



Covid-19 and Destination Marketing: A Science Mapping and Descriptive Analysis

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ABSTRACT

One of the sectors worst affected by the pandemic is the tourism sector. The present study conducted a bibliometric analysis on the theme 'COVID-19 and destination marketing'. It was found that China, Spain, and the USA have conducted maximum research on the theme above. According to Bradford's law, Sustainability (Switzerland), the Journal of Destination Marketing and Management, and Current Issues in Tourism were the top journals publishing papers related to the theme. Kin J was the most productive author. Journal clustering revealed the formation of three clusters namely tourism, health /environmental, and technical clusters. Amid the pandemic, extensive research was conducted on tourism destinations, development, and perception. Researchers may shift their focus from their themes. Human rights and tourism were COVID-19's driving themes. These issues have been thoroughly explored in the literature and may direct researchers' attention toward a thorough assessment of the literature. Tourism, climate change, and the leisure industry were grouped under a specific theme for COVID-19. To characterize COVID-19-induced destination marketing and its behaviors, more research is needed to comprehend the intricacies of this theme. Ecotourism and sustainable tourism are promising areas for future research.

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Introduction

COVID-19 has had a significant impact on the global economy (Shekhar, 2021). For the time being, the COVID-19 pandemic is primarily a health and humanitarian disaster, with businesses quickly adapting to the new change. While the crisis is unfolding, leaders are thinking about what will happen next. Not the 'normal.' We no longer have access to normalcy, and 'business as normal' is even less so. Complexity, unpredictability, and potential risks are emerging new realities. Organizations are now quickly adapting and becoming resilient and agile to succeed.

During the pandemic, governments have incorporated lockdowns and travel restrictions from time to time to protect the population. (Shekhar & Jose, 2021). Tourists were also reluctant to undertake foreign travel. This has severely affected the tourism business (Abdullah et al., 2020). Globally, compared to previous years, in 2020, foreign tourists' visits decreased to 74%. Tourist inflow has reduced to 80-90 percent in numerous developing countries as well. Even though there has been a significant improvement for several destinations in late 2021, mainly national and local travel, the year 2021 has been a nightmare for most tourist places. Compared to pre-pandemic levels, the global average has dropped by 88 percent (Neuburger & Egger, 2021). The indirect repercussions of this downturn were more damaging, as people and capital were idled, and a slowdown in economic growth for intermediary goods and services had a negative upstream effect on numerous industries.

The tourism, travel, and hospitality segment are the worst affector sectors due to the COVID-19 pandemic (Duro et al., 2021). The outbreak had a significant adverse impression on tourism and jobs as well. Supporting tourism businesses have faced significant financial and employment losses in the past two years (Deb & Nafi, 2021). Fear, menace, frustration, and a loss of confidence in tourism entrepreneurs surfaced as negative repercussions. This has resulted in changes in visitor behaviour and motivation to travel in the coming years (Tahiri et al., 2021). The COVID-19 outbreak has become a health and financial disaster that has wreaked havoc on underdeveloped countries, particularly those that rely heavily on tourism. The pandemic of COVID-19 has had a significant impact on travel risk and management views too. The perception of travel risk and management has been linked to managing risk, delivery of services, transportation patterns, channels of distribution, avoiding crowded places, and hygiene and safety (Magano et al., 2021).

Tourism specialists predict that arrival rates will not recover to pre-COVID levels until 2023 or after that. Even with the ease of restrictions, according to World Tourism Organisation (UNWTO), only 60% of pre-pandemic international tourism have restored (UNWTO, 2022). Due to rigorous border controls in many nations, travel in the Asia-Pacific region has lagged behind that of North America and Europe. As the COVID-19 quarantine and entrance restrictions for the region have been lifted, travelers are once again boarding airplanes. There has been a steady increase (27%) in night spending on European Union tourist accommodation. The highest increases in visitors were recorded in Greece, Spain, and Croatia last year, with an increase of more than 70% in the number of nights spent in tourist lodging. However, Travel to Slovakia, Latvia, and Austria all decreased, although by less than 18%. But when the number of visitor nights in 2021 and 2019 are contrasted, it becomes clear that certain nations dropped more than half of their reservations. The worst-hit countries were Latvia, Slovakia, Malta, and Hungary. On the other hand, Denmark and the Netherlands were the least impacted nations. Just under 20% fewer nights were spent in tourist lodging, according to their observations (Yeh, 2021). While tourism is steadily improving, it nevertheless faces several obstacles, including economic and geopolitical ones. Hence from a global perspective, experts believe that it may take another one or two years for the world to reach back to post COVID era concerning the tourism sector (Binggeli et al., 2020; Yeh, 2021; H. Zhang et al., 2021). Almost half of the experts polled expect a return to 2019 levels by 2024 or later. Experts expect the 2019 tourism levels to be restored by 2024. The UNWTO panel of experts polled that by 2024, a fast recovery is expected in Asia and the Pacific (58%). Half of the respondents projected that Europe may witness a recovery by 2023 and the middle east by the end of 2022 (GTP, 2021). The critical roadblocks are travel restrictions, sluggish virus containment, low traveler confidence, and a weak economic environment (Miao et al., 2021). However, despite the challenges posed by the coronavirus, the tourism and hospitality industries are optimistic and preparing for a quick recovery and a return to normalcy. Countries are deciding on measures to encourage tourism while adhering to new standards (Awad-Núñez et al., 2021; Bhati et al., 2021).

To combat the effects of this pandemic on the tourism industry, having the ability to predict future arrivals has become essential. Determining reasonable strategies to create a secure tourism environment post-COVID-19 demands crafting a sustainable tourist market, expanding and improving the tourist industry with high-quality products, building a strong brand, and so on. Destination marketers may create aspirations for the consumers by highlighting the COVID protocols maintained in their tour packages, emphasizing corporate social responsibility, and building empathy in consumers. They may also support morally and financially (discount packages) those consumers who require them (Utkarsh & Sigala, 2021). COVID-19 has increased the usage of mobile phones. Marketers may tap this platform into the new normal to formulate marketing strategies for consumers. Destination marketers may also partner with travel guides, and online travel companies as consumers look into them for planning their next travel (Matiza, 2020). Although the pandemic has delayed the tourism industry, consumers who are sick of staring at the exact four walls are starting to think about vacations once more and destination marketers may look forward to tapping these opportunities strategically.

It is evident from the above discussions that COVID-19 has taken a different direction for the tourism sector. A bibliometric analysis helps to cluster the fragmented literature on COVID-19 and destination marketing. The research output will throw light on the tourism trends and patterns amidst the pandemic and may help destination marketers and academic practitioners to devise strategies in tune with the pandemic. The objective of the study was to collate the global trends in the production of articles on COVID-19 and destination marketing, examine the information garnered from these patterns, and suggest the future direction in the chosen theme of the study. The researcher has used an R-based software named Bibioshiny to execute the analysis. 917 documents were retrieved from the Scopus database using a microdomain-level search. Later, the interpretation of the data was carried out using descriptive and network analysis.

COVID-19 and destination marketing

The marketing activities performed to encourage the destination spots nationally and globally, create a good image in the customers' minds, position the destination, and win an edge over the competitors are known as destination marketing (Pike & Page, 2014). Destination Marketing provides a thorough and integrated review of the fundamental issues and limits that destination marketing organizations (DMOs) face and how destination marketing may be planned, implemented, and assessed to improve destination competitiveness (Galindo Henríquez, 2018). Destination marketing has been researched under a variety of perspectives, such as destination marketing and Web 2 (Mariani, 2020), destination marketing and sustainability (Sharmin et al., 2021), the impact of celebrity endorsement in destination marketing (Roy et al., 2021), the importance of mega-events in destination branding (Wang & Jin, 2019), virtual technology in destination marketing (Marasco et al., 2018) and so on. These researches emphasize the importance of destination branding in building a business.

