Science is love, love requeries honesty

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Content Analysis of Bibliometric Studies Prepared About Smart Tourism

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Abstract

Smart tourism has become one of the most researched topics in recent years. There has been an increase in studies examining the main trends, bibliometric structures and networks, and social, intellectual, and conceptual frameworks of the concept of smart tourism within different parameters. The aim of this study is to evaluate bibliometric analysis studies on smart tourism indexed in WoS and Scopus databases by content analysis. In this context, 48 documents were found in the WoS and Scopus databases under the subject headings of "smart tourism" and "bibliometric analysis". This is the first study using content analysis to analyze bibliometric articles on smart tourism in WoS and Scopus databases. These analyses mainly focus on authors' analysis, articles' distribution according to publication years, country collaboration network, co-citation networks of authors and journals, frequency of keywords, and co-occurrence map analysis. Bibliometric analysis studies on smart tourism have gained momentum, especially after 2019, when most studies were conducted in the field. When the keywords of the studies in WoS are analyzed, it is determined that the most frequently repeated keyword is "bibliometrics" in 14 studies, followed by "smart destination" and "smart tourism destination" in 7 studies each, and "smart tourism" in 3 studies. These results show that most of the bibliometric studies in WoS focus on smart destinations.

Keywords: Smart Tourism, Bibliometric Analysis, Content Analysis, WoS and Scopus
JEL Kodu/Code: L83, M00, M30

Akıllı Turizm Konusunda Hazırlanan Bibliyometrik Çalışmaların İçerik Analizi

Özet

Akıllı turizm son yıllarda üzerinde en çok araştırma yapılan konulardan biri haline gelmiştir. Akıllı turizm kavramının ana eğilimlerini, bibliyometrik yapılarını ve ağlarını, sosyal, entelektüel ve kavramsal çerçevelerini farklı parametreler çerçevesinde inceleyen çalışmalarda artış görülmektedir. Bu çalışmanın amacı, WoS ve Scopus veri tabanlarında indekslenen akıllı turizm üzerine bibliyometrik analiz çalışmalarını içerik analiziyle değerlendirmektir. Bu çalışma, WoS ve Scopus veri tabanlarında akıllı turizme ilişkin bibliyometrik makaleleri içerik analizi yöntemiyle inceleyen ilk çalışmadır. Bu bağlamda, WoS ve Scopus veri tabanlarında "akıllı turizm" ve "bibliyometrik analiz" konu başlıkları altında 48 çalışma bulunmuştur. Bu analizler temel olarak yazarların incelenmesi, makalelerin yayınlanma yıllarına göre dağılımı, ülke iş birlikleri ağı, yazar ve dergilerin ortak atıf ağları, anahtar kelimelerin sıklığı ve birlikte oluşum haritası analizleri üzerinde yoğunlaşmaktadır. Akıllı turizme ilişkin bibliyometrik analiz çalışmalarının, özellikle alanda en fazla çalışmanın yapıldığı 2019 yılından sonra ivme kazandığı görülmektedir. WoS'ta bulunan çalışmaların anahtar kelimeleri incelendiğinde, en sık tekrarlanan anahtar kelimenin 14 çalışmada bulunan "bibliyometri" olduğu, ardından her birinde 7 çalışmada bulunan "akıllı destinasyon" ve "akıllı turizm destinasyonu" ve 3 çalışmada bulunan "akıllı turizm" olduğu belirlenmiştir. Bu sonuçlar, WoS'taki bibliyometrik çalışmaların çoğunun akıllı destinasyonlara odaklandığını göstermektedir.

Anahtar Kelimeler: Akıllı Turizm, Bibliyometrik Analiz, İçerik Analizi, WoS ve Scopus

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1. INTRODUCTION

Rapid advancements in digital innovations and information and communication technologies have directly impacted manufacturing enterprises, service businesses, and other organizations. Specifically, the hospitality and tourism industry has been compelled to quickly adapt to technological innovations that can compete with consumer demands and the rapidly changing market to achieve sustainable tourism development. (Zsarnoczky, 2018). Smart tourism is an interdisciplinary subject that has garnered increasing attention in academia in recent years, drawing from various fields such as sustainability and archaeology (Almobaideen et al., 2016). It is an area constantly evolving in literature and requires further theoretical and conceptual sub-studies. The intellectual progress of the field will largely depend on the abundance of such research (Racherla et al., 2008; Dredge & Jamal, 2015). Authors should generate additional works that possess both theoretical depth and practical implications to foster the development of the smart tourism domain (Johnson & Samakovlis, 2019; Özköse et al., 2023).

