

Daniela Meneses*, Carlos Costa, Fernanda A. Ferreira, Celeste Eusébio

A bibliometric overview of economic sustainability in tourism

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Abstract: Multiple research areas have addressed tourism studies, with a recent emphasis on sustainable tourism and the balance between its three dimensions: economic, social, and environmental. We propose an understanding of the significance of economic sustainability in tourism analysis while conducting an extensive bibliometric analysis and critical evaluation of the current literature.

Data for this study were extracted from Scopus, a widely recognised database for scholarly research. Specific search terms, including “economic sustainability,” “tourism,” “sustainable tourism,” “economy,” “economic indicators,” and “tourism policy,” were used to gather relevant publications. A total of 1716 documents were initially retrieved. Inclusion and exclusion criteria were applied to ensure the selection of pertinent literature, resulting in 491 publications being retained for further analysis. These publications originated from 234 different sources and involved 1173 authors.

The results of the bibliometric analysis reveal promising future research themes, such as sustainable tourism, tourism policy, economic indicators, tourism sustainability, and entrepreneurship. Moreover, identifying the most influential authors and publications offers valuable guidance for future research endeavours.

Keywords: economic sustainability; economic; sustainability; tourism economic; bibliometric review.

***Corresponding author: Daniela Meneses**, Invited Assistant Professor at the School of Hospitality and Tourism (ESHT) of Polytechnic of Porto, UNIAG, Email: dgm@esht.ipp.pt

Carlos Costa, Full Professor of the Department of Economics, Management Industrial Engineering and Tourism of the University of Aveiro, Portugal

Fernanda A. Ferreira, Full Professor at the School of Hospitality and Tourism (ESHT) of Polytechnic of Porto, UNIAG, CITUR

Celeste Eusébio, Associate Professor of the University of Aveiro

1 Introduction

Tourist destinations experience accelerated growth and an amplified requirement to meet the tourism demands. As a crucial economic activity, tourism holds immense significance in the economies of these destinations. Consequently, ensuring the industry’s economic sustainability becomes imperative to maintain its vitality and long-term viability (Mathieson & Wall, 1982).

Economic sustainability encompasses various facets of economic prosperity within society, ranging from individual levels to broader community impacts. This includes economic profitability and efficiency, ensuring that businesses within the tourism sector thrive and remain vital contributors to the overall economy. By addressing these aspects, economic sustainability aims to foster balanced and enduring economic growth in the context of tourism.

This article aims to perform a bibliometric analysis that investigates economic sustainability as a concept and its practical implications for the tourism sector. The bibliometric analysis methodology offers researchers a systematic and objective approach to studying the distribution and evolution of disciplines within publications. By employing quantitative metrics and data-driven techniques, this methodology helps to minimise the influence of subjectivity and biases that might otherwise impact a traditional literature review (Bornmann & Marx, 2018).

The review on economic sustainability was conducted in June 2023 in the Scopus database, resulting in 1716 publications between 1985 and 2023. The inclusion and exclusion criteria were applied, duplicates were removed, and 491 publications were considered for the bibliometric analysis. Additionally, it is worth highlighting that the bibliometric analysis was performed using the R-studio software.

The article begins with an extensive literature review that provides a comprehensive understanding of the existing knowledge in the field of economic sustainability in tourism. Subsequently, it outlines the methodology used for the bibliometric analysis, explaining the steps taken to

gather and analyse the data. Finally, the article presents the study's conclusions and suggests potential areas for future research.

2 Literature Review

Sustainability and sustainable tourism

The idea of sustainability was introduced in 1713 by Hans Carl von Carlowitz in forest management. Later, Forestry Professor Hartig further developed the concept, defining sustainability as follows: "Every prudent forest manager must assess the forest stands promptly and use them to their fullest potential while ensuring that future generations can enjoy at least as much benefit as the current generation" (Cit. by Schmutzenhofer, 1992). The issue of environmental management, particularly the mismanagement of natural resources, has a far-reaching impact on the entire social and global system. Within this context, tourism emerges as a significant theme, drawing increasing attention and becoming the subject of extensive research. Its significance reached its peak during the 1972 Stockholm Conference.

According to the United Nations Environmental Programme and World Tourism Organization (2005, p.11), sustainable tourism is defined as "tourism that takes into full consideration its present and future economic, social, and environmental effects, while addressing the requirements of tourists, the industry, the environment, and host communities." In essence, sustainable tourism caters to visitors' needs, ensures responsible management of natural resources, and promotes eco-friendly practices. Hallenga-Brink and Brezet (2005) further elaborate that sustainable tourism strives to minimise or mitigate the impact of tourism activities on the environment, fosters the preservation of local cultures, and contributes to the well-being of host communities by creating employment opportunities and attracting human resources. In this way, sustainable tourism seeks to balance tourism's benefits and potential negative effects, aiming for a harmonious and long-lasting relationship between tourists, destinations, and the environment.

In the context of tourism, Dwyer *et al.* (2020) acknowledge the three dimensions of sustainability: environmental, social, and economic. Environmental sustainability pertains to the conservation of resources, with particular attention to non-renewable resources. Key indicators include the carbon footprint, biodiversity, environmental quality, and the capacity to minimise waste, degradation, and depletion of resources. Social sustainability revolves

around respect and equality, primarily preserving local communities' cultural and identity aspects. Indicators encompass qualitative services and infrastructure, fair wages, job satisfaction in the tourism sector, non-discrimination in contracts, avoidance of cultural commodification, individual empowerment, lifestyle, community influence on politics, and the impact of tourism concentration on local areas. Economic sustainability aims to achieve long-term economic viability, promote social benefits, and provide opportunities for all stakeholders, including poverty reduction. Indicators considered are tourism expenditure, productivity, contribution to economic growth, business profitability, employment opportunities, the livelihood of communities, impact on other industries, sources of tourism product creation, and income distribution within destinations, among other relevant factors.

Indeed, Choi and Sirakaya (2006) consider sustainability a process of optimising the development growth rate at the level of managing a destination's environmental limits. However, sustainability in tourism is applied in a more comprehensive setting and in a multidimensional rather than one-dimensional way.

