

SUSTAINABLE TOURISM RESEARCH TOWARDS TWENTY-FIVE YEARS OF THE JOURNAL OF SUSTAINABLE TOURISM

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ABSTRACT

The Journal of Sustainable Tourism (JOST) is a main journal in 'Geography, Planning and Development'. The concept of sustainable tourism has gained importance over time. This paper presents a general overview of the journal over its lifetime by using bibliometric indicators. Moreover, in order to establish the position of sustainable tourism research, this paper identifies the trends in research through bibliometric studies. It uses the Scopus database to analyse the bibliometric data. This analysis includes key issues such as the publication and citation structure of the journal; the most cited articles; the leading authors, institutions, and countries in the journal; and the keywords that are most often used. This paper also uses the visualization of similarities to graphically map the bibliographic material. This analysis provides further insights into how JOST links to other journals and how it

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links researchers across the globe. These results indicate that JOST is one of the leading journals in the areas where the journal is indexed, with a wide range of authors from institutions and countries from all over the world publishing in it. The results of the current study can provide insights into topics related to sustainable tourism that can be researched in the future.

INTRODUCTION

The Journal of Sustainable Tourism (JOST) is a journal that publishes studies on the relationships between tourism and the concept of sustainability. Tourism should be responsible in terms of sustainability (Lu & Nepal, 2009); however, sustainability is a concept that requires more critical and comprehensive analysis (Butler, 1999; Lu & Nepal, 2009; Mowforth & Munt, 2003). In 1987, the concept was born when the World Commission on Environment and Development (WCED) published “Our Common Future” (Ruhanen, Weiler, Moyle, & McLennan, 2015). The World Tourism Organization (WTO, 1998) declares that sustainable tourism considers the current and future economic, social and environmental impacts to meet the needs of visitors, the industry, the environment and the host communities. The sustainable tourism has increased its importance over time. The research in this topic has grown a lot in recent years (Qian, Shen, & Law, 2018). According to Buckley (2012), a search by this topic in Web of Science showed more than 8,500 results and more than 1 million in Google Scholar (Sánchez-Cañizares et al., 2018). Xiao and Smith (2006) said that, tourism journals have also recognized the importance of such review studies and have published more of these articles.

The research on sustainable tourism in JOST is both from a theoretical and empirical perspective. Since sustainable tourism has increased its importance over time, and the journal has been published for 25 years, it is interesting to analyse the evolution of the journal over this time period. JOST has been, until now, the only journal dedicated exclusively to sustainable tourism research (Lu & Nepal, 2009).

The journal is indexed in the main databases, including among others, Social Sciences Citation Index of the Web of Science (WoS) and Scopus. We will conduct this study using a bibliometric overview using the Scopus database to collect and analyse the bibliographic material. We

have analysed all the publications of the journal since its origin, using bibliometric indicators. Moreover, our study also uses the visualization of similarities (VOS viewer software) to graphically analyse the results obtained with certain bibliometric techniques, including bibliographic coupling, co-citation and co-occurrence of author keywords (Van Eck & Waltman, 2010). The productivity and influence of the journal has been studied, as well as the main topics, authors, institutions and countries.

The objective of this paper is to disclose the contribution of JOST to scientific research analysing the evolution of its trends since its beginning in 1993 until 2017. There are previous works that have analysed the evolution of a journal since its creation. Merigó et al. (2015a) studied the Journal of Business Research between 1973 and 2014. Cobo et al. (2015) studied the evolution of Knowledge-Based Systems for its 25th anniversary. Valenzuela et al. (2017) studied the first thirty years of the Journal of Business & Industrial Marketing. Merigó et al. (2017) studied the International Journal of Intelligent Systems. Laengle et al. (2017) conducted a study for the fortieth anniversary of the European Journal of Operational Research. Cancino et al. (2017) did the same for the fortieth anniversary of Computers & Industrial Engineering.

The review of the recent literature about the bibliometric studies in sustainable tourism found that there are four main articles about this topic. The first has been elaborated by Ruhanen et al. (2015). This paper carried out a bibliometric analysis of the four main journals in the tourism field. Results indicated that the research in sustainable tourism had significantly increased during the last years and the largest proportion of papers published on sustainable tourism were case studies, empirical studies, and critical reviews, while the subjects and themes in sustainable tourism research had remained constant. The second one, have been elaborated by Qian et al. (2018). This paper conducts an analysis of the main studies in sustainable tourism with the objective to present the current state of this research. The third is the Alvarez-Garcia et al. (2018) article. In this paper a bibliometric comparative study of the documents indexed in the WoS and Scopus databases was done with the objective to show the current state of scientific production on community tourism, which is considered as a type of sustainable tourism. This paper analysed, among others, different aspects such as the overlapping of documents and journals, growth, dispersion or concentration of articles. The main conclusions indicated that although WoS and Scopus databases differ in terms of scope, volume of data, and coverage policies, both information systems are complementary. Finally, the paper also indicated that Scopus

has a better coverage in the community tourism due to collecting a greater number of articles and journals, and its articles receive a greater number of citations. Finally, the paper of Sánchez-Cañizares et al. (2018) conducts a bibliographical review in order to find out who the leading research pioneers are in sustainable tourism in sensitive areas, discover gaps, and to redefine the concept's frontiers.

The results obtained in this paper will be interesting for researchers, academics and publishers because they will provide these readers with information that will help them in the publication of their studies or help publishers in decision making activities related to their journal's strategy. In this sense, it may be interesting to analyse the information on the evolution of the journal, the changes in trends over time, and the most influential authors and institutions.

BIBLIOMETRIC METHODS

Bibliometrics is a research field that quantitatively studies bibliographic material by analysing a research area and identifying its leading trends (Merigó et al., 2017). Pritchard (1969) introduced this term as 'the application of mathematical and statistical methods to books and other means of communication'.

Bibliometric papers expand into many different disciplines, including, among others, accounting (Merigó & Yang, 2017), health economics (Wagstaff & Culyer, 2012), marketing (Moussa & Touzani, 2010; Theubl, Reutterer, & Hornik, 2014; Svensson & Wood, 2007), natural resources (Zhong, Geng, Liu, Gao, & Chen, 2016), and strategic management (Vogel & Güttel, 2013).

There are also several bibliometric studies in tourism, leisure and hospitality management. For example, the papers by Jogaratnam et al. (2005a, 2005b), Goodall (2009) and Yuan et al. (2015) focus on the most productive and influential institutions; the papers by McKercher (2008), Benckendorff and Zehrer (2013) and Figueroa-Domecq et al. (2015) study the number of publications from the most influential authors, and the papers by Ruhanen et al. (2015), García-Lillo et al. (2016) and Omerzel (2016) examine the most renowned journals in the field.

