specific to either discipline or geography as newer journals are and this makes them the “three main” among other reasons. Indeed, when scholars’ contributions to the field were counted, these three journals became the criteria outlet of their publications (Jogaratnam et al., 2005; Sheldon, 1991). Moreover, citation studies have been observed in the three key tourism journals (e.g., Jamal et al., 2008; Jogaratnam et al., 2005; McKercher, 2005, 2008; McKercher et al., 2006; Ryan, 2005). Of particular relevance to the current study, citation analyses conducted by Howey et al. (1999) and its following-up re-examination by Kim et al. (2009) suggested that there were fewer across-discipline citations than within-discipline citations for articles published in tourism and hospitality journals.
For the purpose of investigating the proposed relationships and managing the time and effort in data collection, we defined the citable items as research articles published in ATR, JTR, and TM given the reputation of each tourism journal in the field (Jogaratnam et al., 2005; Ryan, 2005; Sheldon, 1991). In the meantime, this study examined the citation frequencies of those articles by tourism journals in particular contrasting to all research journals. Tourism journals were selected to be those with “tourism”, “tourist”, “vacation” etc. other than “hospitality” in their titles. We proposed hypotheses/sub-hypotheses on the differences in citations received for articles in each of the “three main” as an extension of precedent research on the ranking of tourism journals:

H7.1. There is a statistically significant difference in mean citations received for ATR, JTR, TM articles cited by research journals in SSCI and Scopus.

H7.2. There is a statistically significant difference in mean citations received for ATR, JTR, TM articles cited by tourism journals in SSCI and Scopus.

2.3. The significance of place in tourism research

It is nearly impossible to conceive of various forms of special interest tourism (e.g., cultural heritage tourism, dark tourism, nature-based tourism) without considering the importance of place. Cultural heritage tourism discusses cultural and heritage sites as well as the way they are managed and interpreted. Empirical studies of this research area typically involve a survey of tourists in a specific site or event (e.g., Chang, 2006; Chen, Kerstetter, & Graefe, 2001; Formica & Uysal, 1998; Poria, Butler, & Airey, 2003). The concept of authenticity is of particular interest in the marketing of cultural heritage sites because it is the fundamental component bringing tourists and attractions together (Apostolakis, 2003). Dark tourism, or thanatourism, comprises visits to battlefields, murder/atrocities locations, places where celebrities died, graveyards and internment sites, memorials, events, museums and exhibitions featuring relics and the reconstruction of death (Foley & Lennon, 1996). Nature-based tourism takes place in natural settings or focuses on specific elements of the natural environment (Hall & Boyd, 2005). Therefore, this type of tourism often occurs in accessible remote areas with high natural and aesthetic amenity values, in highly unique natural landscapes.

Place is significant for the tourism industry and research in that it is the context where tourism activities occur and a major subject of tourism research. Very often, places are referred to as “destinations” in a tourism context, and can be defined as a geographic location, a political boundary, or a marketing product (Kotler, Bowen, & Makens, 2010). In addition to destinations, places are often conceived as attractions, hotels/resorts, or festivals/special events/mega events. Place-focused studies within the tourism literature have included tourists’ motivations of visiting a destination (e.g., push–pull framework, Baloglu & Uysal, 1996; Kim, Lee, & Klenosky, 2003; Klenosky, 2002), repeat visitation to destinations (e.g., Gross, Brien, & Brown, 2008; Gross & Brown, 2006, 2008; Gu & Ryan, 2008; Yuksel, Yuksel, & Bilim, 2010), place identity (Dredge & Jenkins, 2003; González, 2008; Gu & Ryan, 2008; Jeong & Santos, 2004) of particular places, to name a few.

The idea of place is rarely considered in shaping the degree to which articles are cited. Among a number of tourism studies using citation analysis, most have focused on the productivity or performance of individual scholars, institutions, and tourism journal development. To the knowledge of the present authors, few studies (e.g., Banks, 2006; The STIMULATE-6 Group, 2007) have adopted this method to explore the significance of one single research focus. Therefore, the current study examines the issue of place-related tourism studies by citation analysis. Given the significance of place in tourism studies, the following hypotheses/sub-hypotheses were proposed:

H8.1. There is a statistically significant relationship between the mentioning of places in the title of an article and the frequency of the article being cited in research journals in SSCI and in Scopus, respectively.