In today's world, where technology is accelerating human and societal change, this research is considered to be an essential source of data for researchers interested in smart tourism and technologies that increase tourists' interest and knowledge of their destination, enrich the services they purchase, enhance their travel experience and increase their satisfaction. Tourism has long been an industry characterized by dynamic growth and evolution driven by changes in consumer behavior, market trends and technological innovations. In recent years, technology has emerged as a key driver in shaping the future of tourism, revolutionizing how destinations are marketed, how services are delivered and how tourists experience their journey. In the digital age, the tourism industry has undergone significant transformations primarily driven by advances in technology, with the rise of 'smart tourism', a concept that integrates cutting-edge technology such as the Internet of Things (IoT), artificial intelligence (AI), big data and cloud computing to create more personalized, efficient and sustainable tourism experiences. This development in tourism has led to increased studies on smart tourism, and there is a need for bibliometric studies on smart tourism and related topics.

When the Web of Science (WoS) Database and Scopus databases are examined, there are more than 1660 academic studies related to Smart Tourism, which contain books, articles, and proceeding papers, in the Web of Science (WoS) database and Scopus in 2010-2023. In this context, this study aims to analyze the content of bibliometric documents on smart tourism in the Web of Science database. This study, which analyzes the content of bibliometric studies evaluating the main themes and current trends of smart tourism in the Web of Science database, will try to fill the gap in the literature by determining the future direction of change and depth of knowledge of the smart tourism phenomenon. When the WOS database is examined, it is seen that documents have been analyzed using various bibliometric analysis methods under the topic of smart tourism. However, the need for bibliometric studies on smart tourism and related topics in the literature constituted the starting point of this study. This article is the first to focus on preparing a content analysis of studies utilizing one or more bibliometric analysis methods related to smart tourism. Bibliometric analysis studies that evaluate smart tourism's main themes and current trends are crucial in contributing to the future direction and depth of knowledge in this rapidly intensifying research area. This study will also serve as a reference for researchers working on the bibliometric analysis of smart tourism to understand the theoretical perspective comprehensively.

2. LITERATURE REVIEW

2.1. Smart Cities

Lopez de Avila (2015) defines smart cities as tourism-oriented and innovative, open to development, equipped with the latest technological infrastructure that facilitates visitor interaction, improves the quality of life and destination experience of residents, and ensures sustainable regional development. It has become necessary for all businesses operating in the tourism sector and tourism destinations to transform towards technology-based applications for reasons such as recognition at the destination and business level, functionality, and making the touristic experience permanent. In this context, it can be said that smart cities with the capacity to take rapid action are also pioneering smart tourism destinations. In other words, the development of smart cities also means the development of these cities as smart tourism destinations.

Smart tourism is an interdisciplinary topic that has grown by feeding from many fields, such as sustainability and archaeology and has attracted increasing attention in academia in recent years (Almobaideen et al., 2016). Smart tourism, which is constantly developing in the literature, is a field that needs more theoretical and conceptual sub-studies. The intellectual progress of the field will only be possible with more of these studies (Racherla et al., 2008; Dredge & Jamal, 2015). It is essential for the development of the field for the authors to produce more studies with theoretical and practical implications that will help the field of smart tourism mature. (Johnson & Samakovlis, 2019).

2.2. Smart Tourism

The term "smart" is used to describe a variety of innovations in the tourism and hospitality industries based on sophisticated networking and information sharing connected to new technologies like edge computing, cloud computing or big data. The term "smart" also refers to the creative ways technology is applied in cities to maximize resource allocation, provide sufficient and trustworthy governance, encourage sustainability, and attain a high standard of living (Gretzel et al., 2015a). Moreover, smart cities have become widely used in defining different urban areas (Xiang et al., 2021).