This paper conducts a bibliometric analysis of a specific journal. This methodology has previously been used in other studies and journals, such as, the *Annals of Tourism Research* (Swain et al., 1998), the *Journal of*

Sustainable Tourism (Lu & Nepal, 2009), Knowledge-Based Systems (Cobo et al., 2015), the Journal of Business Research (Merigó et al., 2015a), Computers & Industrial Engineering (Cancino et al., 2017) the International Journal of Intelligent Systems (Merigó et al., 2017), and the Journal of Travel & Tourism Marketing (Mulet-Forteza, Martorell-Cunill, Merigó, Genovart-Balaguer, & Mauleon-Mendez, 2018).

This paper considers a wide range of methods to represent the bibliographic data under study. The most popular are the number of publications and citations (Ding et al., 2014). Usually, the first one measures productivity, while the second measures influence (Svensson, 2010). Other indicators that have been utilized are the citation per paper and the h-index (Hirsch, 2005; Alonso et al., 2009). The citation per paper measures the impact of each article, while the h-index measures the X number of documents that have X cites or more. Furthermore, the paper also includes several citation thresholds (Merigó et al., 2015b). This inclusion allows identifying the sum of articles that have a certain level of influence.

The analysis focuses on JOST publications between 1993 and 2017 using the Scopus database. The search process uses the keyword 'Journal of Sustainable Tourism' and was conducted in November 2017. The paper considers all the documents published in the journal. The search obtains 1,137 documents, which decreases to 1,032 if only considering articles, reviews, notes and letter.

Finally, this paper shows a graphical mapping of the bibliographic data collected (Cobo et al., 2011; Sinkovics, 2016) by using the VOS viewer software (Van Eck & Waltman, 2010). The VOS viewer gathers the bibliographic material, creating graphical maps in terms of bibliographic coupling, co-citation and co-occurrence of author keywords (Merigó et al., 2016). Co-citation is produced when two documents receive a citation from the same third document. Co-occurrence of author keywords measures the most common keywords used in the documents, and bibliographic coupling occurs when two documents cite the same third document. This last approach can be applied for authors, institutions and countries. Note that it is also possible to implement this approach for authors when there are several journals in the analysis. However, for this study, this behaviour is not possible because the analysis only considers the JOST.

RESULTS

The rising interest in sustainable tourism as an academic field can be observed through the expansion of JOST over its first 25 years. Up to November 15th, 2017, considering only articles, reviews, notes and letters, JOST had published 1,037 documents and had received 27,188 citations; the ratio of citations per paper was 26.2, and its *h*-index was 80.

Publication and citation structure of JOST

Figure 1 shows the annual evolution in the number of publication in each year.

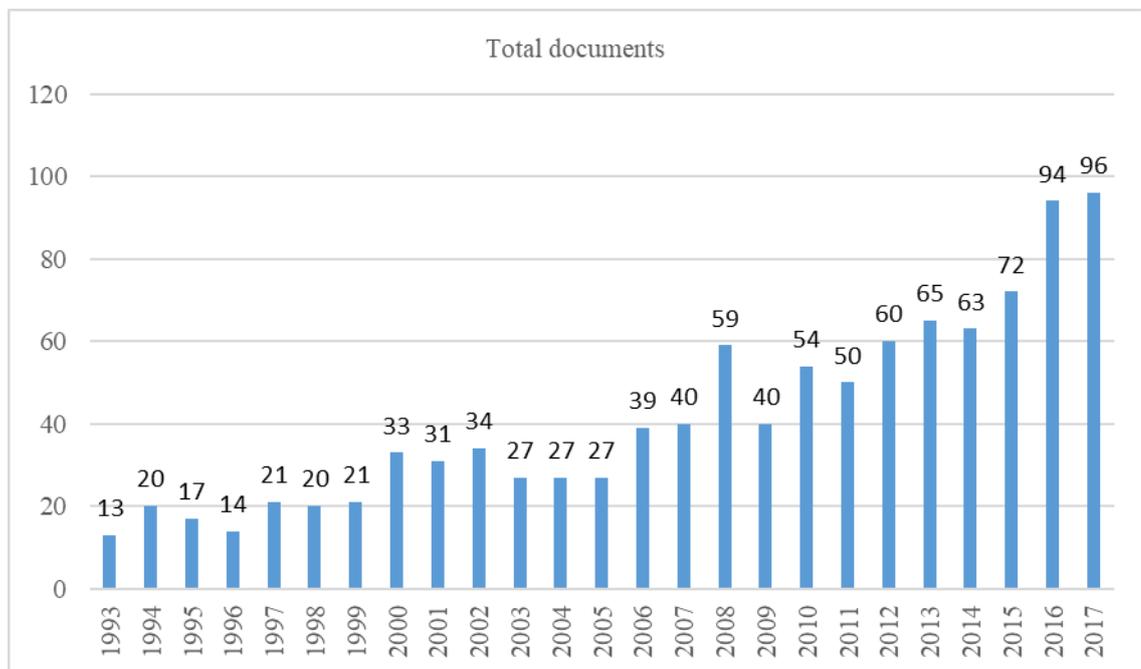


Figure 1. Annual number of publications in JOST

We can subdivide the information of the previous figure into five-year periods: from 1993 to 1999, where the journal published approximately 20 documents per year; from 2000 to 2005, where it published an average of 30 documents; the years 2006, 2007 and 2009, in which it published approximately 40 documents per year; 2008 and the years 2010 to 2015, in which it increased to approximately 60 papers years. Finally, there is a large increase in the production of documents in the

2016-2017 biennium, with 95 documents per year. The increase of the interest in sustainable tourism has allowed the size of the journal to increase substantially in recent years.

Table 1 shows the results of a citation structure analysis using different citation thresholds.

Table 1. *Annual citation structure of JOST*

Year	TP	TC	≥250	≥100	≥50	≥25	≥10	≥5	≥1
1993	13	633	-	3	4	7	9	10	12
1994	20	937	-	3	6	13	14	16	18
1995	17	514	-	1	3	8	11	12	15
1996	14	360	-	1	1	4	10	10	13
1997	21	1,027	-	3	6	11	14	18	19
1998	20	539	-	1	2	7	15	18	18
1999	21	993	-	1	9	14	20	21	21
2000	33	1,455	1	4	7	14	27	30	32
2001	31	963	-	1	5	16	28	28	31
2002	34	1,370	-	4	10	20	25	29	33
2003	27	1,185	1	1	8	17	26	26	27
2004	27	999	-	-	6	19	23	27	27
2005	27	796	-	1	6	11	21	22	27
2006	39	1,831	-	6	14	26	35	36	37
2007	40	2,106	-	6	16	29	38	39	40
2008	59	1,613	-	5	10	21	35	37	44
2009	40	1,651	-	2	11	27	36	39	40
2010	54	2,582	-	7	18	34	51	54	54
2011	50	1,867	-	5	10	27	43	49	50
2012	60	1,140	-	-	2	13	48	55	60
2013	65	1,065	-	-	2	11	42	61	65
2014	63	791	-	-	-	11	31	55	62
2015	72	459	-	-	-	1	13	40	67
2016	94	248	-	-	-	-	3	16	73
2017	96	64	-	-	-	-	-	-	40
Total	1,037	8,315	2	55	156	361	618	748	925
Percentage			0%	5%	15%	35%	60%	72%	89%

Abbreviations: TP = Total papers; TC = Total cites; ≥250, ≥100, ≥50, ≥25, ≥10, ≥5, ≥1 = Number of papers with equal or more than 250, 100, 50, 25, 10, 5 and 1 citations.

