

Bibliometric Analysis on "Sustainable Tourism" and "Destination Image " From 2009 to 2024

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Abstract: A comprehensive analysis of the extant body of scientific research on sustainable tourism and destination image in tourism literature is required. This analysis should encompass the period between 2009 and 2024. The bibliometric method was employed to analyse two tourism variables. The present study will utilise the PRISMA protocol to systematically review the extant literature on sustainable tourism and destination image, encompassing a total of 104 documents, with no exclusion filters applied. The year 2009 was selected as the initial point of reference because it marked the year when the volume of publications began to demonstrate a correlation with the two variables under investigation. The year 2024 was incorporated into the analysis as it represented the most recent complete year. The analysis concentrated on a set of three indicators: author, year of publication, and journal. The analysis employed a combination of quantitative and qualitative methods, encompassing both simple statistics and qualitative content analysis. The theoretical implications of this study broaden the existing discussions on the variables investigated. The analysis of the publications revealed the presence of patterns and trends, thus highlighting an interconnection between the themes with direct impacts on both the projected image and the management of destinations. This was achieved through the implementation of preservation policies and sustainable best practices. The primary limitations of the research are related to the temporal scope of the analysis, which covers only the period from 2009 to 2024, the restriction of the Scopus database, and the non-use of software that could expand the bibliometric study. The importance of bibliometric analysis as a crucial tool for synthesising and understanding the vast body of literature in the field of tourism is reaffirmed. The results of the study highlight the importance of creating strategies that give priority to the interests of local communities. This is an essential factor in promoting more sustainable, responsible, and conscious development by tourism destination managers. Consequently, emphasis is placed on the significance of research contributions and trends, in addition to identifying gaps and opportunities for future investigation.

Keywords: Sustainable Tourism, Destination Image, Tourism, Bibliometric, Sustainability, Sustainable Management.

1. Introduction

In light of the mounting concerns regarding the deleterious effects of tourism, sustainable tourism emerges as a pivotal response. This approach not only addresses the environmental degradation but also the social, economic, and heritage imbalances that are often associated with tourism. The pressure for excessive economic growth occasionally conflicts with the need to safeguard a policy of environmental preservation and social justice. In this sense, sustainable tourism must be integrated and monitored by various stakeholders and government leaders to enable the preservation and optimization of natural resources and their biodiversity, as well as natural and cultural heritage. The objective is to provide a satisfactory experience for visitors, thereby promoting economic growth and the implementation of effective social practices (Dodds and Butler, 2019; León-Gómez et al, 2021; Matarazzo et al, 2021).

The concept of destination image is predicated on the impressions in the minds of tourists, created through their intuitions and emotions about a particular destination. This image is formed from a combination of information sources, personal factors, and mental images, creating a unique perception on the part of the tourist. In this context, the quality of the tourist experience was intrinsically linked to the image of the destination, impacting the level of tourist satisfaction. This intricate and evolving relationship exerts a significant influence on the quality of the destination, which, in turn, shapes the image of the destination in the mind of the tourist (Nguyen, 2019; Jeong et al, 2019; Almeida and Almeida, 2023).

The concept of a "unique destination image" is predicated on the cognitive and affective stimuli to a destination perceived by the visitor, as a new element that can have an impact on tourist loyalty to return to visit. As posited by Marques et al, (2021), the image formed by the visitor in relation to the destination can have a significant impact on the manner in which said destination is promoted. The visitor's level of satisfaction and loyalty is a key factor in this relationship, with the result that they are motivated to recommend the destination or to intend to purchase it.

The present study aims to analyse scientific research on tourism and destination competitiveness between 2009 and 2024 using bibliometric analysis and the Scopus database. The relevance of this study is reflected in verifying

the existence of a relationship between the two variables and submitting the data collected via Scopus during this time period to in-depth analysis.

The article is structured as follows: section 1, introduction to the study; section 2, review of the literature on sustainable tourism and destination image, revealing the most relevant content on each variable; section 3, which describes the methodology used; section 4, results and discussion; and section 5, which concludes with final considerations and contributions from the study.