Smart tourism refers to the implementation of a sustainable and comprehensive strategy encompassing the management, planning, development, and marketing of activities and enterprises associated with tourism, a concept coined by Gordon Philips in 2000 (Li et al., 2017). Muñoz and Sánchez (2015) define smart cities as technologically equipped cities that are tourism-oriented, innovative, facilitate visitor interaction, enhance the quality of life for both residents and visitors and promote sustainable regional development. The transformation of all businesses in the tourism sector and tourism destinations towards technology-based applications has become necessary due to reasons such as visibility and functionality at the destination and business level, as well as the potential to create a sustainable tourist experience. In this regard, smart cities are the top locations for smart tourism because of their quick decision-making. Put another way, the growth of smart cities necessitates the growth of these areas as hubs for smart tourism.

Tourism, as a service industry, is associated with experiences (Aslan, 2022). Tourism destinations have also developed into locations that collect the data required to improve travelers' experience (Özköse et al., 2023), evaluate that data, and build real-time travel platforms (Corrêa & Gosling, 2021). Smart tourism technologies play a pivotal role in elevating tourists' travel experiences and securing their contentment (Özköse et al., 2023). Within this developmental trajectory, the

emergence of the smart tourism concept has become conspicuous (Chen et al., 2021). Smart cities produce information and communication technology-based solutions for the residents of a city. Smart tourism, on the other hand, focuses on enriching experiences and improving the quality of life for both the local population and tourists visiting the city by implementing smart city applications. It also aims to facilitate resource management, enhance accessibility, promote sustainability, and prioritize high-quality living standards (Gretzel et al., 2015a). In this context, the concept of smart tourism involves the fusion of information and communication technologies, smart operational methodologies, and the integration of smart technologies across destinations, events, tourist sites, and enterprises within the tourism, hospitality, and travel sectors. It aims to enhance and facilitate the tourist experience, improve company value, make rapid and efficient data management possible for the travel industry, and convert the collected data into better, more standardized product and service offerings. Moreover, it involves the integration of various technologies in smart governance and sustainability perspectives to provide services and facilities to both the local population and visitors offered by DMOs (Destination Management Organizations) and/or local governments in tourism destinations.

World Tourism Organization (UNWTO) defined smart tourism in 2009 as "clean, green, ethical, and high-quality" at every stage of the service chain (UNWTO, 2009). In 2015, the concept of smart destinations and ICT (Information and Communication Technology) were added to the definition of smart tourism (UNWTO, 2015), and in 2017, it was stated that smart tourism is the future of tourism (UNWTO, 2017). Smart tourism emerges from the integration of information and communication technologies with smart technologies, especially in adapting them to tourism services within the framework of the smart city concept (Wang et al., 2016). Gretzel et al. (2015b) proposed a development framework for smart tourism seamlessly integrates smart destinations, smart business ecosystems, and smart experiences, facilitating the incorporation of intelligence across the tripartite layers within the tourism system. Ataman (2018) highlighted three advantages of smartness offers to the tourism sector. They are;

- Facilitating easy access to necessary tourism information and services for tourists,
- Enabling tourists to observe natural sites in real-time through the implementation of sensors and monitoring systems within natural environments,
- Creating demand-oriented services through the analysis of tourist-acquired data.

Smart tourism leverages four essential information and communication technologies, namely the Internet of Things (IoT), mobile communication, cloud computing, and artificial intelligence, which combine the physical, informational, social, and commercial infrastructure of tourism destinations to benefit stakeholders involved (Guo et al., 2014). Smart tourism has gained attention in recent years due to technological advancements, both in tourism applications and in societal terms (Sigala, 2018; Li et al., 2017; Jovicic, 2019; Özköse et al., 2023) and has become one of the areas where academics conduct the most research. The publication of studies related to smart tourism dates to 1995, when smart cards started to be used in the hotel industry (Vargo & Lusch, 2004). However, it can be said that the interest of academics in the field of smart tourism has been rekindled since 2012 (Ye et al., 2020).

