

A Decade Bibliometric Analysis of Decision Making in Tourism and Hospitality

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Abstract. We identify the evolution of decision making in tourism and hospitality researches from 2013 to 2023, such as: source, document type, journal name, publisher name, topic trends, and author collaborations. Bibliometric analysis was used to analyze 217 articles published from 2013 to 2023. We use the combination of decision making + tourism + hospitality as our main keywords in searching related article titles, abstracts, and keywords to get metadata, where the Scopus database is the main source. The tools used in this bibliometric analysis are Harzing's Publish or Perish for importing source data from Scopus database and further used for citation and metrics analysis. Furthermore, we employ VoS Viewer for data visualization. The results indicate that most related articles to are published in scientific journals, compared to other publication outlets e.g., book chapter, conference proceedings and book. Related articles published in scientific journals have received the highest citations compared to others. Based on network and overlay visualization, the most dominant terms (often appearing) are "Tourism", "Decision Making", and "Hospitality Industry".

Keywords: Bibliometric analysis · Decision making · Tourism · Publish or Perish · VoS Viewer

1 Introduction

Tourism recently has become a major big socio-economic phenomenon which involve an elaborate set of interactions between tourists, tour operators, academia, governments, and local communities. In tourism and hospitality sectors, decision making has played an important role in assisting all tourism stake holders, including tourists and business operators. The rapid development of information technology has influenced people in making decision regarding tourism choices.

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Many works on decision making in tourism and hospitality fields exist. The use of internet, technology, data science, big data, and artificial intelligence has attracted many scholars in assisting tourism decision makers. Zsarnoczky [1] studied on how artificial intelligence can affect the tourism industries. Ivanov & Webster [2] proposed a conceptual framework in incorporating robots, many methods of artificial intelligence and service automation in travel, tourism, and hospitality companies. Samara, *et al.* [3] presented a survey and review on artificial intelligence and big data in tourism. Höpken, *et al.* [4] presented a study in the prediction of tourist arrival using big data analytics and soft computing method based on artificial neural network model. Wu, *et al.* [5] presented a survey on distributed linguistic representations in decision making including applications in hotel selection. They highlight some research opportunities involving data science and explainable artificial intelligence. Mak, *et al.* [6] presented a study on decision-making process involving community participation for sustainable tourism development, where the case study was taken in rural areas of Hong Kong, China. Karl [7] presented the effect of risk and uncertainty in travel decision from the perspective tourist and destination. Yu *et al.* [8] adopted MCDM model in selecting hotel with linguistic distribution assessments. Nilashi *et al.* [9] determined factors which influence the decision in medical tourism to Malaysia using DEMATEL-Fuzzy TOPSIS approach. Pantano *et al.* [10] developed a novel recommender system to facilitate tourists in making a decision through open data analyses. Karl *et al.* [11] examine the tourist's decision-making process for destination choice through travel risks. Stylos [12] studied the evolution of technology for tourism decision-making. McCartney & McCartney [13] presented a research framework on a service-robot for the hospitality and tourism industry. Pappas & Glyptou [14] presented insights from Greece toward accommodation decision-making during the COVID-19 pandemic.

On the other side, to understand the current state of researches on tourism and hospitality, many study has been proposed by many scholars, where they use meta-analysis and bibliometric approach. Niñerola, *et al.* [15] presented their results of a bibliometric analysis on the topic of tourism research on sustainability. Nusair [16] presented a bibliometric analysis from 2002 to 2018 on the development of a comprehensive social media research based on life cycle framework in hospitality and tourism. Palácios, *et al.* [17] presented a bibliometric analysis of trust in the field of hospitality and tourism. Sigala [18] presented a bibliometric analysis of existing researches on tourism and Covid-19 pandemic. Manosso & Domareski Ruiz [19] presented bibliometric analysis, systematic and integrative review on existing researches of sentiment analysis in tourism. Pandey & Joshi [20] presented research trends for past 25-years using bibliometric analysis on the topic of tourism destination choice. Habibi, *et al.* [21] studied medical tourism researches using bibliometric approach. Pahrudin, *et al.* [22] presented a bibliometric study on the role of tourism management and marketing toward sustainable tourism. Qiao, *et al.* [22] presented a bibliometric review in understanding family tourism. Kalia, *et al.* [23] presented a bibliometric analysis in the last three decades on the trends and the emerging research directions of digital tourism. Lopes, *et al.* [24] presented a bibliometric analysis on tourism and land planning in natural spaces. Gomes, *et al.* [25] presented a bibliometric analysis on the tourism industry 4.0 and further they highlighted the future

challenges. Vatankhah, *et al.* [26] presented a bibliometric analysis on the application of MCDM techniques in hospitality and tourism research.