In these 25 years of the journal, examining the number of citations highlights the period 2006 to 2011. In these six years, the journal reached an average of 1,941 cites per year, with 2010 being the best year. A second period is also observed (2000 and 2002), where the annual average citations were 1,412. Next, 1997, 1999, 2001, 2003, 2004, 2012 and 2013 are

notable, in which the average of citations was 1,053. In the past three years (2015-2017), citations were low, which is logical given that the documents are recent and have not achieved their maximum potential to receive cites.

When analysing the thresholds, it should be noted that only two documents receive more than 250 citations. However, the number of published papers with ranges of 50, 25 and 10 citations improves considerably. It should also be noted that only 11% of the published papers are not cited, which highlights that the papers published by JOST are highly cited. In fact, except for the two most recent years (2016 and 2017) and 2008, the number of papers that did not receive citations was very low; and in 11 of the 25 years, all the papers were cited.

Table 2 shows the 50 most cited documents published by JOST according to the Scopus database.

Table 2. The 50 most cited documents in JOST

R	TC	Title	Author/s	Year	C/Y
1	282	Tourism and sustainable development: Exploring the theoretical divide	Sharpley, R.	2000	16.59
2	252	Sustainable tourism development: A critique	Liu, Z.	2003	18.00
3	238	'Staying within the fence': Lifestyle entrepreneurship in tourism?	Ateljevic, I., Doorme, S.	2000	14.00
4	219	Food, place and authenticity: Local food and the sustainable tourism experience	Sims, R.	2009	27.38
5	183	Understanding how consumers view green hotels: How a hotel's green image can influence behavioural intentions	Lee, J.-S., Hsu, L.-T., Han, H., Kim, Y.	2010	26.14
6	181	Rethinking collaboration and partnership: A public policy perspective	Hall, C.M.	1999	10.06
7	180	A framework for monitoring community impacts of tourism	Faulkner, B., Tideswell, C.	1997	9.00
8	178	What is rural tourism?	Lane, B.	1994	7.74
9	176	Tourists' perception of international air travel's impact on the global climate and potential climate change policies	Becken, S.	2007	17.60
10	157	On the need to re-conceptualise sustainable tourism development	Hunter, C.J.	1995	7.14
11	152	A framework of approaches to sustainable tourism	Clarke, J.	1997	7.60
12	151	Can tourism deliver its "aspirational" greenhouse gas emission reduction targets?	Scott, D., Peeters, P., Gössling, S.	2010	21.57
13	145	Sustainable tourism and the evolving roles of government planning	Bramwell, B., Lane, B.	2010	20.71
14	141	Governance, the state and sustainable tourism: A political economy approach	Bramwell, B.	2011	23.50
15	141	Sustainable tourism: An evolving global approach	Bramwell, B., Lane, B.	1993	5.88
16	140	A community-based tourism model: Its conception and use	Okazaki, E.	2008	15.56
17	135	Tourism carrying capacity: Tempting fantasy or useful reality?	Mc Cool, S.F., Lime, D.W.	2001	8.44
18	135	Some fundamental truths about tourism: Understanding tourism's social and environmental impacts	McKercher, B.	1993	5.63
19	132	Sustainable tourism: An overview of the concept and its position in relation to conceptualisations of tourism	Hardy, A., Beeton, R.J.S., Pearson, L.	2002	8.80
20	132	Impacts of climate change on winter tourism in the Swiss alps	Koenig, U., Abegg, B.	1997	6.60
21	131	The development of cross-cultural (mis)understanding through volunteer tourism	Raymond, E.M., Hall, C.M.	2008	14.56

R	TC	Title	Author/s	Year	C/Y
22	130	It does not harm the environment!' An analysis of industry discourses on tourism, air travel and the environment	Gössling, S., Peeters, P.	2007	13.00
23	130	Using interpretation to manage nature-based tourism	Orams, M.B.	1996	6.19
24	128	Sustaining the ego	Wheeller, B.	1993	5.33
25	123	Mediterranean tourism: Exploring the future with the tourism climatic index	Amelung, B., Viner, D.	2006	11.18
26	120	Achieving voluntary reductions in the carbon footprint of tourism and climate change	McKercher, B., Prideaux, B., Cheung, C., Law, R.	2010	17.14
27	120	Can ecotourism interpretation really lead to pro-conservation knowledge, attitudes and behaviour? Evidence from the Galapagos Islands	Powell, R.B., Ham, S.H.	2008	13.33
28	120	Voluntary carbon offsetting schemes for aviation: Efficiency, credibility and sustainable tourism	Gössling, S., Broderick, J., Upham, P., Ceron, J.-P., Dubois, G., Peeters, P., Strasdas, W.	2007	12.00
29	120	Climate change and the sustainability of ski-based tourism in eastern North America: A reassessment	Scott, D., McBoyle, G., Minogue, A., Mills, B.	2006	10.91
30	118	Sustainable tourism or sustainable mobility? The Norwegian case	Høyer, K.G.	2000	6.94
31	117	Policy learning and policy failure in sustainable tourism governance: From first- and second-order to third-order change?	Michael Hall, C.	2011	19.50
32	115	Sustainable rural tourism strategies: A tool for development and conservation	Lane, B.	1994	5.00
33	114	Why sustainable tourism must address climate change	Scott, D.	2011	19.00
34	114	The role of food tourism in sustaining regional identity: A case study of Cornwall, South West England	Everett, S., Aitchison, C.	2008	12.67
35	114	A cultural encounter through volunteer tourism: Towards the ideals of sustainable tourism?	McIntosh, A.J., Zahra, A.	2007	11.40
36	114	Sustainable tourism development in developing countries: Some aspects of energy use?	Gössling, S.	2000	6.71
37	112	Analysing international tourist flows to estimate energy use associated with air travel	Becken, S.	2002	7.47
38	110	Networks, conflict and collaborative communities	Dredge, D.	2006	10.00
39	109	Community-based tourism enterprises development in Kenya: An exploration of their potential as avenues of poverty reduction	Manyara, G., Jones, E.	2007	10.90
40	108	Information and empowerment: The keys to achieving sustainable tourism	Cole, S.	2006	9.82
41	131	Environment-friendly tourists: What Do we really know about them?	Dolnicar, S., Crouch, G.I., Long, P.	2008	14.56
42	107	Problematising 'Festival tourism': Arts festivals and sustainable development in Ireland	Quinn, B.	2006	9.73
43	107	Understanding the impact of ecotourism resort experiences on tourists' environmental attitudes and behavioural intentions	Lee, W.H., Moscardo, G.	2005	8.92
44	106	Cooperative tourism planning in a developing destination	Timothy, D.J.	1998	5.58
45	105	Intention to pay conventional-hotel prices at a green hotel - a modification of the theory of planned behavior	Kim, Y., Han, H.	2010	15.00
46	105	Festival tourism: A contributor to sustainable local economic development?	O'sullivan, D., Jackson, M.J.	2002	7.00
47	104	A typology of governance and its implications for tourism policy analysis	Michael Hall, C.	2011	17.33
48	104	Implementing STD on a small island: Development and use of sustainable tourism development indicators in Samoa	Twining-Ward, L., Butler, R.	2002	0.06
49	104	The environment-community symbiosis: A case for collaborative tourism planning	Getz, D.	1994	4.52
50	103	Local tourism governance: A comparison of three network approaches	Beaumont, N., Dredge, D.	2010	14.71

