

# Research Trends and Themes in the Top-Tier Tourism, Leisure and Hospitality Journals: A Bibliometric and Network Analysis Before and During the COVID-19 Era

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**Abstract** *This research aims to provide perspicuous insights and solid overviews on research trends and themes within the context of tourism, leisure, and hospitality before and during the COVID-19 era. In doing so, a blend of bibliometric (evaluative and relational) measures was employed to systematically analyze and visually map a total of 22787 publications in the top fifteen academic journals based on Scopus CiteScore under the category of 'Tourism, Leisure, and Hospitality Management' from 2000 to May 2021. The results of evaluative methods indicate that there is a substantial growth in the number of publications in the selected journals over the given period, especially during the COVID-19 era. Several reputed institutions and nations significantly contributed to the targeted journals. Moreover, key tourism research themes and clusters were specified and an integrated overview on international research collaboration is confirmed. Theoretical and practical contributions are provided. Limitations and future research directions are outlined.*

**Keywords:** *Research Trends and Themes, Bibliometrics, Network Analysis, TLHM Leading Journals, COVID-19*

## INTRODUCTION

In the last decades, noteworthy progress and evolution of studies in the field of tourism and hospitality have been taking place as it continues to fascinate the academic research fraternity from across the globe. McKercher and Tung (2015) observe the proliferation of journals that reflect the importance of the field. According to the Encyclopaedia of Tourism (Dixon, 2017), the progression of the “multidisciplinary landscape” of tourism knowledge has been enriched over the years by the extraordinary growth of its global research synthesis. This is reflected in a large number of higher education and research institutions, an abundance of academic publications and journals, the upsurge of conferences and associations, along with various

funding sources for its studies. Hence, it becomes essential to identify the central characteristics of studies being conducted in academic research with an international scope. Therefore, bibliometric studies have been conducted for the scientific production within different disciplines, including the tourism, leisure, and hospitality setting, where scholars have been evaluating the epistemology, knowledge domain, and/or intellectual structure of fields to clarify how they have evolved over time (Koseoglu et al., 2016).

Recently, ever since the World Health Organization declared the COVID-19 outbreak as a public health emergency of international concern (WHO, 2020), the pandemic has disrupted and transformed the global scenario of tourism and hospitality in academia and in practice. The appearance of this pandemic has brought several dimensions to the

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understanding of its opportunities, consequences while affecting the research and development focus on COVID-19 to such an extent that the research publications have soared exceptionally. Consequently, the pandemic has propelled myriad changes which is evident by the escalation of papers that deal with COVID-19 related topics and issues around the world is evident (Fry et al., 2020). For instance, the keyword 'COVID-19' yielded 142000 articles in Google Scholar, while restricting to article search to "since 2020", which is a considerably smaller number that aggregates to 389 articles per day or one article about every four minutes (Conley & Johnson, 2021). This denotes that there are plenty of robust and basic research viewpoints that expedite our understanding of the present and initiate cognizance of the future.

With the growing number of publications in academic journals within different contexts, several bibliometric studies have been conducted to analyze, visualize, and map different issues (e.g. topics, trends, citation, social networking and collaboration, the performance of countries, institutions, academic journals, etc.). In this vein, there are several bibliometric studies relating to academic journals within the tourism and hospitality area (e.g. Chang & McAleer, 2012; Correia & Kozak, 2021; Ertaş & Kozak, 2020; Evren, 2020; Koseoglu et al., 2016; Merigó et al., 2020; Mulet-Forteza et al., 2019a; Mulet-Forteza et al., 2019b; Muritala et al., 2020). Parallely, many authors have improved the knowledge about the contributions of certain segments (Kumar et al., 2020) of tourism and hospitality studies and literature on online reviews in tourism and hospitality which presents the state of research in the area (Muritala et al., 2020). Besides these, a number of bibliometric studies have been carried out considering geographic regions/countries (Evren & Kozak, 2014; Güzeller & Çeliker, 2018; Köseoglu et al., 2015; López-Bonilla & López-Bonilla, 2021; Mauleón-Méndez et al., 2020; Moreno-Gil et al., 2020; Shen et al., 2018; Yankholmes, 2014).

Although the aforementioned works, to the best of our knowledge, there is no previous bibliometric study conducted to review and visualize the scientific production of the eminent 15 'Tourism, Leisure, and Hospitality Management' (TLHM) journals based on Scopus CiteScore. In addition, limited attempts have employed a blend of bibliometric metrics (i.e. evaluative and relational measures) for the different types of publications of the selected journals. Moreover, as far as we know, no known work analyzing and visualizing the trajectories of research trends and themes of the fifteen frontal journals within the TLHM area before and during the COVID-19 pandemic and explaining how these trends and themes are affected by the outbreak of this pandemic. In other words, as a contrast to the studies conducted earlier, the present study is distinctive

as it considers the research trends and themes of the two recent decades (2000-2019) along with an extended period (from 2020 to May 2021) during the COVID-19 time; the juxtaposition of research trends and themes before and during the pandemic; and the focus on 15 outstanding TLHM journals chosen as per Scopus CiteScore metric.

In this milieu, considering the limitations of the earlier works, this study aims to provide an in-depth overview and valuable insights on the research trends and themes in the top-tier English language journals of the TLHM area. Consequently, the present study explicitly aims to address the following research questions:

RQ1: What are the research trends and themes of the top 15 TLHM-related journals for the period between 2000 and 2019?

RQ2: What are the research trends and themes of the top 15 TLHM-related journals for the period from 2020 till May 2021?

RQ3: What are the research constituents among the given two periods?

RQ4: How have the tourism, leisure, and hospitality research trends and themes been impacted by the COVID-19 pandemic outbreak?

As a result, this paper employs an integrative and longitudinal bibliometric approach to systematically analyze and visually map the scientific production of the leading TLHM academic journals during the period between 2000 and May 2021. More specifically, this study aims to conduct (1) a number of evaluative bibliometric metrics (i.e. journals' ranking, annual production, the most prolific authors, institutions, and countries, and the most cited documents) and (2) relational bibliometric metrics (i.e. co-authorship, co-citation, co-occurrence, and keywords analysis) for the publications in the top-tier fifteen TLHM associated journals before (between 2000 and 2019) and during (from 2020 till May 2021) the COVID-19 era.

Taken collectively, there are many noteworthy contributions of this bibliometric study. Firstly, it elucidates the theoretical evolution of research related to the context of tourism, leisure, and hospitality management before and during the COVID-19 pandemic. Secondly, the research is extended with an in-depth analysis of the research themes, collaborations, citation, and occurrence related issues before and during the pandemic time. Thirdly, it analyses the research topics, identifies significant research disparities, and provides prospective possibilities relating to current tourism and hospitality research trends and themes and their directions in the future.

## METHODS

### Data Gathering

The current study focuses on the leading TLHM journals that were selected based on Scopus CiteScore 2019 within

the subject area of 'Tourism, Leisure and Hospitality Management' (TLHM). Interestingly, despite the differences in their rank, the latest Scopus CiteScore 2020, announced at the beginning of June 2021, includes the same 15 selected journals (see Table 1).