Motivated from aforementioned works [15–26], we present a bibliometric analysis on decision making in Tourism and Hospitality. Unlike previous works, we use the Scopus database from 2013 to 2023. We not only present the publication source, document type, journal name and rank, publisher name and rank, topic trends, and author collaborations, but also, visualize them. Finally, we discuss some of the research challenges to be explore in future.

The remainder of the paper is organized as follows. In Sect. 2, we describe our proposed research method. Section 3 presents our obtained results and following by complete discussion. Finally, we conclude our work and highlight future work in Sect. 4.

2 Proposed Method

In this paper, we adopt bibliometrics analysis method [27–33] which consists of five stages, namely: Determining the keywords, initial searching and repair searching results; Compiling preliminary data statistics (before and after repairing) and saving in RIS format; Enter RIS data into Publish or Perish; Analysis of publications sources and citations; and finally visualize the results using VoS Viewer. Figure 1 below depicts the flow chart of our proposed method.

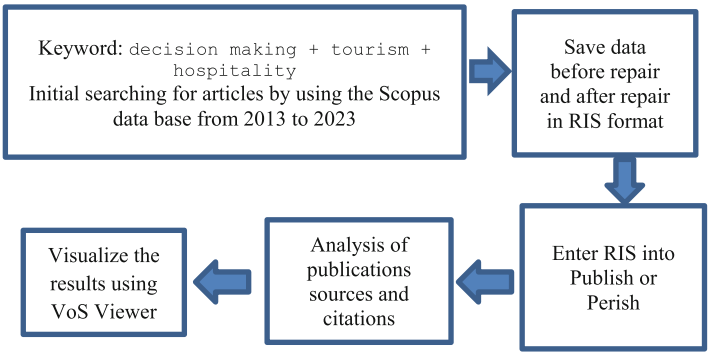

Fig. 1. Flow chart of the proposed method

3 Results and Discussion

This section explains the obtained results of this work, which includes publications and citations, visualizations, authors and networks, research locations and research domains.

3.1 Publications and Citations

For knowing comparison of the citation matrix on the data taken via Scopus, then researcher make the table in which containing number article, number citation, number citations per year, number authors per year, H index, G index, normal hI, and hI yearly at the beginning search and on results repair. Comparison data matrix in result search start and result search after repair could be seen in Table 1.

Table 1. Comparison Matrix

Data	Initial Search Results	Search Results Repair
Database	Scopus	Scopus
Year publishing	(2013–2023)	(2013–2023)
Year citation	10	10
Number of Articles	258	217
Number citation	3698	3268
Number Citation per Year	369.80	326.80
Number Authors per Year	2.94	2.85
H index	30	29
G index	56	52
hI Normal	18	17
hI Annual	1.80	1.70

Based on Table 1 above, a comparison is generated on the comparison matrix between data before repair and data after repair. It is known that some parts have significant changes obtained from the results of the data before the repair with the data after the repair. There is a part of the database mentioned using the same via Scopus with the year of publication from 2013 to 2023 and author data per year which changes from 2.94 to 2.85 per year which means that it has decreased by 9 authors. Other differences are in the number of documents before the correction with a number of 258 to 217, the number of citations that were previously 3698 to 3268, the average citation for the previous year 326.80 to 326.80 after making repairing, the H index amounted to 30 before the repairing to 29 after repairing and G index experienced a data reduction of 4 which before the repairing amounted to 56 to 52. As for the explanation of the statistics of publication per year is described in Table 2.

Table 2. The statistics descriptive of publication

Year	TP	% (N = 217)	NCP	TC	C/P	C/CP
2013	11	0.05	9	986	89.64	109.56
2014	8	0.04	4	75	9.38	18.75
2015	7	0.03	6	223	31.86	37,17
2016	14	0.06	13	259	18.50	19.92
2017	27	0.12	23	407	15.07	17.70
2018	22	0.10	17	296	13.45	17.41
2019	27	0.12	26	399	14.78	15.35
2020	17	0.08	13	216	12.71	16.62
2021	33	0.15	22	305	9.24	13.86
2022	46	0.21	23	101	2.20	4.39
2023	5	0.02	1	1	0.20	1,00
	217	100%				