The use of technology was found to have a good impact on destination marketing during COVID-19. The internet promoted the interaction between various tourism enterprises and consumers during the pandemic. Digital media particularly social media became the major source of the promoter for various digital marketers (Chuchu, 2021a). During the lockdown, destination marketers spread hope and motivation, empathized with the consumers, and urged them to stay indoors. The marketers promised “better coming days”. The focus of the marketers was to build brand equity and loyalty. Campaigns such as “dream now, travel later” were aimed to hit the consumer's memory so that they visited their favorite destination after the lockdown. Destination marketers even resorted to social marketing techniques emphasizing the ‘brotherhood of man’ by assisting governments, and hospitals in distributing masks, hand rubs, PPE kits, and so on (Ketter & Avraham, 2021). As travel restrictions hindered visitors from visiting their favorite destinations, destination marketers also exploited the consumers through nostalgic moments. Countries such as France and Spain posted past videos of their tourist holidaying at their favorite destination (Ketter & Avraham, 2021). After the lockdown, the marketers happily welcomed their visitors through vigorous advertisements. “COVID-19 safe destinations” was the essence of these advertisements (Chuchu, 2021b). Literature also supports the importance of using destination image and imagery (Zhang et al., 2021), fostering destination loyalty

using brand management strategies (Huerta-Álvarez et al., 2020), the potential of virtual tourism (Lu et al., 2022) in destination marketing during COVID-19 and so on.

COVID-19 has disrupted the leisure and hospitality sector the most. Consumers' cancellation of tour packages, refunds of flights, and accommodation have put the leisure industry in crisis. COVID has also caused the tourism industry to make changes, one of which was the greater use of technology. Marketers extensively use social media to promote their tourist destinations during this pandemic (Swarna Abirami, 2020; Wahyuni et al., 2021). Even though the war against COVID-19 is becoming less aggressive and restrictions are being eased, it is clear that there will be long-term effects on traveler behaviour (J. Liu et al., 2022) and social media use (Wong et al., 2021). There is also a vast amount of literature regarding tourist perceptions of COVID (Lopes et al., 2021; Perić et al., 2021; Rahman et al., 2021; Tilaki et al., 2021). Destination marketers have used these findings in shaping their COVID -19 tourism packages.

Bibliometric analysis

Bibliometric analysis is a statistical evaluation of published scientific papers, books, or book chapters, and it is a valuable method of determining the impact of publishing in the scientific community (Donthu et al., 2021). Bibliometric analyses have been carried out in different domains such as financial literacy (Goyal & Kumar, 2021), blockchain (Guo et al., 2021), bioeconomy (Mougenot & Doussoulin, 2021), infectious diseases (Yang et al., 2020), and so on. Recently bibliometric analyses have been carried out in a tourism journal (Leong et al., 2021), halal tourism (Hidayat et al., 2021), sports tourism (Jiménez-García et al., 2020), food tourism (Naruetharadhol & Gebsumbut, 2020) too. However, there has not been any bibliometric research on COVID-19 and destination marketing. Hence in this backdrop, examining the available research to aid the investigation in COVID-19 and destination marketing becomes crucial. Thus, this study used bibliometric analysis tools to review the descriptive and network analysis of the fragmented literature on COVID-19 and destination marketing. The research questions (Zupic & Čater, 2015) used for the study are as follows.

1. What is the worldwide tendency in logical production on COVID-19 and destination marketing?
2. What kind of information may be gleaned from this pattern?
3. What is the research's future direction in this field?

To uncover the research questions, the following research objectives were laid down.

- a. To provide bibliometric visualization of 915 documents retrieved from the Scopus database.
- b. To use Biblioshiny to visualize the pattern of quantitative data selected from various articles, sources, and authors
- c. To understand the conceptual, intellectual, and social structure of the theme 'COVID-19 and destination marketing.'

Methodology

The study used the workflow (Figure:1) developed by Aria & Cuccurullo (2017) to conduct bibliometric analysis. The workflow used science mapping tools developed by (Börner et al., 2003; Cobo et al., 2011b). The present study also used the five steps to conduct bibliometric analysis as described by (Zupic & Čater, 2015). As per these authors, bibliometric analysis is carried out in five stages: design, data collection, analysis, visualization, and interpretation. The first stage identified the three research questions for the present study and recognized 'COVID-19' and 'destination marketing' as the main keywords for data retrieval from the Scopus database. The keyword approach is effective for bibliometric analysis as it fits expert selection and discloses the domain's research expertise in greater depth. Keywords can be selected in two ways. One selection is high-level keywords. The second selection uses essential keywords in tune with the theme of the analysis, which will help to explore huge search spheres and their connections at the micro-level (Chen & Xiao, 2016). The study used the second approach. A search operation with the keyword 'destination marketing' extracted 13,723 articles from the Scopus database. To visualize the pattern with regard to the present study, the researcher narrowed down the search to a microdomain level as 'COVID-19' AND 'Destination marketing.' This fetched 917 documents from the Scopus database. The researcher focused on all subject areas (specialist and generalist journals in Scopus). This helped to understand the scientific depth of the chosen area of study (Massaro et al., 2016). The 917 documents so obtained from the

Scopus database were used for final data analysis. The data was retrieved in November 2021. The Scopus database was selected for the study because of its nature of the vast amount of multidisciplinary journals and quality papers (Oakleaf, 2009). In the second stage, Biblioshiny (Aria & Cuccurullo, 2017), an open-source R-based package, was used to conduct the data analysis. The data collection stage extracted .bib file to execute the third step. Descriptive and network analysis (data visualization) was carried out in the third and fourth steps, i.e., the data analysis and visualization stage. Descriptive statistics involved the analysis of various sources, authors, and documents. Network analysis executed analysis on conceptual structure, social structure, and intellectual structure. In step five, the interpretation of the data analysis was carried out.

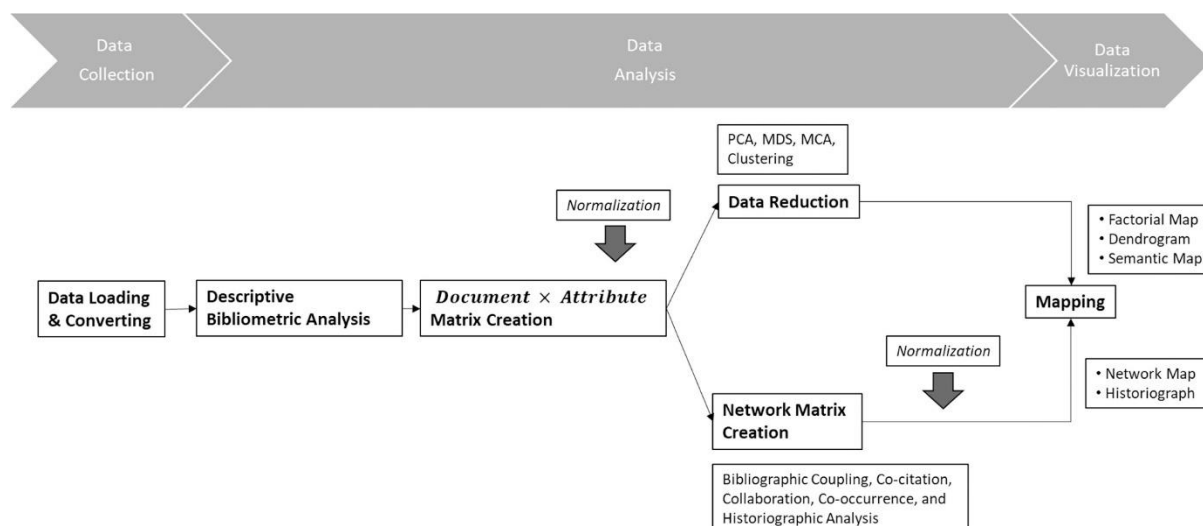


Figure 1. Research framework Adapted from (Aria & Cuccurullo, 2017)

Results

Descriptive Analysis

Dataset

As COVID-19 outbreak was first reported in December 2019 in Wuhan (M. Liu et al., 2020), the period of published sources was found to fall between 2020 and 2022 (articles accepted and ahead of schedule). The extracted papers from the Scopus database covered 288 sources which included articles in journals and books. 915 documents were retrieved from these sources, of which articles (813), book (3), book chapter (11), conference paper (29), editorial (4), letter (5), note (6), and review (34). Average years from publication (0.107), average citations per document (3.711), average citations per year per document (2.717), and references (72768) were also observed. Keyword plus (Gordon, 2012), which describes the total amount of expressions that most commonly comes in the heading of a paper's references, was found to be 1457. The author's keywords (W. Lu et al., 2020), which describe the number of keywords used by various authors, were 3138. There were 2504 authors, 3052 author search appearances, 71 single-authored documents, and 2437 multi-authored documents. Documents per author and authors per document were found to be 0.365 and 2.74, respectively. Co-authors per document (3.34) and Collaboration index (Stallings et al., 2013) of 2.89 were also reported.