2.3. Studies on Smart Tourism

Today, tourism destinations have transformed into places that collect the necessary information, analyze this information and create a real-time travel platform to enhance the tourist's travel

experience (Corrêa & Gosling, 2021) and the concept of smart tourism has emerged under this development trend (Chen et al., 2021). The concept of smart tourism, first used by Gordon Philips in 2000, is defined as the management, planning, development and marketing of tourism activities and businesses by adopting a sustainable and holistic approach (Li et al., 2017). Smart cities produce solutions based on information and communication technologies for the residents of a city. Smart tourism, on the other hand, focuses on enriching the experiences of both locals and tourists visiting the city, improving the quality of life, resources, ease of transportation, and sustainability while implementing smart city applications (Gretzel et al., 2015a). In this context, smart tourism will increase the business value by enriching and facilitating the experience of tourists in destinations, events, tourist attractions, tourism, hospitality and travel industry businesses, enriching and facilitating the experience of tourists, and enabling tourism business management to create a fast and effective data management, depending on the extent to which cities are equipped with ICT, smart technologies and smart management applications.

With bibliometric analysis, specific information about the researched field is obtained in detail, and the complex structures and networks of studies in a particular field are analyzed (Özköse et al., 2023). The results obtained from this analysis become crucial, ranging from determining the level of reputation of the researched topic among countries to determining the publication policies of countries and identifying the subjects/themes of international publication trends. Furthermore, bibliometric studies are essential for the scientific mapping of international publication trends (Demir & Erigüç, 2018). Over the past few years, there has been a noteworthy surge in research on smart tourism. In this context, numerous studies have emerged that analyze the development of the field over time using various analytical methods. For example, Ye et al. (2020) used the Vosviewer software and conducted a study where they identified a total of 124 articles published within the Social Science Citation Index and Science Citation Index by conducting data scanning across Scopus, EBSCO host, and Web of Science (WoS). They concluded that further research should be conducted on public institutions related to the topic, the adverse effects of smart tourism, and the psychological and social effects of smart tourism on individuals.

Türkmendağ (2021) performed a bibliometric analysis of 5070 studies associated with information technology in 32 tourism and hospitality journals found in WoS. According to the study's findings, the trending topics were online reviews, purchase intention, experience co-creation, and the sharing economy. Chen et al. (2021) used the CitesSpace program, relying on the citation analysis, co-citation network, and evolutionary trends of 441 studies obtained from WoS between 2010 and 2021. The results revealed that "smart tourism," "smart city," "smart tourism destination," "technology," and "social media" were the top five current keywords. Additionally, the study highlighted "cloud computing" as the most prominent topic, while "user-generated content" and "tourism system" were identified as the most influential subject headings in recent research. Furthermore, the study noted that "tourism destination," "tourism experience," and "smartphone" were the most popular research topics in recent years. Soliman et al. (2021) conducted a study mapping smart experiences in tourism. They evaluated 84 articles scanned in Scopus from 2011 to 2019 using Plotly, Excel, and DB Gnosis software for evaluative metrics. The study revealed that from 2011 to 2013, research focused on digital mapping and smartphone applications. From 2014 to 2016, research explored specific aspects of these tools, tourists' perceptions and experiences related to destinations, and more specific technological tools and applications such as augmented reality and smart glasses. From 2017 to 2019, the focus shifted to gamification, big data usage,

diversification of digital platforms, and catering to tourist preferences, with many case studies investigating the benefits of these technologies for tourist experiences.

Mehraliyev et al. (2019) stated that smart tourism research has undergone a three-stage process. According to them, the period between 2010 and 2012 can be referred to as the embryonic stage, the years 2013-2014 as the stage of slow development, and the period after 2015 as the stage where research on smart tourism showed a rapid upward trend. In fact, it can be said that this development trend is the most significant reason why researchers in different countries see smart tourism as a priority research area. The ascendancy of tourism as an academic discipline and the proliferation of scholars contributing to this domain have instigated the utilization of bibliometric analyses within the realm of tourism (Hall, 2011). Numerous bibliometric studies have been undertaken in the topic of tourism, as can be seen when looking through the international literature (Ma & Law, 2009; McKercher, 2007; Huang & Hsu, 2008). Put another way, the execution of bibliometric studies has been made easier by the diverse and multifaceted structure of tourist research as well as the degree of maturity attained by studies in the field (Benckendorff & Zehrer, 2013:121-122; Arıca & Çorbacı, 2019). Xiang et al. (2021) highlighted that the evolution of the smartness concept within tourism necessitates novel research paradigms, theoretical frameworks, and methodological approaches. They underscored the significance of conducting a bibliometric analysis study to delineate present research domains, thereby steering the advancement of knowledge within smart tourism.