2. Literature Review

2.1 Sustainable Tourism

The concept of sustainable tourism is predicated on a series of principles, encompassing the utilisation of management and organisational methodologies, alongside legislative and political frameworks. The overarching objective of these principles is to facilitate the development of tourism in a manner that is conducive to the preservation and protection of a destination area's natural and environmental resources. This approach confers immediate advantages to the local community and the environmental biodiversity of the destination (Matarazzo et al, 2021).

In this sense, it is essential that sustainable tourism takes into account three fundamental dimensions: economic, social, and environmental. The objective of the programme is to promote local development, thereby ensuring that financial gains from tourism can be attributed to local populations in order to contribute to their well-being. In this equation, the circular economy can play an important role in the reuse of resources and waste, contributing to local economic strengthening and adding value to the destination's products and services. However, a balance must be struck between economic benefits, the conservation of heritage and natural resources, and the enhancement of the quality of life of the resident population. This can be achieved through respect and appreciation of local cultures, in the promotion and adoption of good sustainable practices. The governance framework plays a pivotal role in shaping, formulating, and implementing public policies and regulatory practices, leveraging collaborative mechanisms among the involved entities (Dogru et al, 2020; Garau et al, 2022; Ramkisson, 2023).

Technology is inextricably linked to sustainable tourism, providing innovative digital solutions and smart practices that facilitate the development of management and organisational strategies across the environmental, economic, social, and governance dimensions. The utilisation of smart technology, such as the Internet of Things (IoT), with the objective of enhancing the rational consumption of water and electricity, can contribute to the effective management of existing resources. This, in turn, can result in the creation of mechanisms for more environmentally friendly operational practices. From an educational perspective, the growth of digital social networks has the potential to contribute to the strengthening of good practices and environmental education. Furthermore, it can create mechanisms for disseminating and promoting sustainable initiatives within the local community. In addition, it can motivate residents to conserve the environment and value culture. In summary, the authors emphasise the significance of technological contributions to the sustainable development of tourism, both in the present and in the future (Choonhawong and Phumsathan, 2022; Paladini and Saha, 2023).

In order to ensure that good practices are integrated and achieved at all levels of tourism activity, it is essential that education and training in sustainable tourism be more comprehensive, involving stakeholders, the local community, industry professionals, and visitors. It is recommended that the aforementioned groups adopt training and educational strategies that are tailored to the different roles they play in the tourism sector. It is submitted that universities, technical schools and educational institutions can play an important role in disseminating knowledge and environmental awareness and adopting good sustainable practices, with the implementation of courses and topics related to sustainable tourism (Edelheim, 2020; Choe and Kim, 2024).

2.2 Destination Image

The concept of "tourist destination" is one which encompasses a wide range of meanings. The various objectives and approaches of researchers investigating this topic, as well as the different roles of the various actors in the tourism system who use the term to designate very different realities and contexts, are important factors in this regard. Consequently, the images projected of a given destination are aimed at a specific target audience (Almeida and Almeida, 2023; 2024). The utilisation of communication channels is of paramount importance in

the construction of this image, the dissemination of promotional messages, and the creation of advertising specifically targeted at a designated audience, with the objective of capturing the interest of potential visitors to the destination (Lojo, Li and Xu, 2020; Almeida and Almeida 2023; 2024).

The centrality of a tourist destination's image is determined by a multifaceted array of factors, including the allure of its primary attractions, the efficacy of its communication strategies, the management of visitor expectations, the quality of its services, and its ability to project a positive image within the local community. These factors will gradually affect tourists' perceptions of a given destination, profoundly influencing their decision-making behavior. The image of a tourist destination is the result of the interaction between tourists and the destination through their decision-making. Tourists invest time, effort, and dedication in their interaction with the services and infrastructure that the destination provides, contributing to their level of satisfaction and, consequently, the creation of an idealised overall perception of the destination based on their experiences. Destinations that have a well-designed and organised projection of their experience offerings, through a wide range of cultural and recreational activities that cater to different types of tourist interests and preferences, create the necessary opportunities to differentiate themselves from the existing competition and become a reference for the end consumer. This, in turn, creates a degree of satisfaction that allows for their loyalty to the destination (Song, Zhang, and Chen, 2021; Ramadhani et al, 2024).