Three field plot

Three field plots (Riehmman et al., 2005) or Sankey plots are used to show the relationship between three fields, with the size of the part corresponding to the node's value. A three-field plot (Figure:2) with the left field as authors, the middle field as keyword plus, and the right field as sources were configured in Biblioshiny.

Major journals and authors sourced main keywords like COVID-19, tourist destination, tourism, perception, development, etc. All eight influential journals covered various dimensions (with different keywords) of destination marketing during COVID-19.

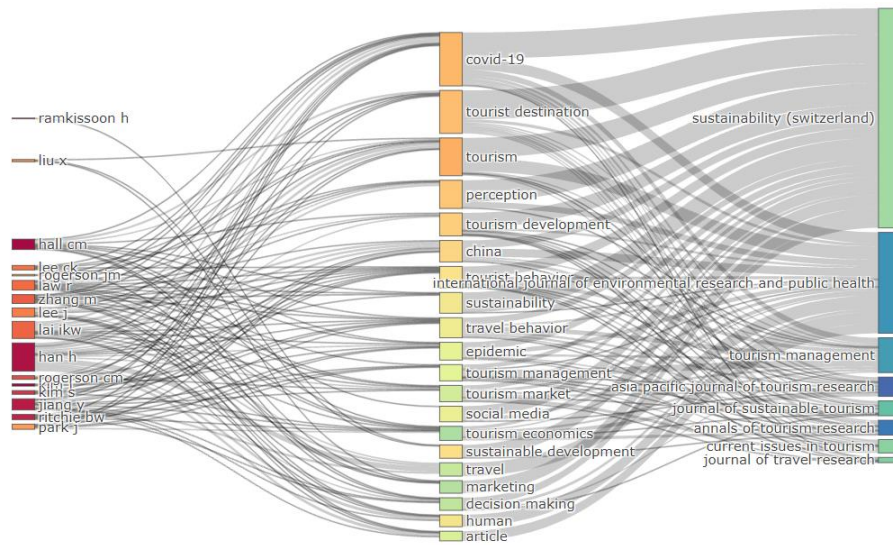


Figure 2. Three Field Plot

Sources

The most relevant sources were sustainability (Switzerland), the Journal of Destination Marketing and Management, Current Issues in Tourism, the Journal of Travel Research, and the International Journal of Hospitality Management (Figure:3). Top cited journals (most local cited sources from reference list) indicated Tourism Management at the top of the list, followed by Annals of Tourism Research and Journal of Travel Research (Figure:4). A closer look at the journals indicated that most of the journals publishing COVID-19 related to destination marketing were in tourism journals. However, Psychology and Sociology journals like Societies (published by MDPI) also accepted papers on destination marketing. Bradford’s law (Banateppanavar et al., 2014) which groups the journals into three zones, indicated seven journals (Figure:5) in zone 1. The journals falling in this zone were highly influential. Sustainability (Switzerland) was ranked no.1, followed by the Journal of Destination Marketing and Management and Current Issues in Tourism. The remaining journals were in Zone 2 and Zone 3. Source local impact based on *h* index (Poirrier et al., 2021) indicated Journal of Destination Marketing and Management and Sustainability (Switzerland) has the highest *h* index (Figure:6). Source growth (Figure:7) which means the development of the journals throughout the study, indicated Sustainability (Switzerland) having the maximum growth rate followed by Journal of Destination Marketing and Management and Current Issues in Tourism. All the journals were steadily growing in publications from 2020 to 2021.

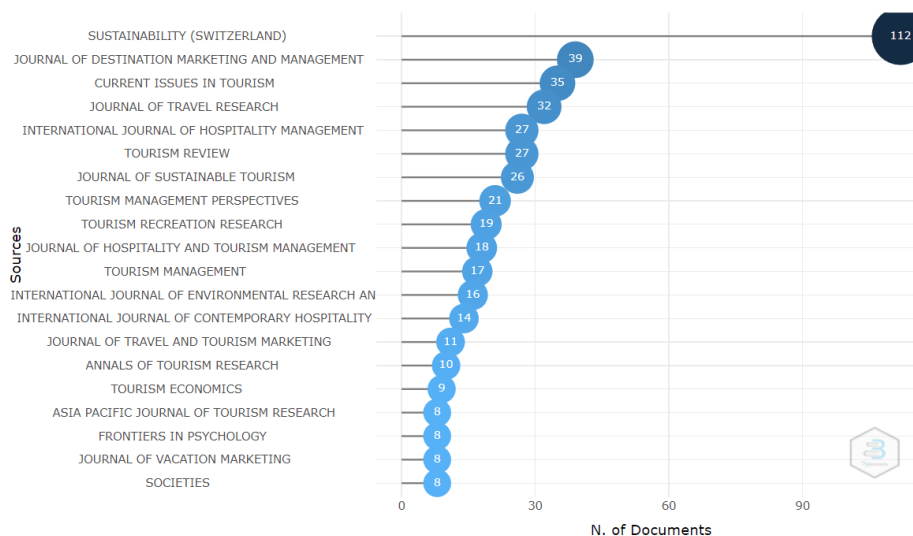


Figure 3. Most relevant sources

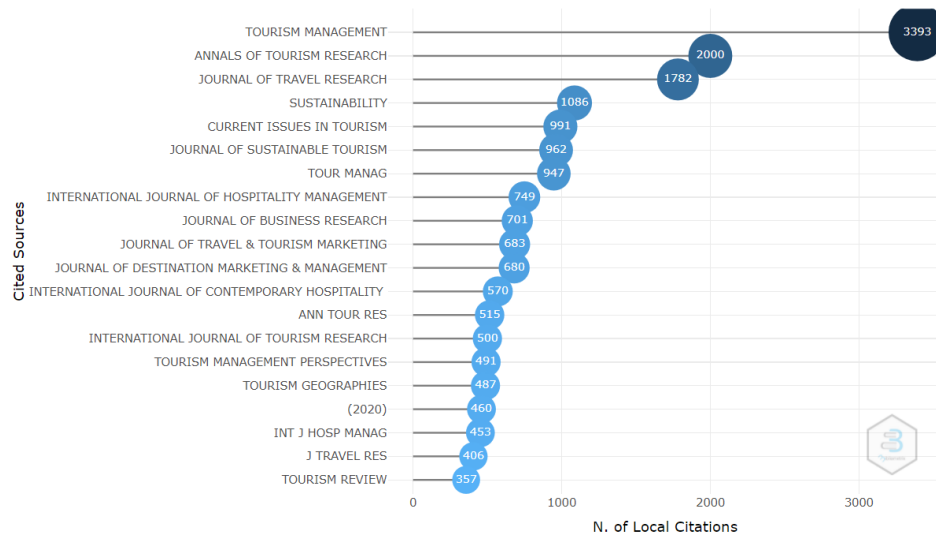


Figure 4. Most local cited sources (from reference list)

