Smart Innovation, Systems and Technologies 209

António Abreu
Dália Liberato
Elisa Alén González
Juan Carlos Garcia Ojeda *Editors*

Advances in Tourism, Technology and Systems

Selected Papers from ICOTTS20, Volume 2

AHES International

Springer

Smart Innovation, Systems and Technologies

Volume 209

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Editors
António Abreu
Institute of Accounting and Administration of Porto (ISCAP)
Polytechnic of Porto
São Mamede de Infesta, Portugal

Elisa Alén González
Facultade de Ciencias Empresariais e Turismo As Lagoas
University of Vigo
Ourense, Spain

Dália Liberato
School of Hospitality and Tourism
Polytechnic Institute of Porto
Vila do Conde, Portugal

Juan Carlos Garcia Ojeda
Universidad de Cartagena
Cartagena, Colombia

ISSN 2190-3018 ISSN 2190-3026 (electronic)
Smart Innovation, Systems and Technologies
ISBN 978-981-33-4259-0 ISBN 978-981-33-4260-6 (eBook)
https://doi.org/10.1007/978-981-33-4260-6

This Springer imprint is published by the registered company Springer Nature Singapore Pte Ltd.
The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

Editorial

The International Conference on Tourism, Technologies and Systems is an international forum for researchers and professionals in the tourism sector, which enables the discussion of the latest innovations, trends and concerns in several areas, in the tourism sector, associated with information technologies and systems. It is an event for professionals in the sector, in search of technology solutions, where academics, IT experts and business managers meet to discuss new ideas that help them maximize the potential of tourism business through technology.

The ICOTTS'20 Scientific Committee is composed of a multidisciplinary group of 137 experts who assessed some 190 papers from 28 countries, received for each of the main topics proposed for the conference: a) technology in tourism and tourism experience; b) smart destinations; c) digital marketing applied to tourism and travel; d) mobile technologies applied to sustainable tourism; e) research in the area of tourism to provide innovative solutions to social problems; f) tourism, well-being and hospitality; g) information technologies in tourism; h) digital transformation of tourism business; i) travel for health and well-being; j) information technologies in ecotourism and agrotourism; k) information technologies in food tourism; l) information technologies in education and educational tourism; m) e-tourism and tourism 2.0; n) big data and travel and tourism management; o) robotics in tourism; p) resilience and tourism; q) dark tourism; and r) military tourism.

The papers accepted for presentation and discussion at the conference are published by Springer and will be submitted for indexing by ISI, SCOPUS, EI-Compendex, Google Scholar and SpringerLink.

We thank all those who contributed to the ICOTTS'20 conference (authors, committees, workshop organizers and sponsors). We deeply appreciate your involvement and support, which were crucial to the success of the conference.

October 2020

António Abreu
Dália Liberato
Elisa Alén González
Juan Carlos Garcia Ojeda

Contents

About the Editors

António Abreu is Adjunct Professor at the Polytechnic Institute of Accounting and Administration of Porto, Instituto Politécnico do Porto. He completed post-doctorate in Technologies and Information Systems, Department of Informatics Engineering, Faculty of Sciences and Technology, University of Coimbra, Ph.D. in Software Engineering based on reusable components with Human–Machine Interface applications, University of Vigo, and Master in Management Informatics from the University of Minho and Licentiate in Informatics–Mathematics Applied by Universidade Lusíada. He currently works as Lecturer in the Information Systems sciences area of the Polytechnic Institute of Accounting and Administration of Porto/Politécnico do Porto, ISCAP/PPorto. He is an effective member of the CEOS.PP Research Center – Center for Organizational and Social Studies of the Polytechnic of Oporto. Between 2015 and 2018, he was Coordinator of the Advanced Professional Technical Courses (CTeSP) of the Higher Institute of Accounting and Administration of Porto (ISCAP) and Coordinator for Market Development of ISCAP's Center for Training and Services Abroad. 2017/2018 – Coordinator of the ISCAP/ACINNET Business Council. He is Conference Chair of the ICOTTS 2019 – The 2019 International Conference on Tourism, Technology & Systems. He is a scientific committee member of several conferences in the area of Information Systems and Technologies.

Dália Liberato is Professor of Tourism, specializing in tourism destinations management and tourism planning, at the School of Hospitality and Tourism, Polytechnic of Porto. Currently, she coordinates the Tourist Activities Management degree in the same school. Her main research interests are tourism management, tourism planning, cross-border tourism, creative tourism, and e-tourism.

Elisa Alén González is Associate Professor of Marketing specializing in tourism marketing at the Faculty of Business Sciences and Tourism, University of Vigo. Elisa's research work lies in tourist behaviour, from motivation to behavioural intentions, focusing on improving satisfaction. In recent years, she has focused on different types of tourism, mainly thermal and senior tourism.