Dwyer *et al.* (2020) also consider that balancing these three dimensions in the long term is the biggest challenge for sustainable tourism development. Sustainability is measured globally, considering environmental issues and the availability of natural resources, and at the local level, with job creation, cultural heritage, and environmental preservation.

Thus, tourism success is closely related to competitive success in the global market (Paunović *et al.*, 2020) and to the destination's economic and natural resource sustainability (Díaz & Espino Rodríguez, 2016). Given the latter's prominence, it will be further discussed in the following section.

Economic sustainability

According to the United Nations Environmental Programme and World Tourism Organization (2005), economic sustainability is the long-term economic viability of economic activity, with equity and fair distribution of benefits, employment opportunities and poverty reduction. Economic sustainability is thus concerned with economic prosperity at diverse levels of society, economic profitability and efficiency, and the vitality of businesses in the tourism sector.

The United Nations Environmental Programme and World Tourism Organization (2005) have proposed several indicators to define and measure economic sustainability in tourism. These indicators help assess the economic

impacts of tourism on the destination and its local community. These indicators include (i) tourism seasonality, referring to the distribution of tourist arrivals and activities throughout the year. Economic sustainability seeks to reduce overreliance on specific peak seasons to ensure a more stable and consistent flow of income for businesses and communities; (ii) employment opportunities: economic sustainability in tourism aims to create job opportunities and promote decent work for local residents, contributing to the overall economic well-being of the community; (iii) tourism as a means for nature preservation: this indicator highlights the potential of sustainable tourism practices to support conservation efforts and protect natural resources, thus contributing to the long-term economic viability of the destination; (iv) economic benefits in the local community/destination: economic sustainability emphasizes the equitable distribution of economic benefits from tourism among the local community, ensuring that tourism revenue supports local businesses and infrastructure development; (v) poverty alleviation: sustainable tourism aims to contribute to poverty reduction by providing economic opportunities and empowering local communities through tourism-related activities; (vi) competitiveness of tourism businesses: economic sustainability takes into account the competitiveness of tourism enterprises, encouraging their growth and success within the context of responsible and sustainable practices.

Looking to the future, achieving tourism sustainability will require striking a delicate balance between environmental and economic considerations. Given the involvement of numerous stakeholders with diverse objectives, aligning their interests towards a common goal becomes a complex challenge. Sustainable tourism must navigate this complexity by promoting stakeholder collaboration and dialogue, addressing potential conflicts, and finding synergies supporting environmental conservation and economic growth. A harmonious integration of environmental and economic objectives will ensure that tourism continues to thrive while preserving destinations' natural and cultural assets for future generations. Sustainable tourism practices will play a pivotal role in achieving this balance and creating a positive and lasting impact on the environment and the economic prosperity of the communities involved (Qiu et al., 2019).

Due to the industry's high environmental impact, tourism needs to reflect on the sustainability models applied and promoted in each destination. Harmony between economic and social growth and the environment is needed (Streimikiene et al., 2021).

3 Methodology

The bibliometric review, which emphasised economic sustainability, was conducted in June 2023 using the Scopus databases, yielding 1716 publications. Following this, duplicate articles were eliminated using a reference manager, leaving a final sample of 491 publications sourced from 234 sources spanning the years 1985 to 2023. Additionally, the bibliometric analysis was carried out utilising *R*-studio software.

This study aims to thoroughly evaluate previous academic research on economic sustainability scenarios in tourism using bibliometric analysis. The chosen methodology is bibliometric analysis, a widely recognised and rigorous approach for analysing large scientific data sets. Bibliometric analysis is frequently used in the social sciences to achieve various objectives, such as exploring emerging trends within specific themes, identifying collaboration patterns among researchers, and understanding the intellectual framework of a particular domain in the existing literature.

Data collection

Bibliometric analysis is frequently utilised in the social sciences for diverse objectives, such as uncovering emerging trends within specific themes, recognising collaboration patterns, and scrutinising the intellectual framework of a particular domain in the extant literature. According to Donthu et al. (2021), bibliometric analysis can provide a holistic view of scientific knowledge and evolutionary evaluation of a specific theme. The authors suggest that bibliometric analysis provides novel and meaningful ways to (1) gain a comprehensive overview, (2) identify knowledge gaps, (3) derive innovative ideas for investigation, and (4) position one's contributions within the field.

The techniques utilised in bibliometric analysis can be classified into two main categories: 1) performance analysis, which offers insights into the contributions of researchers in a specific field, and 2) science mapping, which reveals the connections between authors and research topics (Donthu et al., 2021).

The main objective of this paper is to make a valuable contribution by offering an extensive survey of bibliometric analysis and assessing specific domains within the existing literature using a vast bibliometric dataset. The Scopus database, renowned as the largest source of information on the subject under study, was utilised to search for relevant articles. However, it is crucial to acknowledge that pertinent articles not indexed in this database may be overlooked.

Furthermore, it is noteworthy to emphasise that the bibliometric analysis was conducted using the R-studio software, particularly leveraging the bibliometrix R-package. This package provides a comprehensive set of tools for quantitative research in bibliometrics and scientometrics. R-studio, an open-source environment, is renowned for its versatility and widespread adoption in data analysis and statistical computing (Aria & Cuccurullo, 2017). Data processing was accomplished using the bibliometrix R-package, which offers specialised tools for conducting bibliometric analysis. These tools facilitate quantitative research in bibliometrics and scientometrics, using the versatile and widely adopted R language for data analysis and statistical computing.

Data analysis

With the research objective defined, a comprehensive investigation was conducted in the database on June 2023 using carefully selected and combined “economic sustainability,” “tourism,” “sustainable tourism,” “economy,” “economic indicators,” and “tourism policy,” yielding a total of 1716 publications between 1985 and 2023.

Subsequently, these findings were meticulously organised as follows: (1) sub-categories related to social sciences, document type, source type and language; (2) inclusive and exclusive criteria after the title and abstract scanning; and finally, the duplicate entries were eliminated, resulting in 1225 publications being excluded. This left a total of 491 publications that were included in the bibliometric analysis.

The bibliometric analysis sample consists of 234 sources involving 1173 authors, with 121 being sole-authored publications, resulting in an average of 2.58 authors per document. Additionally, the sample contains 1497 distinct keywords.