The development of a destination's image for sustainable tourism purposes has been shown to offer viable alternatives to ensure the ecological well-being of these tourist spots. It has the capacity to influence the awareness of residents and visitors, encouraging the adoption of sustainable behaviours and practices at the destination. This, in turn, can safeguard the preservation of cultural and environmental heritage, as well as the economic development of the region. Furthermore, it can improve the quality of life of the local community and enhance the tourist experience, with the intention of encouraging tourists to revisit the destination (Lee and Xue, 2020; C.-H. Liu et al, 2021).

3. Methodology

The methodology employed was bibliometric, utilising the PRISMA protocol (Table1), which was based on studies conducted in bibliographic databases. The present analysis focused on the variables "sustainable tourism" and "destination image," based on a set of three indicators: year of publication, country of publication, and journal of publication.

The initial Scopus database search, without the application of any filters, yielded a total of 104 documents. The subsequent phase of analysis of the results involved the reduction of the sample to 81 articles, with the application of the following filters: year (2009 to 2024) and document type (articles). For the sake of clarity, it is important to emphasise one of the earliest studies identified on the variables under investigation, which was published in 2009. This study examined the image of the destination in consumer behaviour in relation to the types of services experienced (Lee, 2009) (Table 2), and the most cited authors (Table 3).

Table 1: Application of the prism protocol in the study

Identification	<p>Domain: Bibliometric analysis on sustainable tourism and destination image (2009-2024)</p> <p>Research questions: What is the extent scope of the concept sustainable tourism and destination tourism? What is the overlap between them?</p> <p>Search: Scopus database</p> <p>Source quality: All type of Journals indexed in Scopus database</p>
Acquisition	<p>Search mechanism and material acquisition: Search and Acquisition mechanism in Scopus with predefined keywords (material acquisition)</p> <p>Search period: 2009 to 2024</p> <p>Search keywords: "sustainable tourism" AND "destination image"</p> <p>Total number of articles returned from the search: (n=104)</p> <p>Articles included: (n=81)</p> <p>Total articles included: (n=81)</p>
Organization	<p>Organization codes: Year, Country, Sources,</p> <p>Organization framework sequences: Temporal production, Analysis by Country, Main publication sources, Quantitative variable-oriented literature review</p>
Purification	<p>No additional purification beyond exclusion of unrelated articles; future studies may apply stricter relevance and language filters</p>
Evaluation	<p>Analysis method: Bibliometric analysis using Scopus data</p> <p>Agenda proposal method: Triangulated analysis based on SPAR-4-SLR protocol.</p>
Reporting	<p>Reporting presentation and discussion: Results presented by indicators (year, country, journal) with figures and tables.</p> <p>Definition of the agenda proposal method: Suggests future research directions: longitudinal studies, causal relationships, advanced statistical models.</p> <p>Reporting convention: PRISMA flowchart for article selection + SPAR-4-SLR protocol for structuring the review, bibliometric tables and graphs.</p>
Assembling	
Arranging	
Assessing	

Source: Authors

Table 2: First studies on the variables

Variable Investigated	Search Without Filter	Filter Applied	Theme of Study (Author, Year)
Sustainable Tourism and Destination Image	104 documents	81 articles	A structural model for examining how destination image and interpretation services affect future visitation behavior: A case study of Taiwan's Taomi eco-village (LEE, 2009).

Source: Authors

Table 3: Most cited authors in the Scopus database

Authors	Nº Citations	Title
Funk (2012)	176	Recurring sport events and destination image perceptions: impact on active sport tourist behavioral intentions and place attachment.
Andrades (2017)	157	Destination competitiveness and tourism development in Russia: Issues and challenges.
Lee and Xue (2020)	155	A model of destination loyalty: Integrating destination image and sustainable tourism.
Chi and Han (2021)	105	Emerging rural tourism in China's current tourism industry and tourist behaviors: the case of Anji County.
Kozak and Martin (2012)	95	Tourism life cycle and sustainability analysis: profit-focused strategies for mature destinations.
Lee (2009)	95	A structural model for examining how destination image and interpretation services affect future visitation behavior: a case study of Taiwan's Taomi eco-village.