Note: TP = total number of publications; NCP = number cited publications; TC = total quotes; C/P = average citations per publication; C/CP = average citation per cited publication

Table 2 above shows publication statistics data obtained for 10 years, from 2013 to 2023. In the first year of 2013, there were a total of 11 publications with 9 of the total citations of 986. Then in the following year, namely 2014, it was found to have a total of 8 publications from the results of 4 publication citations out of a total of 75 citations. In 2015 there were 7 total publications which had 6 citations that had been published, and a total of 223 citations. In 2016 it doubled from the previous year where there were 14 total publications, 13 citations published, with a total of 259 citations. Then in 2017 also experienced an increase in the total number of publications from previous years, which increased by 13 documents to 27 total publication documents with the number of citations increasing also to 23 which became a significant addition of documents with a total acquisition of 407 citations documents so that it became the second total cited document after the first year in 2013. However, in 2018 there was a decrease in the total number of publications by 0.10% or to 22 total documents with publication citations decreasing to 17 from a total citation of 296 documents. That way in 2019 it experienced an increase that returned to the previous 2 years, namely with a total of 27 publications which increased by 0.12% with a total of 26 publication citations out of a total of 399 or became the third in the total citations of the last 10 years. In 2020, it received a significant decline, which was at 17 of the total number of publications, with a total of 13 publication citations out of a total of 216 document citations, then in 2021 it increased with a total of 33 documents, with 22 citations out of a total of 305 citied documents. In 2022, it increased by the second order after 2013, and increased from the previous year by 0.21% with the number of citations published as many as 23 with a total of 101 citations. And in the last year, namely 2023, there are only 5 total publication documents, out of 1 each of the number of citation and station documents

published. This is because the search for new documents is carried out during the last 3 months of 2023. Figure 2 as follow depicts the bar chart of publication and citations.

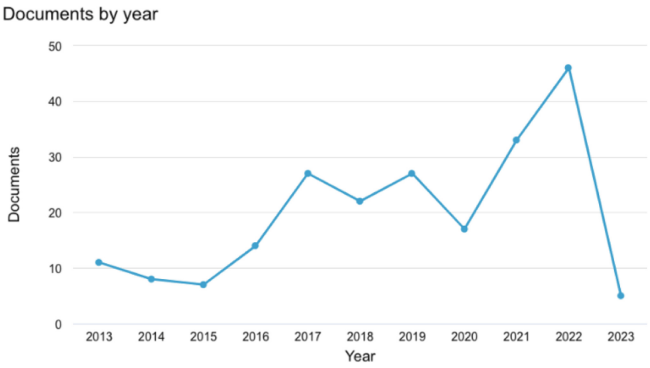

Fig. 2. Publication from 2013–2023

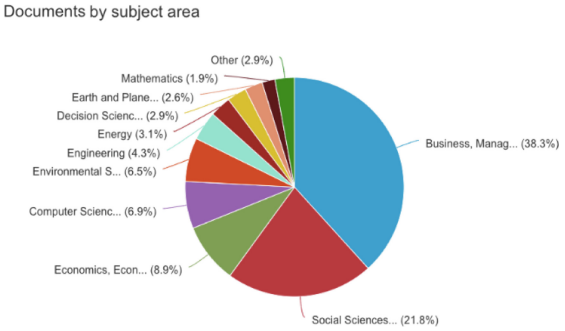

Fig. 3. Documents by subject area from 2013–2023

In Fig. 2 above, there is a graph showing documentation data published at intervals between 2013–2023. As shown in the diagram above and in the previous table, it is known that the peak of the most total publications is in 2022 with a total of 46 documents or an increase of 21% from previous years. Meanwhile, in the following year in 2023 it is the lowest total publicans with the acquisition of 5 documents or with a percentage of only 2% from previous years. Meanwhile, in Fig. 3 above, the data of the document by the subject area is presented. The diagram is dominated by blue color where there is Business, Management, and Accounting data with a total publication of 160 documents or 38.3% of the total data. In addition, in other subject areas obtained from Social Sciences represented by red color which is the second most documents with 21.8% or with 91 publication documents. Other subject areas are filled with Economics, Econometrics and Finance as much as 8.9%, Computer Science as much as 6.9%, Environmental Science as much as 6.5%, then in Engineering with 4.3%, Energy with 3.1%, Decision Sciences 2.9%, Earth and Planetary Sciences as much as 2.6% and the last subject with the acquisition of other documents which have 2.9% and the least document, namely

Mathematics with 1.9%. The conclusion is that from the many subject areas obtained, the most widely used documents are on the subjects of Business, Management, and Accounting. Figure 4 and Table 3 as follow depicts and describe the document type, respectively.