To analyse the results, the data was processed following the guidelines outlined by Donthu *et al.* (2021), all while considering the study’s objectives. This process involved conducting performance analysis and science mapping to analyse the study’s data comprehensively.

The bibliometric analysis was conducted following a structured approach involving four essential steps. The initial step involved defining the study’s objectives. Subsequently, in the second step, appropriate techniques for bibliometric analysis were determined. The third is composed of defining the inclusion and exclusion criteria of the articles that will be analysed, and the duplicate articles were removed. Finally, in the fourth step, the data was input into R-studio, and the results were diligently reported according to the study’s aims (Figure 1).

For data analysis, the following were considered in performance analysis: (1) publication-related metrics, with the data: total publications, number of contributing authors, number of active years of publication and productivity per active year of publication; (2) citation-related metrics, with total citations data and average citations. The data considered in the science mapping and taking into account that it is intended to analyse the evolution of concepts and studies over the years, co-citation analysis (which provides information on the past of research), bibliographic coupling (which provides information on the present of research), and finally, co-word analysis (which provides information on the state of research in the present) were considered for analysis. The authors’ keywords were considered as analysis data.

4 Results and discussion

The chosen analysis procedure, encompassing performance analysis and subsequent science mapping, will guide the presentation of the results. The first twenty authors or publications were considered the most important data in the different results.

Performance analysis: publication-related metrics

The performance analysis showcases metrics linked to the results derived from the publications of the studied sample.

The annual scientific analysis demonstrates a significant increase in publications from 2010. The first study on a database related to the topic under study dates to 1985, with one study and between one and nine publications in the following years (Figure 2).

Since 2010, there has been a gradual rise in the number of publications on the subject, accompanied by fluctuations until 2019. However, starting in 2019, there has been a significant surge in publications, reaching a record high of 68 in 2021. As of the present year, 2023, there have been twenty-five publications on the subject. The notable increase in publications coincides with the onset of the Covid-19 pandemic. The lockdown of airspace and restrictions on travel between regions has led to the closure of many companies in the tourism sector close, resulting in unemployment. It is now increasingly evident and crucial that businesses in the tourism sector prioritise economic sustainability.

Figure 3 shows the number of contributing authors. Gavurova B., Grecu A., Latham J., and Zhang J. are the authors with the most publications in the sample.

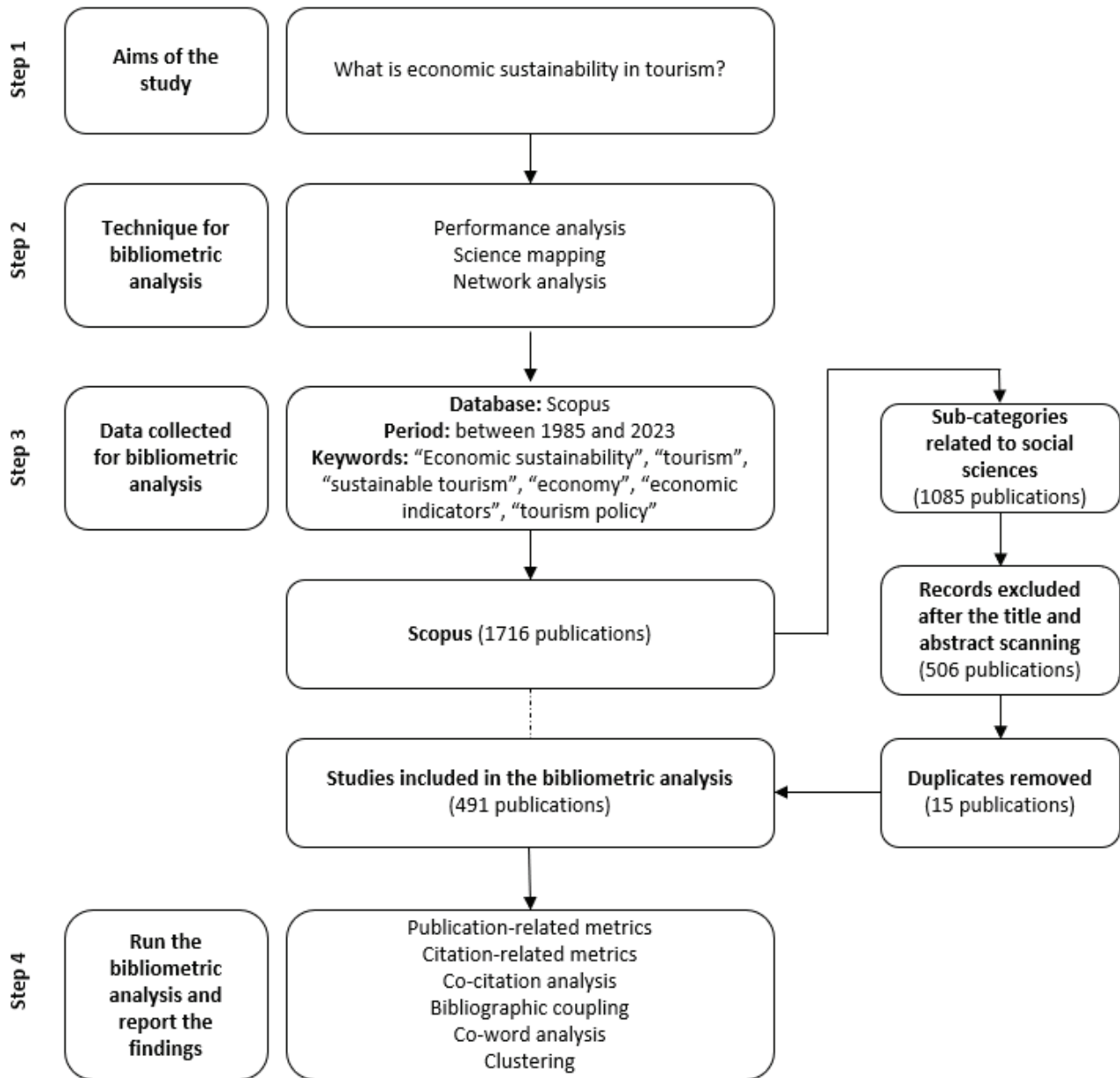


Figure 1: The bibliometric analysis procedure

Source: Adapted from Donthu et al. (2021)

The remaining authors contributed three, two, or one publication.