Source: Authors

4. Results and Discussions

The results are presented according to the use of the following indicators (year of publication, country, and journal) of the variables investigated in this study.

4.1 Temporal Production

The annual indicator demonstrates that the number of publications was less than five in 2009, with a slight increase in 2012. However, 2023 and 2024 are noteworthy due to the heightened interest in this subject from Asian countries, which has led to a notable surge in research activity in this area. (Figure 1).

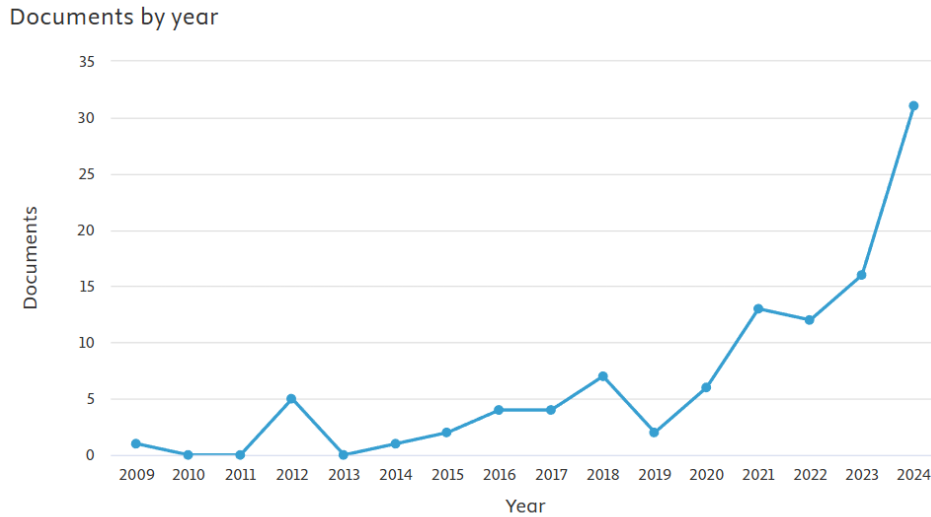


Figure 1: Year indicator

Source: Scopus (2024)

4.2 Analysis by Country

When analysing the countries, two stand out for their number of publications in relation to the others: China (15) and Indonesia (15). As demonstrated in the temporal analysis, Asian countries are distinguished as the most prolific in this domain, with Spain (12) representing Europe in this area of research. (Figure 2).

Documents by country or territory

Compare the document counts for up to 15 countries/territories.

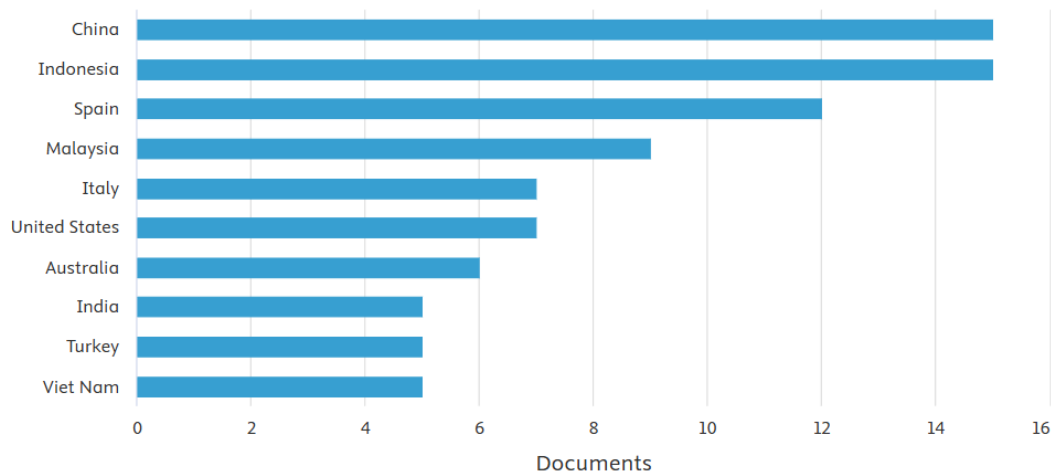


Figure 2: Publication sources

Source: Scopus (2024)

