

Ksenija Tokić

# Citation analysis of the journal *TOURISM*

## Abstract

*The journal TOURISM is one of the oldest tourism journals in the world and over the years, it has profiled itself as an extremely high-quality scientific journal (Goeldner, 2011). Citation analysis is an important and useful tool for the evaluation of the productivity of scientists and scientific institutions, but also for the evaluation of scientific publications. This paper presents the citation analysis of the journal TURIZAM/ TOURISM based on data from today's three most relevant databases - Scopus, Web of Science, and Google Scholar for the period 2000 – 2011. The results of the analysis suggest that TURIZAM/ TOURISM has significant international reception, which places this Croatian journal side by side with renowned international tourism journals.*

*Key words: citation analysis; index databases; scientific journals; The International Interdisciplinary Journal TOURISM; Croatia*

## Introduction

Journals are nowadays an essential means for communicating scientific knowledge since they are issued periodically, meaning fast publication of new research results of theoretical and applied science. As the quality of academic publications has been increasing lately, they can be ranked on the basis of the citation counts of the articles they publish or the quality perceptions of experts (Pechlaner, Zehrer & Abfalter, 2002).

Production of scientific articles in the field of tourism has been growing significantly. Today, 819 scientific institutions in 111 countries participate in the research of tourism involving 5,092 researchers who have published 165,684 scientific works (papers, books and other) (Baretje-Keller, 2012). The number of scientific journals in the field of tourism and associated activities has grown since the 1970s from about twenty to 180 at the beginning of 2012 (Ateljević & Peeters, 2008; Ateljević & Peeters, 2009; Baretje-Keller, 2012).

The journal *TURIZAM/ TOURISM* (in Croatian and English) is one of the five oldest tourism journals in the world (Goeldner, 2011). It was first published on June 1, 1953 as a supplement to the *Bulletin* entitled *Tourism News* by the Croatian Hospitality and Tourism Association in Zagreb, with M. Barbić as Editor-in-Chief. Its publishers, editors, and even its name have changed since then. At the beginning of 1956 the journal's name changed to *TOURISM*, which has been preserved to this day, while the

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Ksenija Tokić, B.A., Institute for Tourism, Zagreb, Croatia;  
E-mail: ksenija.tokic@iztzg.hr

Institute for Tourism joined the publishing in 1992 (Hitrec, 2002). In its 60 years of continuous publication, it has become an extremely high-quality scientific journal with multidisciplinary orientation. Its quality is supported by the fact that the articles published in the journal of *TURIZAM/ TOURISM* are indexed by several internationally recognized index databases, for example: CAB, CIRET, EBSCO, PsychINFO, SCOPUS etc.

Citation analysis is the examination of the frequency, patterns, and graphs of citations in articles and books, and is one of the most widely used methods of bibliometrics, introduced by Garfield<sup>1</sup> in 1955 (Wikipedia, 2012). It is a method for the quantitative measurement of published works i.e. bibliographic references (Broadus, 1987). For the citation analysis of the journal *TURIZAM/ TOURISM* we will explore three databases recognized today as the most relevant, and these are the Web of Science, Scopus and Google Scholar (Hall, 2010) for the period 2000-2011.

## *TURIZAM/ TOURISM* in citation index databases

Today, the journal *TURIZAM/ TOURISM* is indexed in the following databases: Boletín de Novedades, CAB International, CIRET, Cabells Directory, CSA, EBSCO, EMBASE, Elsevier Geo Abstracts, IBR, IBZ, PsychINFO, SCOPUS, Social Planning, and available online in the Croatian database HRČAK financed by the Croatian Ministry of Science, Education and Sports.

For purposes of this citation analysis, we used the bibliometric data from the Web of Science, Scopus and Google Scholar databases, as these are used for official evaluation of scientific journals, institutions, scientists, etc. The analysis also included the Web of Science citation index database although it does not index articles from *TURIZAM/ TOURISM*, since several authors indexed in the Web of Science cite articles from *TURIZAM/ TOURISM*.

### Scopus

Scopus, a database of renowned publisher of scientific literature, Elsevier, is one of the world's leading citation databases of peer-reviewed literature and online sources. It contains more than 47 million records, about 18,500 journal titles and 340 series of books from 5,000 publishers worldwide, and 4.9 million conference papers, etc. (Elsevier, 2012a). It is an interdisciplinary database, and many believe that it is better in coverage of European scientific publications than the Web of Science (Rudjer Bošković Institute Library, 2010).