The sample comprises 234 sources, encompassing 1173 authors, of which 121 are sole-authored publications, leading to an average of 2.58 authors per document. The findings indicate significant collaboration among the authors and a comprehensive focus on economic sustainability.

The results show the authors' production over the years. The publications have been constant over the years; most authors make one publication per year, while other authors make two publications per year (Figure 4).

Between the years 1999 and 2009, there was only one publication. However, the number of publications remained constant after this period, with an average of one to two publications per year.

Analysing the top twenty results, it becomes evident that the countries of the corresponding authors display varying publication numbers. Spain boasts the highest number of authors (30 publications), followed closely by the USA (29 publications), China (23 publications), and the United Kingdom (22 publications). The rest of the authors' publication counts fall below twenty.

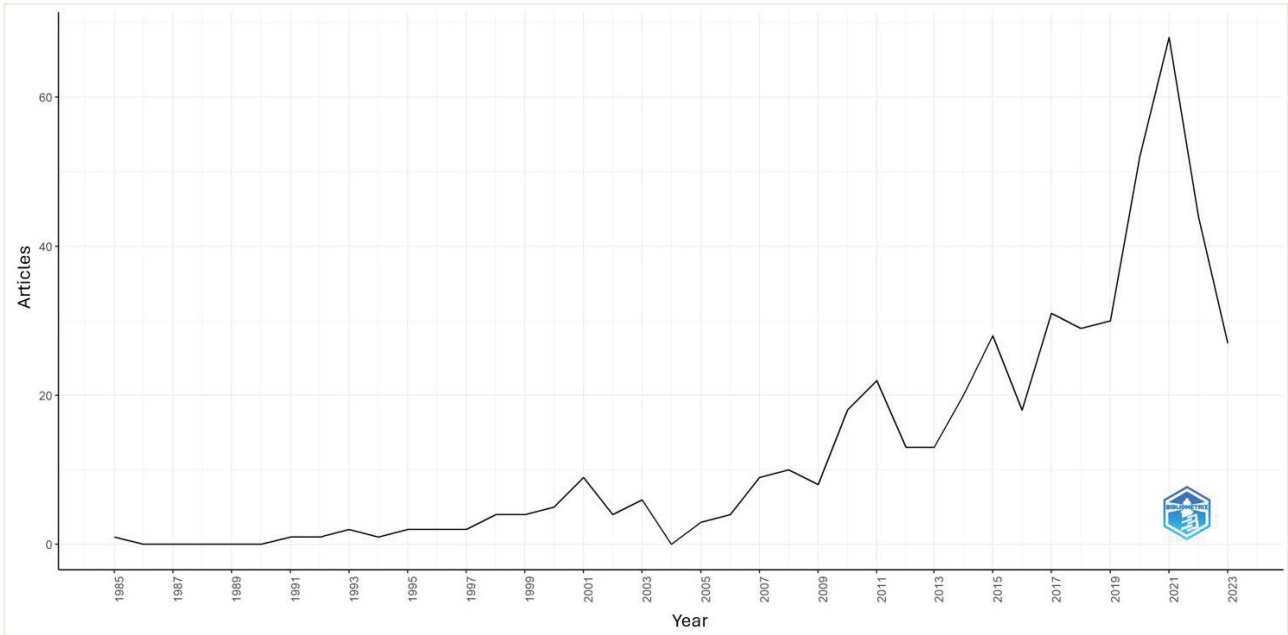


Figure 2: Publication number per year of bibliometric analysis

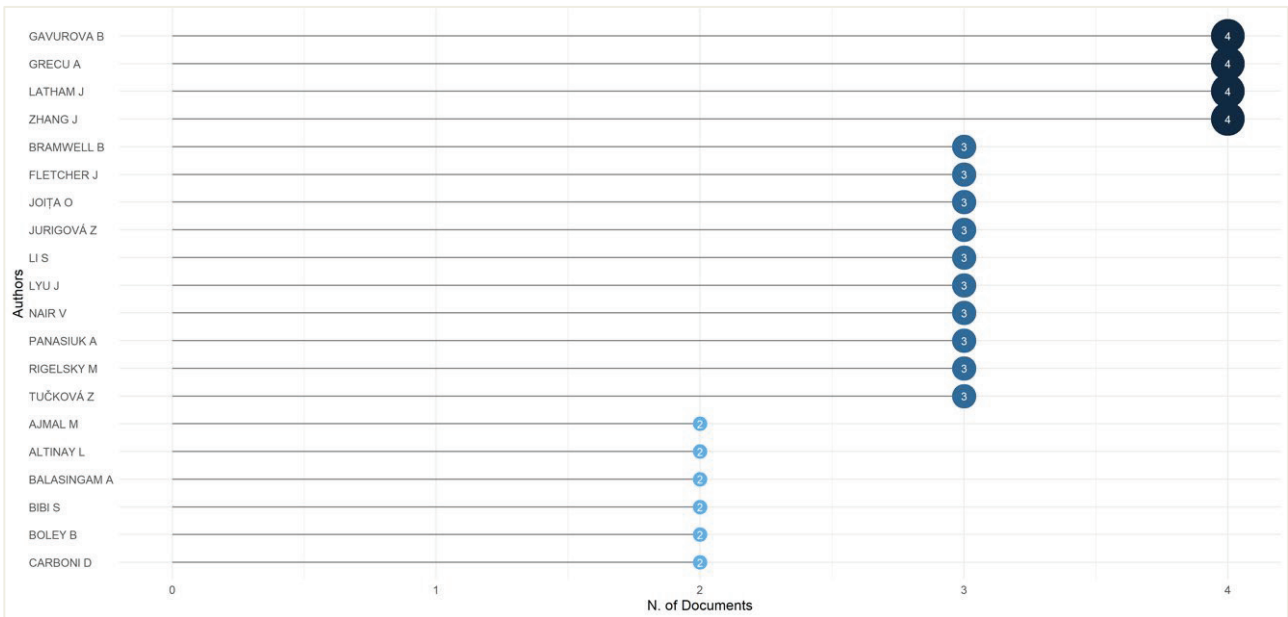


Figure 3: Publication number of contribution authors' bibliometric analysis

Figure 5 shows the number of publications per source, and upon verification, it is evident that the journal “Sustainability” has the highest impact in the analysed sample, boasting 50 publications. In second place is the “Journal of Sustainable Tourism,” with thirty-one publications, and in third is “Tourism Economics,” with eighteen publications.