Abbreviations available in Table 1 except for: R = Rank; C/Y = Citations per year

The most cited document is made by Richard Sharpley (University of Central Lancashire, UK), entitled “Tourism and sustainable development: Exploring the theoretical divide” published in the 2000. This paper proposes a model of sustainable development according to which principles of sustainable tourism are compared. The results of the paper indicate that there are significant differences between the concepts of sustainable tourism and sustainable development, suggesting that the principles and objectives of sustainable development cannot be transposed onto the specific context of tourism. This work occupies the 13th place in the C/Y ranking. Regarding this last classification, the first work is by Rebecca Sims (Lancaster University, UK), “Food, place and authenticity: Local food and the sustainable tourism experience”, from 2009 with 219 citations.

Table 3 presents the most cited documents in the papers published in JOST. This allows one to identify which documents have been most influential in the documents that have been published by the journal.

Table 3. *Most cited documents in JOST documents*

R	Year	Cited reference	Type	Citations	TLS
1	1993	Bramwell, B., Lane, B. Journal of Sustainable Tourism, 1 (1), pp. 1-5	A	47	45.00
2	1997	Hunter, C. Annals of Tourism Research, 24 (4), pp. 850-867	A	42	40.00
3	1985	Murphy, P. Tourism: A Community Approach	B	38	33.00
4	1995	Jamal, T., Getz, D. Annals of Tourism Research, 22 (1), pp. 186-204	A	35	35.00
5	2000	Sharpley, R. Journal of Sustainable Tourism, 8 (1), pp. 1-19	A	32	30.00
6	1980	Butler, R. Canadian Geographer, 24 (1), pp. 5-12	A	31	31.00
7	2011	Bramwell, B., Lane, B. Journal of Sustainable Tourism, 19 (4-5), pp. 411-421	A	30	29.00
8	1990	Urry, J. The Tourists Gaze: Leisure and Travel in Contemporary Societies	B	29	22.00
9	2003	Liu, Z. Journal of Sustainable Tourism, 11 (6), pp. 459-475	A	28	28.00
10	2000	Tosun, C. Tourism Management, 21 (6), pp. 613-633	A	25	24.00
11	1998	Mowforth, M., Munt, I. Tourism and Sustainability Development and New Tourism in the Third World	B	25	23.00
12	1991	Butler, R. Environmental Conservation, 18, pp. 201-209	A	25	21.00
13	2006	Saarinen, J. Annals of Tourism Research, 33 (4), pp. 1121-1140	A	24	24.00
14	2011	Scott, D. Journal of Sustainable Tourism, 19 (1), pp. 17-34	A	24	23.00
15	1994	Lane, B. Journal of Sustainable Tourism, 2 (1-2), pp. 102-111	A	24	22.00
16	1999	Butler, R. Tourism Geographies, 1 (1), pp. 7-25	A	23	23.00
17	2006	Choi, H., Sirakaya, E. Tourism Management, 27 (6), pp. 1274-1289	A	23	23.00
18	1991	Inskeep, E. Tourism Planning: An Integrated and Sustainable Development Approach	B	23	21.00
19	1999	Honey, M. Ecotourism and Sustainable Development: Who Owns Paradise?	B	22	22.00
20	1987	Our Common Future. Oxford: Oxford University Press	B	22	19.00
21	1982	Britton, S. Annals of Tourism Research, 9 (3), pp. 331-358	A	22	17.00
22	2010	Miller, G., Rathouse, K., Scarles, C., Holmes, K., Tribe, J. Annals of Tourism Research, 37 (3), pp. 627-645	A	21	21.00
23	2007	Becken, S. Journal of Sustainable Tourism, 15 (4), pp. 351-368	A	21	20.00
24	1988	Cohen, E. Annals of Tourism Research, 15 (3), pp. 371-386	A	21	20.00

R	Year	Cited reference	Type	Citations	TLS
25	2002	Gossling, S. <i>Global Environmental Change</i> , 12 (4), pp. 283-302	A	21	20.00
26	1999	Scheyvens, R. <i>Tourism Management</i> , 20 (2), pp. 245-249	A	20	20.00
27	1997	Clarke, J. <i>Journal of Sustainable Tourism</i> , 5 (3), pp. 224-233	A	19	19.00
28	2006	Cole, S. <i>Journal of Sustainable Tourism</i> , 14 (6), pp. 629-644	A	19	19.00
29	1995	Hunter, C. <i>Journal of Sustainable Tourism</i> , 3 (3), pp. 155-165	A	19	17.00
30	2001	Miller, G. <i>Tourism Management</i> , 22 (4), pp. 351-362	A	19	17.00

Abbreviations available in Table 2 except for: A = Article; B = Book; TLS = Total Link Strength

The document that has received the most citations was a work published in JOST. We refer to the work of Bill Bramwell & Bernard Lane (Sheffield Hallam University and the University of Bristol, respectively, both in the UK), entitled "Sustainable tourism: An evolving global approach", published in 1993. This paper was the first article that was published in the journal. Moreover, being the most cited article, it has set a trend for future works related to sustainable tourism. Of the documents cited in Table 3, 80% are articles, compared to only 20% being books. Of the total of the most cited articles, 33.3% have been published by JOST; 20% were published in *Annals of Tourism Research* and 13.3% in *Tourism Management*.

Leading authors, institutions and countries of JOST

This section presents a general overview of the leading authors, originating institutions and countries publishing in JOST. The objective is to examine the most successful publications and citations according to the Scopus database.

Table 4 shows the fifty most effective authors in JOST. Note that the ranking is based on the number of total publications. In case of a tie in the number of papers, the ranking favours the number of citations. Additionally, more indicators are included to provide a better overview, such as the h-index, the ratio of citations to papers and the number of works with an amount equal or more than 100, 50, 25, 10, 5 and 1 citations. In addition, the ranking lists the authors' studies in any journal to attain a higher profile and to assess the influence of authors publishing in JOST.