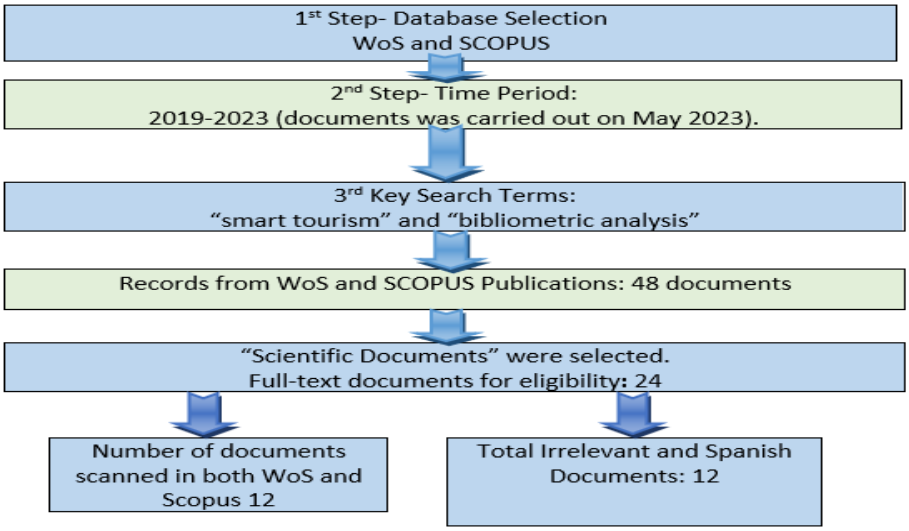
In their research, Johnson and Samakovlis (2019) analyzed 247 articles published between 2000 and 2018 using six network structures and metrics. They found that smart tourism research is influenced by e-tourism research based on knowledge network connections. However, keyword analysis revealed no direct relationship between e-tourism and smart tourism. They suggested that further research is needed to understand the reasons for this inconsistency. The study highlighted the need to examine smart tourism through other components besides information technology and recommended accessing more information on the topic through consolidated datasets obtained from other academic databases. Bastidas-Manzano et al. (2021) conducted a study that included 258 articles indexed by the ISI Web of Science database between 2013 and 2019. These articles focused on information technology in the context of accommodation and tourism. The study identified themes that reflect the importance of terms such as smart tourism (88 articles), experience (22 articles), satisfaction (14 articles), innovation (12 articles), intention (9 articles), and information technology (6 articles). Thus, it was stated that there is an increase in satisfactory tourism experiences by implementing information technology in smart tourism destinations. AU and Tsang (2022) conducted their research by selecting databases such as Web of Science (WoS) and Scopus. Their bibliometric database encompassed articles published in the Journal of Smart Tourism, focusing exclusively on English-language publications released between 2010 and 2021. The study culled 96 articles, identifying six key thematic elements associated with the 'smartness' factor: tourism, travel, technology, destination, attraction, and hotel. The study delved into comprehensive bibliometric investigations by employing three citation-based review methodologies—citation analysis, co-citation analysis to visually represent bibliographic relationships among articles on smart travel experiences, and bibliographic coupling analysis.