Scopus has developed some specialized relevance indicators for the scientific literature it indexes, among which is the SJR (SCImago Journal Rank) considered as a new indicator of prestige of scientific journals, SNIP (Source Normalized Impact per Paper), and the H-Index. The SJR indicator is applied in ranking scientific journals, and is based on the number of citations received by a journal in the preceding three years. It was developed by SCImago Research Group of the University of Granada, Extremadura, Carlos II and Alcalá de Henares (Elsevier, 2012b) on the basis of the Google Page Rank algorithm (González-Pereira, Guerrero-Bote & Moya-Anegón, 2009). It is a portal that includes scientific indicators for journals and countries developed from the information contained in the Scopus database. These indicators can be used to assess and analyze scientific domains, and they show the presence of a journal covered by Scopus.

SNIP is also a new indicator created by Hank Moed, which offers new bibliometric possibilities. It is defined as the average impact factor per paper in a given year based on the average number of citations in which it is similar to the Thomson Reuters Impact Factor. It is available online at Scopus and includes more journals than the Thomson Reuters Impact Factor, and is updated twice a year (Elsevier, 2012b).

The *h*-index (*Hirsch Number*) was developed by J.E. Hirsch, which reflects an index for each author, group of authors or a body of literature. It is based on the highest number of articles that had the same number of citations.

## Google Scholar

This database was developed by the Google Scholar Team of Google, a web search engine serving hundreds of thousands of users worldwide. This database offers simple access to scholarly literature.

As posted on its website in reference to the ranking of documents: "Google Scholar aims to rank documents the way researchers do, weighing the full text of each document, where it was published, who it was written by, as well as how often and how recently it has been cited in other scholarly literature. The most relevant results will always appear on the first page." (Google Scholar, 2011).

Google Scholar offers the possibility of an advanced search by author, publication, or even by date, supporting most advanced operators in Google web search (Google Scholar, 2011).

## Web of Science

Web of Science is the most popular and most renowned index database in the world, owned by Thomson Reuters. It is common name for agglomerated bibliographic, citation and full text databases which offers specialized index databases by scientific domain: Science Citation Index Expanded indexing 8,300 leading journals from 150 scientific disciplines; Social Sciences Citation Index containing 4,500 journals from 50 social disciplines, and 3,500 journals from leading scientific and technological journals, Arts & Humanities Citation Index includes more than 2,300 journals, Conference Proceedings Citation Index indexing more than 148,000 journals and proceedings across 256 disciplines Index Chemicus includes more than 2.6 million compounds, Current Chemical Reactions contains one million reactions, It also publishes impact factor calculations and other analyses (Thomson Reuters, 2012). WoS is located on the Thomson Reuters Web of Knowledge platform. Unlike many other databases, the Web of Science not only collects information, but it also carefully evaluates it and sorts it.

Although *TURIZAM/ TOURISM* is not directly indexed in the Web of Science database, some indexed journals cite certain articles from *TURIZAM/ TOURISM*. This indirectly allowed us to obtain certain quantitative indicators of the reception of *TURIZAM/ TOURISM* by authors whose works are published in journals indexed by the Web of Science database.

## Definition of citation analysis

Garfield introduced citation analysis in 1955. It is defined as a method of bibliometrics based on the number of citations in scholarly works as the primary tool of the analysis (Garfield, Malin & Small,

1988). Citation analysis is gaining importance because bibliometric indicators are increasingly used as a benchmark for the granting of financial resources to institutions, researchers, journals, etc. (Hall, 2010).

Bibliometrics is a method used for the quantitative analysis of any set of bibliographic records of human production, meaning the majority of recorded knowledge, by investigating the different relations between the elements of the bibliographic records as a reflection of the content of given references, but not the content itself (Maričić, 2003). Bibliometrics has become an important and necessary element in the research of tourism (Hall, 2010; Hall, 2011; McKercher, 2005) due to the significant increase in scholarly literature from that field.

Citation creates a link between the cited work and the citing work. The number of citations an article receives tells of how many times certain scholars considered it important to cite it in their articles. This demonstrates its use value, which also has a qualitative connotation. This dimension of quality is commonly termed as impact, relevance or importance of a scholarly work (Petрак, 2003).

Works are cited for many reasons. According to Garfield (1979), some of these include expressing respect toward a noted predecessor, acknowledgement of peers, review of literature, correction of one's own work, correction of someone else's work, a critical review of a work, drawing attention to an emerging work, substantiation of claims, reference to a rarely known, non-indexed, or non-cited work, refutation of the ideas or work of others, etc. The number of citations is a complex indicator, which can also be considered a measure of quality, importance, relevance, visibility, and impact of the works and their authors.

Citation databases are secondary sources of scientific and professional literature, which in addition to the bibliographic description of the document (article, book, etc.) offer a list of titles that the author(s) of the document had referred to. The primary purpose of a citation index is that it serves as a relevant source of scholarly literature because the system for indexing a journal or document incorporates a selection mechanism (Wikipedia, 2012).