H8.2. There is a statistically significant relationship between the mentioning of places in the title of an article and the frequency of the article being cited in tourism journals in SSCI and in Scopus, respectively.

H9.1. There is a statistically significant relationship between the mentioning of places in the abstract of an article and the frequency of the article being cited in research journals in SSCI and in Scopus, respectively.

H9.2. There is a statistically significant relationship between the mentioning of places in the abstract of an article and the frequency of the article being cited in tourism journals in SSCI and in Scopus, respectively.

H10.1. There is a statistically significant relationship between the mentioning of places in the keywords of an article and the frequency of the article being cited in research journals in SSCI and in Scopus, respectively.

H10.2. There is a statistically significant relationship between the mentioning of places in the keywords of an article and the frequency of the article being cited in tourism journals in SSCI and in Scopus, respectively.

H11.1. There is a statistically significant relationship between the form of places mentioned in the title, abstract and/or keywords of an article and the frequency of the article being cited in research journals in SSCI and in Scopus, respectively.

H11.2. There is a statistically significant relationship between the form of places mentioned in the title, abstract and/or keywords of an article and the frequency of the article being cited in tourism journals in SSCI and in Scopus, respectively.

3. Methods

3.1. Data collection

Cases utilized in this study included all research articles published in ATR, JTR, and TM between 1990 and 2010. Articles throughout the two decade period of the journals were compiled to make the study comparable. Full-length articles, research notes, and case studies were viewed as research articles, while book reviews, rejoinders and commentaries, conference reports and communications, and letters from the editors were excluded. The definition and selection of tourism journals have been performed in various ways by past studies (e.g., Cheng, Li, Petrick, & O’Leary, 2011; Jamal et al., 2008). In the current study, only the above three journals were selected given their reputation as being the top journals within the field (Jogaratnam et al., 2005; McKercher et al., 2006; Sheldon, 1990).

Data collection for this study occurred in two stages. The first stage involved coding independent variables for each research article. In line with hypotheses H1.1–H6.2, six relevant variables were coded that included: frequency of a journal being published within a year, the number of years since the article was published, the order of an article within a specific issue, the length of an article (in terms of page numbers), the number of authors of an article, and the gender of the lead author of an article (1 = female; 2 = male). These variables were considered independent variables for analyses pertaining to hypotheses H8.1–H11.2. To address H8.1–H11.2, data were tallied for each research article pertaining to: whether a place was mentioned.
in the article title, abstract, and/or keywords (coded as binary variables; yes or no), and if place was mentioned, what form did the place take (i.e., destination, attraction, hotel/resort, or festival/special event/mega event). These four forms were determined by the researchers as being most prevalent in the tourism literature. Two researchers tallied all the cases and coded the independent variables, while a third researcher focused on verifying whether the identification of research papers in the three journals were correct and exhaustive. It took nearly three months to finish the first stage of data collection.

The second stage of data collection involved the coding of four dependent variables (i.e., the frequencies of research papers being cited in both general research journals and tourism journals in SSCI and Scopus, respectively). Citation of an article was operationally defined as the count of citations each article received within SSCI and Scopus. The selection of the two databases followed the conclusions of Martell (2009) and García-Pérez (2010) that found citation counts differ according to the database where the article was produced; moreover, Thomson Scientific’s Web of Science (SSCI in our case) and Elsevier’s Scopus are the most often used academic databases in citation analyses (García-Pérez, 2010; Strotmann & Zhao, 2010). Two types of citation counts in each database were tallied in the study. The first one was the total number of citations received by an article from all research journals; the other one was the total number of citations received by an article from tourism journals only. In this step, two concerns were raised. The first was that citations from non-academic journals, such as conference proceedings, lecture notes, were excluded. The second was that tourism journals where citation counts were extracted were operationalized differently from those from which research papers were tallied. The range of the former was larger than the latter. Specifically, when citation counts from tourism journals were compiled, tourism journals were operationalized as those having tourism, travel, tourist, or vacation explicitly in their title. Therefore, journals such as Journal of Travel & Tourism Marketing, Information Technology and Tourism, Tourism Analysis, and Journal of Vacation Marketing, to name a few, were counted as citing sources besides ATR, JTR, and TM. Although Cheng et al. (2011) identified a more comprehensive list of tourism journals by examining the mission statement of a journal, our seemingly much simpler selection of tourism journals as citing sources was deemed to be appropriate because 43 out of 59 journals in Cheng et al.’s (2011) list were counted in this study. The second stage of data collection was conducted by two researchers. This stage took approximately seven months to complete.