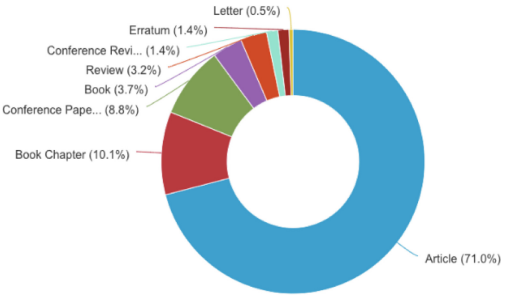

Fig. 4. Documents type

Table 3. Document type

Type	Number	Percentage
Article	154	0.71
Book Chapter	22	0.10
Conference Paper	19	0.09
Book	8	0.04
Reviews	7	0.03
Conference Review	3	0.01
Erratum	3	0.01
Letter	1	0.00
	217	100%

From both Fig. 4 and Table 3 above, the analysis results obtained based on the type of document from the Scopus database include Article, Book Chapter, Conference Paper, Book, Review, Conference Review, Erratum, and Letter. It is mentioned in the table above, that the most document type gains are obtained in Article types as many as 154 documents or 71% of the total 217 documents. Then followed by the Book Chapter document type as much as 10.1% or with 22 documents, then in third place with the Conference Paper type as much as 19 or 8.8% rounded up to 9%. Review document type with 7 documents, then 3 documents each are taken for Conference Review and Erratum type documents. And the last or the least type of use is obtained from the document type, namely 1 Letter type document. Figure 5 as follow depicts the documents per year by source.

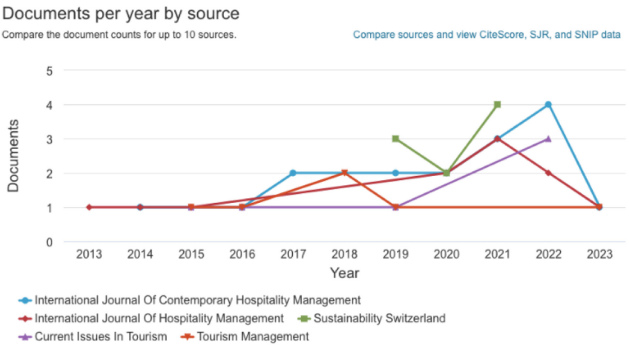

Fig. 5. Documents per year by source

From Fig. 5 above, the International Journal of Contemporary Hospitality Management published articles from 2014 and increased until 2022. Furthermore, the International Journal of Hospitality Management published a journal from 2013 to 2023 but decreased from 2021 to 2023. In the next source, Sustainability Switzerland with green lines began publishing journals in 2019 to 2021. Source: Current Issues in Tourism with purple line color from 2015 to 2022 and the last one is Tourism Management with orange line color starting in 2015 to 2023. Table 4 as follow describes the sources type of publication.

Table 4. Sources type of publication

Type	Number	Percentage
Journal	165	0.76
Book	24	0.11
Conference Proceedings	16	0.07
Book Series	12	0.06
	217	100%

In Table 4 above, data is presented in the form of document analysis or data based on the type of source. Obtained from the Scopus database, document types are classified with several source type areas in the last 10 years between 2013–2023 that international journals of contemporary hospitality management have experienced a significant increase every year starting from 2016 to 2022 and with a surge in current issues in tourism in 2019 to 2022. We obtained source types based on the Journal with the acquisition of 165 data sources or 76%, Book as much as 11% or 24 sources, Conference Proceedings as many as 16 types of sources, and Book Series with the acquisition of 12 of the totals of 217 data sources obtained. Figure 6 as follow depicts the documents by affiliation.