## The advantages and disadvantages of citation analysis

The greatest advantage of citation analysis as an important tool in modern bibliometrics is that it is used to explore the range of knowledge in various fields of science, as well as in tourism, and is therefore suitable for the evaluation of the scientific productivity of individuals, institutions, and scholarly products especially journals. Consequently, citation analysis is increasingly being combined with other tools of bibliometrics for ranking research and scientific works in the aim of granting resources to institutions or individuals, as well as for academic title promotion. This has led to the need for authors to publish their works in journals that are included in relevant index databases, putting ever greater pressure on those journals to be indexed in them (Hall, 2010).

Tourism journals have long been under-represented in citation databases, but in recent years, this has started to change (Hall, 2010). McKercher, Law and Lam (2006) conducted a ranking of tourism and hospitality journals, in which the journal *TOURISM* gained the 31<sup>st</sup> place among the 42 tourism journals selected for ranking. According to them, citation analysis is, on the one hand, the most commonly used, and on the other, the most controversial method, so McKercher (2005) believes that it is necessary to systematize the standards for ranking journals that publish articles on the subject of tourism.

The disadvantages of citation analysis arise from the policies of issuing and publication of articles in scholarly journals. Thus, Teodorescu (2000), after examining the publishing productivity of university teachers in 10 variously developed countries, warns that it is unsafe to apply the findings of the publishing analysis of Western countries to other that of other nations, because due to the many context-specific variables, we cannot expect a unique model for publishing productivity to function. The same can be said for the application of citation indicators. Thus, for example, in small scientific communities extremely emphasized are the following two problems. One is of methodological nature, which is reflected in bibliometric analysis through the "statistics of small numbers", and the caution with which to approach their interpretation (Petruk, 2003).

The second problem is that the database of the influential American Institute for Scientific Information, Philadelphia, the primary source of data such as Current Contents, Web of Science, and others, on which bibliometric analyses are base, are oriented toward journals written in the English language. These databases are dominated by American authors who are especially fond of citing works created in their country, thus raising the average citation frequency of American science 30% above world average. Narin (1976) justifiably warns that papers published in any other language are far less cited than are those published in English. This has implications in determining the impact factor of scientific journals. Scientists from other, especially small, countries are thus in an essentially different position, similar to that in other domains of cultural and political life. Therefore, it appears that the actual impact of their research measured by this indicator, even if the results indicate lower value levels, in this context has special significance.

## Citation analysis of the journal *TURIZAM/ TOURISM*

### Scopus

*TURIZAM/ TOURISM* is indexed in the Scopus database since 2002. To date, 285 articles have been indexed, of which 132 were cited 340 times. The database recorded the following results for the year 2011: SJR 0.026, SNIP 0.204, and *h*-index of 6.

Table 1

**Citation frequency of *TURIZAM/ TOURISM* articles in the Scopus database for the period 2000 - 2011**

Citation frequency of <i>TURIZAM/ TOURISM</i> articles: <i>Scopus</i> 2000 - 2011		
Articles indexed	Articles cited	Number of citations
285	132	340

Among the articles in this database, the most cited *Tourism* article was „A dark tourism spectrum: Towards a typology of death and macabre related tourist sites, attractions and exhibitions" by Stone, P.R. from 2006, which was cited 30 times. The article "Tourism in capital cities" by Hall, C.M. from 2002 was cited 11 times, whereas articles "Altruistic tourism: Another shade of sustainable tourism: The case of Kanda community" by Singh, T.V. from 2002, and "In Agatha Christie country: Resident perception of special interest tourism" by Busby, G., Brunt, P. and Lund, J. from 2003 were each cited 10 times.

## Google Scholar

The Google Scholar indexes 245 articles, of which 198 were cited 682 times. The most cited article with 21 citations was "Tourism in capital cities" by Hall, C.M. from 2002. The second cited article was "Cultural identities constructed, imagined and experienced: A 3-gap tourism destination image model" by Govers, R. from 2004., which was cited 20 times. Two articles were each cited 16 times: "Benchmarking indicator-systems and their potential for tracking guest satisfaction" by Fuchs, M. from 2002, and "Cultural differences in tourist destination risk perception: An exploratory study" by Fuchs, G. from 2004.

Table 2  
Citation frequency of *TURIZAM/ TOURISM* articles in Google Scholar for the period 2000 - 2011

Citation frequency of <i>TURIZAM/ TOURISM</i> articles: Google Scholar 2000 - 2011		
Articles indexed	Articles cited	Number of citations
245	198	682

## Web of Science

As previously mentioned, *TURIZAM/ TOURISM* is not indexed by today's most relevant citation index database, the Web of Science. However, some indexed journals cite certain *TURIZAM/ TOURISM* articles. This indirectly allowed us to obtain the citation frequency of *TURIZAM/ TOURISM* in the Web of Science database.