3. METHODOLOGY

This study aims to evaluate bibliometric analysis studies on smart tourism indexed in WoS and Scopus databases. Also, this study focuses on conducting a content analysis of the existing bibliographic research on smart tourism up to this point. In this era of rapid technological

transformation, it is crucial to comprehensively address research on smart tourism and identify its developmental trends. Bibliometric analysis is a widely used technique for field summaries, analysis of the intricate networks and structures of publications and citations, and concluding further study (Özköse et al., 2023). Bibliometric studies often utilize visualizations of bibliographic and bibliometric data to identify invisible colleges, frequently employed to determine patterns of collaboration and influence within a field (Racherla & Hu, 2010). The objective of this study is to scrutinize the annual trend and development direction of bibliometric studies conducted in the international literature on smart tourism from 2019 to May 2023. When WOS is examined, it is seen that the first bibliometric analysis on "smart tourism" was published in 2019. It is concluded that bibliographic studies on smart tourism have started recently and that more bibliometric analyses are needed to evaluate different aspects of smart tourism. In this context, 48 documents were found in the WoS and Scopus databases under the subject headings of "smart tourism" and "bibliometric analysis". Document analysis revealed that 19 documents were indexed in the Scopus database, 29 documents were indexed in the WoS database, and 12 publications were indexed in both the WoS and Scopus databases.

Table 1. Research Process



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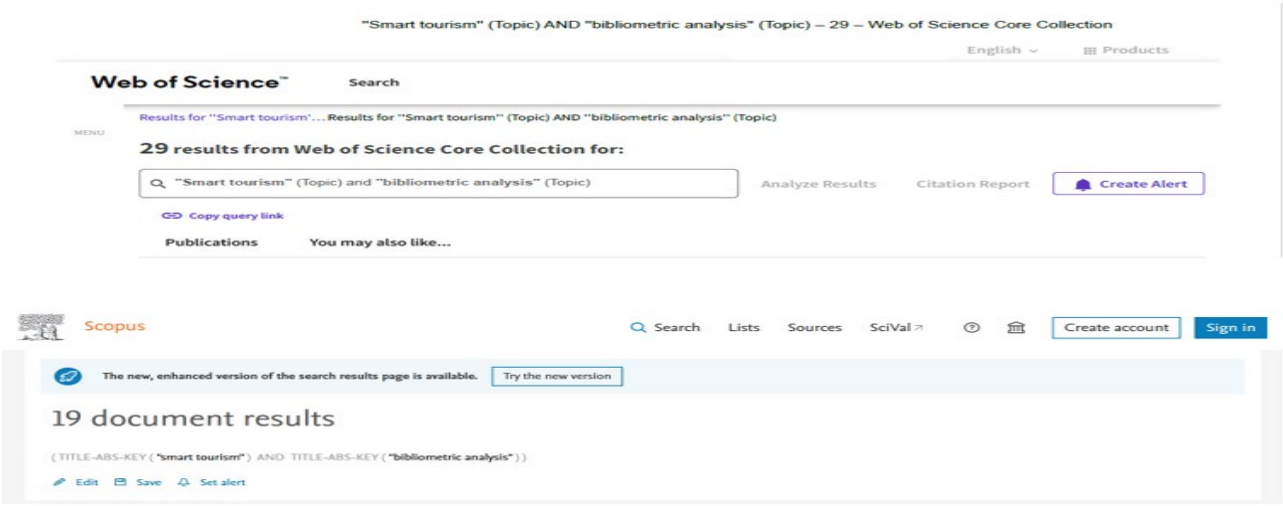

Figure 1. Total Documents from WoS and Scopus Databases for Study

It was determined that nine documents indexed in the WoS database and three documents indexed in the Scopus database were irrelevant to the topic or were publications in Spanish, and these publications were excluded from the study. Bibliometric research on the topics identified in the WOS database is carried out through certain filters. Through these constraints, obtaining more qualitative data on the topic(s) is possible. After determining the keywords in WOS, it is possible to obtain healthy data from programs such as VOSviewer or SCimat by transferring the documents obtained with the help of date range - document type - WOS category, WOS index, and foreign language restrictions to text format. When the bibliometric studies are examined, it can be seen that the scope of these bibliometric studies considers the studies scanned in English sources, articles, SSCI and SCI expanded in specific date ranges, if possible, in periods when academic studies are concentrated. Accordingly, the study continued with a review of a total of 24 documents. The research is limited to journals indexed in WoS and Scopus databases, encompassing all articles, papers, books, and other relevant works. In this context, 48 bibliometric analysis studies were identified, with 29 in WoS and 19 in Scopus. The research questions (QR) formulated are:

QR1. What are the most commonly used keywords in bibliometric analysis studies on smart tourism?

