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Jiang, Jingxian; Woosnam, Kyle M.; and Draper, Jason, "A Citation Analysis of Articles Published in the Top-Ranking Tourism Journals (2001-2010)" (2016). *Tourism Travel and Research Association: Advancing Tourism Research Globally*. 25.
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A Citation Analysis of Articles Published in the Top-Ranking Tourism Journals (2001-2010)

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ABSTRACT

This paper analyses the citations received by research papers in the three top-tier tourism journals, Annals of Tourism Research, Journal of Travel Research, and Tourism Management from 2001 to 2010. ANOVA tests and post-hoc tests shows that mean citation counts in both SSCI and Scopus received by research papers in the three journals were significantly different from each other. Similarly, mean numbers of tourism articles citing the same research papers were also significant for both SSCI and Scopus. Furthermore, OLS regression analysis revealed that the issue in which the article appeared, its order in the issue, and the number of pages significantly influenced total citation counts as well as citations from tourism articles received by research papers in all three journals.

Keywords: *citation analysis, research papers, top-ranking tourism journals.*

INTRODUCTION

Citation analysis is a method of assessing the influence of particular authors, publications, research fields, and research institutions (Liu, 1993). During the last two decades, it has evolved from simply counting the number of citations of authors or work of interest to examining complex citation indices based on citation counts as the basic unit of measure. Citation counts refer not only to the number of citations or references appearing in an article or journal (i.e., synchronous citations), but also the frequency of a particular work cited by other authors (i.e., diachronous citations) (Swarna, Kalyane, & Kumar, 2008). Frequently the latter type is used to measure the significance or impact of a scholarly work or entity.

The number of received citations varies depending on several factors. First, pulling records out of different databases, such as Yahoo, Google, Google Scholar, and ISI web of knowledge (García-Pérez, 2010; Martell, 2009) could yield different results. Second, the novelty, publicity and significance of a specific work, papers produced by the same author, and a criticism-provoking piece tend to receive more citations (Case & Higgins, 2000). Third, characteristics of the field, journals, and articles (e.g., broadness of a field, the impact, quality,

prestige of the journal, as well as the number of authors, pages, references etc.) also predict the chance of a work being cited (Bornmann & Daniel, 2008). In the tourism field, citation analysis has focused on identifying contributors to the field and rating/ranking tourism journals. To the knowledge of the authors, reasons that works are cited have yet to be examined. This paper examines this issue with two primary purposes: 1) to provide an overview of the number of citations received by research papers in the three top-tier tourism journals and 2) to explore reasons underlying the relative frequency of citations of the research papers.

METHODS

Research papers published in the three most referenced tourism journals, *Annals of Tourism Research* (ATR), *Journal of Travel Research* (JTR), and *Tourism Management* (TM), from 2001 to 2010 (e.g., McKercher, Law, & Lam, 2006), were selected as the sample for this study. Research papers took the form of full-length research articles, research notes, and case studies. Each paper was recorded and coded with the following information: 1) journal-related information—including the journal in which the article appeared, year the article was published, and frequency with which the journal was published in a given year; 2) article-specific information—including volume and issue in which the article appeared, order of the article in a particular issue, number of pages of the article, number of keywords, number of authors, and gender of the first author. All variables were continuous save gender (coded: female = 1; male = 2) of first author and journal outlet (coded: ATR = 1; JTR = 2; TM = 3).

In addition, the number of times each research paper (during the 10-year period) was cited was recorded using the Social Science Citation Index (SSCI) and Scopus databases. Citation counts in these two databases were chosen because past research (Martell, 2009; García-Pérez, 2010) has suggested that citation counts vary by databases where an article is queried. In addition, each of these two databases is frequently used in citation analyses (García-Pérez, 2010; Strotmann & Zhao, 2010). Additionally, the number of times each research paper was cited strictly by an article in a tourism journal was also recorded. Aside from the three tourism journals mentioned above, others whose title contains “tourism” and/or “travel” (e.g., *Journal of Travel & Tourism Marketing*), as well as “vacation” were considered journals in the tourism field; otherwise, they were considered non-tourism journals. The study intended to answer two questions: 1) whether ATR, JTR, and TM are significantly different from each other in terms of the citation counts of the papers they published from 2001 to 2010; and 2) whether journal-related and article-specific variables have significant effects on the number of citations received by the research papers included in the study.

First, four separate ANOVAs (with post-hoc tests when necessary) were performed to compare the number of citations received by the research papers across ATR, JTR, and TM in SSCI and Scopus, as well as those cited by tourism journals in each index. Next, journal-related variables (i.e., publishing journal, year of publication, and publication frequency) and article-specific variables (i.e., volume and issue, article order, number of pages, number of keywords, number of authors, and gender of the first author) were regressed on the four citation counts. The alpha level was set to .01 instead of .05 to reduce the potential Type 1 error arising from the large sample size (over 1,000) (Clark-Carter, 2004).

FINDINGS

1815 research papers were identified in the three top tourism journals from 2001 to 2010. TM published 822 research papers, accounting for 45.3% of the entire sample, followed by ATR

($n = 570$, 31.4%) and JTR ($n = 423$, 23.3%). JTR and ATR published four issues each year from 2001 to 2010 while TM published six. The number of pages in the research papers ranged from 2 to 33, with 52.3% of papers having between 8 and 14 pages. The average number of keyword was 4.20. JTR started to require keywords in 2003, resulting in 88 missing values in the number of keywords. More than nine out of ten (92.4%) papers were authored by one to three scholars, with the average being 2.15 authors. A majority of the articles (68.4%) had a male as the lead author.