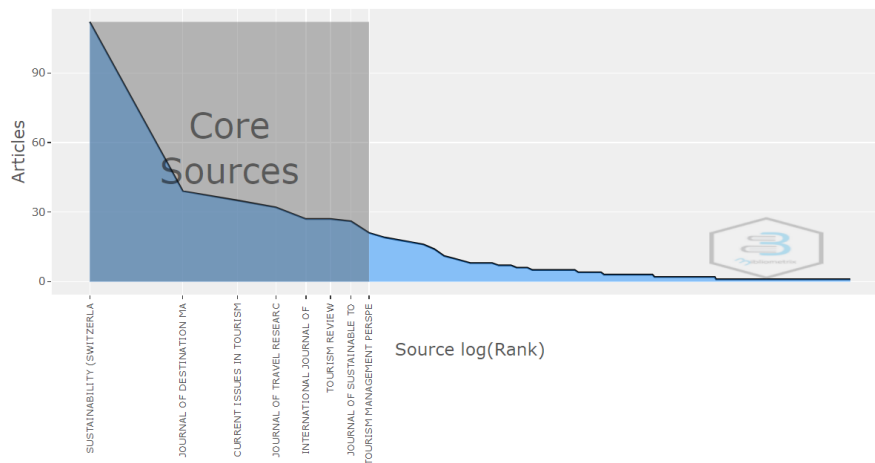


Figure 5. Source clustering through Bradford's law

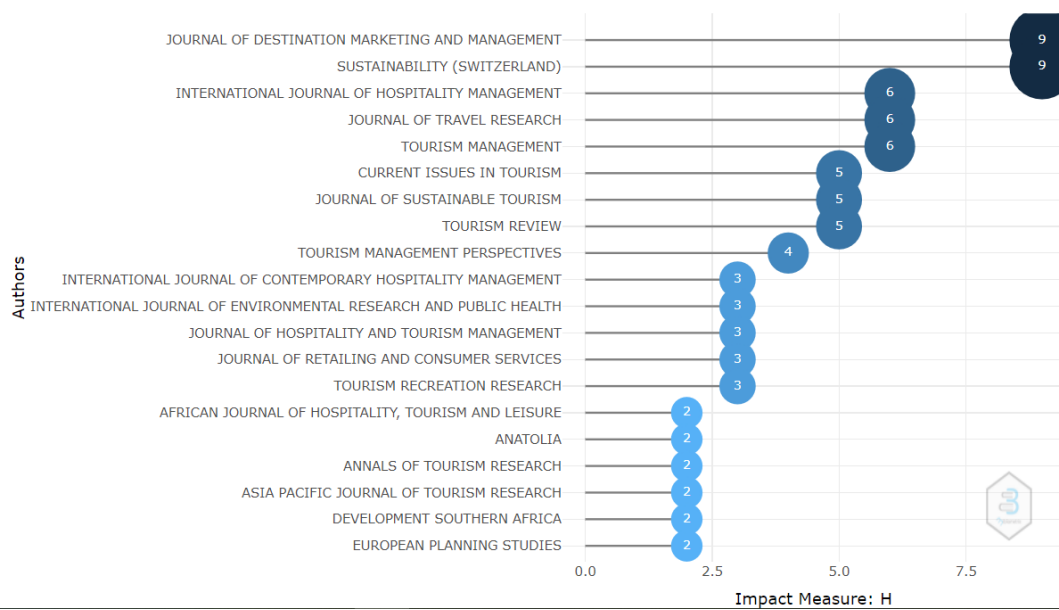


Figure 6. Source local impact by h index

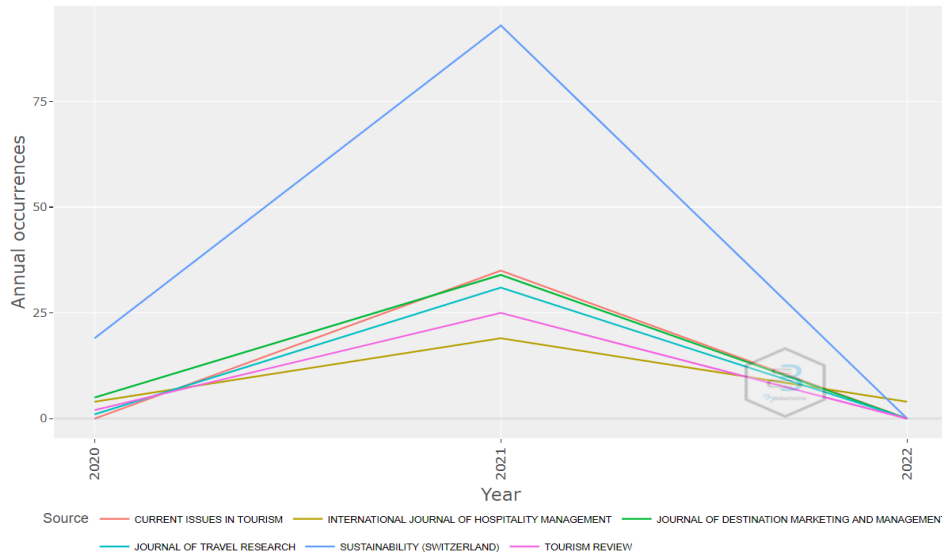


Figure 7. Source growth (top journals)

Authors

Kim J was the most productive author followed by Hall CM (Figure:8). Kim and Hall had the highest *h* index (Figure:9) as well. Examining the most locally cited authors, Dinh SU T and Nguyen CP topped the spot with 158 citations. This was followed by Ferreresbonfill JB, Molinertena M, Monferrertirado D, and Rodrguezartola RM, each having 44 citations. Author productivity supported Lotka’s law (Kumar, 2020). The proportion of authors who had written one document on ‘COVID-19 and destination marketing’ dropped from 87% to 8 % when they had written two papers on the theme (Table 1).

Table 1. Productivity of authors using Lotka’s law

Documents written	N. of Authors	Proportion of Authors
1	2180	0.871
2	205	0.082
3	67	0.027
4	28	0.011
5	12	0.005
6	5	0.002
7	1	0
8	4	0.002
9	1	0
11	1	0