The entire data collection process lasted approximately ten months, yielding a total of 3428 cases. Regarding the distribution of research papers among the three journals, TM published the most (n = 1401, 40.9%) during the two decades, followed by ATR (n = 1195, 34.9%) and JTR (n = 832, 24.3%).

3.2 Data cleaning

Data cleaning involved four independent variables and all dependent variables. Whether a place was mentioned in keywords and the number of keywords had missing values and needed to be differentiated with those with values zero in some of the cases. One of the reasons of missing values in those variables was that ATR, JTR, and TM adopted keywords as a required component of an article at different points in time. Specifically, JTR started to include keywords in 2003 and TM started in 1995. Therefore, the variables of whether a place was mentioned in keywords and number of keywords were coded as missing values for JTR before 2003 and TM before 1995. Another reason leading to missing values in the two variables as well as in the variable of whether a place was mentioned in the abstract was that research notes and case studies did not have keywords or abstracts for ATR, JTR, or TM. In this case, these three variables were coded as missing values as well. 614 (17.9%) cases had missing values in the three variables due to this reason.

The fourth independent variable that required extensive attention was the gender of the lead author of an article. It is usually the case that full names of all authors were present on published articles; therefore, the gender of the first author could be distinguished from his/her first name immediately if the first name was a common English name. In case the gender indicated by first names was not obvious to the authors (n = 804, 23.4% of the total cases) (e.g., names of Asian descent that were not familiar to the authors), they were first searched in Google to match the photo of the researchers or to look for any description (e.g., short bios, introductions of research experience) that could help identify gender. When none of this information was available, authors of the current work consulted colleagues in their respected departments from similar cultural backgrounds to determine gender. Ultimately, gender could not be determined for only 39 (1.1%) of the first authors.

Missing values for the dependent variables were also carefully checked. The citation count was recorded as zero if a search of citing a paper showed that this paper had not been cited; by contrast, it was treated as a missing value when the database did not provide the number of citations or was not listed in the respective database. As a result, there were 948 (24.7%) cases with missing values in citations in SSCI and 306 (8.9%) cases in Scopus. Within SSCI, 248 (7.2%) articles did not have any citation in general academic journals and 362 (10.6%) did not have any citations in tourism journals, while Scopus had less cases without any citation in general academic journals (169 cases, 4.9%) or in tourism journals (285, 8.3%).

4. Analyses and findings

4.1 Descriptive analyses

Means and standard deviations of citations received by articles in JTR, ATR, and TM from SSCI and Scopus are reported in Table 1. Overall, Scopus included more citations (3122) of the three tourism journal articles than SSCI did (2480); and the mean citations in Scopus was more than those in SSCI, both from all journals (MeanScopus = 17.05; MeanSSCI = 10.53) and tourism journals only (MeanScopus = 10.51; MeanSSCI = 6.92).

4.2 Hypotheses testing

Multiple linear regression analysis was used to examine the relationships between the mentioning of place along with articles’ structural elements and the frequencies of articles being cited in all academic journals and tourism journals only within SSCI and Scopus. The alpha level for the overall regression models was modified to 0.01 to avoid Type 1 error raised by analyzing a large sample (Clark-Carter, 2010). The regression models including frequency of journal publication, number of years since article was published, order of articles within the issue, and gender of authors were all highly significant (p < .001) for SSCI (F = 66.56), Scopus (F = 66.79), and tourism journals (F = 75.41) (Table 2). Variance explained ranged from 11.9% for Scopus to 14.2% for tourism only journals in SSCI. For SSCI and Scopus tourism, the significant predictors included frequency of journal publication, number of years since published, and length of article, with all being positive relationships with number of citations. The same independent variables were significant in the models that included Scopus and/or Scopus tourism as the outcome variables. However, the Scopus model also included an additional significant relationship. The order of articles within an issue had a significant negative relationship, indicating less citations for articles put later in the order of a journal issue. Tourism only journals in Scopus also had a negative relationship between the order of articles within an issue and number of citations.