The journals with the lowest representation in the sample (top twenty) are the “International Journal of Tourism Research” and the “Journal of Cleaner Production” with four publications each. This sample accounts for 45% of all publication sources.

The dispersion of articles among various publications underscores the interdisciplinary nature and significance

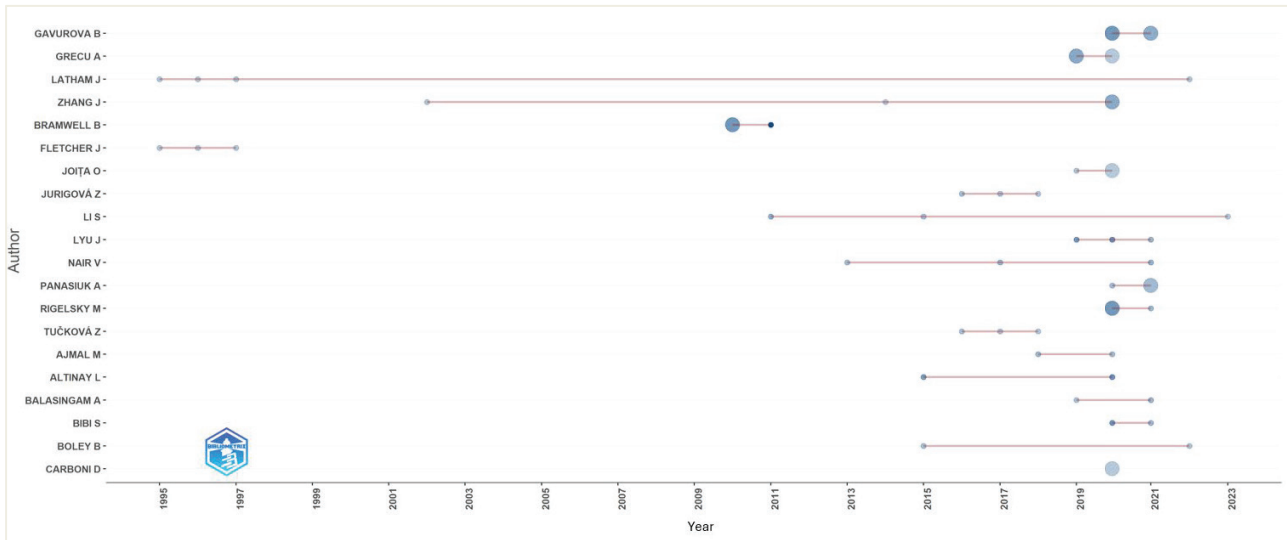


Figure 4: Number of active years of publication bibliometric analysis

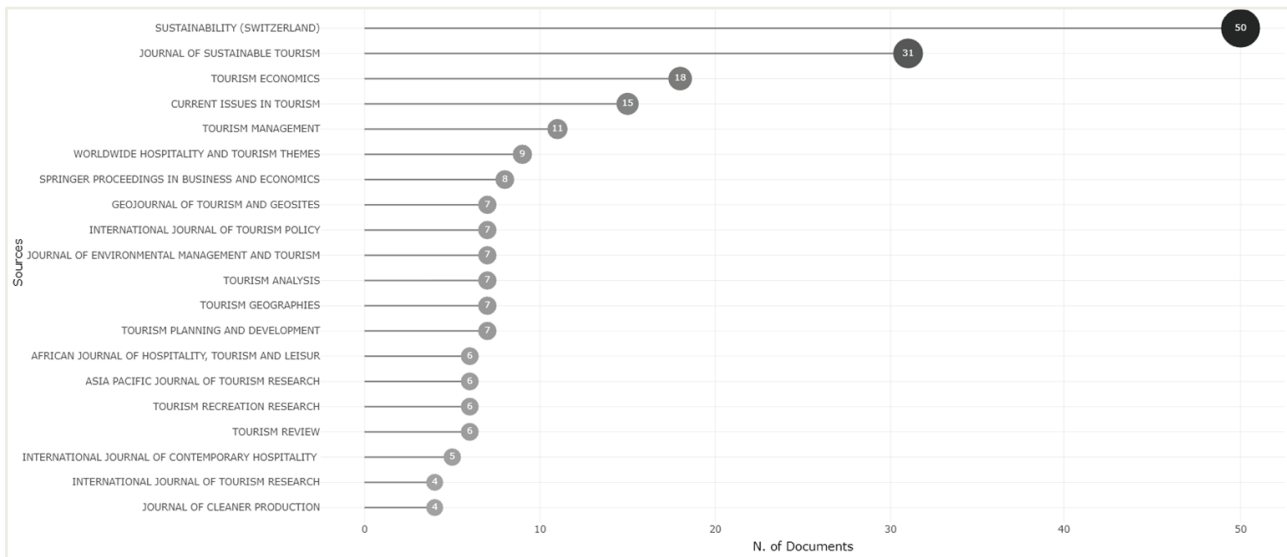


Figure 5: Number of publications by source bibliometric analysis

of the issue. Effective resource management affects the environment, the broader social community, and businesses reliant on natural resources. This highlights that economic sustainability transcends the boundaries of the social sciences.

Performance analysis: citation-related metrics

Another relevant data set in the bibliometric analysis is the most cited authors and documents. The sample of publications in this study has 8969 citations, and the result is presented in Figure 6.

The authors Bornhorst T., with the publication in “Tourism Management,” Bramwell B., with the publication in “Sustainable Tourism,” and Hall J., with the publication in the “Journal Management Studies,” are shown as the most influential and relevant contributors to this study.

The trend of annual document publications in Table 1 reflects the sustained interest in the study over time. Moreover, the table demonstrates an average growth in economic sustainability over the past twenty years.

