



Visualizing Sustainable Tourism Research in New-Normal: A Bibliometric Analysis

Noufal Ponnann¹.

Research Scholar, B.N. Bahadur Institute of Management Sciences (Department of Studies in Business Administration), University of Mysore.

Dr. Aisha M Sheriff².

Professor. B.N. Bahadur Institute of Management Sciences, (Department of Studies in Business Administration), University of Mysore.

ABSTRACT

The breakout of the COVID-19 pandemic has disrupted the tourism and hospitality industries, creating an unprecedented challenge for researchers. The pandemic has led to rethinking and executing new approaches for the sustainability of the tourism and hospitality industry. Academics in the field of tourism conducted extensive research on the effects of the pandemic on the tourism industry. However, not much is known about the nature, key areas, themes, and approaches of tourism sustainability research in the new normal. The objective of this research article is to evaluate how sustainable tourism research engages with the new challenges of the COVID-19 pandemic. This research utilised bibliometric data from 152 research articles from 10 journals and used VOS viewer software to identify and visualise the trend in sustainable tourism research.

KEYWORDS: Sustainable Tourism, Covid-19, Research Trend, Bibliometric Analysis

INTRODUCTION

The UN Commission (Brundtland, 1987) defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." The triple bottom line (TBL) model (Govindan et al., 2013) has given a new meaning to the idea of sustainability. In this model, social, economic, and environmental factors are the main pillars of the idea of sustainable development (Evangelista et al., 2018; Kuhlman & Farrington, 2010) In 2012, the United Nations Rio+20 summit in Brazil reaffirmed the role of sustainable development in improving human well-being and reducing global poverty and these objectives are included the Millennium Development Goals

(Griggs et al., 2013). Agenda 2030 of the United Nations came up with 17 goals for sustainable development. As per this agenda, all countries were asked to work together to end poverty, increase social and economic prosperity, and protect the planet (environment; Nam, 2015). Ever since the release of the 1987 Brundtland Report, sustainable tourism has emerged as the dominant paradigm in tourism development. Sustainability in the tourism context seeks to reduce negative social and environmental impacts while developing local economic viability, infrastructure, health, and education (Medina-Muoz et al., 2016; Swarbrooke, 1999; Yu et al., 2011).

The COVID-19 pandemic has confronted the tourism industry with an unprecedented challenge. The United Nations World Tourism Organization estimated that the industry might incur a loss of 850 million to 1.1 billion in international tourist inflow (UNWTO, 2020). With unprecedented challenges faced by the tourism industry in the COVID, tourism academicians are expected to shift research focus to develop solutions for the industry. To understand what sustainable tourism research is focusing on in the new normal, we need a more thorough assessment and analysis of sustainable tourism literature. This study looks at research articles published from 2020 to 2022 to try to find trends and patterns in sustainable tourism research during COVID-19.

REVIEW OF LITERATURE

Sustainable tourism development is a way to make tourism socially, culturally, economically, and environmentally viable over the long term (Lozano-Oyola et al., 2012; World Tourism Organization [WTO], 2004). According to Griggs et al. (2013) and Pearce (1988), sustainable tourism development that provides greater social well-being, economic opportunity, and protection of the environment offers the best avenues for enhancing people's lives. The UN Brundtland Commission defines "sustainable" as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987), emphasising sustainability as an important policy issue in tourism (Crittenden et al., 2011; Saarinen, 2006). Chok et al. (2007) and Sachs (2015) both point out that boosting prosperity by promoting tourism requires an understanding of how politics, the environment, the economy, and culture interact with each other and how these interactions affect environmental sustainability, social inclusion, and overall prosperity.

The COVID-19 epidemic has had a significant effect on tourism. The global economy has experienced unprecedented turmoil. Tourism-dependent economies bear the brunt of the economic downturn for far longer than other economies. As a result, the pandemic has brought obstacles that have substantially altered the current state of tourism sustainability, forcing a transition. The application of the triple bottom line (economic, socio-cultural, and environmental) approach brought new problems regarding the sustainability of tourism, which led to a rethinking and implementation of new techniques. The COVID-19 tourist impact issue motivated many researchers to engage in transformative thinking and recognise it as a time of great potential. As a result, many research scholars have actively contributed to sustainable tourism research.