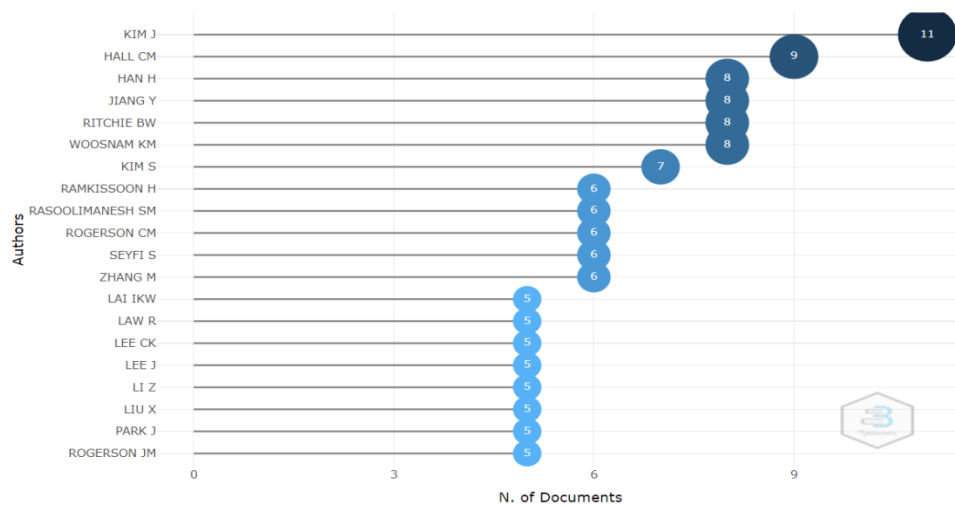


Figure 8. Most relevant authors

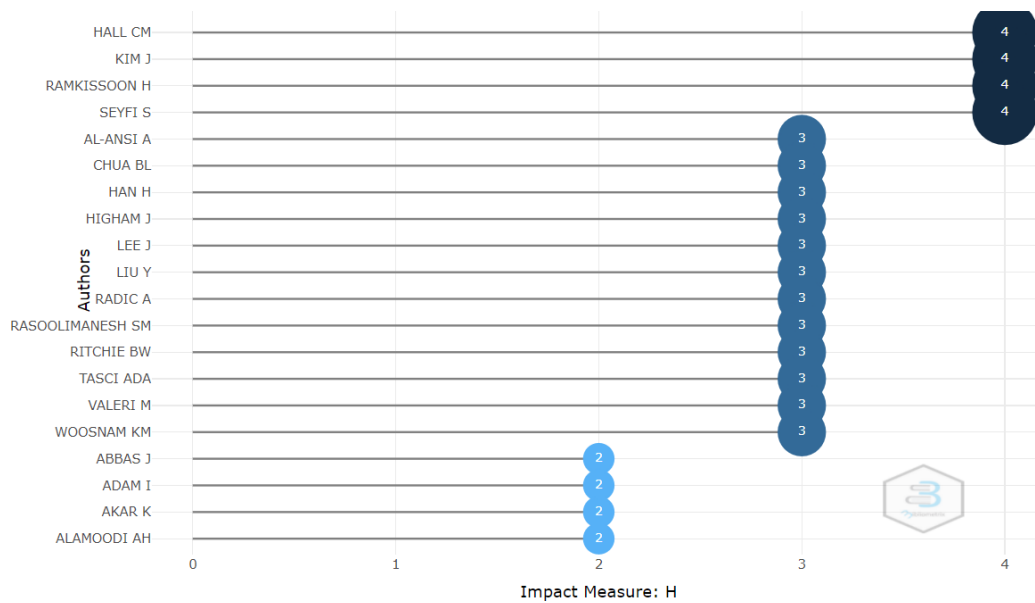


Figure 9. Author local impact by h index

Affiliations and countries

The University of Johannesburg was the most relevant affiliation with 43 articles, followed by Hong Kong Polytechnic University with 33 articles (Table:2). China retained the top spot in scientific production followed by Spain and USA (Table:3). Norway was the highest cited country, followed by China and Spain (Table:4). China had the maximum single country publications. On the contrary, countries like the UK, New Zealand, Hong Kong, etc., had more multiple-country publications (Figure: 10). A closer look at affiliations, country scientific production, and citations indicated that major continents Asia, Europe, and America were actively involved in publishing articles related to the theme. However, it was also observed that there weren't many publications from African countries.

Table 2. Top 10 affiliations

Affiliations	Articles
University of Johannesburg	43
The Hong Kong Polytechnic University	33
Sun Yat-Sen University	18
University of Central Florida	17
University of Surrey	17
Universiti Sains Malaysia	16
Sejong University	15
Kyung Hee University	14
University of Canterbury	14
Griffith University	13

Table 3. Top 10 countries' scientific production

Region	Frequency
China	309
Spain	200
USA	152
UK	121
Australia	109
Italy	91
Portugal	89
Malaysia	88
South korea	80
South africa	68

Table 4. Top ten cited countries

Country	Total Citations	Average Article Citations
Norway	891	148.5
China	422	3.735
Denmark	187	93.5
Turkey	185	7.708
United Kingdom	154	4.278
USA	145	3.085
Spain	141	1.808
Korea	105	2.625
Australia	98	3.062
South africa	92	5.111

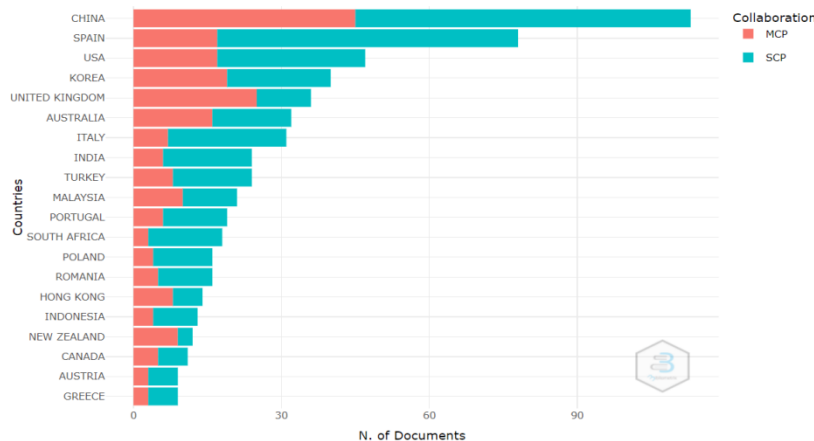


Figure 10. Corresponding author's country

MCP: Multiple Country Publications; SCP: Single Country Publications

Documents

Figures 11 and 12 represent the top globally and locally cited documents. Research work on pandemics, tourism, and global change by Gössling et al. (2020) was the top-cited work across the globe. This work was the top locally cited document as well. A critical discussion on tourism research concerning COVID-19 by Zenker & Kock (2020) was the second-highest, followed by work on the effect of lifestyle and travel of Chinese during the pandemic by Wen et al. (2021) was the third globally cited document. The second top locally cited document by Qiu et al. (2020) focused on examining the social cost associated with COVID-19 and tourism. The third top locally cited document was the work carried out by Zheng et al. (2021). This paper described the travelers' fear to travel amid COVID-19 and the role of self-protection, resilience, and coping mechanisms involved in this situation.

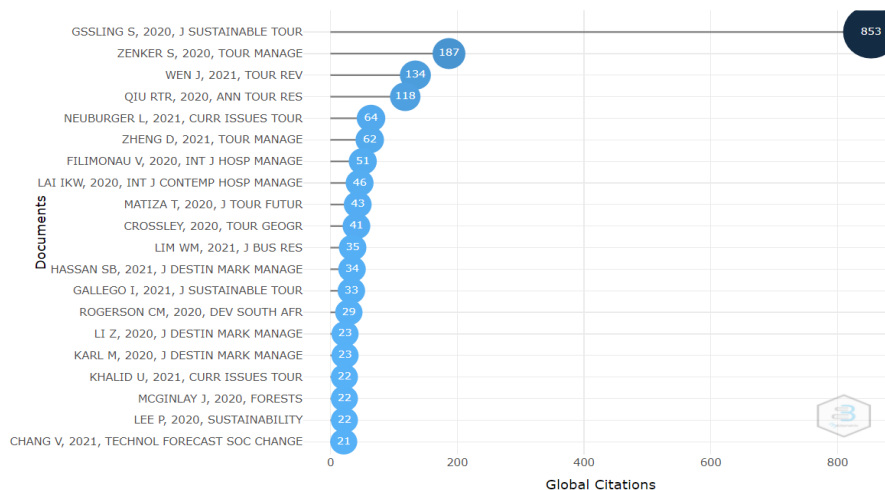


Figure 11. Top global cited documents

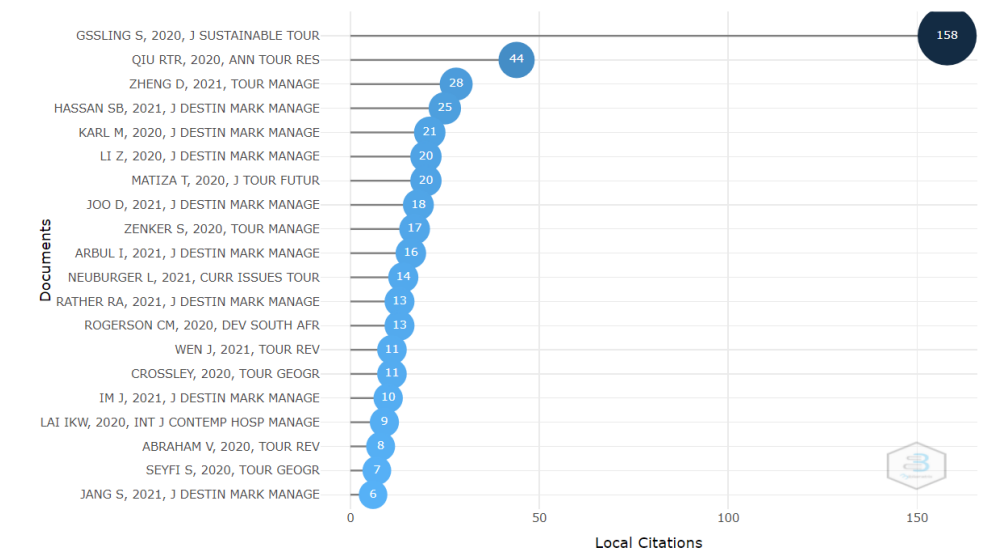


Figure 12. Top local cited documents

Words

An analysis of the keywords indicated tourism, COVID-19, tourist destination, perception, etc. at the top of the list. This was further supported by word cloud analysis (Figure:13). The size of the words in the word cloud is directly proportional to the number of occurrences of the words



Figure 13. Word Cloud

Visualization

The topic of destination marketing and COVID-19 has gathered momentum in publication since 2020. Data visualization is the process of converting large amounts of data and measurements into maps, charts, and other representations. The data visualization that accompanies makes it easier to identify and convey meaningful trends, anomalies, and new perspectives about data. The scientific mapping done through data visualization falls into the following sections: clustering map, conceptual structure, intellectual structure, and social structure (Aria & Cuccurullo, 2017).