**Table 1: The Top 15 TLHM Journals Based on Scopus CiteScore 2019 & 2020**

Journal Title	JTA*	2019		2020	
		Rank	CiteScore	Rank	CiteScore
Tourism Management	TM	1	12.8	1	16.5
Journal of Travel Research	JTR	2	10.9	2	13.3
International Journal of Hospitality Management	IJHM	3	8.0	5	9.4
Journal of Service Management	JSM	4	7.7	3	10.0
Current Issues in Tourism	CIT	5	7.5	8	8.6
International Journal of Contemporary Hospitality Management	IJCHM	6	7.2	6	9.3
Cities	CIS	7	6.9	11	8.0
Annals of Tourism Research	ATR	8	6.8	14	7.0
Journal of Hospitality and Tourism Research	JHTR	9	6.8	12	7.9
Journal of Hospitality Marketing and Management	JHMM	10	6.8	9	8.5
Applied Geography	AG	11	6.4	13	7.2
Journal of Sustainable Tourism	JST	12	6.4	10	8.3
Journal of Travel and Tourism Marketing	JTTM	13	6.3	4	9.6
Journal of Destination Marketing and Management	JDMM	14	6.0	7	8.8
Tourism Management Perspectives	TMP	15	5.5	15	6.8

Note: JTA = Journal Title Abbreviation. These abbreviations are used throughout the whole paper.

The collected and retrieved data included all English document types published in the selected fifteen journals from 2000 to 27<sup>th</sup> May 2021. A total of 22787 documents

were gathered, organized, and analyzed. Table 2 reveals the total number of publications per journal during the given period.

**Table 2: Number of Publications of the TLHM Journals (2000-2021)**

Journal	Number of Publications		Mean	Median	Maximum	Minimum
	2000-2019	2020-2021				
TM	2589	295	184	177	242	136
JTR	1103	259	81	75	169	54
IJHM	1945	538	180	153	316	108
JSM	389	73	37	36	72	1
CIT	1083	560	129	100	379	37
IJCHM	1713	247	125	108	240	53
CIS	1868	644	202	187	420	63
ATR	1576	340	120	112	219	80
JHTR	621	207	50	38	105	23
JHMM	447	82	44	45	50	32
AG	1879	194	168	188	222	38
JST	1187	341	105	101	239	62
JTTM	1202	92	69	69	96	30
JDMM	377	172	55	43	118	16
TMP	573	191	76	70	140	41
Total	18552	4235				

Note: The retrieved documents were gathered by 27<sup>th</sup> May 2021.

## Analysis Techniques

To begin with, a bibliometric approach consists of three methods/techniques, which are evaluative methods, relational methods, and review studies (Benckendorff & Zehrer, 2013; Koseoglu et al., 2016). The present article has employed the first two methods, namely evaluative and relational techniques (network analysis), to provide a solid, comprehensive, and longitudinal bibliometric analysis. Concerning the evaluative methods, Hall (2011) indicated that there are three evaluative methods (i.e. productivity, impact, and hybrid metrics). In this paper, we have conducted both productivity and impact measures. These metrics were performed to represent clear insights on the essential trends of the scientific production of the selected journals in terms of the annual production, the most productive nations and institutions, the most prolific authors, and the highest cited publication in the highest-rank TLHM journals between 2000 and 2021. In this vein, several bibliometric tourism and hospitality studies have used these measures within different themes and scopes (e.g., Cardoso et al., 2021; Chang & McAleer, 2012; Soliman et al., 2021a; Van der Zee & Vanneste, 2015). With regard to the relational techniques (network analysis), the current study has employed a number of relational metrics such as co-authorship analysis, co-citation analysis, and co-word analysis (Koseoglu et al., 2016). These networking measures were used to explore the links between research domains, publications, and authors' collaboration, as well as the up-growth of new research trends and themes (Benckendorff & Zehrer, 2013). These metrics were used in prior bibliometric research (e.g. Koc & Boz, 2014; Khanra et al., 2021; Koseoglu et al., 2016; Soliman, et al., 2021c; Ye et al., 2012) within the tourism and hospitality setting.

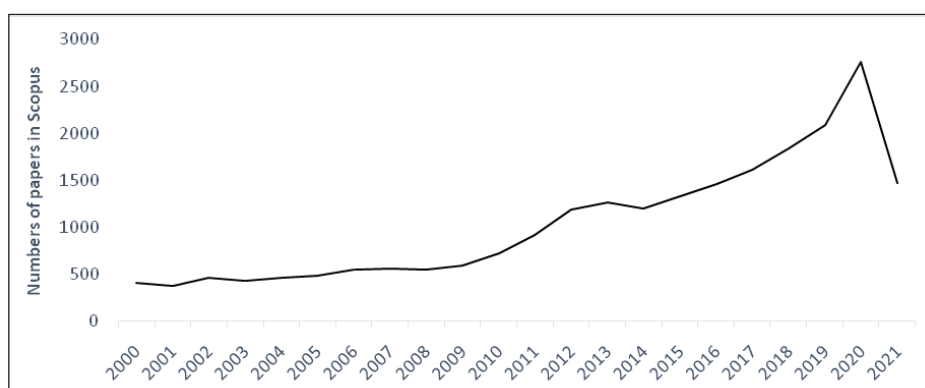
## Analysis Procedures

As previously illustrated, the analysis of the current study will be performed among two stages: (A) for the period from 2000 to 2019 (before the COVID-19 pandemic) and (B) for the period from 2020 to May 2021 (during the COVID-19 pandemic). In doing so, the evaluative measures were provided using the Scopus Tools Analysis with some interventions by the authors. In addition, EViews software was employed to calculate the values of 'Mean, Median, Maximum, Minimum' for the annual production for each journal. To perform the relational methods, VOSviewer was utilized to visualize and construct bibliometric networks of the most reputed TLHM journals depending on Scopus CiteScore. In other words, this software was employed to perform co-citation, co-authorships, and co-occurrence analysis (Au-Yong-Oliveira et al., 2021).

## ANALYSIS AND RESULTS

### Evaluative Bibliometric Metrics

Fig. 1 illustrates the progression in the number of publications in the leading TLHM journals of the period from 2000 until May 2021. It is evident that there is considerable growth in the number of publications all over the given period. The year 2020 recorded the peak value of 2766 documents, while 1469 documents were published in the first five months of 2021. It can be analyzed that the average annual production in the prominent fifteen TLHM journals for the period 2000-2021 is 1036 publications.