The peak in document publications occurred in 2010, followed by a notable increase in 2008. The results indicate

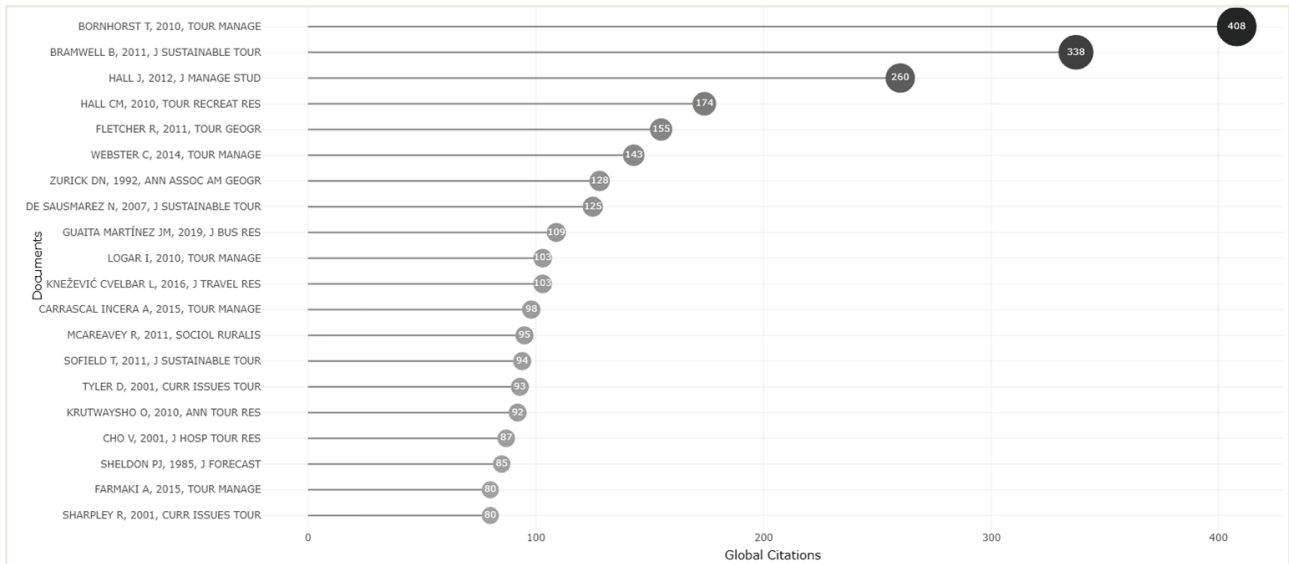


Figure 6: otal citations of bibliometric analysis

Table 1: Average citations of bibliometric analysis

Year	N	MeanTCperArt	MeanTCperYear	CitableYears
1985	1,00	85	2,18	39
1991	1,00	3	0,09	33
1992	1,00	128	4,00	32
1993	2,00	13	0,42	31
1994	1,00	5	0,17	30
1995	2,00	7	0,24	29
1996	2,00	1	0,04	28
1997	2,00	15	0,56	27
1998	4,00	10,5	0,40	26
1999	4,00	14,75	0,59	25
2000	5,00	20,6	0,86	24
2001	9,00	48	2,09	23
2002	4,00	4,5	0,20	22
2003	6,00	26,83	1,28	21
2005	3,00	28	1,47	19
2006	4,00	24,25	1,35	18
2007	9,00	30,11	1,77	17
2008	10,00	20,2	1,26	16
2009	8,00	28,12	1,87	15
2010	18,00	56,61	4,04	14
Total	96,00			

Notes: N= number of publications; MeanTCperArt= average total citations per article; MeanTCperYear= average total citations per year

a consistent rise in the number of articles published from 2001 onwards, which continued in subsequent years. The findings suggest significant potential for the subject of study to expand over the years.

Science mapping: co-citation analysis

Science mapping summarises the study sample, enabling a quicker visualisation of relationships between authors, themes, and the geographical distribution of authors. The analysis presented in this study will cover three main aspects: co-citation analysis, bibliographic coupling, and co-word analysis.

Co-citation analysis provides a proactive assessment of document similarity. Utilising the co-citation network explores the connections among cited publications, providing valuable insights into the evolution of foundational themes within a research field over time.

The results show that authors cite each other among the thematic publications that interest them, forming small thematic clusters. There are no links between the different authors in the co-citation.

Science mapping: Bibliography coupling

Bibliographic coupling analysis is a widely used method for establishing networks and clusters of literature. It identifies two works as bibliographically coupled if they both cite a common third work. The strength of the coupling is determined by the number of works they cite in common;

the more works they cite in common, the stronger the coupling between them (Nettle & Frankenhuis, 2019).

The bibliographic coupling established five major clusters with the thematic impact of each theme (Figure 8).

The findings indicate that the tourism theme appears in all clusters, but its significance varies. The theme “sustainable” is present in four out of the five clusters, while the themes “tourism,” “sustainable,” and “development” are present in all clusters.

Science mapping: Co-word analysis

The analysis included a co-word analysis of author collaborations and keywords. In terms of thematic co-word analysis, three distinct clusters were identified: tourism, economic sustainability, and sustainable tourism (Figure 9).

The three major clusters are interconnected. The tourism cluster exhibits a robust association with the sustainable tourism cluster, which, in turn, has a strong connection to the economic sustainability cluster. Within the tourism cluster, there is a significant link between sustainability and tourism policy. The sustainable tourism cluster shows reasonable connections with various aspects, such as environmental, political economy, and sustainable development goals. On the other hand, the economic sustainability cluster is highly connected to sustainable development and moderately linked to themes like tourism development, management, cultural tourism, and social sustainability.