Juan Carlos Garcia Ojeda is Tenure-Track Professor at the Universidad de Cartagena (Colombia). He completed Ph.D. in Science Technology from the University of Pannonia (Hungary), M.Sc. in Computer Science from Kansas State University (USA), M.Sc. in Computer Science from Instituto Tecnológico y de Estudios Superiores de Monterrey (Mexico) in agreement with the Universidad Autónoma de Bucaramanga (Colombia), and B.Sc. from Universidad Autónoma de Bucaramanga (Colombia). He is a member of the Association for Computing Machinery (ACM), State Alumni (US Department of State), Colombia-USA Exchange Alumni Association; also, Regional Promoter, for the Caribbean region, of the Colombian Society of Computation (SCo2). He has published several papers in both national and international journals, book chapters, and a book and participated and presented papers in national and international conferences.

Smart Tourism: A Bibliometric Analysis of Scientific Publications from the Scopus and Web of Science Databases

Maria I. B. Ribeiro[1,3], António J. G. Fernandes[1,3], and Isabel M. Lopes[2,3(✉)]

[1] Escola Superior Agrária, Instituto Politécnico de Bragança, Centro de Investigação de Montanha, Bragança (CIMO), Campus Santa Apolónia, 5300-253 Bragança, Portugal
{xilote, toze}@ipb.pt

[2] Escola Superior de Tecnologia e Gestão, Instituto Politécnico de Bragança, Unidade de Pesquisa Aplicada em Gestão – IPB, Campus de Santa Apolónia, Bragança, Portugal
isalopes@ipb.pt

[3] Centro ALGORITMI da Universidade do Minho, Guimarães, Portugal

Abstract. This research aimed to identify the most developed themes in the field of Smart Tourism (ST). To this end, a search was carried out in Scopus and Web of Science (WoS) databases on March 3, 2020. The search was based on the terms "Intelligent", "Tourism" and "Smart". In Scopus database, 128 publications were counted and in WoS database 73 publications were found, of which 32 were duplicated in the Scopus database. A bibliometric analysis based on 169 publications was developed using the VOSviewer software and the term co-occurrence technique. Three thematic areas (clusters) were identified that are related to each other. The first cluster links the concept of ST with the concept of Smart City and the use of the internet in the tourism sector. The second cluster focuses on studies that measure satisfaction and determine the preferences of the tourist and/or visitor. The third cluster, relates the concept of ST with the use of more advanced communication technologies available for tourists and/or visitors, which are easy to use and provide greater convenience to the user.

Keywords: Tourism · Intelligent · Smart · Scopus · Technologies · Web of Science · Visitors

1 Introduction

ST is a recent phenomenon that characterizes the current situation of tourism and that contemplates the fundamental role of the evolution of information technologies (IT) in the development of the tourism sector [1]. The smart concept came about as a result of the increase in IT and the need for sustainability. It relies primarily on IT that integrate hardware, software and network technologies to provide real-time real-world knowledge and advanced analytics to help people make smarter decisions about alternatives, as well as enabling actions that will optimize processes and business performance [2].

A. Abreu et al. (Eds.): ICOTTS 2020, SIST 209, pp. 1–14, 2021.
https://doi.org/10.1007/978-981-33-4260-6_1

These technologies trigger innovation and greater competitiveness, ensuring more sustainable development [3]. It is necessary to be smart to survive in the tourism industry. Intelligence facilitates the design of products, actions, processes and services in real time, involving different stakeholders simultaneously to optimize collective performance and competitiveness and to generate solutions and added value for all [4].

In this context, this research aimed to identify the most developed themes in the field of Smart Tourism (ST). To achieve this objective, a bibliometric analysis based on 169 publications from Scopus and Web of Science (WoS) databases was developed using the VOSviewer software and the term co-occurrence technique.

This work is organized in five (5) sections. The introduction presents the importance of the ST for a sustainable development of the tourism sector. In the second section, the literature review on ST is organized. The third section describes the methodology used in this research. The fourth section presents the results. In the fifth section, the conclusions and limitations of this study are exposed and future researches are suggested.

2 Literature Review

The concept of ST results from the adaptation of the concept of "smart city" to a tourist destination. This concept is related to the use of technologies and the internet in tourism, with the purpose of obtaining improvements in terms of economic growth, quality of life, resource management and development of more efficient management and social participation processes [5–7]. The World Tourism Organization attributes to ST characteristics such as clean, green, ethical, quality, among others [8]. Thus, the ST must be able to meet the requirements of short-term economic needs and long-term sustainable development [9]. The use of technologies and the internet in tourism, in addition to providing new and differentiated tourism products, also allows for a sector development with greater equity and sustainability as a result of greater collaborative participation [7]. The principle of intelligent tourist destination is to provide smarter platforms to collect and distribute information within the destination, facilitate and provide efficient tourism resources and integrate tourism providers at micro and macro levels, with the aim of guaranteeing on the one hand, positive economic results, on the other, its more equitable distribution across the country and local society [10].

An intelligent tourist destination is characterized by having high levels of innovation and user facilitation of platforms and technologies, using interfaces and technologies, namely, Internet of Things (IoT), mobile communication, cloud computing/services and artificial intelligence [9]. ST destinations allows to obtain information about the real needs and preferences of customers. Effective involvement between tourists and service providers is important to provide products that successfully meet the needs of tourists [4, 11]. The ST should help tourists to easily make decisions before or during their travels, providing relevant and meaningful information, based on the analysis of big data, personal information, patterns of behavior, etc. [12]. Thus, ST destinations can be defined as destinations that use available technology to co-create value, pleasure and new and different experience for the tourist [13–15]. The future of the ST is based on technological development and its rapid and extensive implementation at all levels of the tourism sector [11].