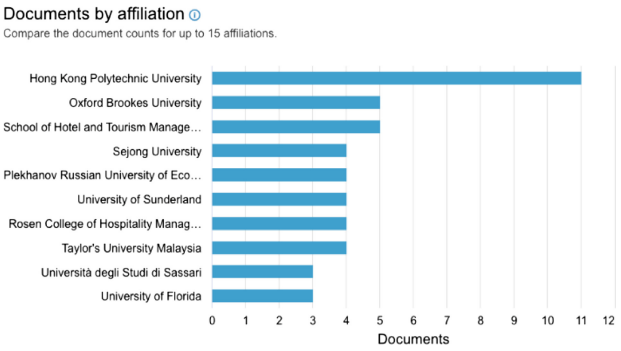

Fig. 6. Documents by affiliation

Figure 6 above displays the number of documents by affiliation. Based on the results of analysis from the Scopus database, it was found that Hong Kong Polytechnic University had the highest number of documents with 11 documents, then Oxford Brookes University and The Hong Kong Polytechnic University School of Hotel and Tourism Management with 5 documents each. As for the other affiliation, it has an average of 4 documents and 3 documents. Table 5 as follow describes the list of top 20 cited articles in the related field.

Table 5. Top 20 cited articles

Citation	Authors	Title	Year	Journal Name	Publisher
792	D. Leung, R. Law, H. van Hoof, D. Buhalis	Social Media in Tourism and Hospitality: A Literature Review	2013	Journal of Travel and Tourism Marketing	Taylor and Francis
136	G. Abrate, G. Viglia	Strategic and tactical price decisions in hotel revenue management	2016	Tourism Management	Elsevier
115	L. Kwok, K.L. Xie, T. Richards	Thematic framework of online review research: A systematic analysis of contemporary literature on seven major hospitality and tourism journals	2017	International Journal of Contemporary Hospitality Management	Emerald

(*continued*)

Table 5. (*continued*)

Citation	Authors	Title	Year	Journal Name	Publisher
95	E. Varkaris, B. Neuhofer	The influence of social media on the consumers' hotel decision journey	2017	Journal of Hospitality and Tourism Technology	Emerald
92	M. Singal	How is the hospitality and tourism industry different? An empirical test of some structural characteristics	2015	International Journal of Hospitality Management	Elsevier
90	F. Altuntas, M.S. Gok	The effect of COVID-19 pandemic on domestic tourism: A DEMATEL method analysis on quarantine decisions	2021	International Journal of Hospitality Management	Elsevier
77	S. Ham, H. Han	Role of Perceived Fit With Hotels' Green Practices in the Formation of Customer Loyalty: Impact of Environmental Concerns	2013	Asia Pacific Journal of Tourism Research	Taylor and Francis
65	H. Han, J. Hwang	Multi-dimensions of the perceived benefits in a medical hotel and their roles in international travelers' decision-making process	2013	International Journal of Hospitality Management	Elsevier
55	N. Pappas	Hotel decision-making during multiple crises: A chaordic perspective	2018	Tourism Management	Elsevier

(*continued*)

Table 5. (*continued*)

Citation	Authors	Title	Year	Journal Name	Publisher
51	H.-F. Luoh, S.-H. Tsaur, Y.-Y. Pliers	Empowering employees: Job standardization and innovative behavior	2014	International Journal of Contemporary Hospitality Management	Emerald
50	M. Mariani, M. Ek Styven, J.K. Ayeh	Using Facebook for travel decision-making: an international study of antecedents	2019	International Journal of Contemporary Hospitality Management	Emerald
47	B. Liu, L. Pennington-Gray	Bed bugs bite the hospitality industry? A framing analysis of bed bug news coverage	2015	Tourism Management	Elsevier
44	G. McCartney, A. McCartney	Rise of the machines: towards a conceptual service-robot research framework for the hospitality and tourism industry	2020	International Journal of Contemporary Hospitality Management	Emerald
44	I.P. Soler, G. Fond	Hedonic price models with geographically weighted regression: An application to hospitality	2018	Journal of Destination Marketing and Management	Elsevier
44	L. Parte-Esteban, P. Alberca-Oliver	Determinants of technical efficiency in the Spanish hotel industry: regional and corporate performance factors	2015	Current Issues in Tourism	Routledge
43	N. Stylos, J. Zwiegelaar, D. Buhalis	Big data empowered agility for dynamic, volatile, and time-sensitive service industries: the case of tourism sector	2021	International Journal of Contemporary Hospitality Management	Emerald

(*continued*)

Table 5. (*continued*)