ANOVA with post-hoc tests were used to compare mean citations received among ATR, JTR, and TM articles published from 1990 to 2010 within both the SSCI and Scopus databases. Table 3 shows that the
three journals significantly differed \((p < .001)\) in their mean frequencies of citations received from research journals in SSCI \((F = 33.79)\), tourism journals only in SSCI \((F = 39.02)\), research journals in Scopus \((F = 18.88)\) and tourism journals only in Scopus \((F = 31.41)\). Within each ANOVA, the groups had unequal sample sizes; furthermore, results of Levene’s test of homogeneity indicated unequal variance in the dependent variables. Therefore, the Tamhane T2 procedure was adopted as an alternative, conservative post-hoc test to detect between-group differences and to control for Type I error (Dunnett, 1980; Tamhane, 1979). Results revealed significant differences in mean citations received by articles in ATR, JTR, and TM in both scenarios concerning SSCI and for all research journals in Scopus. To be more specific, ATR received the most citations from research journals and tourism journals in both SSCI and Scopus. In addition, TM received significantly more citations than JTR did in SSCI both among all research journals and from tourism journals only. By contrast, in Scopus, TM received significantly less citations than JTR did in tourism journals only and did not receive a significantly different degree of citations than JTR did among all research journals.

Regression results concerning the relationships between place mentioning variables and citation frequency of articles are presented in Table 4. The combination of the place-related variables (e.g., mentioning of places in the title of an article, mentioning of places in the abstract of an article, mentioning of places in the keywords of an article, and forms of those mentioned places), significantly contributed \((p < .001)\) to the frequencies of the articles being cited in research journals in SSCI \((F = 5.50)\), tourism journals only in SSCI \((F = 6.66)\), research journals in Scopus \((F = 5.73)\), and tourism journals only in Scopus \((F = 7.04)\). Mentioning of places in the title of an article was a significant predictor, with a negative relationship in each model indicating fewer citations for articles that mentioned the place in the title of an article.

5. Implications

The goal of this study was to examine the effects of various structural elements of articles (field-, journal-, article-, and author/reader-related factors), as well as place-related variables in predicting the number of citations received among ATR, JTR, and TM articles published from 1990 to 2010. Number of years since an article was published and the length of an article proved to be significant in predicting the frequencies of articles cited in both SSCI and Scopus. Therefore, \(H_{2.1}, H_{2.2}, H_{4.1}, \) and \(H_{4.2}\) were supported. Two other variables, frequency of journal publication and the order of an article within an issue, yielded mixed findings. Therefore, \(H_{1.1}\) and \(H_{3.2}\) were supported, while \(H_{1.2}\) was partially supported. For each citation index (i.e., research journals in SSCI, tourism journals only in SSCI, research journals in Scopus, tourism journals only in Scopus), a combination of the four variables explained over 10% of the variance in frequency of citations. In terms of the comparisons among ATR, JTR, and TM in their citations in SSCI and Scopus, significant ANOVAs suggested that the citation frequency in the three journals differed with each other across the two databases. Therefore, \(H_{7.1}\) and \(H_{7.2}\) were both supported. Regressions concerning the relationships between place-related variables and citation frequencies confirmed that mentioning of place in the title of an article had a negative significant relationship with the frequency of citations the article received from all research journals and tourism only journals in SSCI and Scopus. As a result, \(H_{8.1}\) and \(H_{8.2}\) were supported. Whether place was mentioned in the title of an article accounted for less than 2% of the variance in each of the citation indices in SSCI and Scopus. By and large, focus on the place where research was undertaken is not a major contributor to the frequency with which articles are cited. In addition, the form of place (i.e., destinations, attractions, hotels/resorts, or festivals/special events/mega events), did not predict article citation frequencies.