This article tries to give a comprehensive bibliometric analysis of the 152 research articles (Table No. 1) on sustainable tourism that were published between 2020 and 2022 in the ten (10) most influential journals.

Top 10 Journals in Sustainable Tourism Research during Covid-19

Table No: 1

Publication Titles	Record Count	% of 152
SUSTAINABILITY	86	56.579
JOURNAL OF SUSTAINABLE TOURISM	22	14.474
TOURISM GEOGRAPHIES	14	9.211
CURRENT ISSUES IN TOURISM	11	7.237
INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH	5	3.289
JOURNAL OF TRAVEL RESEARCH	4	2.632
LAND	3	1.974
TOURISM MANAGEMENT PERSPECTIVES	3	1.974
INTERNATIONAL JOURNAL OF HOSPITALITY MANAGEMENT	2	1.316

OBJECTIVES OF THE STUDY

- To classify the major subject areas in sustainable tourism research during COVID-19
- To identify the perspectives applied to the study of sustainable tourism research during COVID-19
- To identify the geographical patterns in sustainable tourism research during COVID-19

RESEARCH METHODOLOGY

The study chose bibliometric data from the world's leading bibliometric database, Web of Science, which indexes over 171 million scholarly literature published in journals, conference proceedings, symposia, seminars, workshops, and conventions across the globe. The articles for this analysis were obtained through the search of the text parameter "Sustainable Tourism" (Topic) and Covid-19 (Topic). The search results from the Web of Science found a total of 227 articles (Table 1) published from 2020 to 2022. For the analysis, this study shortlisted 10 journals that contributed the highest number of articles related to

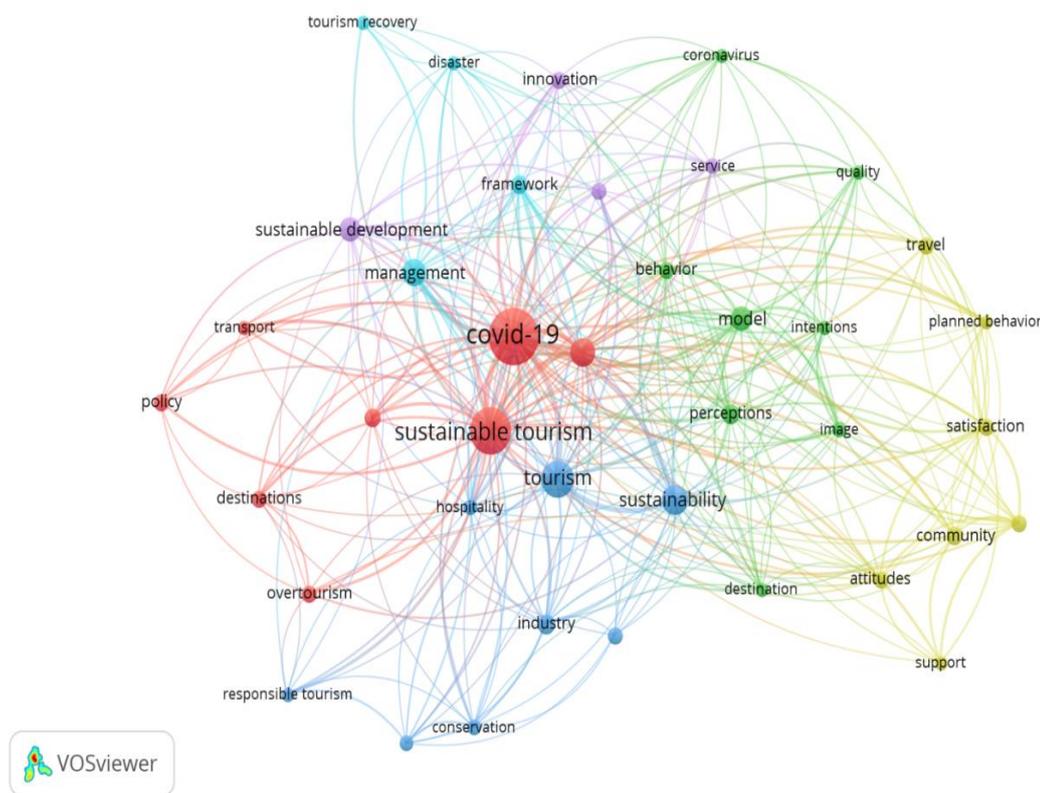
COVID-19 and sustainable tourism. A total of 152 research articles were published by the top 10 journals. The VOS Viewer software tool is used for keyword analysis and to visualise bibliometric networks.