Clustering

Clustering is the process of dividing a community or range of data items into many groups so that data types and sources in the same group are significantly more similar than data points in separate classes

(Caruso et al., 2021). To put it differently, the aim is to classify groups into clusters based on common traits. Journal coupling was carried out using a filter criterion which was a combination of keyword plus (words that appear frequently in an article's references), top cited journals (restricted to top 250), and minimum cluster frequency (number of journals in a cluster) of 3 (Figure:14). The most significant cluster was the tourism journal's cluster; the second cluster was journals publishing science, health, and environmental articles. The third cluster of journals was technical journals publishing telematics, informatics, and computing.

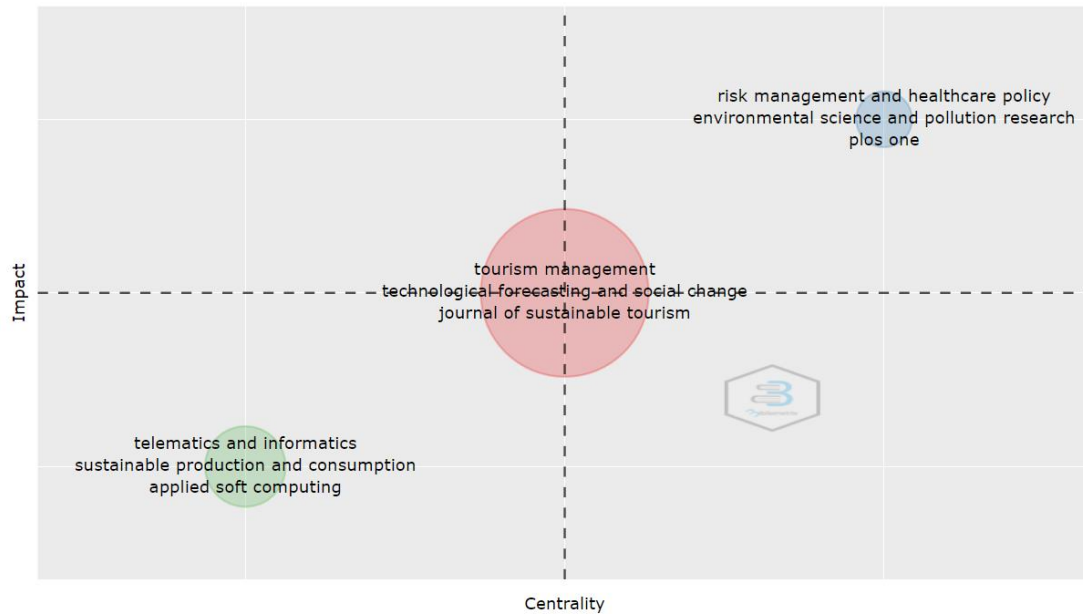


Figure 14. Journal clustering by coupling

Conceptual structure

The conceptual structure shows the interaction among various themes, areas, and trends using a co-concurrence network, thematic maps, and factorial analysis (Aria & Cuccurullo, 2017). A co-concurrence analysis (using keyword plus), which indicates the frequency of related variables, pointed out the formation of three clusters (Figure:15). The three colors pointed to three different groups. The distance (joining lines) between various nodes in the cluster pointed to relatedness. Words showed the vertex, and the size of the nodes was directly proportional to its occurrences. The red cluster was centered on tourism and related behavior and patterns. The blue cluster pointed to the impact of COVID-19 on the tourism market and economics. The green cluster pointed to the pandemic and the behavior of the gender regarding travel and tourism.

A factorial analysis (Figure:16 and 17) too indicated a similar pattern. Multiple correspondence analysis with keyword plus as the field formed two clusters (Figure:16). The first cluster (red) converged to COVID -19 tourism determinants. The second cluster (blue) pointed to COVID-19 and travel determinants about gender. The topic dendrogram (Figure:17) indicated the hierarchical clustering order and the interrelationship among the keywords created by hierarchical clustering. The dendrogram doesn't measure the perfect association among clusters. It provides an approximate number of clusters to facilitate further research (Andrews, 2003). Two clusters were identified in the dendrogram too. The dendrogram is an alternative representation of the multiple correspondence analysis shown in Figure 16. The first cluster (red) converged to COVID -19 tourism determinants. The second cluster (blue) pointed to COVID-19 and travel determinants about gender.