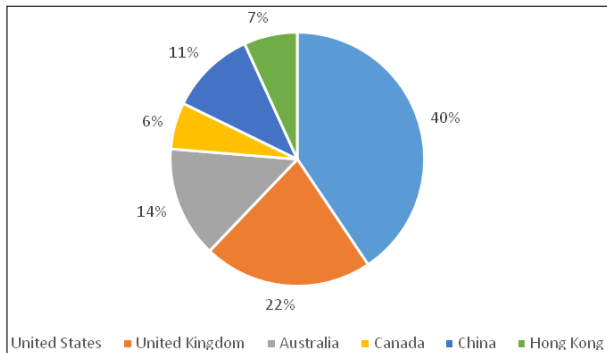
**Fig. 1: Annual Production of the Leading TLHM Journals Based on Scopus CiteScore (2000-2021).**

These Figures contemplate the significance of the area of TLHM, which in turn is reflected by the robust growth of publications over the given period. More interestingly, during the period of the COVID-19 pandemic from 2020

until May 2021, a considerable increase in publications is observed within the chosen journals.

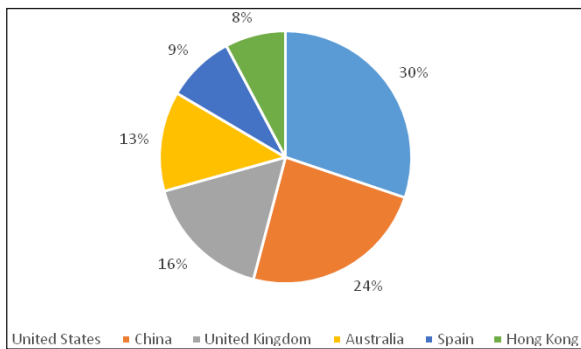
Fig. 2 represents the most productive countries in the area of TLHM from 2000 to 2019. Among the 15 leading journals,

it is seen that the USA, the UK, and Australia are among the top three, followed by Canada, China and Hong Kong. Researchers of the USA contributed 40% to knowledge generation in these journals. Their scientific productions have been mainly published in IJHM (1259 documents) and ATR (978 documents). This is followed by contributions from researchers in the UK (22%), with 798 publications in TM, 598 documents in IJCHM, and 558 publications in ATR.



**Fig. 2: The Most Productive Countries in the Leading TLHM Journals (2000-2019)**

Fig. 3 illustrates that the USA is the most productive country during the pandemic period (2020-2021) which has contributed 30% of articles. It is noteworthy to mention that researchers from China have produced 24% of publications in the chosen journals. Interestingly, Spain has entered the list of most productive countries, with a 9% contribution of overall research during the COVID-19 era.



**Fig. 3: The Most Productive Countries in the Leading TLHM Journals (2020-2021)**

Table 3 lists the most productive institutions during 2000-2019. It is clearly seen that authors from the Hong Kong Polytechnic University, Hong Kong, have published the greatest number of documents (930) in the 15 leading journals of TLHM. This is followed by 400 publications by authors from the University of Queensland, Australia, and authors from the University of Central Florida, the USA with 355 documents.

**Table 3: The Most Productive Institutions in the Leading TLHM Journals (2000-2019)**

R	Institution, Country	Number of Publications
1	The Hong Kong Polytechnic University, Hong Kong	930
2	The University of Queensland, Australia	400
3	University of Central Florida, the USA	355
4	Rosen College of Hospitality Management, the USA	289
5	Texas A&M University, the USA	269
6	University of Otago, New Zealand	265
7	University of Surrey, the UK	244
8	University of Nevada, Las Vegas, the USA	244
9	Griffith University, Australia	169
10	Chinese Academy of Sciences, China	152
11	Griffith Business School, Australia	109
12	University of Waterloo, Canada	77
13	Purdue University, the USA	49
14	Pennsylvania State University, the USA	49
15	National University of Singapore, Singapore	48

During the COVID-19 era, from 2020 till May 2021, the Hong Kong Polytechnic University, Hong Kong is still the leading institution in terms of publications, with 112 published documents (Table 4), followed by the University of Johannesburg, South Africa, and the University of Central Florida, the USA, with 38 and 31 publications respectively.

**Table 4: The Most Productive Institutions in the Leading TLHM Journals (2020-2021)**

	Institution, Country	Number of Publications
1	The Hong Kong Polytechnic University, Hong Kong	112
2	University of Johannesburg, South Africa	38
3	University of Central Florida, the USA	31
4	University of Surrey, the UK	30
5	Sun Yat-Sen University, China	28
6	Sejong University, South Korea	21
7	University of Houston, the USA	21
8	University of Otago, New Zealand	16
9	Temple University, the USA	15

	<b>Institution, Country</b>	<b>Number of Publications</b>
10	Pamplin College of Business, the USA	15
11	Washington State University, the USA	14
12	Florida State University, the USA	12
13	Southwestern University of Finance and Economics, China	12
14	University of Canterbury, New Zealand	12
15	Sichuan University, China	11

Table 5 indicates the most productive authors in the top fifteen TLHM journals between 2000 and May 2021. For the period of 2000-2019, Law Rob has the highest figure (263) of publications in the selected journals, followed by JafarJafar who has published 85 documents in these journals during the given period.

As per Table 5, during the COVID-19 pandemic era (2020 till May 2021), both Kim Myung Ja and Li Xuri have the same publications (38 publications for each one). This is followed by Law Rob and Liu Yizhi, with 37 publications in the chosen journals for each one.

**Table 5: The Most Prolific Authors in the Leading TLHM Journals (2000-2021)**

<b>(2000-2019)</b>			<b>(2020-2021)</b>		
<b>R</b>	<b>Author</b>	<b>Publications</b>	<b>R</b>	<b>Author</b>	<b>Publications</b>
1	Law Rob	263	1	Kim Myung Ja	38
2	JafarJafar	85	2	Li Xuri	38
3	Pizam Abraham	79	3	Law Rob	37
4	Han Hu	75	4	Liu Yizhi	37
5	Mattila Anna	61	5	Wang Yuezhu	36
6	Ryan Chris	60	6	Han Heesup	34
7	Fesenmaier Daniel	49	7	Zhang Hongru	32
9	OkumusFevzi	48	9	Wang Jian-qiang	31
8	Var Turgut	45	8	Woosnam Kyle Maurice	31
10	Lee Choong-Ki	40	10	Kim Sunhoe	29
11	Hall Michael	33	11	Zhang Xiaoxia	28
12	Teare Richard	32	12	YangYang	28
14	Bramwell Bill	30	14	Li Hui	27
13	Petrick James	25	13	Li Yuan	27
15	Buckley Richard	18	15	Wang Xiao-kang	27

## Citation Analysis

Table 6 identifies the most cited documents published in the top-tier TLHM journals from 2000 to 2019. The work of Baker and Crompton in 2000, published in ATR, has the peak value, 1794 citations followed by the work of Beerli

and Martin published in ATR by 2004, with 1548 citations. The paper by Sparks and Browning, published in TM in 2011, has 1502 citations, Buhalis and Law in 2008 with 1223 citations, succeeded by the paper by Yoon and Uysal in 2005, with 868 citations.