Between 2001 and 2010, research papers across the three journals were cited an average of 7.04 times ($SD = 8.46$) in SSCI and 14.92 times ($SD = 16.02$) in Scopus. F tests from the ANOVAs suggested that mean citation counts in both SSCI ($F = 20.28$, $p < .01$) and Scopus ($F = 5.74$, $p < .01$) received by research papers in the three journals were significantly different from each other. Games-Howell post hoc tests were selected to detect differences in the total citation counts and citations from tourism articles because of unequal variances indicated by Levene's tests ($p < .01$) (Field, 2009). In terms of citation counts from SSCI, the mean total citation counts received by papers published in JTR ($M = 2.53$, $SD = 3.45$) in the last 10 years was significantly different (i.e., less than) from those in ATR ($M = 7.15$, $SD = 8.24$) and TM ($M = 7.84$, $SD = 8.99$). Regarding citation counts from Scopus, the mean total citation counts received by papers published in JTR ($M = 12.64$, $SD = 12.83$) in the last 10 years was significantly different (i.e., less than) from those in ATR ($M = 15.88$, $SD = 17.93$) and TM ($M = 15.48$, $SD = 16.06$).

During the same time period, research papers across the three journals were cited by articles appearing in tourism journals an average of 4.39 times ($SD = 5.65$) in SSCI and 8.80 times ($SD = 10.19$) in Scopus. F tests from ANOVAs examining mean number of tourism articles citing the same research papers were also significant for both SSCI ($F = 13.68$, $p < .01$) and Scopus ($F = 7.49$, $p < .01$). Again, Games-Howell post hoc tests were used. For the SSCI, the mean number of citations JTR ($M = 1.86$, $SD = 2.37$) research papers received from articles in tourism journals was significantly different (i.e., less than) from those in ATR ($M = 4.84$, $SD = 5.73$) and TM ($M = 4.59$, $SD = 5.92$). For Scopus, the mean number of citations ATR ($M = 10.19$, $SD = 12.01$) research papers received from articles in tourism journals was significantly different (i.e., greater than) from those in TM ($M = 8.80$, $SD = 10.18$) and JTR ($M = 8.28$, $SD = 8.60$).

OLS regression analysis showed that the patterns of variables contributing to citation counts from both of SSCI and Scopus were similar (Table 1). The issue in which the article appeared, its order in the issue, and the number of pages significantly influenced total citation counts as well as citations from tourism articles received by research papers in all three journals. However, the order of the article in a particular issue did not have a significant effect on citations received from tourism articles in Scopus.

Table 1
Summary of OLS Regression

Source	SSCI		SSCI tourism		Scopus		Scopus tourism	
	t	Sig.	t	Sig.	t	Sig.	t	Sig.
Intercept	1.220	.223	.962	.336	.289	.773	.154	.878
Journal	-.442	.659	-.424	.672	-1.915	.056	-1.886	.060
Year	-1.185	.236	-.932	.351	-.246	.805	-.112	.911
Volume	-.364	.716	-.377	.706	-1.763	.078	-1.749	.080
Issue	-3.467*	.001	-2.958*	.003	-4.526*	.000	-4.246*	.000
Order	-2.622*	.009	-3.019*	.003	-2.225	.026	-3.020*	.003
Frequency	1.014	.311	.802	.423	2.900*	.004	2.502	.012
Page	4.554*	.000	4.363*	.000	7.785*	.000	7.487*	.000
Keyword	-1.003	.316	-.524	.601	.675	.500	.622	.534
Authors	.048	.961	-.527	.599	.745	.456	.205	.838
Gender	.196	.845	.242	.809	-.808	.419	-.797	.426
Corrected Total	1.220	.223			.289	.773	.154	.878

*p<.05

CONCLUSIONS AND IMPLICATIONS

Upon initial inspection, one can obviously see that the SSCI is a more conservative estimate of citation counts versus Scopus. Total citation counts received by research papers in JTR in the last ten years were significantly fewer than those in ATR and TM in SSCI and Scopus, echoing the findings of Martell (2009) and García-Pérez (2010). In relation to Bornmann and Daniel (2008), three common characteristics associated with research papers in the three top tourism journals published in the latest ten years that influence the chance they were cited by articles in all disciplines and articles in the tourism field in SSCI and Scopus were identified. The earlier the article appeared in a specific issue in a specific year, and the more pages it had, the more likely it would be cited. However, journal outlet, year, volume, number of keywords, number of authors, and gender did not have a significant impact on the degree of citation.

This study provided a preliminary analysis in exploring reasons tourism research articles are cited by other papers in general disciplines and in the tourism field. Future studies should consider adding more journal- or article-associated variables in the model and include a larger number or categories of articles and citing sources. Testing whether other databases (i.e., Google Scholar) might produce different citation counts is also a direction that further studies can take. In addition, we did not consider the digital object identifier (DOI) year in this analysis. Ultimately the DOI year may have an impact on the degree of citation.

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