ANALYSIS AND DISCUSSION

Keyword analysis

This section aims to identify the most common keywords used by every research paper related to sustainable tourism research during COVID 19. Keyword analysis can provide information about the main content of an article. Hence, the analysis of keys can be used to find out the research trend and subareas in a particular domain. From this analysis, it is possible to determine the most frequently occurring topics in the field. To conduct the analysis, the study considered all keywords captured by the VOS Viewer, and it obtained 1026 keywords from 152 research articles. Only 177 keywords appeared more than once, 82 keywords more than 3 times, and only 39 keywords appeared more than 5 times (Picture No 1). Sustainability (20 occurrences), Impact (19 occurrences), and Management (17 occurrences) are the most recurrent keywords after considering the article search text parameters, 'Sustainable Tourism' and 'Covid-19'. Models, perceptions, frameworks, community, resilience, satisfaction, behavior, and attitudes are some of the other important research areas focused on by the researchers. The network connections show the keywords that appear together more frequently in the analysed papers; a line between two keywords indicates their co-occurrence. The size of the nodes and words represents the weight of the nodes (keywords), i.e., occurrences. The distance between two nodes reflects the strength of the relationship between them, i.e., a shorter distance means a stronger relationship. Finally, the colour of the node indicates the cluster of research areas, and the analysis found a total of six clusters of research areas.

Picture 1
Network Visualization of Keyword Analysis



Content Analysis

The study has adopted a triple bottom line (socio-cultural, economic, and environmental) categorization for analysing research studies. It has analysed the research articles by covering the abstracts of the articles. The abstract of an article gives an overview of the whole article. In general, the abstract is mostly about the study's purpose, how it was done, and what it found.

The study has found that the socio-cultural subject research studies ((Acevedo-Duque, Gonzalez-Diaz, Vega-Munoz, Mantilla, Ovalles-Toledo, & Cachicatari-Vargas, 2022) (Yang & Wong, 2021) (Pasquinelli, Trunfio, Bellini, & Rossi, 2021) (Dastgerdi, De Luca, & Francini, 2021)) of COVID 19 were mainly focused on residents' physical, psychological, and spiritual well-being. The economic effect contextual theme research studies (Castanho, Couto, Sousa, Pimentel, & Batista, 2021), (Liu, Wu, & Li, 2021), (Nazli, 2021), and (Klinsrisuk & Pechdin, 2022) mostly looked at how COVID 19 affected economic production, unemployment, household income, economic governance, economic crisis management, and policy making.

The majority of the sustainable research studies on the environment (Candia & Pirlone, 2022; Sumanapala & Wolf, 2022; Becken & Loehr, 2022; Goessling & Schweiggart, 2022) focused on the need and importance of environmental planning, establishing a balance between tourism development and the environment, and how vital it is to make people aware of the environment for sustainable tourism from the COVID 19 effect.

(Eichelberger, Heigl, Peters, & Pikkemaat, 2021). The major subject areas of tourist behavioural studies are as follows: tourist risk perception, tourist destination choice, socio-cultural and environmental responsibility of tourists, tourist behaviour on border health restrictions, technological adaptation of tourists, and tourists' attitudes on social media during COVID and its impact. Shrestha and Decosta (2021) conducted a research study in which they came to the conclusion that the COVID-19 Pandemic presents an opportunity for reforming the concept of sustainable tourism development and suggested that stakeholders collaborate for inclusive planning and decision making in order to achieve sustainability.. Public health status and the performance of the economy were found to be the two most influential and most uncertain factors of tourism recovery, according to a research study that was conducted by Clark, Nyaupane, Timothy, and Buzinde (2022). The study defined six critical drivers of tourism recovery as public health status, the performance of the economy, destination availability, government policy, consumer confidence, and leadership message