**Table 6: Top 15 Cited Document in the Leading TLHM Journals (2000-2019)**

	<b>Authors</b>	<b>Year</b>	<b>Title of the Paper</b>	<b>Journal</b>	<b>Citations</b>
1	Baker, D. A., & Crompton, J. L.	2000	Quality, satisfaction and behavioral intentions	ATR	1794
2	Beerli, A., & Martin, J. D.	2004	Factors influencing destination image		1548
3	Sparks, B. A., & Browning, V	2011	The impact of online reviews on hotel booking intentions and perception of trust.	TM	1502
4	Gallarza, M. G., Saura, I. G., & García, H. C.	2002	Destination image: Towards a conceptual framework. Annals of tourism research	ATR	1432
5	Neirotti, P., De Marco, A., Cagliano, A. C., Mangano, G., & Scorrano, F.	2014	Current trends in Smart City initiatives: Some stylised facts	CI	1330

	Authors	Year	Title of the Paper	Journal	Citations
6	Buhalis, D., & Law, R.	2008	Progress in information technology and tourism management: 20 years on and 10 years after the Internet—The state of eTourism research	TM	1223
7	Han, H., Hsu, L. T. J., & Sheu, C.	2010	Application of the theory of planned behavior to green hotel choice: Testing the effect of environmental friendly activities		1098
8	Xiang, Z., & Gretzel, U.	2010	Role of social media in online travel information search		1072
9	Dwyer, L., & Kim, C.	2003	Destination competitiveness: determinants and indicators	CIT	1058
10	Chen, C. F., & Chen, F. S.	2010	Experience quality, perceived value, satisfaction and behavioral intentions for heritage tourists	TM	970
11	Yoon, Y., & Uysal, M.	2005	An examination of the effects of motivation and satisfaction on destination loyalty: a structural model		868
12	Buhalis, D.	2000	Marketing the competitive destination of the future		844
13	Litvin, S. W., Goldsmith, R. E., & Pan, B.	2008	Electronic word-of-mouth in hospitality and tourism management		792
14	Chi, C. G. Q., & Qu, H.	2008	Examining the structural relationships of destination image, tourist satisfaction and destination loyalty: An integrated approach		772
15	Chen, C. F., & Tsai, D.	2007	How destination image and evaluative factors affect behavioral intentions?		769

The list of top 15 cited documents in the highest rank TLHM journals for 2020-2021 presented in Table 7. It is clear that the highest two cited papers published in JST and ATR with 472 and 92 citations respectively.

**Table 7: Top 15 Cited Document in the Leading TLHM Journals (2020-2021)**

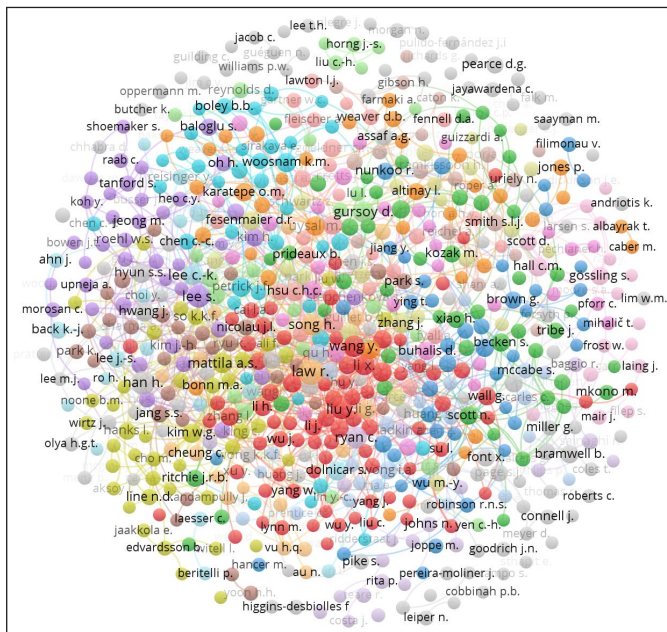
Authors	Year	Title of the Paper	Journal	Citations
Gössling, S. Scott D. & Hall C. M.	2020	Pandemics, tourism and global change: a rapid assessment of COVID-19	JST	472
Yang, Y., Zhang, H., & Chen, X.	2020	Coronavirus pandemic and tourism: Dynamic stochastic general equilibrium modeling of infectious disease outbreak	ATR	92
Desjardins, M. R., Hohl, A., & Delmelle, E. M.	2020	Rapid surveillance of COVID-19 in the United States using a prospective space-time scan statistic: Detecting and evaluating emerging clusters	AG	80
Zenker, S., & Kock, F.	2020	The coronavirus pandemic—A critical discussion of a tourism research agenda.	TM	73
Kim, M. J., Lee, C.-K., & Jung, T.	2020	Exploring Consumer Behavior in Virtual Reality Tourism Using an Extended Stimulus-Organism-Response Model.	JTR	69
Jiang, Y. and Wen, J.	2020	Effects of COVID-19 on hotel marketing and management: a perspective article	IJCHM	62
Yu, M., Li, Z., Yu, Z., He, J., & Zhou, J.	2020	Communication related health crisis on social media: a case of COVID-19 outbreak	CIT	58
Baum, T. and Hai, N.T.T.	2020	Hospitality, tourism, human rights and the impact of COVID-19	IJCHM	56
Nieuwland, S., & Van Melik, R.	2020	Regulating Airbnb: how cities deal with perceived negative externalities of short-term rentals	CIT	54
Qiu, R. T., Park, J., Li, S., & Song, H.	2020	Social costs of tourism during the COVID-19 pandemic	ATR	53
Wang, L., Wang, X. K., Peng, J. J., & Wang, J. Q.	2020	The differences in hotel selection among various types of travellers: A comparative analysis with a useful bounded rationality behavioural decision support model.	TM	52
Gursoy, D., & Chi, C. G.	2020	Effects of COVID-19 Pandemic on Hospitality Industry: Review of the Current Situations and a Research Agenda	JHMM	52

Authors	Year	Title of the Paper	Journal	Citations
Kumar, A., Aswin, A., & Gupta, H.	2020	Evaluating green performance of the airports using hybrid BWM and VIKOR methodology	TM	49
Loureiro, S. M. C., Guerreiro, J., & Ali, F.	2020	20 years of research on virtual reality and augmented reality in tourism context: A text-mining approach	TM	47
Hao, F., Xiao, Q., & Chon, K.	2020	COVID-19 and China's hotel industry: Impacts, a disaster management framework, and post-pandemic agenda	IJHM	47

## Relational Bibliometrics (Network Analysis)

### Co-Authorship Analysis

Fig. 4 represents the co-authorship analysis for the 15 TLHM leading journals (the thresholds were minimum 10 papers), where 19 international scientific alliances have taken place to explore various issues. China (red cluster) has a maximum of 47 alliances during the period 2000-2019. Researchers from Germany, France and China (green cluster) have formed 35 alliances which mark as the second largest, followed by 32 research partnerships between Poland, Ukraine, USA and others (navy blue cluster).