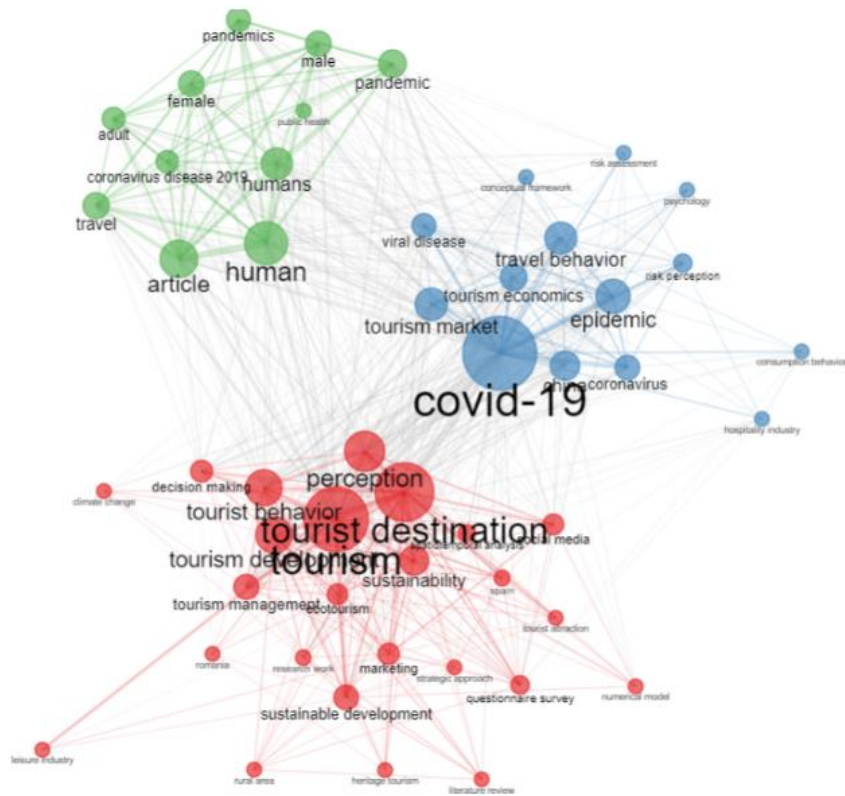


Figure 15. Co concurrence analysis

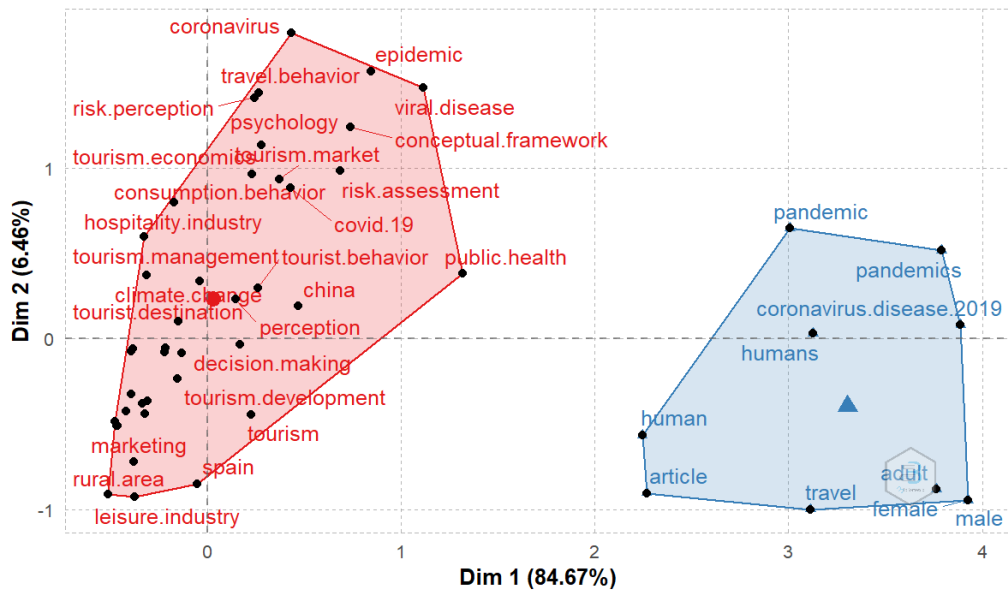


Figure 16. Conceptual structural map using multiple correspondence analysis

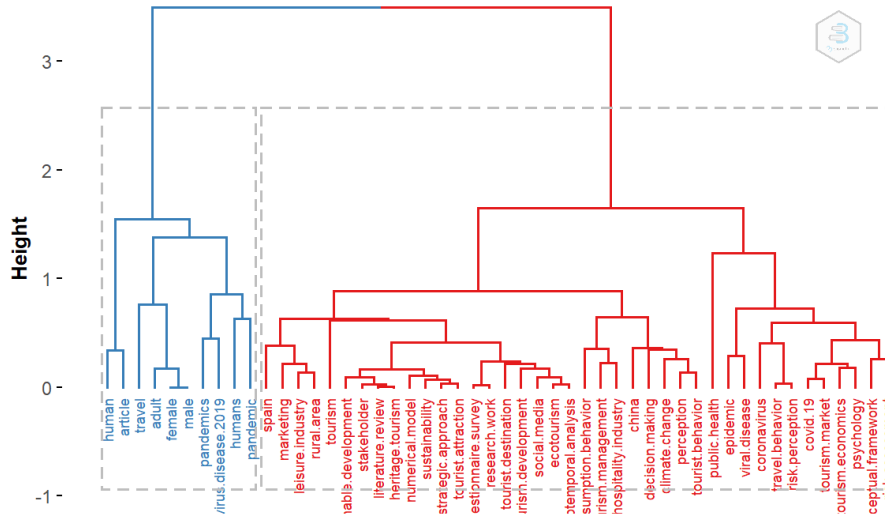


Figure 17. Dendrogram

Thematic maps

Thematic maps indicate special distributions (Tennekes, 2018). Based on the inspiration of (Cobo et al., 2011a), the map is based on co-word network analysis and clustering using keywords. The map is divided into four quadrants based on centrality and density. The first quadrant is a basic theme (high density and low centrality). The second quadrant is known as a motor theme (high density and high centrality). The fourth quadrant (niche theme) has high centrality but low density. The last quadrant (emerging or declining theme) has low centrality and low density. It was observed (Figure:18) that ‘tourism destination,’ ‘perception’ and ‘tourism development’ were falling in basic themes. ‘Human’ and ‘article ‘ in motor theme. ‘Tourism,’ ‘leisure industry’ and ‘climate change’ in niche theme and ‘COVID,’ ‘travel behavior’ and ‘epidemic’ in emerging theme. By splitting the entire time frame into distinct time slices, thematic evolution in the field analyses the overall picture of the field's evolution over time. Using a filter criterion of 250 ‘keyword plus’ across time frame (2020 to 2021) indicated the thematic evolution map (restricted to evolution of only 5 keyword plus) as shown in Figure:19. ‘Ecosystem’ which was prominent in 2020 shifted to ‘COVID-19’, ‘COVID-19’ which was prominent in 2020 bifurcated into ‘COVID-19’ and ‘Human’ , ‘Tourism destination’ diverged to ‘tourism destination’ and ‘human’ related studies and so on.



Figure 18. Thematic map

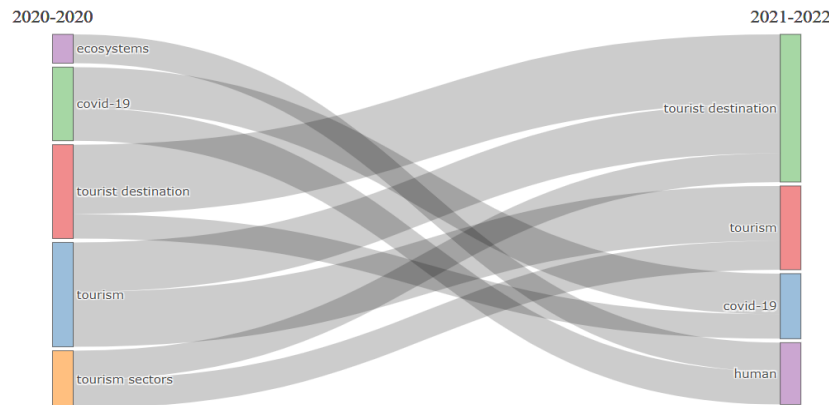


Figure 19. Thematic evolution

Intellectual structure

By examining the collaboration between authors and countries, intellectual structure remarks how diverse authors impact the scientific community. It displays the level of collaboration among research groups and the research community and their ties with other institutes (Hota et al., 2020). The intellectual structure is leveraged by co-citation network analysis. Co-citation analysis is the examination of sets of publications that are referenced together in the source articles. Whenever numerous authors discuss the very same pair of articles, research groups arise. There seems to be a common theme among such clusters of co-cited documents (Hota et al., 2020). A co-citation analysis with the field as authors, deploying a Lovain cluster algorithm with the number of nodes as 50, the co-citation network depicted two different clusters/colors for the papers (Figure: 20). Cluster 1 (red) indicated authors like Chen, Wang, Lee, Kin, Zang, etc., working in similar fields and mutually citing the papers. Their papers mainly were inclined toward tourism, travel, and consumer behavior in the wake of COVID-19. The second cluster (blue) was focused on pandemic and gender behavior pattern studies.

Social structure

Social structure talks about the collaboration of authors, institutions, and countries. A collaboration network analysis with the field as countries, with 50 nodes and clustering using the Louvain algorithm indicated four clusters' formation. China was the leader in cluster 1 (red), having collaborated with Spain, Portugal, Thailand, the USA, etc. The UK was the leader in cluster 2 (blue), having close collaboration with Norway, Poland, and Italy. The third cluster was a close collaboration between Malaysia, the Netherlands, Japan, and Australia. The last cluster was an isolated cluster (purple). The Czech Republic and Slovakia were found to have collaborated (Figure:21).