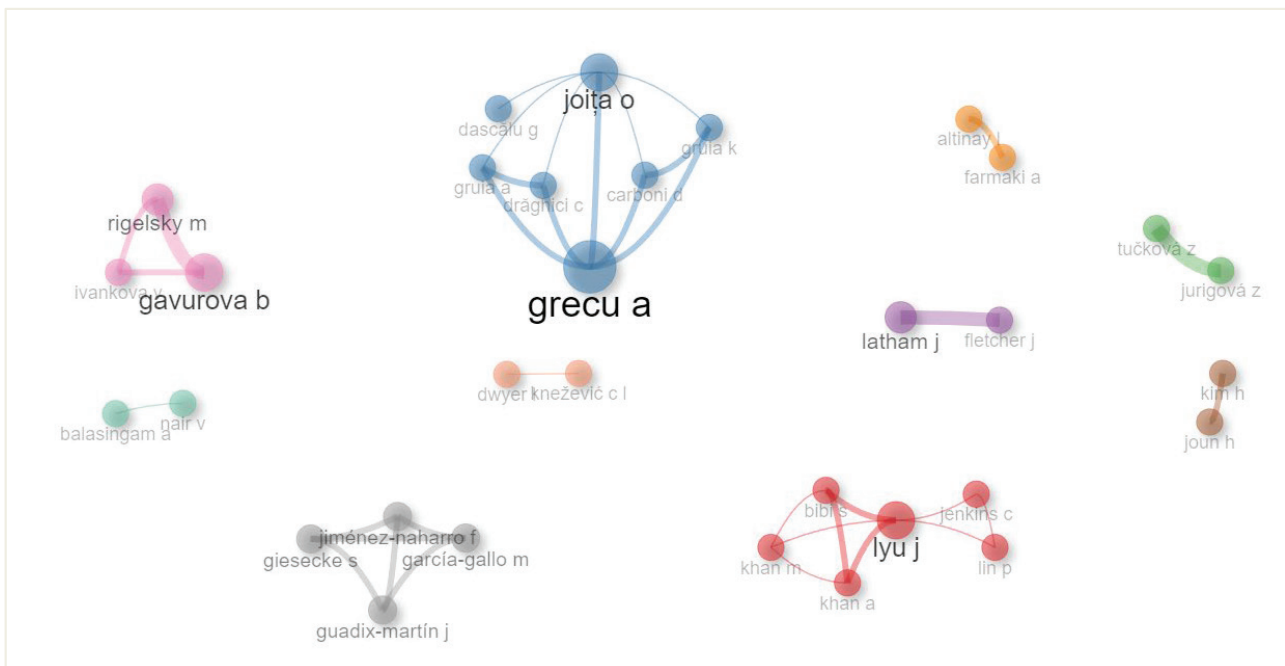


Figure 7: Co-citation analysis of bibliometric analysis

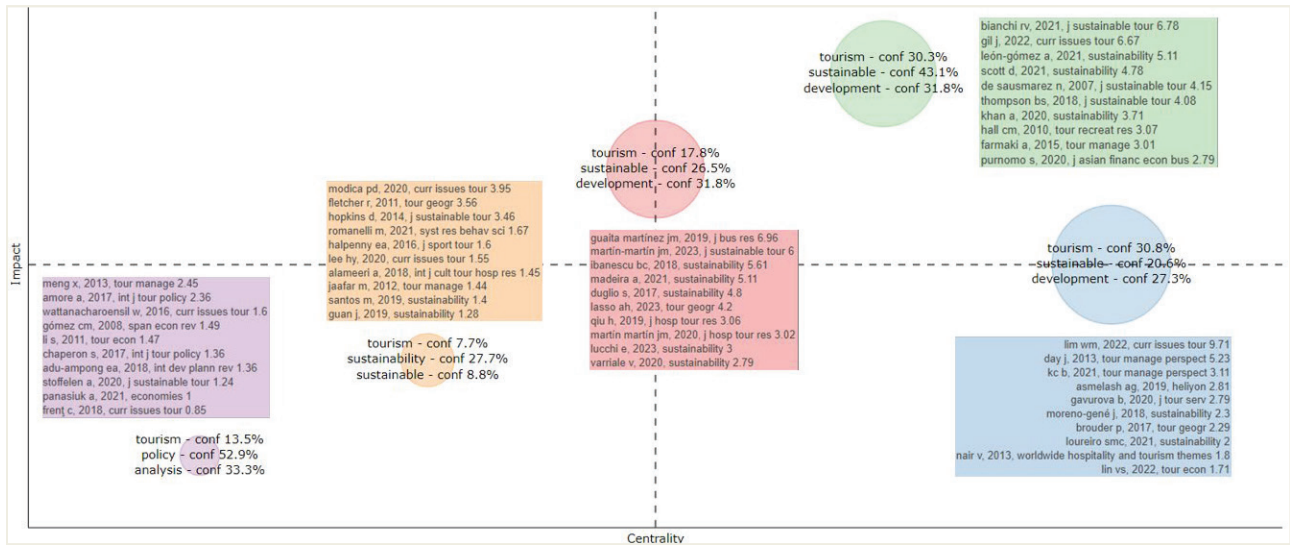


Figure 8: Bibliography coupling by citing publications of bibliometric analysis



Figure 9: Relationship among topics of bibliometric analysis

Insights for the future: Thematic evolution

The bibliometric analysis shows that, over the years, the themes have constantly changed, following and adapting to emerging study needs. Figure 10 shows that, between 1985 and 1996, tourism was an isolated area of study, not being integrated by any other area.

Between 1997 and 2008, new themes such as economic sustainability, tourism policy, and sustainable tourism were introduced. These themes gradually became integrated into various areas of tourism study, such as conservation, cultural tourism, climate change, urban tourism, and regional development in subsequent years. Over the last three years, emerging themes have emerged and integrated

with existing ones, suggesting that economic sustainability will remain a focal point that intersects with various other themes due to its complexity. This indicates that specialisation is likely to be observed in future research themes.

5 Conclusions

Bibliometric analyses give us a holistic view of thematic evolution, in this case, on economic sustainability in tourism. They provide important insights into new themes in scientific research and identify the most relevant authors within each theme.