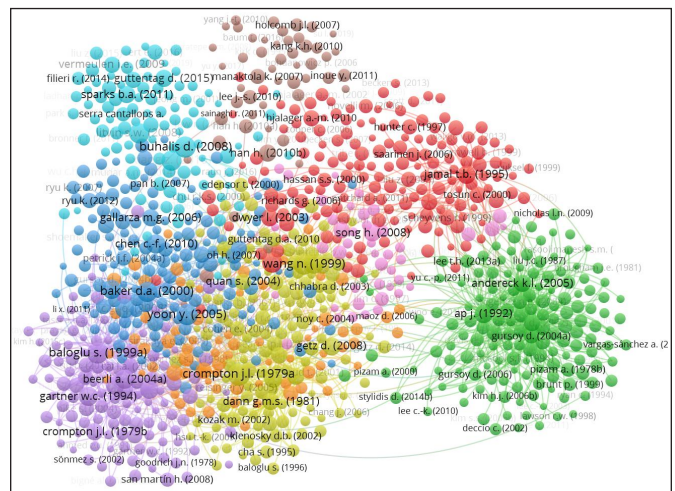
**Fig. 4: Visualization Map of Co-Authorship Analysis for the Top 15 TLHM Journals (2000-2019)**

The findings of co-authorship analysis for the top 15 TLHM journals for 2020-2021 allowed allocating 10 clusters of the scientific alliances. Each of the three biggest clusters contains the 15 scientific alliances with the scientists from China, Finland, USA, UK and Hong Kong. Noting that all scientific alliances contain the scientists from China and Hong Kong.

### Co-Citation Analysis

Fig. 5 denotes the visualization map of co-citation analysis of published articles in the prominent TLHM journals for 2000-2019 (the thresholds were minimum 50 citations). The findings indicate that the co-citation analyses include four categories (orange, navy blue, blue, and yellow) among the nine clusters of scientific alliance which are closely located. This affirms that the topics chosen by researchers from these clusters were the same and substantiated with the findings of the results of their research counterparts. On the other hand, the purple cluster in Fig. 5 is seen to be distantly located from the other eight clusters.

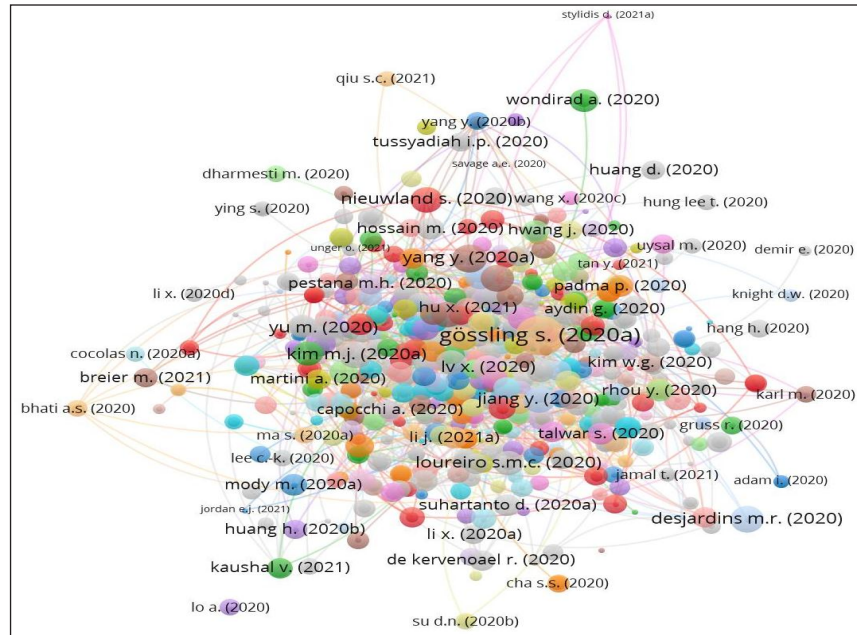
The most cited article in the orange cluster is of Beerli, A., and Martin, J. D. published in 2004 with 1088 citations, followed by Baker, D. A., & Crompton, J. L. published in 2000 in the ATR with 1330 citations in the navy-blue cluster. The articles of Getz, D. published in 2008 have 941 citations in the blue cluster, while the purple cluster contains 1223 citations for the article of Buhalis D. that was published in 2000. Green cluster has 772 citations of the article in 2005 by Andereck et al., followed by the article of Baker & Crompton published in 2000 with 1115 citations in the yellow cluster.



**Fig. 5: Visualization Map of Co-Citation Analysis of the Publications in the 15<sup>th</sup> Selected Journals (Based on Scopus) for 2000-2019**

Fig. 6 shows the visualization map of co-citation analysis in the published articles among the 15 prominent journals of TLHM for the period of 2020-2021. It is seen that the articles of Gossling et al. (2020) have 472 citations; Yang

et al. (2020) have 92 citations; Desjardins et al. (2020) – 80 citations and Zenker and Kock (2020) have 73 citations. The results indicate that all clusters are penetrating each other in this category.



**Fig. 6: Visualization Map of Co-Citation Analysis of the Publications in the 15<sup>th</sup> Selected Journals (Based on Scope) for 2020-2021**

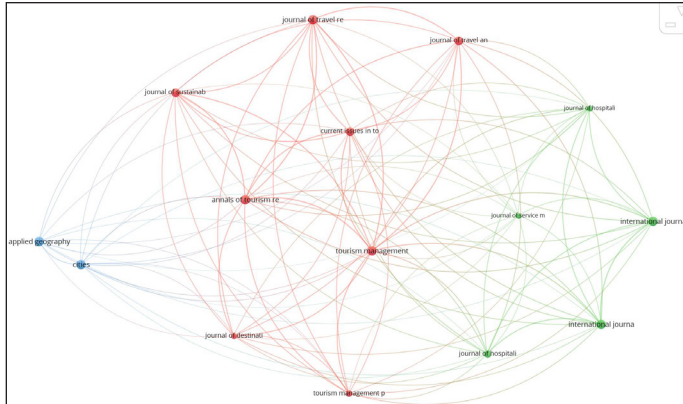
Table 8 gives a comparison of data on citations and total link strength of the chosen journals during 2000-2019 and 2020-2021. TM is the most cited journal with 212590

citations followed by ATR with 177645 citations and JTR with 103797 citations.