Table 4. *The most productive authors in JOST*

R	Author Name	University	Country	JOST									TOTAL			
				TP	TC	H	C/P	≥100	≥50	≥25	≥5	≥1	TP	TC	H	C/P
1	Gössling, S.	Lund U.	Sweden	20	869	14	43.45	4	5	11	16	19	129	4,122	32	31.95
2	Lane, B.	U. of Bristol	UK	20	796	10	39.80	4	5	5	13	16	44	1,248	17	28.36
3	Hall, C.M.	U. of Canterbury	New Zealand	18	792	12	44.00	4	4	8	15	17	369	7,331	44	19.87
4	Bramwell, B.	Sheffield Hallam U.	UK	17	706	9	41.53	3	5	8	10	12	78	2,697	29	34.58
5	Becken, S.	Griffith U.	Australia	14	624	8	44.57	3	5	5	7	12	88	2,027	23	23.03
6	Ryan, C.	U. of Waikato	New Zealand	14	370	11	26.43	-	1	6	14	14	223	4,700	36	21.08
7	Higham, J.	U. of Otago	New Zealand	13	178	8	13.69	-	-	2	9	11	86	1,400	21	16.28
8	Peeters, P.	U. of Applied Sciences	Netherlands	12	689	10	57.42	1	5	7	11	12	47	1,842	20	39.19
9	Weiler, B.	Southern Cross U.	Australia	12	321	10	26.75	-	2	5	10	10	80	972	17	12.15
10	Scott, D.	U. of Waterloo	Canada	11	556	8	50.55	3	4	5	10	11	100	3,796	35	37.96
11	Wearing, S.	U. of Newcastle	Australia	11	233	7	21.18	-	2	3	7	10	79	1,351	20	17.10
12	Font, X.	Leeds Beckett U.	UK	11	215	6	19.55	-	1	3	7	10	52	1,103	18	21.21
13	McKercher, B.	Hong Kong Polytechnic U.	China	9	445	7	49.44	2	3	5	8	8	132	3,551	33	26.90
14	Eagles, P.F.J.	Murdoch U.	Australia	9	400	8	44.44	-	4	6	9	9	56	1,165	17	20.80
15	Jamal, T.	Texas A&M U.	USA	9	399	8	44.33	1	2	6	9	9	63	2,031	21	32.24
16	Weaver, D.	Griffith U.	Australia	9	265	6	29.44	1	2	4	8	9	91	2,187	26	24.03
17	Dolnicar, S.	U. of Queensland	Australia	9	257	6	28.56	1	1	4	6	8	153	3,057	31	19.98
18	Ruhanen, L.	U. of Queensland	Australia	9	152	6	16.89	-	1	2	7	9	69	557	12	8.07
19	Dredge, D.	Aalborg U.	Denmark	8	372	7	46.50	2	3	5	7	7	65	1,190	17	18.31
20	Fennell, D.A.	Brock U.	Canada	8	259	6	32.38	-	2	5	7	8	60	1,193	20	19.88
21	Moore, S.A.	Murdoch U.	Australia	8	189	6	23.63	-	-	3	7	8	88	1,307	21	14.85
22	Moscardo, G.	James Cook U.	Australia	7	229	6	32.71	1	2	2	6	7	102	2,186	25	21.43
23	McGehee, N.G.	Virginia Polytech Inst State U.	USA	7	184	6	26.29	-	2	2	7	7	38	1,564	21	41.16
24	Laing, J.	La Trobe U.	Australia	7	129	5	18.43	-	1	2	5	7	75	510	13	6.80
25	Coghlan, A.	Griffith U.	Australia	7	126	5	18.00	-	-	2	5	7	45	467	14	10.38
26	Buckley, R.	Griffith U.	Australia	6	303	5	50.50	-	3	5	5	6	196	3,264	31	16.65
27	Lumsdon, L.M.	U. of Central Lancashire	UK	6	235	6	39.17	-	2	5	6	6	33	783	18	23.73
28	Prideaux, B.	Central Queensland U.	Australia	6	217	6	36.17	1	1	2	6	6	151	1,942	26	12.86
29	Dickinson, J.E.	Bournemouth U.	UK	6	194	5	32.33	-	2	3	5	6	44	927	17	21.07
30	Wall, G.	U. of Waterloo	Canada	6	164	4	27.33	-	1	3	4	5	204	2,875	32	14.09
31	Pearce, P.L.	James Cook U.	Australia	6	130	6	21.67	-	-	2	6	6	152	3,406	31	22.41
32	Chan, W.W.	Hong Kong Polytechnic U.	China	6	95	5	15.83	-	-	1	5	5	62	840	17	13.55
33	Boley, B.B.	The U. of Georgia	USA	6	32	3	5.33	-	-	-	3	5	29	200	8	6.90
34	Sharpley, R.	U. of Central Lancashire	UK	5	392	5	78.40	1	1	4	5	5	78	1,953	21	25.04
35	Getz, D.	U. of Calgary	Canada	5	327	5	65.40	1	3	4	5	5	97	4,338	36	44.72
36	Han, H.	Sejong U.	South Korea	5	295	3	59.00	2	2	2	2	4	112	2,929	29	26.15
37	Ham, S.H.	U. of Idaho	USA	5	269	4	53.80	1	3	3	4	4	18	531	13	29.50
38	Ramkissoon, H.	Curtin U.	Australia	5	215	5	43.00	-	2	5	5	5	45	939	17	20.87
39	Mair, J.	U. of Queensland	Australia	5	193	5	38.60	-	2	3	5	-	42	605	13	14.40
40	Simmons, D.G.	Lincoln U.	New Zealand	5	190	4	38.00	-	1	3	4	4	32	976	15	30.50
41	Powell, R.B.	Clemson U.	USA	5	134	2	26.80	1	1	1	2	3	39	394	11	10.10
42	Tribe, J.	U. of Surrey	UK	5	123	3	24.60	-	2	2	3	5	68	1,966	21	28.91
43	Mason, P.	Bedfordshire U.	UK	5	114	4	22.80	-	-	-	4	5	28	498	10	17.79
44	Higgins-Desbiolles, F.	U. of South Australia	Australia	5	82	3	16.40	-	1	1	3	5	32	469	11	14.66
45	Cohen, S.A.	U. of Surrey	UK	5	81	3	16.20	-	-	1	3	4	50	834	17	16.68
46	Hallo, J.C.	Clemson U.	USA	5	12	2	2.40	-	-	-	1	3	45	235	8	5.22
47	Coles, T.	U. of Exeter	UK	5	10	2	2.00	-	-	-	1	4	70	1,026	17	14.66
48	Kasim, A.	U. Utara Malaysia	Malaysia	4	146	4	36.50	-	1	3	4	4	36	255	9	7.08
49	Kaltenborn, B.P.	Norwegian Inst Nature Res	Norway	4	95	3	23.75	-	-	2	3	3	71	1,410	26	19.86
50	Kastenholz, E.	U. de Aveiro	Portugal	4	75	4	18.75	-	-	1	3	4	38	480	13	12.63

Abbreviations available in Tables 1, 2 and 6.