3 Methods

This research aimed to understand with more detail the topics covered in the scientific literature on ST. To achieve this objective, a quantitative study was developed involving a bibliometric analysis based on a search carried out on March 3, 2020, which focused on publications available in the Scopus and WoS databases. These databases were used due to their multidisciplinary character which allows the analysis of citations and bibliometric data. In the search carried out, only publications that contained, in the title, abstract or keywords, the terms "Intelligent", "Tourism" and "Smart" were selected. Thus, one hundred and sixty-nine (169) publications were found that served as the basis for the bibliometric analysis. Of these, one hundred and twenty-eight (128) publications were counted in the Scopus database. Seventy-three (73) publications were found in the WoS database. Of these, thirty-two (32) were withdrawn because they were duplicated in the Scopus database.

After identifying the documents, the bibliometric technique of co-occurrence terms was used in order to group them into thematic clusters. The terms were extracted using the VOSviewer software in order to build a map that shows the relations between the different terms and their association with clusters of thematic areas. With this methodology, the distance between the various selected terms is analyzed, and the shorter the distance between two terms, the stronger the relation between them [16]. On the map, the colors represent the clusters of thematic areas, and the terms with the same color are part of the same cluster and, therefore, are more strongly associated to each other compared to terms that have a different color. In the analysis, the binary counting method was selected, which consists of identifying whether the term is present or absent in each document analyzed.

4 Results

Initially, the results of the descriptive analysis are presented, namely, the number of articles published per year in the period 2000–2020, the Top 5 of the most published works by publication, institution and country per database; ST domain subareas per database; type of publications per database; and, h-11 and h-7 indexes of contributions on ST from the Scopus and WoS databases, respectively. Subsequently, the results of the analysis of the thematic areas are presented.

4.1 Descriptive Analysis

As already mentioned, 128 publications were selected within the scope of the ST in the Scopus database. Figure 1 shows a growth trend in the number of publications in the period from 2001 to 2015, with an average annual growth rate of 22.5%. In 2016, the number of publications decreased compared to the previous year (−80%). In 2020, there were only 3 publications since the search was carried out on March 3, 2020 and, as such, only January and February were considered. The average annual growth rate from 2001 to 2019 was 19.8%. The first publications, in the WoS database, are from 2011. The average annual growth rate in the period from 2011 to 2019 was 26.4%. The years with the highest number of publications were 2016 and 2018, both with 14 (19.2%) publications.

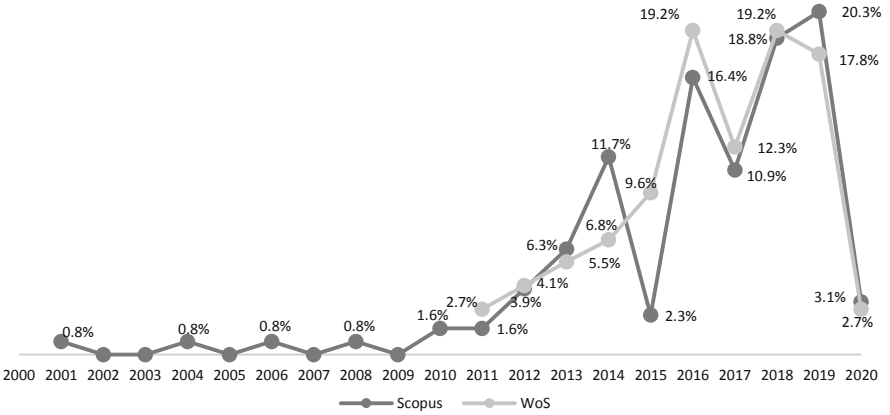

Fig. 1. Number of publications per year (%).

In WoS database, the literature focuses on scientific journals in the areas of Electronics, Informatics, Management and Telecommunications, namely Engineering Electrical Electronic (23.3%), Computer Science Information Systems (19.2%), Computer Science Theory Methods (19.2%), Management (15.1%) and Telecommunications (13.7%). In Scopus database, the areas of IT, intelligent systems and artificial intelligence (AI), communication and information stand out, with Lecture Notes in Computer Science Including Subseries Lecture Notes in AI and Lecture Notes in Bioinformatics (13.9%) as the source with more publications (Fig. 2).

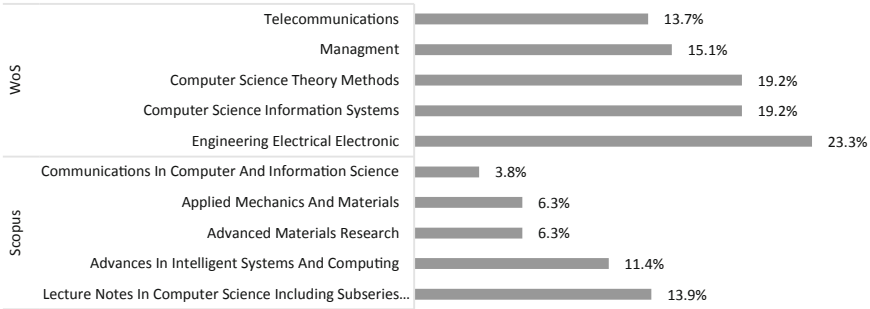

Fig. 2. Top 5 journals with more publications per database.