**Table 8: Data on Citations and Total Link Strength of the Selected 15<sup>th</sup> Journals**

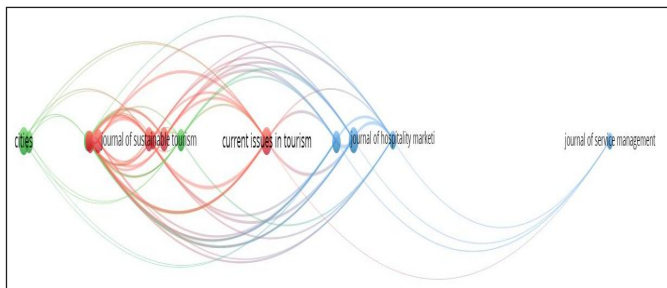
Source	2000-2019		2020-2021	
	Citations	Total Link Strength	Citations	Total Link Strength
TM	210969	50331	1540	364
ATR	176353	38801	1292	302
JTR	102660	32678	1137	345
IJHM	901357	24468	2091	450
AG	64006	887	451	10
CI	57117	1068	1633	17
JST	56 719	19181	1478	424
IJCHM	55 474	21 132	962	3370
CIT	30 304	21 032	1901	451
JTTM	36 381	20 883	222	145
JHTR	22 292	11 735	260	122
JSM	15 927	817	328	8
TMP	11 850	11 843	651	179
JHMM	9 687	8 190	385	167
JDMM	8 812	11 164	408	176

The co-citation analyses of the journals of 2000-2019 confirm that eight journals are merged as one cluster (red) as seen in Fig. 7 (the thresholds were minimum 5 co-citations). It is seen that the primary focus of the publications is associated with tourism developed issues. It also indicates that the journals of AG and CI have been distant from red cluster journals during 2000-2019.



**Fig. 7: Visualization map of Co-Citation Analysis Dependent on the Sources (2000-2019)**

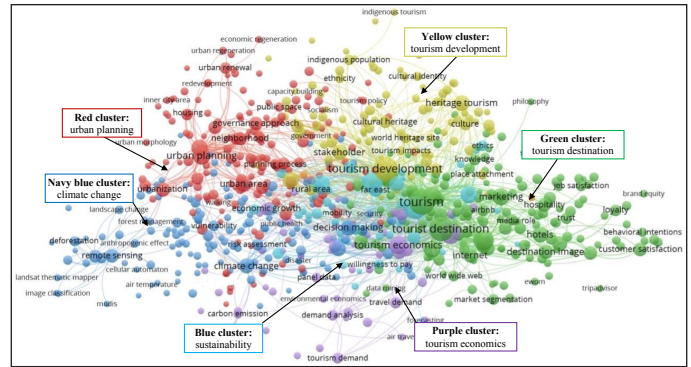
Fig. 8 indicates that, during the period from 2020 to May 2021, all journals are closely located to each other by co-citation, excepting JSM.



**Fig. 8: Visualization Map of Co-Citation Analysis Dependent on the Sources (2020-2021)**

**Co-Occurrence Analysis**

Fig. 9 denotes the co-occurrence analysis dependent on the keywords in research trends and themes in the top 15 TLHM journals. The results of co-occurrence analysis (the thresholds were minimum 20 cooccurrence of keywords) of papers which are published during 2000-2019 confirm the presence of six scientific directions in the exploration of issues on tourism development. These scientific directions have been merged into six broad scientific clusters (with total items of keywords 700) formed on two main attributes namely: occurrence and total link strength.



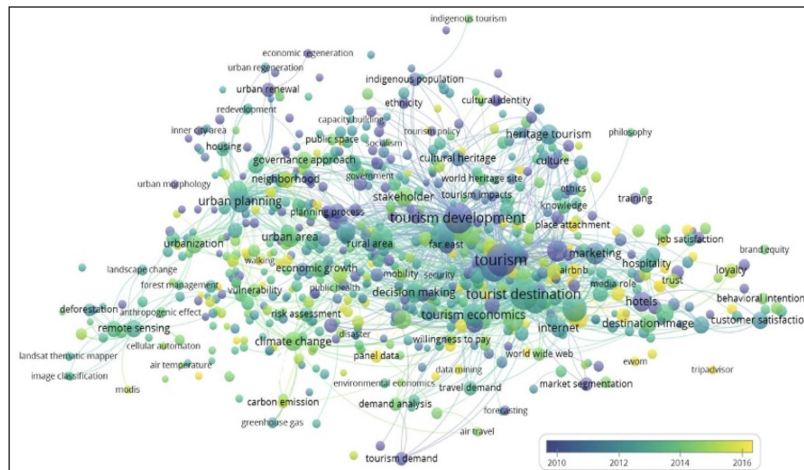
**Fig. 9: Co-occurrence Analysis Dependent on the Keywords in Research Trends and Themes in the Leading TLHM (2000-2019)**

The results of co-occurrence analysis (Fig. 9) indicate that red is the most significant cluster with 169 items of keywords, consisting core keywords of urban planning, urban policy, and urban area. The articles in red cluster focused on the analysis of impact of urbanization on development of tourism. Green cluster has 168 items that focus on analyzing the general parameters of tourism development such as marketing, hospitality, tourists’ loyalty, and sharing platform for tourism development. This was followed by a navy-blue cluster with 158 items in which ‘climate change’ was the core keyword. The authors in this cluster analyzed the link between climate change and tourism attractiveness of the countries. Yellow cluster stood in the fourth place with 97 items that included two core keywords-heritage tourism and tourism development. It can be seen that this cluster is located close to green, blue and red clusters, which confirmed that topics of urban planning, tourism development, destination and sustainability are frequently interconnected and researched. The purple cluster has 56 items with ‘tourism economics’ being the core keyword. The authors in this cluster examined the demand and supply in the tourism sector. Finally, the blue cluster has items with ‘sustainability’ as the core keyword. Results indicate that this cluster is penetrating all other clusters.

Fig. 10 represents the overlay visualization of co-occurrence analysis dependent on the keywords in research trends and themes in leading journals of TLHM. The results of overlay visualization of co-occurrence analysis indicate that the researchers studied the general issues of tourism development (purple color on Fig. 10) before 2010. The article between 2010 and 2014 focused on the factors like urban planning, cultural heritage and sustainable development principles that affected the tourist’s decision making. During 2014-2016, authors analyzed the impact of carbon emissions, air pollution and consequences of climate change on the tourism attractiveness of the destination. Results show that

the focus of research trends and themes after 2016 are based on the analyses of the impact of information technologies,