Citation	Authors	Title	Year	Journal Name	Publisher
43	A. Farmaki	Tourism and hospitality internships: A prologue to career intentions?	2018	Journal of Hospitality, Leisure, Sport and Tourism Education	Elsevier
42	M. Peters, A. Kallmuenzer, D. Buhalis	Hospitality entrepreneurs managing quality of life and business growth	2019	Current Issues in Tourism	Routledge
40	M. Guix, M.J. Bonilla-Priego, X. Fonts	The process of sustainability reporting in international hotel groups: an analysis of stakeholder inclusiveness, materiality and responsiveness	2018	Journal of Sustainable Tourism	Routledge
38	T. Zhang, Z.A. Shaikh, A.V. Yumashev, M. ChÅ'ad	Applied model of E-learning in the framework of education for sustainable development	2020	Sustainability (Switzerland)	MDPI

Table 5 presents a list of the top 20 articles cited from various related fields. The document created by Leung, *et al*. in the Journal of Travel and Tourism Marketing published in 2013 by Taylor and Francis, with the title "Social Media in Tourism and Hospitality: A Literature Review" is the document with the highest number of citations, up to792 with a number of information about Content analysis on the articles was analyzed from the point of view of consumers and suppliers, and found that consumer-centered studies generally focused on the use and impact of social media in the research phase of travelers' travel planning process. Meanwhile, the least citation i.e., 38 citations were obtained with the title "Applied model of E-learning in the framework of education for sustainable development" which was written by Zhang, *et al*. published in 2020 by Sustainability (Switzerland) MDPI. Table 6 as follow describes the top five publisher on the related field.

Table 6. Top five publishers

No	Publisher	Number of Articles	Percentage
1	Emerald	43	32
2	Elsevier	37	28
3	Routledge	24	18
4	Taylor and Francis	15	11
5	Springer	14	11
		133	100%

In Table 6, the top publisher was Emerald with the total articles 43 with a percentage of 32%, and in the last place with 14 articles or 11% is achieved by Springer publisher from the total number of articles as many as 133 published documents. Table 7 as follow describes the top five journals on the related field.

Table 7. Top five journals ranking

No	Journal Name	Number of Articles	Percentage
1	International Journal of Contemporary Hospitality Management	16	33
2	International Journal of Hospitality Management	11	22
3	Sustainability (Switzerland)	9	18
4	Tourism Management	7	14
5	Current Issues in Tourism	6	12
		49	100%

From Table 7 above, it is stated that the International Journal of Contemporary Hospitality Management has 16 publications with a percentage of 33% and the last number of publications is in the journal Current Issues in Tourism with a percentage of 12% with 6 articles from a total of 49 articles.

3.2 Visualization Topics Use VoS Viewer

Figure 7 below shows visualization of topic areas using network visualization from VoS Viewer.

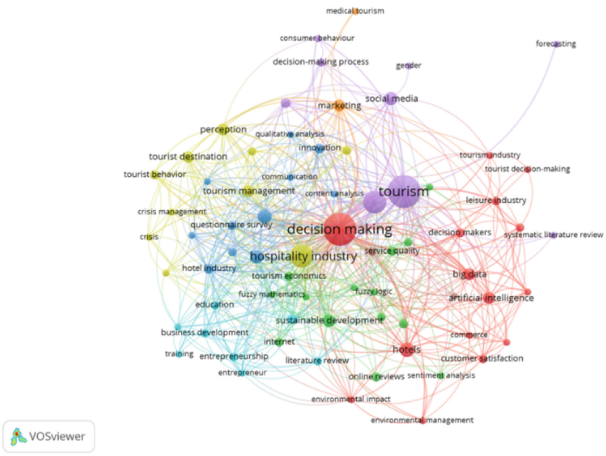

Fig. 7. Visualization topic area using network visualization (Color figure online)

From Fig. 7 above, 8 clusters with different node colors are formed. The number of items obtained from mapping images with visualization of the topic area are described by colors as follows:

a. Red color contains 15 items: Decision making, Tourism Industry, Tourism decision-making, Leisure Industry, Decision Makers, Systematic, Big Data, Artificial Intelligence, Commerce, Customer Satisfaction, Hotels, and so on.
b. Green color contains 14 items: Service Quality, Fuzzy Logic, Tourism Economics, Fuzzy Mathematics, Sustainable Development, Internet, Sentiment Analysis, Online Reviews, and so on.
c. Blue color contains 11 items: Qualitative Analysis, Innovation, Communication, Content Analysis, Questionnaire Survey, Hotel Industry, and so on.
d. Yellow color contains 10 items: Perception, Tourist Destination, Tourist Behavior, Crisis Management, Crisis, Tourism Management, and so on.
e. Purple color contains 9 items: Tourism, social media, Consumer Behavior, Decision Making Process, Forecasting, and so on.
f. Light Blue color contains 8 items: Education, Business, Development, Training, Entrepreneurship, Entrepreneur, Literature Review, and so on.
g. Orange color contains 2 items: Marketing and Medical Tourism.
h. Chocolate color contains 2 items: Investment and Forecasting

Figure 8 as follow describes the visualization topic area using overlay visualization from Vos Viewer.