Stefan Gössling (Lunds University, Sweden) and Bernard Lane (University of Bristol, UK) head the ranking of the journal in number of papers. However, Stefan Gössling is in first place, since he received more citations, had a better h-index and had more articles that received a number equal to or higher than 100, 50, 25, 5 and 1 citations. Other authors to be highlighted are Colin Michael Hall (University of Canterbury, New Zealand) and Bill Bramwell (Sheffield Hallam University, UK). However, the authors with the best ratio citations per paper are Richard Sharpley (University of Central Lancashire, UK) and Donald Getz (University of Calgary, Canada). We highlight that 19 authors have obtained 100 or more citations in their works published in JOST; 38 authors achieve 50 or more citations. Furthermore, 46 authors reach 25 or more citations; and all the authors of the list have published works in JOST that have received 5 or more citations. The above data confirm that the works published in JOST receive a significant number of citations. Some of the leading authors currently also lead the journal from an editorial perspective, including Stefan Gössling, C. Michael Hall and Susanne Becken (among other important authors). Conversely, we have observed that most of the authors that publish in JOST diversify their research in several journals; there are only 6 authors whose works published in JOST represent more than 20% of their total published works. If we analyse the affiliation of the authors, four authors are from Griffith University, three are from the University of Queensland. In addition, there are seven institutions that are represented in the ranking by two authors: Clemson University, Hong Kong Polytechnic University, James Cook University, Murdoch University, the University of Central Lancashire, the University of Surrey and the University of Waterloo. The distribution by countries presents a clear concentration, since 66% of the authors belong to three countries: Australia (17 authors), the UK (10 authors) and the USA (6 authors). Canada and New Zealand present 4 authors.

Table 5 shows the 50 most productive institutions in a ranking based on the number of publications. As in the previous analysis, this table includes additional indicators, such as total citations, the h-index and the ratio citations per paper, as well as the number of documents that achieved the threshold of 100, 50, 25, 5 and 1 citations. Table 5 also presents the current world ranking of these institutions according to the Academic Ranking of World Universities (ARWU) and the Quacquarelli Symonds World University Ranking (QS).

Table 5. *The most productive and influential universities in JOST*

R	Institution	Country	TP	TC	H	C/P	≥100	≥50	≥25	≥5	≥1	ARWU	QS
1	Griffith U.	Australia	49	1,450	22	29.59	3	10	19	37	47	301-400	325
2	U. of Queensland	Australia	40	904	17	22.60	1	5	13	29	38	55	47
3	U. of Waterloo	Canada	35	1,271	19	36.31	3	11	16	27	33	201-300	152
4	U. of Otago	New Zealand	29	721	17	24.86	1	2	10	20	26	301-400	151
5	Hong Kong Polytechnic U.	China	29	748	13	25.79	2	3	9	21	25	201-300	95
6	James Cook U.	Australia	27	810	17	30.00	1	4	11	25	26	301-400	367
7	Sheffield Hallam U.	UK	26	879	13	33.81	3	5	12	18	21	-	-
8	Southern Cross U.	Australia	24	528	15	22.00	1	2	8	20	22	-	801-1000
9	U. of Waikato	New Zealand	20	584	14	29.20	1	2	10	19	20	601-700	292
10	Monash U.	Australia	20	807	17	40.35	1	8	13	18	18	78	60
11	Texas A&M U.	USA	20	711	13	35.55	1	4	11	18	19	101-150	195
12	U. of Canterbury	New Zealand	20	698	13	34.90	3	4	10	15	18	401-500	214
13	Virginia Polytech Inst State U.	USA	20	471	12	23.55	1	3	5	18	18	301-400	367
14	Leeds Beckett U.	UK	18	430	9	23.89	-	3	5	14	17	-	-
15	Lincoln U.	New Zealand	17	701	10	41.24	2	5	8	13	15	601-700	319
16	Western Norway Research Institute	Norway	17	657	10	38.65	3	5	7	13	15	-	-
17	NHTV Int Hoger Onderwijs Breda	Netherlands	17	709	11	41.71	3	5	7	12	16	-	-
18	Linnaeus U., Kalmar	Sweden	15	333	9	22.20	1	1	5	10	14	-	-
19	U. of Johannesburg	South Africa	14	233	7	16.64	-	1	4	8	13	401-500	601-650
20	Wageningen U. and Research Centre	Netherlands	14	178	7	12.71	-	-	2	10	13	101-150	124
21	Murdoch U.	Australia	14	262	8	18.71	-	-	5	11	13	701-800	501-550
22	Massey U.	New Zealand	13	447	10	34.38	1	2	6	12	12	501-600	316
23	U. of Surrey	UK	13	299	7	23.00	1	2	3	8	11	301-400	264
24	U. of Technology Sydney	Australia	13	284	8	21.85	-	2	4	9	12	301-400	176
25	Lund U.	Sweden	13	703	10	54.08	4	4	8	11	13	101-150	78
26	Pennsylvania State U.	USA	12	232	10	19.33	-	-	4	11	12	85	93
27	U. of Calgary	Canada	12	287	9	23.92	-	2	3	9	11	151-200	217
28	U. of South Australia	Australia	12	190	7	15.83	-	1	2	8	12	501-600	279
29	U Oulu	Finland	11	276	8	25.09	1	1	4	9	10	401-500	411-420
30	U. of Bristol	UK	11	425	6	38.64	2	3	4	6	7	61	44
31	U. of New South Wales UNSW	Australia	11	224	7	20.36	-	1	3	8	10	101-150	45
32	Brock U.	Canada	10	289	7	28.90	-	2	5	9	10	-	-
33	La Trobe U.	Australia	9	232	6	25.78	1	1	3	7	9	301-400	360
34	Sun Yat-Sen U.	China	9	113	5	12.56	-	-	2	6	9	151-200	319
35	Clemson U.	USA	9	150	4	16.67	1	1	1	4	6	601-700	701-750
36	Bournemouth U.	UK	9	216	7	24.00	-	2	3	8	9	-	701-750
37	U. of Central Lancashire	UK	9	262	8	29.11	-	1	5	9	9	-	801-1000
38	Charles Darwin U.	Australia	8	171	6	21.38	-	-	3	6	7	-	651-700
39	U. of Bedfordshire	UK	8	156	6	19.50	-	-	1	16	8	-	-
40	U. of Florida	USA	8	109	6	13.63	-	-	1	6	7	88	178
41	Macquarie U.	Australia	8	169	5	21.13	1	1	1	6	6	151-200	240
42	U. of Exeter	UK	8	50	3	6.25	-	-	1	3	7	151-200	158
43	Institute for Tourism Studies	China	8	77	5	9.63	-	-	-	5	7	-	-
44	London Metropolitan U.	UK	7	204	5	29.14	-	2	3	6	7	-	701-750
45	Victoria U. Melbourne	Australia	7	134	4	19.14	-	1	2	4	6	-	-
46	Colorado State U.	USA	7	51	4	7.29	-	-	1	4	4	201-300	481-490
47	Arizona State U.	USA	7	263	6	37.57	-	2	5	6	7	101-150	209
48	Western Sydney U.	Australia	7	102	4	14.57	-	-	2	4	7	301-400	551-600
49	Norwegian Inst Nature Research	Norway	7	109	5	15.57	-	-	2	5	5	-	-
50	U. of Ljubljana	Slovenia	7	52	2	7.43	-	-	-	2	7	401-500	651-700

Abbreviations available in Tables 1, 2 and 6 except: ARWU and QS = Ranking in the general ARWU and QS university rankings.