At the institutional level, the publications are very dispersed (Fig. 3). In fact, Beijing Union University and St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences (SPIIRAS) were the institutions with most publications in the Scopus database both with 3 publications (1.8%). Beijing Union University is a municipal university administered by the government of China and located in Beijing. It is dedicated to the study and research in the fields of international business, economics and international trade, Chinese history, language and literature

and business and administration. The second institution is located in St. Petersburg, Russia. It is dedicated to the study and research in the areas of IT, intelligent automation systems and computer science. On the other hand, in WoS database, the largest number of publications (4.1% that correspond to 7 publications) is associated with the Chinese Academy of Sciences located in Beijing, China, which explores and takes advantage of high technology and natural sciences for the benefit of the Society. Constituted by an extensive research and development network, it brings together scientists and engineers from China and around the world to address theoretical and applied problems, using scientific and management approaches.

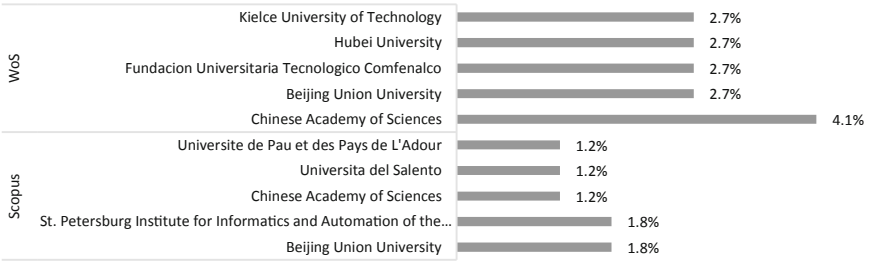

Fig. 3. Top 5 institutions with more publications per database.

China is the country with the most publications in both databases, with 57.6% (74 publications) in Scopus and 48.0% (35 publications) in WoS databases. Spain, Italy, Taiwan and France held the remaining positions in the Top-5 of the countries that publish the most (Fig. 4).

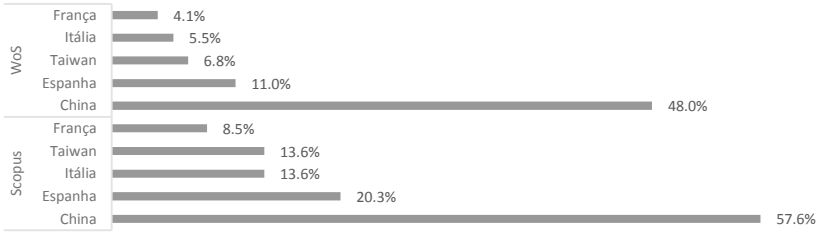

Fig. 4. Top 5 countries with more publications per database.

The subarea with the greatest representativeness in terms of publications is Computer Science with 32.7% in Scopus and 35.6% in WoS databases, corresponding to 42 and 26 publications, respectively (Fig. 5).

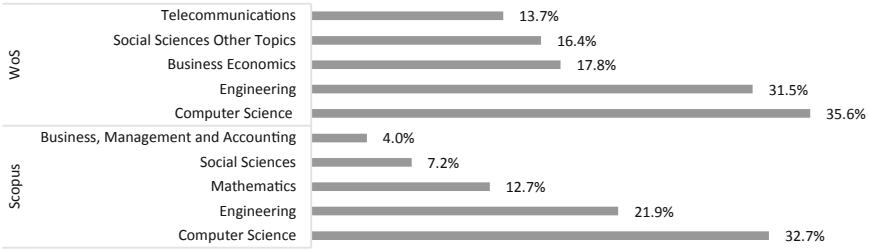

Fig. 5. Subareas with publications from the ST domain per database.

As shown in Fig. 6, of the total of 128 publications in Scopus and 73 in WoS databases, corresponding to 55.5% and 69.9%, respectively are conference documents.

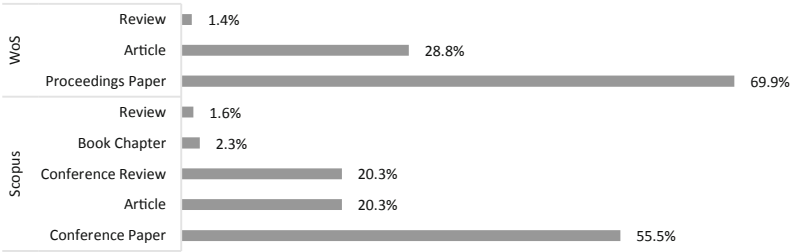

Fig. 6. Type of publications per database.