4.3 Main Publication Sources

The journals Sustainability Switzerland (15 publications), Journal of Sustainable Tourism (4), and Springers Proceedings in Business and Economics (4) are the primary drivers in the discussion and dissemination of the variables under study, with the first journal standing out for its volume of publications compared to the second and third journals, reinforcing its importance in addressing these topics as a platform for learning and debate in academic and scientific circles in this line of research. (Figure 3).

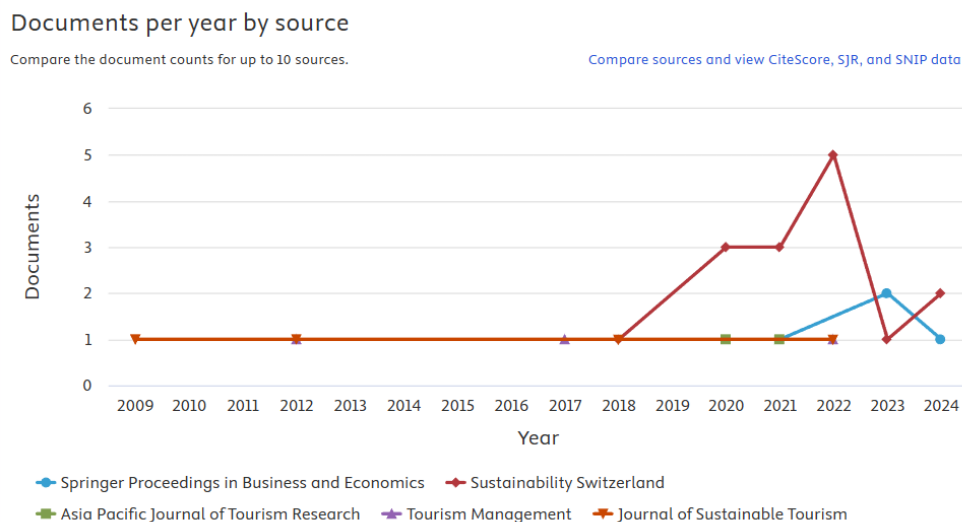


Figure 3: Main publication sources

Source: Scopus (2024)

The analyses carried out indicate that the variables "sustainable tourism" and "destination image" demonstrate continuous growth in publications in the Scopus database. In this sense, it is important to highlight the role of how tourist destinations manage their image, based on the sustainable use of existing resources, in order to differentiate themselves in an increasingly globalised and competitive market. It is evident that publications in this field may pertain to the identification and enhancement of strategies that ensure the competitiveness of destinations. Indeed, these strategies are intended to enhance the attractiveness, resilience, and sustainability of these destinations. In this context, Matarazzo et al, (2021) advocate the use of management, organisational and policy implementation methods that help chart a path for the sustainable development of tourism. Almeida and Almeida (2023) highlight the importance of using communication channels to project image, reinforcing the destination's ability to become more competitive.

5. Conclusion

The relationships between the variables investigated suggest an integrated approach to tourism management in destinations between 2009 and 2024. The mapping of scientific production facilitated the identification of publications, thereby providing a more comprehensive overview of the investigated topics and analysing the periods of greatest study intensity and publication.

The contemporary tourism scenario is characterised by an increasing interdependence amongst the factors that influence the competitiveness and attractiveness of tourist destinations. The study's emphasis on the variables examined mirrors the intricacy and multidimensionality of this emergent tourism phenomenon. In this sense, it is necessary to adopt strategies in the way destinations are managed and optimised, adjusting management models to make better use of cultural, economic, social, and human resources, integrated into the sustainability of destinations in an increasingly competitive and global market.