Two Australian institutions, Griffith University and the University of Queensland, are the leaders in terms of the number of papers published in JOST. The first institution is the first in the ranking both in number of documents and number of citations received, as well as in the h-index and number of documents that receive a number greater than or is equal to 25 and 5 citations. These two institutions accumulate 12% of the works and citations received from all the top 50. These results are related to the number of authors that figures in the top 50 of Table 5, since these two institutions are the ones that have the most authors in this top. If we focus on the first ten institutions, we can highlight that they accumulate 39% of the works and 43% of the citations received, which highlights a high degree of concentration in the institutions that lead the publications in JOST. Of these ten institutions, half are from Australia, and two from New Zealand; however, Canada, China and the UK contribute only one. We must also highlight Lunds Universitet (Sweden), which is the first in the ranking of citations per paper and documents with 100 or more citations. This is due to the fact that the most prolific author in JOST, Stefan Gössling, is from this institution. If we analyse the position of these institutions in the Academic Ranking of World Universities (ARWU), thirty-four of the institutions in Table 5 are included in the ARWU, and five are among the first hundred universities in this world ranking (the University of Queensland, the University of Bristol, Monash University, Pennsylvania State University and the University of Florida). The analysis of the QS World University Rankings of the institutions in Table 5 reveals that only eleven institutions are not included in the QS. These same institutions were not in the ARWU either. The institutions that were not in the ARWU but appear in the QS are: Charles Darwin University, Bournemouth University, London Metropolitan University, Southern Cross University and the University of Central Lancashire. Of the total of institutions in Table 5, six are in the top 100 of the QS ranking. Of these, the University of Bristol, the University of Queensland, Monash University and Pennsylvania State University were also at the top of the ARWU.

Regarding the most productive countries in JOST, we want to emphasize that the country refers to where the author is based at the time of publication. In addition, this analysis considers the total population of the country to show the productivity per million inhabitants. Table 6 presents the thirty-five most productive countries.

Table 6. The most productive and influential countries in JOST

R	Country	TP	TC	H	C/P	≥100	≥50	≥25	≥5	≥1	Pop	TP/Pop	TC/Pop
1	Australia	256	6,869	46	26.83	12	41	96	197	240	23.61	10.84	290.94
2	United Kingdom	226	6,800	45	30.09	18	40	79	162	199	65.22	3.47	104.27
3	United States	198	4,504	39	22.75	7	25	61	135	170	324.29	0.61	13.89
4	New Zealand	104	3,314	33	31.87	9	17	44	82	95	4.51	23.05	734.55
5	Canada	95	2,731	34	28.75	4	21	37	72	89	36.16	2.63	75.53
6	China	71	1,180	19	16.62	2	3	14	44	61	1,369.81	0.05	0.86
7	Netherlands	42	1447	19	34.45	5	8	14	29	38	17.12	2.45	84.54
8	Spain	36	576	14	16.00	-	3	8	21	32	46.47	0.77	12.40
9	Norway	32	882	13	27.56	3	6	10	23	27	5.27	6.08	167.45
10	Sweden	29	1,100	17	37.93	5	6	14	22	27	10.07	2.88	109.29
11	South Africa	21	353	10	16.81	-	1	6	12	18	59.96	0.35	5.89
12	Taiwan	18	230	7	12.78	-	1	3	12	15	23.11	0.78	9.95
13	Germany	16	426	10	26.63	1	1	7	13	15	82.18	0.19	5.18
14	Finland	15	293	8	19.53	1	1	4	12	13	5.50	2.73	53.24
15	South Korea	13	469	7	36.08	3	3	3	9	12	49.54	0.26	9.47
16	Austria	13	156	7	12.00	-	-	2	7	10	8.57	1.52	18.20
17	Malaysia	12	266	9	22.17	-	1	4	10	10	29.63	0.41	8.98
18	Slovenia	10	88	4	8.80	-	-	-	4	9	2.07	4.84	42.62
19	France	9	315	6	35.00	1	3	4	6	9	66.95	0.13	4.70
20	Kenya	9	251	8	27.89	-	1	5	9	9	48.66	0.18	5.16
21	Switzerland	9	243	4	27.00	1	2	3	3	7	8.40	1.07	28.92
22	Japan	9	205	4	22.78	1	1	2	4	7	126.93	0.07	1.62
23	Greece	9	185	8	20.56	-	-	2	8	9	11.18	0.80	16.54
24	Portugal	9	120	5	13.33	-	-	1	6	9	10.56	0.85	11.36
25	Egypt	7	147	5	21.00	-	1	1	5	7	95.87	0.07	1.53
26	Italy	7	94	5	13.43	-	-	1	6	6	60.59	0.12	1.55
27	Ireland	6	236	5	39.33	1	2	2	5	6	6.38	0.94	37.00
28	Denmark	6	131	5	21.83	-	1	2	5	5	5.75	1.04	22.79
29	Turkey	6	103	5	17.17	-	-	2	5	6	79.81	0.08	1.29
30	Botswana	5	142	4	28.40	-	1	3	3	4	2.03	2.46	69.99
31	Israel	4	150	4	37.50	-	1	1	4	4	8.76	0.46	17.13
32	Mauritius	4	142	4	35.50	-	1	3	4	4	1.26	3.17	112.52
33	Poland	4	103	3	25.75	-	1	1	3	4	38.63	0.10	2.67
34	Ghana	4	56	3	14.00	-	-	-	3	3	24.22	0.17	2.31
35	Thailand	4	52	3	13.00	-	-	1	3	3	68.86	0.06	0.76

Abbreviations available in Tables 1, 2 and 6 except: Pop: Population (in millions)

In the past 25 years, there have been many countries that have published in JOST, which highlights its international character. In total, fourteen countries are European, accumulating nearly a third of the documents published and the citations received. There are three countries that lead the journal: Australia, the UK and the USA. These three countries accumulate 52% of the works published and 53% of the citations received in JOST. In this order, these countries appear in the ranking in terms of

number of documents, citation, h-index and number of documents with equal or more than 50, 25, 5 and 1 citations. The citation quantity only changes when we analyse the number of documents with 100 or more citations, in which case the UK leads the ranking, followed by Australia and New Zealand. It should also be noted that the position in the ranking changes when analysing the ratio of citations per paper, where the leader is Ireland, followed by Sweden and Israel. If we analyse the number of documents published and the ratio citations per paper considering the population of the countries, the first three are New Zealand, Australia and Norway.