Tables 1 and 2 show the publications included in the h-index, that is, the number of articles by a given author with at least the same number of citations [17]. The h indexes totaled 11 publications in the Scopus database and 7 publications in the WoS database. In the h index, also known as the Hirsch index, publications are organized in ascending order according to the most cited publication and then calculated where the sequence number of publications meets the citations [18]. The most cited article [19], in both databases, developed by Borràs, Moreno and Valls and published in 2014, counted 199 and 132 citations at the time of the search (May, 2020), in Scopus and WoS databases, respectively. In this article, the authors review the systems recommended for Tourism, which use AI, including scientific articles and conference proceedings in their review.

As shown in Table 1, taking into account the methodology used in the h index publications, 6 are experimental studies, 3 are empirical studies that use a quantitative methodology and the remaining 2 are conceptual studies. Empirical studies focus essentially on studying preferences and analyzing the satisfaction of visitors and/or tourists. The most recent empirical study [20], developed in 2017, recorded 16 citations. This article proposes an approach, based on big data from social networks with geographic tags, to generate popular tourist attractions, create new services and provide greater convenience to visitors and/or tourists.

The most cited article [19], with 199 citations, was a conceptual one. In these study, the authors expose the characteristics associated with ST and describe the technologies used to facilitate and improve the stay of tourists and visitors to a tourist destination.

The most cited experimental study, with 29 citations [21], develops a system for mobile devices, which incorporates information such as the users' speed and their route. This system is able to personalize the route for each visitor/tourist since it takes into account their current location and driving speed (Table 1).

The most recent experimental studies were carried out in 2017. In a research [27], with 17 citations, authors use an approach based on the big data analysis of social networks, which contain the geographical location of visitors/tourists, with the objectives: to discover new popular tourist attractions, to create new services and to improve the user's comfort of this system. In the other research [28], with 16 citations, authors prove, through the implementation of a specialized strategy, which includes the identification of areas and regional industries dedicated to the promotion of local business development, that tourism can be a valuable instrument to promote a smart, sustainable and inclusive regional growth (Table 1).

Table 1. H-index of the literature on ST from the Scopus database (h-11).

Reference	Method	Contributions	Cit.
1. [19]	Conceptual review	Literature review, since 2008, on tourism recommendation systems, published in scientific journals and conferences, related to AI	199
2. [22]	Empirical quantitative	Assesses tourist preferences in relation to intelligent tourist attraction, analyzing their strengths and weaknesses. This study extends previous research on ST and offers guidance on theoretical research and the practical development of smart tourist attraction	72
3. [23]	Conceptual	Demonstrates that smart cities are superior for offering technical values and smart services, using IoT, ubiquitous sensor networks, among others, as instruments. Smart city supervision, smart transport, smart environment monitoring and ST are examples of services offered by a Smart City	41
4. [24]	Empirical quantitative	Develops an algorithm to analyze data on customer preferences, according to objective criteria for different segments. Determines customer satisfaction in different criteria. Provides constructive suggestions, aimed at professionals and researchers, for the development of personalized marketing campaigns that allow the improvement of the services of the websites of online travel agencies	40
5. [21]	Experimental	Proposes a system for mobile devices which incorporates some implicit contextual information: the user's speed and their route. This system was created specifically to help users traveling, providing smart and personalized points of interest along the route, taking into account the current location and driving speed	29

(*continued*)

Table 1. (*continued*)

Reference	Method	Contributions	Cit.
6. [25]	Experimental	Develops a prototype of a mobile tourist guide using the Smart Space infrastructure to facilitate the integration of services and internal processes in the system that allows comprehensive and up-to-date information search, together with personalized recommendations and services	26
7. [26]	Experimental	Develops a structure, called "WantE-at" that includes a mobile application that records information about a specific region (cultural heritage, gastronomy, restaurants, products, stores, etc.) allowing users to interact with objects in a natural and fun way, using smartphones without the need for another structure. This device aggregates information/feedbacks provided by users about their experiences and can be shared on social networks	19
8. [27]	Experimental	Presents a private Blockchain implementation approach for the smart home system (SHS) to deal with privacy and security issues. SHS is an integration of home appliances and sensors to obtain automatic operations of heating, lighting, air conditioning, residential security, health systems, etc. The SHS allows the owner to monitor and execute the functions of the devices remotely at any time via the Internet	17
9. [20]	Empirical quantitative	Proposes a new method to discover popular tourist attractions, create new services and provide greater convenience to people, extracting spatial-temporal data from social networks that contain the geographic location of users. This approach, based on big data from social networks with geographic tags, can support decision making related to tourism management and planning. This method allows the extraction of information related to travel preferences	16
10. [28]	Experimental	Demonstrates, through the implementation of a smart specialization strategy, based on the identification of regional areas and industries aimed at promoting local business development, how tourism can be used to promote smart, sustainable and regional growth	15
11. [29]	Experimental	Develops a model and software, which is based on the use of near field communication technology and smart posters, spread across smart environments. This method allows users/visitors, in an easy, intuitive and context-aware way, to navigate smart urban scenarios	11

Table 2 contains the publications that constitute the Hirsch index of the WoS database. Of the 7 publications that are part of this index, 5 are duplicated in the Hirsch index of the Scopus database. The first two publications, articles [19, 22] held exactly the same top positions, in the two databases, first and second, respectively. However, the number of citations is higher in Scopus (199 and 72, respectively) compared to WoS (132 and 56, respectively).