The findings confirmed that selective field-, journal-, article-, and author/reader-related factors influenced the frequencies of articles being cited and are mixed with previous research accounting for article citation frequencies. The fact that \(H_{2.1}\) and \(H_{2.2}\) were supported suggests that older publications receive more citations than recent ones do in the tourism field. This finding is contradicting with Cawkell’s (1976) explanation that recent publications receive more citations than older ones because recent publications exceed older ones in quantity. However, previous research also showed that the citation phenomenon varies even among different areas within a single subfield (e.g., Klamer & Van Dalen, 2002; Lewison & Dawson, 1998). Since tourism is relatively new in social science fields and has been studied from various disciplinary perspectives (e.g., Goeldner, Ritchie, & McIntosh, 2000; Jafari & Ritchie, 1981; Przeclawski, 1993), it is likely that tourism research has to look back into its root disciplines as well as its earlier publications for reference. Second, \(H_{4.1}\) and \(H_{4.2}\) concerning length of article were supported, and these results are consistent with what has previously been found in other fields (Abt, 1993; Baldi, 1998;
Laband, 1990; Stewart, 1990), indicating that the longer the length of an article, the greater degree of citations the article receives. Support for hypotheses on the relationships between frequency of journal publication (i.e., H 1.1) and the order of an article within an issue (i.e., H 3.2) with the frequency of article citation resonate with previous findings. Stewart (1983) argued that the citations an article receives may be related to the frequency of publication of the journal containing the article. Additionally, according to Ayres and Vars (2000), the first article in scientific journals tends to be cited more often than ones appearing later in the issue.

6. Limitations and future research

This study selected articles in ATR, JTR, and TM because of the reputation of each journal in the tourism field. There are many other journals contributing to the knowledge of tourism studies in addition to these three. Findings may have changed if other journals were included in the analysis. Moreover, we could have taken more tourism journals into consideration given more time. For example, Cheng et al. (2011) provided a relatively comprehensive and updated list of 59 journals on tourism studies with 29 disciplinary focuses. Ideally, adopting more journals representing different supporting fields of tourism studies from Cheng et al.’s (2011) list would have likely provided a more panoramic view of how articles are cited in tourism journals.

The fact that ATR, JTR, and TM adopted abstracts and keywords as required sections of accepted articles at different time points may bias the findings. JTR and TM started keywords from 2003 and 1995, resulting in a proportion of missing values in the variables of whether place was mentioned in keywords and the form of places. It is likely that missing values in the two variables changed their predictability in citations. Similarly, the coding of the variable, gender of the lead author presented challenges with respect to its contribution to citations. In some instances, the authors had to utilize knowledge of numerous cultures to determine gender. In doing so, a degree of error may have been introduced.

The data used in this study spans two decades. Although a citation analysis across such a long period of time considers a fair view of citation development, the risk for committing Type I errors (Clark-Carter, 2010) is ever-present. Even though the alpha level was reduced to 0.01, the possibility exists for not being conservative enough. Perhaps utilizing a smaller sample from random years would help reduce the chance for Type I error.

This research shows that only mentioning place in the title makes a difference in the frequency an article is cited. One potential area for future research would be to repeat the method of the current study, with its analysis extending to a few more categories of tourism journals (e.g., tourism journals with a regional/international focus) and see if the significance of place mentioning in citations would change. One potential directional hypothesis could be that mentioning of place in the title/abstract/keywords of articles published in tourism journals with a focus on place-related issues increases the frequency of an article being cited.

By looking at the number of citations an article receives, the study is not equating such figures with the impact that said articles have on the field or the contributions that are made to advancing the literature in travel and tourism research. It would be interesting to examine the role that theory development and testing have on the degree of citation. Given the need for theoretical development and testing and continued call for more “theory” in manuscripts, it would be worthwhile to consider the role theory plays in citation analysis.