GRAPHICAL ANALYSIS OF JOST WITH VOS VIEWER SOFTWARE

This section develops a graphical analysis of the leading issues in JOST using the VOS viewer software (Van Eck & Waltman, 2010). In the graphical visualization, the size of a circle increases with an item's relevance, and the network connections identify more closely linked items. The placement of the circles and the colours are used to cluster the items.

First, we examine the co-citation of journals cited in JOST. Co-citation occurs when two journals receive a citation from the same third source (Small, 1973). The representation illustrates the most cited journals, and the network connections indicate the journals that are co-cited. Figure 2 shows the results for publications in JOST with a citation threshold of fifty and the one hundred most representative co-citation connections.

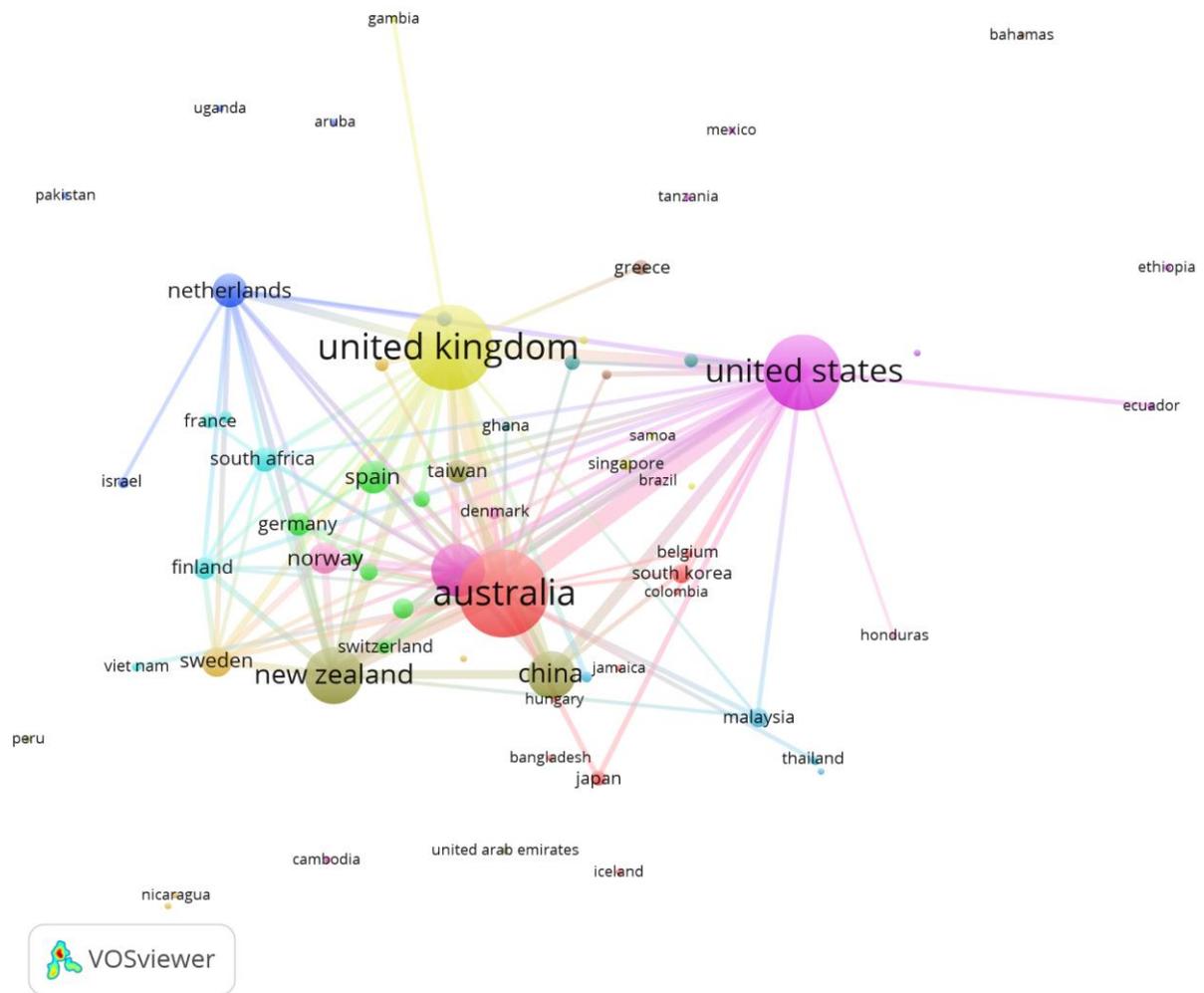


Figure 3. *Bibliographic coupling of countries that publish in JOST*

Australia is the most productive country and has the largest network in the map. The UK and the USA also have a significant position in the journal. Regardless, most of the leading countries in the journal are from Europe; these are countries that are also part of the most representative node of the previous figure.

Next, we analyse the leading keywords (available from 1999) of JOST. Thus, Figure 4 analyses the co-occurrence of author keywords for documents published in the journal with a threshold of five occurrences and the one hundred most representative co-occurrence connections.

According to this analysis, we can expect that the future trends of research in sustainable tourism will carry out in the topics related to, among others, climate change, sustainable tourism development and ecotourism.

CONCLUSIONS

This paper provides a general overview of JOST journal. The leading trends in productivity, influence, topics, authors, institutions and countries have been analysed. The journal has maintained a prominent place among leisure and tourism journals. The increase in the size of JOST has revealed the growing interest in sustainable tourism over time.

This finding shows the consolidation of the journal in the tourism sector and the growing concern for sustainable development in that field. JOST's documents have been commonly consulted. Proof of this finding is that 89% have received citations during the analysed period; in addition, if we discard the most recent years, 2017 and 2016, due to the temporary impossibility of having previously obtained citations, the percentage of documents cited increases to nearly 96% of the total.

Although the journal is originally from the UK, it is cited most often by authors from New Zealand and South Africa. Regarding the most productive institutions in JOST, two Australian ones are notable: Griffith University and the University of Queensland, which are also the originators of the most productive authors in JOST. As time has passed, more institutions from different countries have published works constantly and uninterruptedly. The journal's geographical representation is increasingly expanding. Although Australia, the UK and the USA remain the leaders in the publication of articles in JOST, the list extends to more countries, not only European but also Asian and African, which highlights its marked international character.

Although this work has attempted to provide a complete overview of the leading trends of JOST, it has certain limitations that are worth noting. The data are collected from the Scopus database. Therefore, the data have been collected under a full counting system. Thus, in the analysis conducted, the documents with many co-authors are more important than the works signed by a single author. To overcome this limitation, the paper uses fractional counting in the mapping analysis with the VOS viewer software. Another limitation is that the paper focused on

analysing only articles, reviews, notes and letters and did not consider all the contributions made by the journal.

Despite these limitations, the paper provides information that will be useful for different stakeholders such as researchers, academics and publishers. These results will help these stakeholders make their decisions about their research, collaborations and strategies.

For future studies researchers are recommended to attempt to isolate specific patterns related to JOST and to sustainable tourism, as well as to define the causal relation between research quality/productivity and citation flow.

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