The study has evolved in terms of both volume and analytical complexity through the application of various approaches, ranging from comparative quantitative studies between destinations to qualitative studies focused on the perceptions of tourists and the actors in the tourism sector themselves.

The study's limitations stem from its reliance on a single database (Scopus) and its exclusive focus on the period from 2009 to 2024, potentially compromising the representativeness of the results. This may necessitate the utilisation of bespoke software to further the research in future.

For future research, it is recommended that the time period be extended, longitudinal studies be conducted to capture changes over time, and a systematic review of the literature be performed to deepen understanding of the theories and methodologies applied in the field. Another promising approach would be to use advanced statistical models, such as network analysis or structural models, to explore the causal relationships between the investigated variables and broaden the range of analyzed indicators.

The research under scrutiny here highlights bibliometrics as a strategic resource for structural and epistemological dynamics in the field, critical understanding, and guidance for future research agendas. In addition to contributing to the extant literature, this important body of research also adds significant guidelines for the development of research in future investigations. The incorporation of additional variables would facilitate a more profound comprehension of the dynamics and prevailing practices within the tourism sector.

Ethics Declaration

We state that ethical clearance was not required for this research.

AI Declaration

AI tools were not used the creation of this paper.

References

- Almeida, G.G.F. and Almeida, P. (2023) 'A influência da imagem de destino dentro da marca territorial no desenvolvimento regional', *Ciências Sociais Cogentes*, 9(1). <https://doi.org/10.1080/23311886.2023.2233260>.
- Almeida, G.G.F. and Almeida, P. (2024) 'Researching destination branding in pandemic crises: A research agenda', *European Journal of Tourism, Hospitality and Recreation*, 14(1), pp. 165–178. <https://doi.org/10.2478/ejthr-2024-0012>
- Andrades, L. (2017) 'Destination competitiveness and tourism development in Russia: Issues and challenges', *Tourism Management*. Elsevier BV. <https://doi.org/10.1016/J.TOURMAN.2017.05.008>
- Chi, X. and Han, H. (2021) 'Emerging rural tourism in China's current tourism industry and tourist behaviors: the case of Anji County', *Journal of Travel & Tourism Marketing*, 38(1), pp. 58–74. <https://doi.org/10.1080/10548408.2020.1862026>
- Choe, Y. and Kim, N. (2024) 'From the classroom to the Living Lab for developing competencies in tourism higher education', *Journal of Hospitality, Leisure, Sport & Tourism Education*. <https://doi.org/10.1016/j.jhlste.2024.100511>
- Choonhawong, W. and Phumsathan, S. (2022) 'Critical review of patterns, roles, and influences of social media in tourism', *Journal of Social Sciences*, 43(4). <https://doi.org/10.34044/j.kjss.2022.43.4.27>
- Dodds, R. and Butler, R. (2019) *Overtourism: Issues, realities and solutions*. Berlin/Boston: De Gruyter. <https://doi.org/10.1515/9783110607369>
- Dogru, T., Bulut, U., Kocak, E., Isik, C., Suess, C. and Sirakaya-Turk, E. (2020) 'The nexus between tourism, economic growth, renewable energy consumption, and carbon dioxide emissions: Contemporary evidence from OECD countries', *Environmental Science and Pollution Research*, 27(32), pp. 40930–40948. <https://doi.org/10.1007/s11356-020-10110-w>
- Edelheim, J. (2020) 'How should tourism education values be transformed after 2020?', *Tourism Geographies*, 22(3), pp. 547–554. <https://doi.org/10.1080/14616688.2020.1760927>
- Funk, D. (2012) "Recurring sport events and destination image perceptions: impact on active sport tourist behavioral intentions and place attachment," *Journal of Sport Management*. <https://doi.org/10.1123/jsm.26.3.237>
- Garau, G., Carboni, D. and Karim El Meligi, A. (2022) 'Economic and environmental impact of the tourism carrying capacity: A local-based approach', *Journal of Hospitality and Tourism Research*, 46(7), pp. 1257–1273. <https://doi.org/10.1177/10963480211031426>
- Jeong, Y. and Kim, S. (2019) 'A study of event quality, destination image, perceived value, tourist satisfaction, and destination loyalty among sport tourists', *Asia Pacific Journal of Marketing and Logistics*, 32, pp. 940–960. <https://doi.org/10.1108/APJML-02-2019-0101>
- Kozak, M. and Martin, D. (2012) 'Tourism life cycle and sustainability analysis: profit-focused strategies for mature destinations', *Tourism Management*, 33, pp. 188–194. <https://doi.org/10.1016/j.tourman.2011.02.015>
- Lee, T.-H. (2009) 'A structural model for examining how destination image and interpretation services affect future visitation behavior: a case study of Taiwan's Taomi eco-village', *Journal of Sustainable Tourism*, 17(6), pp. 727–745. doi: 10.1080/09669580902999204
- Lee, S.W. and Xue, K. (2020) 'A model of destination loyalty: Integrating destination image and sustainable tourism', *Asia Pacific Journal of Tourism Research*, 25(4), pp. 393–408. <https://doi.org/10.1080/10941665.2020.1713185>
- León-Gómez, A., Ruiz-Palomo, D., Fernández-Gámez, M.A. and García-Revilla, M.R. (2021) 'Sustainable tourism development and economic growth: Bibliometric review and analysis', *Sustainability*, 13(4), p. 2270. <https://doi.org/10.3390/su13042270>
- Liu, C.-H., Jiang, J.-F. and Gan, B. (2021) 'The antecedent and consequence behaviour of sustainable tourism: Integrating the concepts of marketing strategy and destination image', *Asia Pacific Journal of Tourism Research*, 26(8), pp. 829–848.
- Lojo, A., Li, M. and Xu, H. (2020) 'Online tourism destination image: Components, information sources, and incongruence', *Journal of Travel & Tourism Marketing*, 37(4), pp. 495–509. <https://doi.org/10.1080/10548408.2020.1785370>