The analysis of the various research articles' abstracts finds that perception of the risk of COVID-19 negatively affected the attitudes of the tourists. Researchers have proposed enhancing their hygiene conditions to restore the confidence of tourists to travel. Communication is essential to tackle travellers' fears and concerns. Vaxication (a combination of vaccine and vacation) can be further strengthened by travel incentives, which will also reduce the perceived risk of travellers. COVID-19 is also likely to influence future pro-environmental travel behaviour. Studies have found a positive association between the environmental impact of tourism and pandemic travel anxiety.

Many studies have emphasised the importance of the role that the government plays in the tourism industry's recovery from the epidemic. They argue that help from the government is essential to reducing the negative impacts that the pandemic had on the tourism industry. According to the findings of the study, the pandemic has opened the door for the use of virtual technology, which can contribute to the development of sustainable tourism by lowering the amount of greenhouse gas emissions caused by transportation. In addition to this, it can provide a "virtual accessibility," which is particularly helpful for the elderly and disabled people who have limited mobility.

Geographical distribution Patterns of Sustainable Tourism Research –During Covid-19

Table No : 2

Countries/Regions	Record Count	% of 152
SPAIN	19	12.5
USA	19	12.5
ITALY	14	9.211
PEOPLES R CHINA	14	9.211
POLAND	14	9.211
AUSTRALIA	13	8.553
ENGLAND	13	8.553
SOUTH KOREA	12	7.895
SOUTH AFRICA	10	6.579
SWEDEN	10	6.579

Using the authors' country of affiliation, it was noticed that the interest in sustainable tourism is worldwide, because there are 122 countries that have published at least one article related to the topic, and 10 countries have published more than 10 research articles. This fact reveals that researchers from across the world have taken a serious approach to studying the impact of the COVID-19 pandemic. Table 2 shows the ten countries with the highest academic output in sustainable tourism research. Together, they represent 65.72% of the articles and 84.77% of the citations. According to the data, Spain and the United States have contributed 19 research papers each, followed by Italy, China, and Poland with 14 research article each.

FINDINGS AND CONCLUSION

Tourism research on sustainability has made significant contributions during the COVID19 period. In order to mitigate the effect of the COVID-19 Crisis, the research studies tried to give conceptual and practical implications for socio-cultural, economic and environmental sustainability. It is founds the key word analysis that, Sustainability (20 occurrences), Impact (19 occurrences), and Management (17 occurrences) are the primary research areas concentrated on by the researchers. Other important research areas concentrated on by the researchers include models, perceptions, frameworks, community, resilience, satisfaction, behaviour, and attitudes. The studies have strengthened the argument for the need to prioritise the social and spiritual aspects of the well-being of tourism stakeholders and can provide them with great comfort and support during times of shock. The behavioural and perception-related concepts studied also made a significant contribution to sustainable tourism research.

Analysis on the geographical distribution patterns of Sustainable Tourism research shows that, there are 122 countries that have published at least one article related to the topic. 10 countries have published 10 or more research articles and Spain and the United States have contributed maximum (19 each) research papers. Whereas the primary emphasis of the socio-cultural research studies on the residents' overall physical, psychological, and spiritual well-being. The vast majority of the research that was conducted on the economic effects contextual theme looked at how COVID 19 impacted various aspects of the economy, including unemployment, household income, and the government. In contrast to the vast majority of sustainable research studies on the environment, which concentrated their attention on the necessity and significance of environmental planning for the development of sustainable tourism, In addition, the findings of the study indicate that the primary research foci in the field of tourist behaviour studies are as follows: the perception of risk by tourists; the choice of destinations by tourists; and the sociocultural and environmental responsibility of tourists.. The study summarises that while the topics and themes of sustainable tourism research seem to have changed over time, the theoretical and methodological approaches have, with a few exceptions, stayed the same.

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