In Fig. 8, the application of this mapping is based on the color of the item. As seen in the dark color indicator with a dark blue base owned in 2018 and 2019 where the color shows the darker the color produced, the longer the time presented. The dark colors include “Marketing”, “Questionnaire survey”, and “Education”. Then in 2019 there are “Decision Making”, “Hotels”, and “Hospitality Industry”. Meanwhile, in 2020 and 2021 and above, the colors tend to be brighter, namely “Tourism”, “Hotel Industry”,

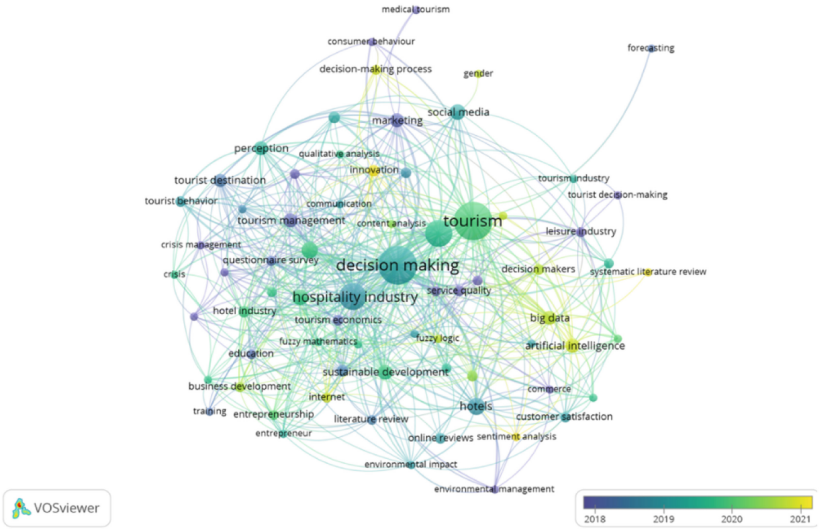

Fig. 8. Visualization topic area using overlay visualization (Color figure online)

and "Entrepreneur". Then continued for the latest years, namely "Artificial Intelligence", "Sentiment Analysis" and "Innovation".



Fig. 9. Visualization topic area using density visualization (Color figure online)

Figure 9 as above describes the visualization topic area using density visualization from Vos Viewer. It presents an overview of the topic area of density visualization. In this case it is mentioned that the presented indicator with a bright color. It is intended that

items with bright colors are interpreted by the number of topics taken as research material and have a widely used level of density. As for the level of density that is quite a little given symbol with the provision of color tends to be darker. Some of the items that researchers still use include "Tourism", "Decision Making", and "Hospitality Industry". As for items rarely used by researchers include "Environmental Management", "Forecasting", and "Gender".

3.3 Author and Relationship Among Authors

Figure 10 below depicts overlay visualization of the author and co-author using VoS Viewer.

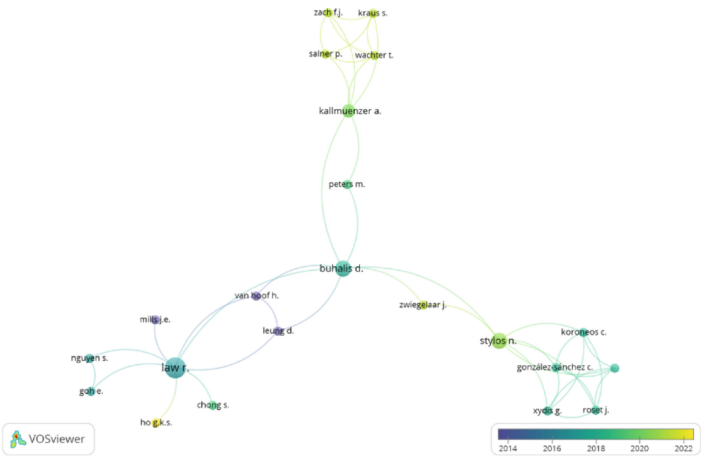

Fig. 10. Visualization of the author and co-author overlay

In Fig. 10 above, it is a mapping of the author visualization and co-author overlay which is analyzed using Vos Viewer to get the shape of the author's visualization network. The color of the nodes on each author indicates the year of publication in the published journal, while the number of nodes indicates the number of documents uploaded and the size of the network connecting with other authors. Based on the results of the analysis in Fig. 10, there are four authors who have greater links than other authors, namely Law R with 8 links who published their writings on average in 2016, Buhalis D with 7 links with an average publication year in 2017, Stylos N 7 links with an average publication year of 2020. And Kallmuenzer A with 6 links that published their writing in 2020.