One concern that was not addressed in this study is the plausible inflation effect of self-citation on the citation counts of articles in ATR, JTR and TM. In their co-citation analysis of the top three tourism journals, Benckendorff and Zehrer (2013) reported that the self-citation shares of ATR, JTR and TM are 12.2%, 11.0%, and 6.9%, respectively, during the period of 1996–2010. Citation counts of articles in the three journals could be diluted due to self-citation, because self-citation tends to inflate citation counts (Nisonger, 2000). On the other hand, in the citation analysis of scientific production from 1981 to 1996, Aksnes (2003) found that the effect of self-citation on citation counts decreases over a longer period of time. In our case, how self-citation affects citation counts in the tourism field remains a limitation and requires future investigation. From a wider perspective, self-citation is an evident but ambiguous phenomenon. For example, Bonzi and Snyder (1991) show that reasons underlying self-citation were no different from those citing others’ works. Self-citation is also the encouraged practice of some journals in order to make their publications more visible. On the other hand, self-citation may be viewed as a reflection of researchers’ egotism. There is no normative guideline regarding how often one should cite oneself despite the popularity of self-citation. Hence, an ethical discussion on the regulation of excessive self-citation in the editorial- and peer-review process within the tourism field following an examination of the influence of self-citation should take place (Garfield & Welljams-Dorof, 1992).

The fact that reasons researchers are motivated to cite certain articles for scientific and perhaps non-scientific reasons can be answered from various perspectives (e.g., social constructive perspective in Bornmann & Daniel, 2008) rather than citation analysis and is beyond the scope of this study. Nevertheless, it is worthy of future exploration. Although this study has offered that the mention of place in the title of an article makes a significant difference in the frequency the article being cited, the question of what factors lead to more frequent citations of place-focused tourism studies remains unanswered. The low percentage of variance explained in the regression analyses speaks to this finding.

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**Table 3**

Comparisons of citations among three journals.

<table>
<thead>
<tr>
<th></th>
<th>ATR</th>
<th>JTR</th>
<th>TM</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSCI</td>
<td>12.23*</td>
<td>2.53*</td>
<td>9.67*</td>
<td>33.79**</td>
</tr>
<tr>
<td>SSCI Tourism</td>
<td>8.42**</td>
<td>1.86*</td>
<td>5.97*</td>
<td>39.02**</td>
</tr>
<tr>
<td>Scopus</td>
<td>19.89**</td>
<td>15.90*</td>
<td>15.18*</td>
<td>18.88**</td>
</tr>
<tr>
<td>Scopus Tourism</td>
<td>12.74**</td>
<td>10.56*</td>
<td>8.60*</td>
<td>31.41**</td>
</tr>
</tbody>
</table>

*Note: Means with different letters a, b, or c are significantly different.
** p < .001.

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**Table 4**

Multiple linear regressions on citations from different sources: Beta (t).

<table>
<thead>
<tr>
<th>Forms of places</th>
<th>SSCI</th>
<th>SSCI Tourism</th>
<th>Scopus</th>
<th>Scopus Tourism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place in title</td>
<td>−.12***</td>
<td>−.14***</td>
<td>−.11**</td>
<td>−.13***</td>
</tr>
<tr>
<td>Place in abstract</td>
<td>.06 (1.40)</td>
<td>.04 (0.95)</td>
<td>.05 (1.04)</td>
<td>.03 (0.74)</td>
</tr>
<tr>
<td>Place in keywords</td>
<td>.04 (1.76)</td>
<td>.05 (2.01)</td>
<td>.04 (1.75)</td>
<td>.05 (2.05)</td>
</tr>
<tr>
<td>Destinations</td>
<td>−.09 (−1.78)</td>
<td>−.07 (−1.30)</td>
<td>−.09 (−1.70)</td>
<td>−.07 (−1.36)</td>
</tr>
<tr>
<td>Attractions</td>
<td>−.03 (−.96)</td>
<td>−.02 (−.74)</td>
<td>−.02 (−.81)</td>
<td>−.02 (−.56)</td>
</tr>
<tr>
<td>Hotels/resorts</td>
<td>−.01 (−.32)</td>
<td>−.01 (−.24)</td>
<td>−.01 (−.26)</td>
<td>−.01 (−.33)</td>
</tr>
<tr>
<td>Festivals/special events/mega events</td>
<td>.00 (−.01)</td>
<td>−.01 (−.34)</td>
<td>.01 (0.45)</td>
<td>−.01 (0.35)</td>
</tr>
<tr>
<td>F</td>
<td>5.50**</td>
<td>6.68**</td>
<td>5.73**</td>
<td>7.04**</td>
</tr>
</tbody>
</table>

Adjusted R²                     | .013      | .017          | .013   | .016          |

** p < .001.


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