Of the studies that only appear in WoS database, one is experimental and the other is empirical. In the experimental one [30], authors present a platform that consists of a flexible infrastructure, with which users can easily control systems or equipment in different contexts (home, city, health, tourism, etc.). For example, with the same platform, the user can control, at home, lights, equipment, such as computers, machines, etc. Currently, it is necessary to use mobile devices that transmit data (IoT) used for many different services, such as supervising, controlling, monitoring, analyzing and displaying information to users. In this sense, authors propose a single platform that can be used for different services with the use of a single device. The empirical article [31] uses both qualitative and quantitative methodologies to analyze the advantages and potential of a "tourist kit" based on the concept of a prepaid card issued by a major postal operator. The card can be recharged by tourists according to their needs and its validity is not restricted to short periods. With this "Tourist Kit", cardholders can purchase a variety of products and services benefiting from substantial price discounts.

Table 2. H-index of the literature on ST from the WoS database (h-7).

Reference	Method	Contributions	Citations		Pos
			WoS	Scopus	
1. [19]	–	–	132	100	(1)
2. [22]	–	–	56	72	(2)
3. [24]	–	–	34	40	(4)
4. [28]	–	–	12	15	(10)
5. [30]	Experimental	Presentation of an autonomous Kali-Smart platform, based on semantic Web technologies and a Middleware (computer software that provides services for application software in addition to those available through the operating system) that provides autonomy and reasoning facilities in a semantic context. This platform offers users a flexible infrastructure, where they can easily control various modes of interaction of the situations experienced in different contexts (home, city, health, tourism, etc.). In this context, the use of mobile devices that transmit data (IoT), becomes obsolete	9	–	–

(*continued*)

Table 2. (*continued*)

Reference	Method	Contributions	Citations		Pos
			WoS	Scopus	
6. [20]	–	–	8	16	(9)
7. [31]	Empirical qualitative quantitative	Investigates the advantages and potential of a 'tourist kit' based on a prepaid card issued by a major postal operator. The card can be recharged by tourists/visitors according to their needs and its validity is not restricted to short periods. Thus, the tourist kit consists of an integrated, practical and flexible tool capable of making the cardholder's stay more pleasant because it allows him to choose and buy products and services at lower prices	7	–	–

Pos - Position of the h-index of the Scopus database (h-11)

4.2 Analysis of Thematic Areas

Taking into account the analysis of the thematic areas and using the VOSwiewer software and the term co-occurrence technique, a total of 6519 terms were identified in the 169 selected publications (32 publications that were duplicated were removed). Subsequently, the number of occurrences of a term in the total of the documents analyzed was defined as 10, with a total of 67 terms. Of these, terms with more than 60% relevance were selected, corresponding to 40 terms and, finally, insignificant terms were excluded such as international conference, survey, conference, special focus, article, topic, paper, case study, China, characteristic, concept, etc. In the end, a total of 29 terms were obtained, distributed over three clusters of thematic areas.

The first cluster consists of 11 terms, namely, cloud computing, IT, innovation, internet, IoT, order, rapid development, Smart City, ST, thing, tourism industry. This cluster links the ST concept with the Smart City concept and the internet. Both allowed for a rapid development of the tourism industry (red color in Fig. 7). The concept of Smart City does not stand on its own and is closely associated with ST. The progressive transition from digital cities to smart cities has become a reality in recent years [23]. In fact, smart cities serve as leverage for the establishment of smart tourist destinations that use IT and innovations to provide pleasure and positive experiences to tourists/visitors [23]. Smart tourist destinations are a combination of tourist products and, as a rule, originate in smart cities [5–7, 32].

The second cluster includes 9 terms, namely, effect, evaluation, impact, implementation, intelligent tourism, performance, research, strategy and sustainable development (green color in Fig. 7). The publications that are part of this cluster determine the impact of the ST for the tourists, continuously analyzing the preferences and satisfaction of the tourist to better respond to their needs. Tourism experiences are the main product of the tourism industry, with a direct impact on tourist satisfaction [10].

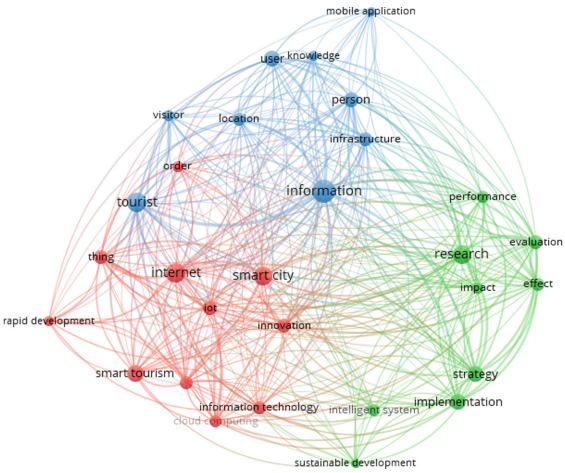

Fig. 7. Co-occurrence map of terms.