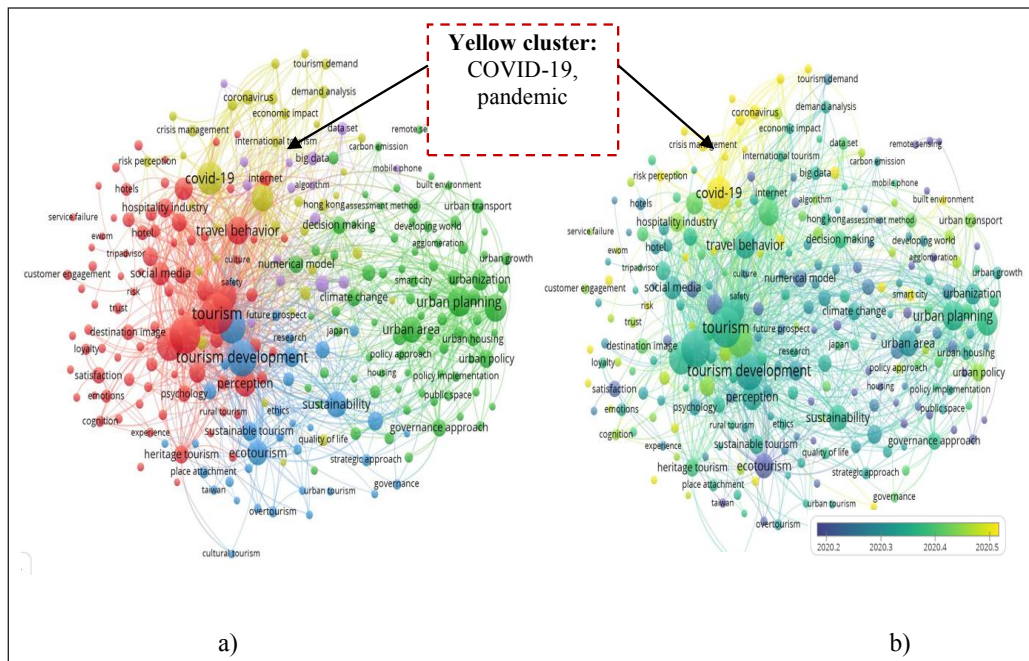
digitalization, and social media marketing, and sharing platforms on tourism development (yellow color on Fig. 10).



**Fig. 10: Overlay Visualization of Co-Occurrence Analysis Dependent on the Keywords in Research Trends and Themes in the Leading TLHM Journals (2000-2019)**

The results of co-occurrence analysis dependent on the keywords in research trends and themes in 2020-2021 are seen in Fig. 11a. It identifies five clusters of scientific directions in tourism development related research. The red cluster emphasizes tourist loyalty, satisfaction and social media;

urban planning, urbanization and smart city are seen in the green cluster; navy blue cluster has sustainable development and ecotourism, while the purple cluster converges on big data, mobile phone and mobility.



Note: (a) – co-occurrence analyses by clusters; (b) – overlay visualization

**Fig. 11 (a & b): Co-Occurrence Analysis Dependent on the Keywords in Research Trends and Themes the Leading TLHM Journals 2020-2021 (Based on Scopus)**

Comparison analyses of the general trends in the tourism’s investigations with the trends due pandemic 2020-2021 confirmed that researchers boost the analysis of COVID-19 impact on tourism development. Therefore, the investigations on consequences of pandemic activated after May 2020 (Fig. 11b).

### Keyword Analysis

Table 9 shows the results of the top 15 keywords that are reflected in the research trends and themes of the top-tier TLHM journals during 2000-2019. ‘Tourism’ is the most

used keyword which recurred 2315 times. However, the highest total link strength was in the keyword ‘tourism destination’ which was used 13278 times. The comparative results (Table 9) denote that keywords like tourist behavior (occurrence – 1160), ecotourism (occurrence – 11334), heritage tourism (occurrence – 544) frequently analyzed before 2020. The relationship between climate change (link – 300), sustainability and tourism development (link – 350) can also be seen. It can also be seen that the keyword ‘COVID-19’ appeared in the list of 15 most frequently used keywords between 2020 till May 2021.

**Table 9: Comparison Analysis of Occurrence and Total Link Strength of the Keywords in Research Trends and Themes in the Leading TLHM Journals**

Keywords	(2000-2019)		(2020-2021)	
	Occurrence	Total Link Strength	Occurrence	Total Link Strength
Tourism	2315	10965	381	407
Tourism destination	1908	13728	341	756
Tourism development	1837	12109	308	623
Tourism management	1558	10838	270	591
Tourist behaviour	1160	7676	251	521
Ecotourism	1134	8218	153	301
Tourism market	999	7203	218	502
Sustainability	888	5959	159	242
Perception	838	5592	169	296
Tourism economics	716	5331	172	383
Urban planning	690	5037	206	232
Marketing	569	3358	178	212
Heritage tourism	544	3939	–	–
Climate change	542	21830	200	234
Customer satisfaction	521	3665	198	332
COVID-19	–	–	257	176

## DISCUSSION OF FINDINGS

This comprehensive bibliometric study encapsulates the status of research trends and themes through analyzing and visually mapping 22787 publications in the leading 15 TLHM journals chosen as per Scopus CiteScore. The reflective study has intended to emphasize on two segments: a) during the period of two decades 2000-2019 before the COVID-19 pandemic, and b) during the pandemic 2020-2021. The evaluative bibliometric metrics section has examined the annual production, affiliation/country, authorship analysis and citation analysis. The relational bibliometric metrics section has studied the co-authorship, co-citation, co-occurrence, and keyword analysis.

This bibliometric analysis of the Scopus CiteScore indexed in fifteen leading TLHM journals has underlined the rapid growth in the publication and citation performance from

2000 to 2019 (before COVID-19) and also during 2020-2021 (during COVID-19). Findings stress the increasing contribution of publications in the two decades before pandemic (2000-2019) and also during the ongoing pandemic age (2020-2021). The results obtained in this study reiterate the observation that several publishing opportunities exist, as the numbers of researchers and their published research contributions are multiplying than in the past, with an increase in collaboration in the field of TLHM. It is interesting to note that there were more than 18,000 publications during 2000-2019. A significant rise in the annual production is seen in a short span of less than two years (2020-2021) during the COVID-19 pandemic with more than 4000 peer published articles. This means that the numbers of articles during the pandemic age are going to exceed the average of articles published during the two decades (2000-2019) before pandemic. This emphasizes the importance of the field of TLHM in society. As the TLHM sector faces the brunt of

COVID-19 pandemic with restrictions of international travel or new rules for tourists, this could provide new perspectives of scientific inquiry for the researchers of this field.

Although results reflect Hong Kong Polytechnic University, Hong Kong as the most productive institution (both before and during COVID-19 period), Hong Kong is ranked sixth among the productive countries. On the contrary, the USA ranks the highest both during 2000-2019 and 2020-2021, but ranks third in terms of institutional production. A significant change is that the University of Johannesburg, South Africa has acquired the second place during the phase of pandemic (2020-2021), while University of Queensland, Australia which was in the second position during 2000-2019 is yet to make its entry in the list of most productive institutions in the pandemic era. Therefore, it can be seen that the topmost productive institutions are not from the leading productive countries.

The bibliometric analysis was used to understand the most prolific authors of the two segments (before and during the pandemic) which reflected a substantial change in the list. The first two leading authors of the two decades (2000-2019) were replaced by new authors in the list of leading authors of 2020-2021. This implies that new researchers are contributing to the knowledge of the TLHM field. A similar change has been observed in the citation analysis during the two phases of before and during pandemic (2000-2019 and 2020-2021) with new authors receiving high citation scores, while the top cited journal has also changed. It is observed that the authors who have received high citation scores are not the most productive authors during 2020-2019. The same scenario is manifested during the 2020-2021 period where the authors with high citation scores are not so productive. The differences are also ascertained in the journals which are related to highly productive authors, most productive countries and institutions along with citation scores.