Table 3  
Citation frequency of *TURIZAM/ TOURISM* articles in WoS for the period 2000 - 2011

Citation frequency of <i>TURIZAM/ TOURISM</i> articles: Web of Science 2000 - 2011		
Articles indexed	Articles cited	Number of citations
-*	98	148

\*Since *TURIZAM/ TOURISM* is not indexed by WoS, this data is not reported.

WoS data suggests that in the analyzed period, 98 articles were cited 148 times.

The most cited article, with 12 citations, was "A dark tourism spectrum: Towards a typology of death and macabre related tourist sites, attractions and exhibitions" by Stone, P. from 2006 (as in Scopus). The second most cited article (7 citations) was "Using economic valuation to price ecotourism sites in developing countries" by Navrud, S. and Vondolia, G.F. from 2005.

Two articles were each cited 5 times: "Benchmarking indicator-systems and their potential for tracking guest satisfaction" by Fuchs, M. from 2002, and "In Agatha Christie country: Resident perception of special interest tourism", by Busby, G., Brunt, P. and Lund, J. from 2003.

**Table 4**  
**Citation frequency of *TURIZAM/ TOURISM* articles in WoS, Scopus and GS in the period 2000 - 2011**

Citation frequency of <i>TURIZAM/ TOURISM</i> articles	Scopus	Google Scholar	WoS
Indexed articles - total	285	245	*
Cited articles - total	132	198	98
Cited articles in relation to indexed articles - percentage	46%	80%	*
Number of citations - total	340	682	148
Average number of citations per cited article	2.58	3.44	1.51
Average number of citations per indexed article	1.19	2.78	*

\* *TURIZAM/ TOURISM* is not indexed by WOS.

From the table we can discern that in the Scopus and GS databases, the percentage of cited articles in relation to indexed articles amount to almost 50% in Scopus, and a high 80% in GS. Regarding the number of citations per article, if we look as the number of citations per indexed article, it amounts to 1.19 in Scopus and 2.78 in GS. Regarding the number of cited articles alone, the results suggest that each cited article in Scopus had an average of 2.58 citations and in GS 3.44 citations.

**Table 5**  
**Most frequently cited articles in WoS, Scopus and GS for the period 2000 - 2011**

Most frequently cited Turuzam/Tourism articles 2000-2011	Year	Scopus	Google Scholar	WoS	Total number of citations
A dark tourism spectrum: Towards a typology of death and macabre related tourist sites, attractions and exhibitions / Stone, P.R.	2006	30	0	12	46
Tourism in capital cities / Hall, C.M.	2002	11	21	0	32
Altruistic tourism: Another shade of sustainable tourism: The case of Kanda community / Singh, T.V.	2002	10	8	3	21
In Agatha Christie country: Resident perception of special interest tourism / Busby, G., Brunt, P. i Lund, J.	2003	10	11	5	26
Cultural identities constructed, imagined and experienced: a 3-gap tourism destination image model / Govers, R.	2004	8	20	0	28
Benchmarking indicator-systems and their potential for tracking guest satisfaction / Fuchs, M.	2002	6	16	5	27
Cultural differences in tourist destination risk perception: an exploratory study / Fuchs, G.	2004	9	16	4	29
Using economic valuation to price ecotourism sites in developing countries / Navrud, S. and Vondolia, G.K.	2005	0	0	7	7

## Conclusion

The Journal *TOURISM* is one of the oldest tourism journals in the world (the only older one is *Tourism Review*, AIEST). However, only since the year 2000, when it started being published in the English language has it become "visible" to the wider international academic community. Therefore, since 2000, it has been indexed in more index databases than before.

Citation analysis has been applied since 1955 when introduced by Garfield as an objective indicator of scientific production introduced it, and new indicators have been developed since. As the number of scholarly journals and works is constantly growing, citation analysis is increasingly used worldwide, and in our country, as a criterion for granting funds to scientific institutions and academic title promotion.

This paper presents the citation analysis of articles published in the journal *TURIZAM/ TOURISM* according to the indicators of the most relevant citation index databases, Web of Science, Scopus and Google Scholar for the period 2000-2011, since the data for this period is the most complete in all three databases.

This is the result of the editorial board's efforts for the journal to be indexed by the WoS database also, whereby complying with all recommendations such as being regularly published, having an international editorial board, at least two anonymous reviews in a relatively short time, etc.

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### Note

<sup>1</sup> In 1960, Garfield's Institute for Scientific Information (ISI) also introduced the first citation index for works published in academic articles.

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