On the other hand, this cluster also includes publications that analyze and prove that ST is an important lever for the sustainable development of local and regional economies.

The third cluster links the ST with the most advanced communication technologies and consists of 9 terms, namely, information, infrastructure, knowledge, location, mobile application, person, tourism, user and visitor (blue color in Fig. 7). This cluster is associated, in particular, with the innovation, growth and development of the tourism sector, which translates into the greater ease and convenience provided to tourists/visitors; and, it is reflected in the discovery of new intelligent services, new tourist attractions, greater competitiveness and sustainable development in the tourism sector.

5 Conclusion

ST is a topic that has given rise to an increasing number of publications, especially in recent years. From 2001 to 2019, the evolution of the number of publications (the majority were proceedings of scientific events) was exponential. In WoS database, the literature focuses on scientific journals in the areas of Electronics, Informatics, Management and Telecommunications. In Scopus database, publications in the areas of IT, intelligent systems and AI, communication and information stand out. The Chinese universities of Beijing Union University and Chinese Academy of Sciences were the institutions, among the Top 5 by institution, with the largest number of publications in the Scopus and WoS databases, respectively. China was the country with the most Scopus and WoS publications in the Top 5 by country. The most representative subarea in the ST domain was Computer Science.

VOSviewer software and the terms co-occurrence technique were used in order to group the existing literature in the ST domain into clusters. Three clusters were identified. The first cluster relates the ST concept with the Smart City concept and the

use of the internet in tourism. The second cluster focuses on studies that measure the satisfaction and determine the preferences of the tourist/visitor. The third cluster relates the ST concept with the use of more advanced communication technologies available to the tourist/visitor, which are easy to use and provide greater convenience to the user.

Taking into account the three thematic areas found in this research, all of them are current and promising since they provide positive experiences to the tourist/visitor, and at the same time, enable the innovation of services and products offered by the tourism sector, guaranteeing greater sustainability and competitiveness in the sector.

This research involves an analysis limited to the period from 2000 to March 3, 2020 which is a limitation of the work. However, it was in recent years that the largest number of publications were published within the scope of ST. Also, this research is limited to Scopus and WoS databases, with other bibliometric databases such as Google Scholar Metrics (GSM) were omitted. Finally, the definition of the minimum number of occurrences of terms in the bibliometric analysis, limited to 10 terms, makes it impossible to identify all terms below this limit, not allowing to show how these terms are correlated.

This research, carried out using bibliometrics as an instrument for measuring data and information from scientific publications, made it possible to identify themes, in the scientific area of ST, that generated greatest interest by the scientific community, in the period from 2000 to March 3, 2020. Thus, this work contributes to a better clarification of the lines of research developed.

Acknowledgments. The authors are grateful to the Foundation for Science and Technology (FCT. Portugal) for financial support by national funds FCT/MCTES to CIMO (UIDB/00690/2020).

UNIAG. R&D unit funded by the FCT. Portuguese Foundation for the Development of Science and Technology. Ministry of Science. Technology and Higher Education. Project n.o UIDB/04752/2020.

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The Potential of Adventure Tourism in the Azores: Focusing on the Regional Strategic Planning

Gualter Couto[1], Rui Alexandre Castanho[1,2,3,4(✉)], Pedro Pimentel[1], Célia Barreto Carvalho[5,6], and Áurea Sousa[7]

[1] School of Business and Economics and CEEAplA, University of Azores, 9500-321 Ponta Delgada, Portugal
[2] Faculty of Applied Sciences, WSB University, 41-300 Dąbrowa Górnicza, Poland
acastanho@wsb.edu.pl
[3] CITUR - Madeira - Centre for Tourism Research, Development and Innovation, 9000-082 Funchal-Madeira, Portugal
[4] VALORIZA - Research Centre for Endogenous Resource Valorization, Polytechnic Institute of Portalegre (IPP), 7300 Portalegre, Portugal
[5] Faculty of Social and Human Sciences, University of Azores, and CINEICC - Cognitive and Behavioral Centre for Research and Intervention, 9500-321 Ponta Delgada, Portugal
[6] Faculty of Psychology and Educational Sciences, University of Coimbra, 3000-115 Coimbra, Portugal
[7] Faculty of Sciences and Technology and CEEAplA, University of Azores, 9500-321 Ponta Delgada, Portugal

Abstract. The Portuguese autonomous region of Azores is one of the Outermost Regions of the European Union. Despite the many challenges this insular region present, the geographical location of the islands has also granted exciting opportunities for regional development. One of the examples is the Adventure Tourism, which has a high potential in the territory. Besides, this tourism activity is seen as an essential vehicle for regional sustainable development. Thereby, through an empirical case study research, the present study assessed some regional strategies and territorial planning tools enabling a more profound knowledge of the process and plans ongoing to achieve sustainable development in the Azores Archipelago by the regional authorities. The study shows that the Azores tourism strategy includes nature as the most crucial resource for its development.