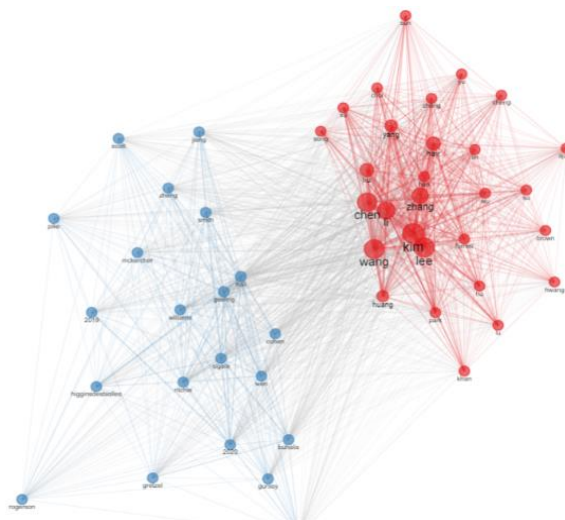


Figure 20. Co-citation network

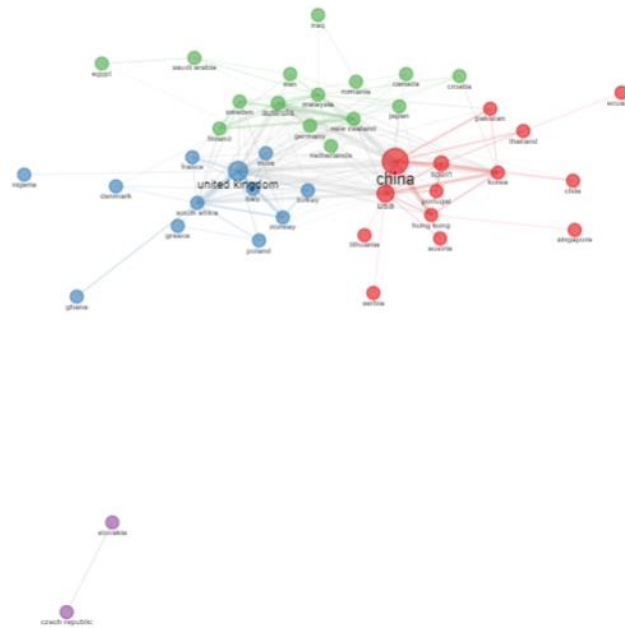


Figure 21. Collaboration network

Discussion

The bibliometric analysis using Biblioshiny underlined in determining the trends in terms of writers, journals, citations, affiliations, collaborations, documents, words, and various themes from 2020-2022. Data was fetched from the Scopus database owing to its robust structure and the quality and quantity of the research sources. The data processing indicated a spur in the number of publications from 2020-2021 related to the theme 'COVID-19 and destination marketing'. Average citations per document were reasonably good. An analysis of scientific production indicated a significant increase (580 %) in the number of articles published between 2020 (115) to 2021 (783). This period coincides with the outbreak of COVID-19, mutations, and exponential waves across various parts of the planet. Norway topped the global citation. The majority of the scholarly contributions were from China, Spain, and the USA, and their collaborations with developing economies were moving from a nascent stage to expanding stage. The outcome of such collaborative studies will help destination marketers to plan their strategies with much confidence amidst COVID-19. For example in one of the collaborative studies, the focus was on the growing trend in 'luxury tourism' (Giousmpasoglou et al., 2021) amidst the pandemic. Destination marketers may investigate the intricacies of such trends and may even offer a luxury destination in localized vacation spots with premium pricing. A glass of wine and some fresh flowers left in the hotel suite, expensive dining deals, and planned alliances with local attractions can all make a big difference even for marketers in emerging economies. Work-from options are still offered by many companies (Jenkins & Smith, 2021). Destination marketers may use this opportunity and offer cheap long-term lodgings that are at least not as expensive as a month's rent in consumers' locations. The usage of mobile phones grew during the pandemic (WiScicka-Fernando, 2021). Destination marketers may ensure that their website's mobile version is at least as good as its desktop version. Marketers may test mobile-test each page, especially important purchase-related ones. If offering an app they must ensure that it makes sense for their company such as it is bug-free and consumers have a great user experience. Marketers may also use Tik Tok (Rimadias et al., 2021; Wengel et al., 2022) and post the best video, activities, and content that makes people feel FOMO (Mohanani & Shekhar, 2021). If the company has a budget, Virtual Reality (Li et al., 2021), 360-degree place views, audio/video clips, and live feed video of the destination may also be exercised to build brand equity.

The analysis identified authors namely Kim and Hall to be highly productive and also with the highest h indices. As far as citation was examined, Dinh and Nguyen topped the spot. The analysis also revealed the maximum number of articles in journals such as Sustainability, Journal of Destination Marketing and Management, and current issues in tourism. It was observed that the

majority of the publications on the theme ‘COVID-19 and destination marketing’ were from tourism journals. Brandford law indicated that tourism journals fall into zone 1, the most relevant and influential zone. Zone 2 and 3 included multidisciplinary journals, particularly business/management, psychology, engineering, and social science. This opens the way for academicians to explore the nuances of destination marketing across various interdisciplinary domains. The growth rate of the top journals in tourism regarding research on COVID-19 & tourism was pretty satisfactory. Scrutiny of global cited documents revealed the consumer behavior patterns, attitudes, and perceptions towards travel destinations. Consumers were apprehensive about traveling, and few were also willing to take risks amidst COVID-19. An analysis of conceptual structure indicated the direction for researchers to focus on their areas for future research. Conceptual structure promises thrust areas such as tapping consumer psychology, risk perception, rural tourism marketing and development, and medical tourism. Tourism and travel are trailing behind while the rest of the world is slowly moving into a recovery stage, primarily due to people's choices and perceptions of safety and a new, more careful behavior when purchasing goods that are not essential for survival, such as tourism and travel. The present study supports the direction for more research on consumer psychology and risk perception (Oríndaru et al., 2021; Prasad & Ghosal, 2020). Considering the risk of crowding, rural tourism can be a promising segment for tourists. The bibliometric study supports future studies in rural tourism. The desire for tourism in remote regions significantly grew during the pandemic, and the locations perfectly suited to provide rural lodging saw a greater and longer-lasting revival of domestic demand (Marques et al., 2022). Whilst short-term effects on in-person offerings have been significant, technological developments in healthcare care have significantly increased the possibility of remote medical consultation. Future research in medical tourism is promising too. The hospitals and general practitioners now have more business prospects, which might be used to boost medical tourism (Chhabra et al., 2021). The tourism determinant cluster and COVID-19 gender cluster would help to understand the nuances of consumer behavior patterns better. Out of the two clusters formed, one cluster was related to COVID -19 tourism determinants. Closer scrutiny of this cluster revealed the psychology and travel patterns of consumers (Kement et al., 2022; Kock et al., 2020; Ulak, 2020; Zielinski & Botero, 2020), perception (Kement et al., 2022), and attitudes towards various destinations (Han et al., 2020), risk assessment, and decision-making concerning travel (Bae & Chang, 2021; Joo et al., 2021), consumer behavior concerning destinations (Donthu & Gustafsson, 2020), and so on. The second cluster (blue) pointed to COVID-19 and travel determinants concerning gender. It was found that female tourists were affected more than males in terms of travel attitudes and preferences during the pandemic (Asan, 2021), females had more worries (Kaygin & Topcuoglu, 2020) and more panic about dying (Barazi et al., 2021). Hence knowing the designs and behavior mechanisms in these clusters will allow destination marketers to devise a marketing mix (Kieanwatana, 2021) tuned to COVID-19.

The thematic mapping provided an exciting result. Much research was done on tourism destinations and development and tourism perception amidst the pandemic. Researchers may shift their focus from these areas. They may focus on ecotourism (Gabriel-Campos et al., 2021), and sustainable tourism (Sheller, 2020). These areas seem to be more promising for research during the pandemic. The leisure industry, climate change, and tourism amid COVID-19 fell in niche themes. Human rights during COVID-19 fell into motor themes. These themes have been well developed in the literature and may help researchers to focus on a systematic literature review. More effort is needed to understand the nuances of this theme to profile COVID-19-induced destination marketing and its actions. COVID-19 and travel behavior were less researched areas (emerging or declining themes). These areas can appear to be better in future research areas.

Limitations and future research

The study was confined to the documents retrieved from the Scopus database. Future research may focus on databases like Google Scholar, Web of Science, Dimensions, etc., to yield a better understanding of the patterns and trends. Keyword plus was used as the field in the majority of data analysis. Future research may make use of other areas to estimate more results. A science mapping performed in this study may be supplemented with systematic literature reviews and meta-analyses to understand the existing literature pattern better. Future studies also could focus on comparative studies

among countries involved in this area of research and those that aren't. It will help in evaluating the various factors that influence the presence or absence of COVID-19-induced destination marketing.

Conclusion

The study examined a bibliometric analysis of publications on COVID-19 and destination marketing on various themes and areas. The study may provide a roadmap for academic practitioners to understand the pattern of existing literature concerning COVID-19 and destination marketing. There has been a considerable amount of research on the theme during the last two years. Using bibliometric mapping and descriptive analysis, the author analyzed the different trends in publications, implications, and future research directions. The critical trends observed in this study may help policymakers devise destination marketing programs amidst the pandemic for the immense interest of tourists.

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