3.4 Research Locations and Research Domains

Figure 11 below depicts the network visualization of the author-based countries. Meanwhile, Table 8 below describes the number of documents along with the country of origin and with their respective research domain.

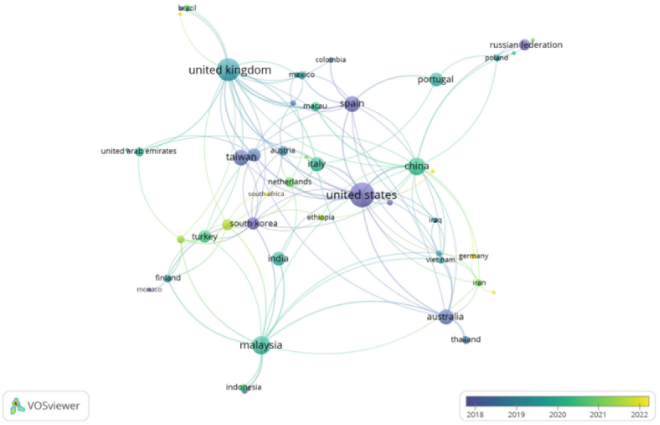

Fig. 11. Visualization of the country

Table 8. Top 10 Country of location research and research domain

No	Country	Number of Articles	Research domain
1	United States	36	Decision making, tourism, hospitality industry, hospitality, social media, entrepreneurship, machine learning
2	United Kingdom	30	Decision making, tourism, hospitality, social media, hospitality industry, consumption behavior, sustainability
3	Malaysia	19	Decision making, tourism, hospitality, hospitality industry, machine learning, tourism development, tourist destination
4	China	18	Decision making, tourist destination, medical tourism, hospitality, tourism development, sustainability
5	Spain	14	Decision making, tourism, hospitality industry, hospitality, environmental management, hotel industry
6	Taiwan	14	Decision making, hospitality industry, social media, performance, sustainability, hotels
7	Australia	13	Decision making, social networking (online), tourism, affect-driven behavior
8	Italy	12	Decision making, hotels, hospitality industry, tourism development

(*continued*)

Table 8. (*continued*)

No	Country	Number of Articles	Research domain
9	India	11	Decision making, tourist destination, tourism, hospitality, social media
10	Portugal	11	Decision making, tourism, hospitality industry, customer satisfaction

Based on Table 8 above, a more complete explanation of the number of documents published based on research domains from various countries is obtained. Related to the previous picture, the country with the 36th most published documentation comes from the United States with research domain keywords "Decision making", "tourism", "hospitality industry", "hospitality", "social media", "entrepreneurship", "machine learning". Then followed by neighboring countries, namely the United Kingdom with 30 documents, Malaysia 19 documents, China with 18 documents, Spain and Taiwan with 14 documents or with the acquisition of the same documents, Australia with 13 documents, Italy with 12 documents, and with the last position being in India along with Portugal having 11 documents published. The most widely used domains in Table 8 are "Decision Making", "Tourism", and "Hospitality Industry".

4 Conclusion and Suggestions

We have successfully presented a bibliometric analysis on decision making in tourism and hospitality from 2013 to 2023. Our bibliometric study has shown in helping researchers to determine the characteristics of scientific production, including what, who, how, how, and where, it was published. Our bibliometric study contributes theoretically in determining the characteristics and evolution of scientific publication in the related field. Therefore, the results of this work can be a guideline for future researchers who are researching new topics in decision making in tourism and hospitality. Finally, the most found topics "Decision Making", "Tourism", and "Hospitality Industry" can help the researchers to come up with alternative ideas of researches.

Since the coverage of Scopus database is larger than that ISI WoS database, thus it is recommended for future work to explore the WoS database which contain mostly reputable publication in doing bibliometric analysis for the same topic. For more comparison results involving different sources, it is also suggested to explore other databases such as Google, EBSCO, and ProQuest.

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