Keywords: Adventure Tourism · Regional development · Strategic planning · Sustainability

1 Introduction

The concept of adventure tourism does not lend itself to a straightforward definition. It overlaps with many different tourism segments and has unique features that create a context for memorable experiences. The definition of adventure tourism presented by

A. Abreu et al. (Eds.): ICOTTS 2020, SIST 209, pp. 15–25, 2021.
https://doi.org/10.1007/978-981-33-4260-6_2

the Adventure Travel Trade Association (ATTA) has been adopted by the World Tourism Organization (UNWTO). They regard it as a trip that includes at least two of the following three elements: physical activity, natural environment, and cultural immersion [1]. In turn, Buckley [2, 3], states that adventure tourism broadly means guided commercial tours where the principal attraction is an outdoor activity, which relies on features of the natural terrain and requires specialized sporting or similar equipment, and is exciting for the tour clients. However, slow adventure is different.

According to Varley and Semple [4], the concept of slow adventure is: "(…) *a celebration of the (ir)rationality of uncertainty, unpredictability, transience, experiment and the emotional content of human experience, particularly in the context of the great outdoors and engagement with the more-than-human world*." Moreover, the concept of slow adventure is based on an appreciation of the journey as an experiential dimension rather than the chore of getting to a destination [4, 5]. The authors add that the idea of "slow" adventure is rooted in a Nordic philosophy as the essential and casual activity of just being, or dwelling, in nature for extended periods of time, which allows for the generation of rich experiences, a deep appreciation of and spiritual immersion in the natural environment through engaging in everyday outdoor activities.

Slow adventure is a new marketing concept that builds the experience around the strong commitment of the participants and their interaction with nature and transformative moments. It fits the broader picture of sustainable tourism and can contribute to the development of new products, reduction of seasonality, and increased tourists' stay. Correctly exploring the concept of slow adventure can be of great importance to remote rural nature-based destinations [6–9]. Still, it is essential to develop the skills and train professionals for this purpose properly.

Contextually, the present study, through the assessment of some regional strategies and territorial planning tools, aims to allow a more profound knowledge of the process and plans ongoing to achieve sustainable development in the Azores Archipelago by the regional authorities.

2 Materials, Methods, and Case Study Description

Recognizing the symbiosis between tourism and territorial management and how they can add to sustainable development and vice-versa, the present study crossed existing thematic literature with empirical knowledge of the Azores Islands' ultra-peripheral territories.

In this regard, a thematic bibliography concerning slow tourism and adventure tourism was collected, assessed, and analyzed. Based on this review, it was possible to move forward for a case study analysis, apply those principles, and cross them with sustainable tourism and development in the Azores' ultra-peripheral territories.

Contextually, this chapter sub-divided into more specific sections as a brief overview of the Azores Archipelago, and the new paradigm in tourism faced by this peripheral region.

After, an entire chapter is dedicated to the tourism strategy in the Azores. Finally, the study concludes with some guidelines recommended by the authors, along with the final thoughts.

2.1 A Brief Overview of the Azores Archipelago

The Azores is a Portuguese autonomous region and one of the Outermost Regions (OR) of the European Union (EU). It comprises nine islands located in the middle of the Atlantic Ocean, almost midway between Europe and the United States of America (Fig. 1). The archipelago is strategically positioned, and it has been considered a sustainable nature-based destination. Recently, due to its remoteness and stunning nature, it has been increasingly identified with adventure tourism by international references like Bloomberg, Departures, BBC, Forbes, GeekyExplorer, and Lonely Planet, among many others. Its natural and cultural heritage, as well as its generalized rural environment, makes it the perfect place for slow adventures.

Some of the main challenges of the Azores arise from this distance to the main decision centers, beyond the fragmentation and geographic dispersion of its internal market. The archipelago has natural constraints that demand constant attention. The heterogeneous territory's fragmentation resulted in very different islands in terms of area and natural resources, with significant land dispersion (some islands are very distant from the center of the archipelago, while others are very close to each other). For these reasons, five islands—Santa Maria, Graciosa, São Jorge, Flores, and Corvo—have been categorized as the "Cohesion Islands" (being the smallest islands or the ones with greater challenges to their development) and benefit from positive discrimination in the regional economic policies. The remaining four islands—São Miguel, Terceira, Pico, and Faial—are the most developed, although substantial differences exist among them as well. This context has apparent impacts on the regional economy, including effects on resource efficiency, population concentration, internal market dynamics, and the need to have multiple structural infrastructures, such as ports, airports, health units, or other public services.

Despite the many challenges listed above, the geographical location of the islands has also granted exciting opportunities for regional development. Beyond a new potential for space research and exploration, historically, many transatlantic routes have passed through the Azores, making the islands critical in logistics support to sea and air navigation, both in military and commercial activities. Finally, it should also be highlighted that the big size (almost 1 million km^2) of the EEZ grants the Azores unique opportunities regarding the Blue Economy, logistics, fisheries, nautical tourism, scientific research, and exploration of marine resources.

2.2 A New Paradigm in Tourism

Tourism is perceived as a sector of high strategic importance for the Azores, which can contribute decisively to the development and growth of the region [11]. The natural and cultural resources of the Azores are varied and unique. They are the base for incredible adventures and extraordinary experiences, many of which are fast-pace high adrenalin activities. In contrast, others are very relaxing and dig deep into the social and cultural roots of the local people.