The co-citation analysis points towards differences in the visualization map during the two periods. When comparing the data of 2000-2019 and 2020-2021 on citations and total link strength, *Tourism Management* is the most cited journal followed by *Annals of Tourism Research* *Journal of Travel Research* while the citations of *Journal Cities* and *International Journal of Contemporary Hospitality Management* have dropped when compared with the data of the two decades. During 2000-2019 the primary focus of peer reviewed articles was related to tourism development issues. *Applied Geography* and *Cities* has stood apart from the main clusters of journals during 2000-2019. In contrast, during 2020-2021, all journals are closely located to each other by co-citation excluding *Journal of Service Management*.

A noticeable aspect of co-occurrence analysis is that the focus is on the interconnectedness of various topics associated with tourism development consisting of core keywords like

‘urban planning’, ‘urban policy’, ‘urban area’, ‘marketing’, ‘hospitality’, ‘tourists’ loyalty’, ‘sharing platform for tourism development’, ‘climate change’, ‘heritage tourism’ and ‘tourism development’. ‘Sustainability’ is seen to be penetrating all other clusters, which confirms that issues on sustainable development have been an integral part of all scientific directions on tourism development investigations during 2000-2019. It is seen that from 2000-2021 there have been certain topics focused during specific period of time – for example, researchers studied general issues relating to tourism development before 2010; during 2010-2014 the focus was on the factors like urban planning, cultural heritage and sustainable development principles that affected the tourist’s decision making; authors during 2014-2016 analyzed the impact of carbon emissions, air pollution and consequences of climate change on the tourism attractiveness of the destination; and focus of research trends and themes after 2016 are based on the analyses of the impact of information technologies, digitalization, social media marketing, sharing platforms and COVID-19 on tourism development. During 2020-2021 there is a tangible increase on topics related to COVID-19 and its impact on tourism development.

Results of the keyword analysis suggest that ‘tourism’, ‘tourism destination’ and ‘tourism development’ were the three most frequently used keywords before the pandemic (2000-2019) which indicates that tourism destination and development was frequently investigated with other tourism issues. The same keywords have continued to be frequently used during the pandemic age too. It is worth mentioning here that heritage tourism which was among the top 15 keywords during 2000-2019 has not been used during 2020-2021. Occurrence of keyword ‘Climate change’ during the ongoing pandemic phase (2020-2021) is quite high when compared to the results of before pandemic. Undoubtedly, the global pandemic has given rise to the occurrence of the keyword COVID-19 in 2020-2021, which was obviously not found to be cited during the two decades 2000-2019. This illustrates how the pandemic has become a predisposed element that affects the research trends and themes in the TLHM related journals.

## THEORETICAL AND PRACTICAL CONTRIBUTIONS

The current research represents varied contributions and implications for both academia and practitioners. To begin with, the present paper provides valuable contributions to faculty members, scholars, higher education institutions, research centers, and other education-related stakeholders; as it produces a blended of evaluative and relational bibliometric measures and metrics in relation to the research evolution, major trends, key themes, and fundamental

directions concerning the scientific production of the top-tier academic journals within the tourism, leisure, and hospitality management area over the last two decades as well as during the COVID-19 pandemic. This could boost the consciousness regarding tourism and hospitality contemporary research trends and themes, taking into consideration how these trends are changed with the outbreak of COVID-19. The research results also represent clear outlines and remarkable insights regarding the academic performance and research productivity of the most productive scholars and researchers, institutions, the chosen academic journals before and during this pandemic, which in turn has substantial influences on tourism and hospitality education (Evren & Kozak, 2014) and scholarly production of tourism researchers around the world (Soliman et al., 2021b). Although there are some prior attempts analyzing and visualizing the scientific production of academic journals within the tourism and hospitality context, limited bibliometric studies have been conducted, especially for the top 15 journals based on the Scopus CiteScore rank. That is, this paper could produce informative measures concerning such journals for those who are interested in the CiteScore rank in terms of publication or career promotion issues. Moreover, to the best of the authors' knowledge, the current study is considered one of the few studies that compare the tourism and hospitality research trends and themes before and during the COVID-19 pandemic. To this end, this study could present a solid direction and clear overviews for academia on the future of research trends and themes in the TLHM area.

With regard to the practical contributions, this paper provides outstanding schemes and an in-depth overview for tourism policymakers, managers, and concerned stakeholders on the main trends and directions of tourism and hospitality research before and during the COVID-19 era. This could help in demystifying the most crucial research trends and providing valuable guidelines and practical solutions for tourism and hospitality-related businesses that are negatively influenced by the outbreak of this pandemic (Hassan & Soliman, 2021). In addition, this paper has outlined and visually mapped the key themes of current tourism, leisure, and hospitality research produced by the top-tier journals within the field. That is, the tourism and hospitality industry and associated sectors have to concentrate on the most crucial factors and directions through which they can identify the critical course of actions, along with restricted resources that could best respond to challenges and threats in this difficult and changing work environment. Moreover, the finding of this article could help tourism and hospitality policymakers and managers in designing and formulating proper and timely policies, strategies and plans, deploying solid management approaches, and implementing sustainable practices.

## LIMITATIONS AND FUTURE RESEARCH

Despite its theoretical and practical contributions, this paper has some limitations to be addressed by further work. Firstly, the current paper has employed a bibliometric analysis of the scientific production of the top fifteen TLHM journals, based on the CiteScore Ranking of Scopus Elsevier. Therefore, future research is recommended to go beyond the selected journals and analyze the big data of other Scopus indexed journals (e.g., the remaining Q1 journals, Q2, Q3, or Q4 journals) within the subject area of 'Tourism, Leisure and Hospitality Management'. This will lead to providing remarkable insights regarding tourism and hospitality research trends, themes, and directions before and during the current situation of the COVID-19 pandemic.

In addition, further work is suggested to focus on the publications of academic journals within different subject area/s (e.g. 'Marketing'; 'Communication'; 'Safety Research'; 'Management Information Systems'; 'Management of Technology and Innovation'; 'Geography, Planning and Development', etc.). This would introduce valuable insights regarding the scientific production within such areas. Further work is also suggested to include the publications during the entire year of 2021. This could present an in-depth overview in relation to tourism and hospitality research trends and themes over a two-year period. Additionally, the current paper employed two bibliometric methods, namely, evaluative and relational techniques. Further research is recommended to conduct a systematic review of the publications of the targeted journals. Moreover, handling the challenge of the pandemic by the tourism academia can also be considered by researchers. Finally, future research can conduct a bibliometric study on the scientific production of other journals within the tourism and hospitality context according to a specific region (e.g., Europe or East Asia, etc.) or based on certain criteria such as ranking (e.g. Journal Citation Reports (JCR)- Clarivate, database (e.g. Web of Sciences, Google Scholar, etc.), the journal's nature and scope, the publisher, etc.

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