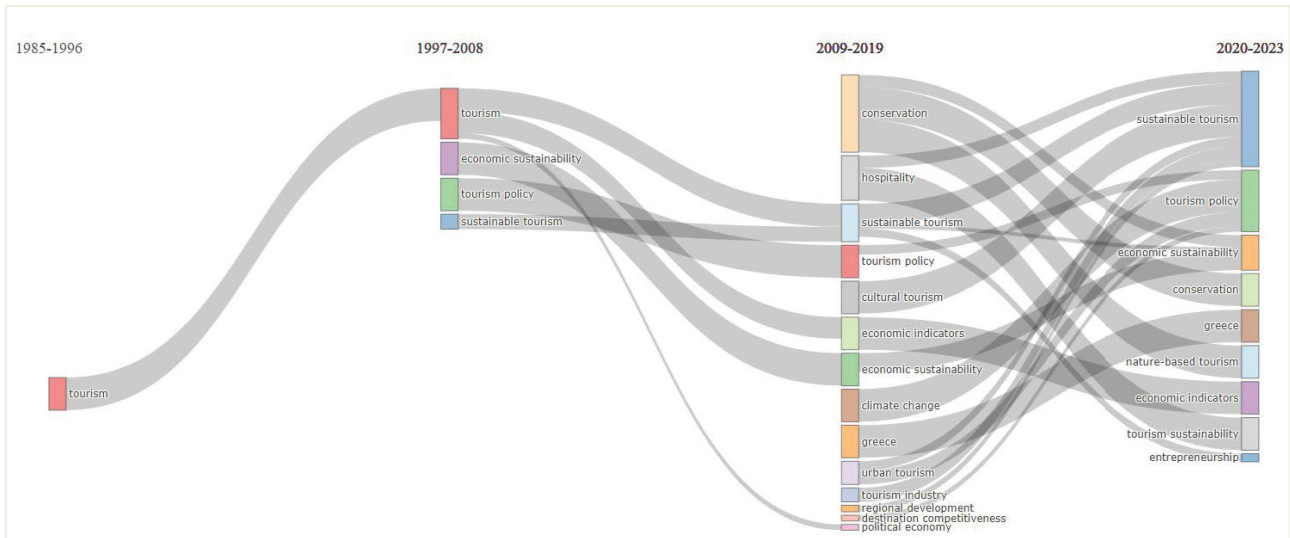


Figure 10: Thematic evaluation of bibliometric analysis

The bibliometric analysis conducted in this study provides valuable insights into the evolution and trends in academic research on economic sustainability. Between 1985 and 2001, there was a noticeable rise in publications. However, in the subsequent years, from 2002 to 2010, the number of publications showed variations. Notably, significant increases in publications were observed in 2011, 2015, and 2017. The year 2021 stands out as it witnessed the highest number of publications, indicating a substantial surge in research interest. Regarding author contributions within the studied sample, each author is associated with one to four publications. Remarkably, there are many sources (234) and authors (1173), with only 121 sole-authored publications. Furthermore, the authors' origins are primarily from Spain, followed by the USA, China, and the United Kingdom, each contributing more than twenty publications. The diversity of authors from different countries underscores the global relevance of the subject.

The journals with the highest number of contributions are “Sustainability,” “Journal of Sustainable Tourism,” and “Tourism Economics,” demonstrating the multidisciplinary nature of the theme. It should be noted that the author with the highest number of citations was Bornhorst on “Tourism Management”, in line with the average citation results that show the substantial increase in research demonstrating not only the multidisciplinary but also the potential for growth of the theme.

The clusters “sustainable tourism,” “tourism,” and “economic sustainability” were identified in line with the author’s thematic coupling, verifying the thematic

similarity between the authors; however, when the co-occurrence network is verified, this interrelation is not verified. It can be concluded that there is a lack of cooperation and collaboration between different authors studying the same subject, which could prove to be a constraint in the development of scientific knowledge and sharing with political and public decision-makers while resulting in the slow creation of policies and initiatives that promote economic sustainability among stakeholders in the tourism sector.

The multidisciplinary nature of the theme becomes evident over the years as it integrates or diverges into other thematic areas, as observed and confirmed in the (slow) thematic evolution. United Nations Environmental Programme and World Tourism Organization (2005) have established six indicators to measure economic sustainability; the fact that only the environmental and economic indicators appear reveals a lack of studies linking the three main dimensions of sustainability, as mentioned in the article by Dwyer et al. (2020).

Based on the results, the major research themes considered are sustainable tourism, tourism policy, economic indicators, tourism sustainability, and entrepreneurship. However, we believe regenerative tourism and the regenerative economy should also be considered as future research topics.

By understanding the trends and research landscape, scholars can focus their efforts on areas that hold substantial potential for further exploration and contribute to advancing knowledge in economic sustainability in tourism.

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Conflicts of Interest

The authors of the article, “A bibliometric overview of economic sustainability in tourism,” declare no conflict of interest.

Bio notes

Daniela Meneses is a PhD Candidate in Tourism at the University of Aveiro, an Invited Assistant Professor at the School of Hospitality and Tourism of Polytechnic of Porto, Portugal, and a Researcher at the Portuguese Foundation for Science and Technology and UNIAG. The research interest areas are sustainable tourism, networks in tourism, and tourism development. ORCID ID: 0000-0001-5840-8357.

Carlos Costa is a Full Professor (Professor Catedrático) in the Department of Economics, Management Industrial Engineering and Tourism (DEGEIT) of the University of Aveiro. He has over 25 years of academic and professional experience in Tourism and planning. He is the head of the Tourism Research Group of the Research Centre in Governance, Competitiveness and Public Policies (GOVCOPP) and the leader of the PhD Tourism Programme of the University of Aveiro. ORCID ID: 0000-0002-0089-6930.

Fernanda A. Ferreira is developing her professional activity as a Senior Lecturer in the Information Systems and Mathematics Department at the School of Hospitality and Tourism (ESHT) of the Polytechnic Institute of Porto, Portugal. She holds a PhD in Applied Mathematics from the Faculty of Sciences of the University of Porto (FCUP) (in 2007). A researcher and coordinator of UNIAG (Applied Management Research Unit) since 2013, her publications, more than 140 in peer-reviewed journals, book chapters, and proceedings, cover industrial organisation, game theory, and tourism research interest areas. ORCID: 0000-0002-1335-7821

Celeste Eusébio is an Associate Professor of Tourism and a researcher at the GOVCOPP Research Unit at the University of Aveiro (Portugal). She holds a Degree in Tourism Management and Planning from the University of Aveiro (1995), a Master's in Economics from the University of Coimbra (1998), and a Doctoral Degree in Tourism, also from the University of Aveiro (2006). Her research interests include tourism economics, impacts, forecasts, and consumer behaviour in tourism. ORCID ID: 0000-0002-2220-5483.

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