- Marques, C., da Silva, R.V. and Antova, S. (2021) 'Image, satisfaction, destination and product post-visit behaviours: How do they relate in emerging destinations?', *Tourism Management*, 85, 104293. <https://doi.org/10.1016/j.tourman.2021.104293>
- Matarazzo, A., Spampinato, E.C., Arfò, S., Sinigaglia, U., Bajeli, A. and Benanti, S. (2021) 'Blockchain technology applied to the consortium Etna DOC to avoid counterfeiting', *Advances in Global Services and Retail Management*, 2, pp. 1–11. <https://tinyurl.com/4yrmwsx8>
- Matarazzo, A., Vazzano, T.A. and Squillaci, C. (2021) 'Survey on purchasing methods of food products in Tarragona and Catania', *Advances in Global Services and Retail Management*, 2, pp. 1–18. <https://tinyurl.com/2p8h8rf7>
- Nguyen, T.L.H. (2019) The influence of Hue tourist destination image on tourists' intention to return. Ph.D. Thesis. Hue, Vietnam: University of Economics, Hue University.
- Paladini, S. and Saha, K. (2023) 'The quest for sustainability in lower orbit: Conceptual models for space tourism', *International Journal of Tourism Research*, 25(3), pp. 333–349. <https://doi.org/10.1002/jtr.2568>
- Ramadhani, D.P., Alamsyah, A., Febrianta, M.Y. and Damayanti, L.Z.A. (2024) 'Exploring tourists' behavioral patterns in Bali's top-rated destinations: Perception and mobility', *Journal of Theoretical and Applied Electronic Commerce Research*, 19(2), pp. 743–773.
- Ramkissoon, H. (2023) 'Perceived social impacts of tourism and quality-of-life: A new conceptual model', *Journal of Sustainable Tourism*, 31(2), pp. 442–459. <https://doi.org/10.1080/09669582.2020.1858091>
- Song, X., Zhang, X.C. and Chen, S.Y. (2021) 'Research on the image structure and influencing factors of typical tourist destinations in the Yellow River Basin', *Resource Development and Market*, 37(9), pp. 1145–1152.