QR2. What measurement methods are used in bibliometric analysis studies on smart tourism?

QR3. Which study has received the most citations in the field?

QR4. What time intervals do bibliometric analysis studies on smart tourism cover?

QR5. What is the overall development of bibliometric analysis studies on smart tourism?

4. FINDINGS

Bibliometric analysis is an essential method for evaluating scientific literature and identifying trends in research areas. Bibliometric analysis tools allow for analyzing various data such as publications, citations, and keywords to understand the structure and relationships of scientific production. VOSviewer, SciMAT, and CiteSpace are the most commonly used programs for academic bibliometric research. VOSviewer is a bibliometric analysis tool developed by Van Eck and Waltman (2010). This software specializes in the visualization of network structures. The ability to visually analyze citations, keywords, or collaboration relationships between publications is one of the most significant advantages of VOSviewer. VOSviewer has an easy-to-understand and user-friendly interface, which makes it accessible to researchers with low technical knowledge (Van Eck & Waltman, 2010). VOSviewer requires data to be processed before being uploaded to the software. In addition, with data cleaning and editing, the program makes errors and makes analysis possible. SciMAT is a bibliometric analysis tool developed by Cobo et al. (2011) and provides tools to examine the development processes of scientific fields over time.

Specializing in science mapping and thematic analysis, SciMAT stands out for researchers who want to conduct time series analysis. SciMAT has a more complex interface than other tools and requires users to have a more profound knowledge of bibliometric analysis. (Cobo et al., 2011). CiteSpace is another important bibliometric analysis tool developed by Chen (2006). This software specializes in the analysis of co-citation and bibliometric networks. CiteSpace analyzes knowledge structures and emerging trends in a given field. CiteSpace is particularly effective in identifying "boom terms" and new research trends. Sudden leaps and significant developments in research fields can be easily identified. CiteSpace has a more complex interface than other tools, and users must have advanced technical knowledge to fully utilize the software (Chen et al., 2010). In this context, the comparison of bibliometric analysis methods is given in Table 2.

Table 2. Comparison of bibliometric analysis methods

Bibliometric Analysis Tool	Advantage	Disadvantage
VOSviewer	User-friendly, high-quality network visualization, big data processing	Limited in time series analysis, requires data preprocessing
SciMAT	Long-term analysis, thematic evolution maps, data pre-processing	Complex use, limited in terms of visualization
CiteSpace	Identifying new trends, broad citation analysis, visualization of knowledge domains	Complex interface, data processing requirement

This study carried out the bibliometric analysis studies conducted on smart tourism and indexed in WoS and Scopus databases. When examining Table 3, it can be observed that there are 12 common studies found in both WoS and Scopus databases. Bartol and Mackiewicz-Talarczyk (2015) compared the two databases in their study and found that 84% of the active journals in WoS were also present in Scopus, while only 54% were the reverse. This indicates that the WoS database is the broadest, encompassing publications from other databases. When Table 3 is examined, it can be observed that bibliometric studies on smart tourism began after 2019, and out of these studies, 19 were articles, 4 were book chapters, and 1 was a conference paper. In this regard, it can be concluded that there is a need for further research on the subject.

Table 3. Main Journal Articles

Rank	Title	Author(s)	Year	Keywords	The type of program used in the analysis	Time Span	Total Citations	Database
1) A	Smart Travel Experiences: A Bibliometric Analysis of Knowledge Domains and Research Areas	Wai Ching Wilson AU, Nelson K. F. TSANG	2022	bibliometric analysis, smart tourism, knowledge domain, smart travel experience, literature review	VOSviewer-Thematic Analysis	2010-2021	104	WoS and Scopus
2) A	A Bibliometric Analysis of Knowledge Development in Smart Tourism Research	Abbie-Gayle Johnson and Ioanna Samakovlis	2019	bibliometric analysis, tourism, review, smart tourism, publications	Gephi	2000-2018	48	WoS and Scopus
3) A	Developing A Comprehensive Life Cycle Framework for Social Media Research in Hospitality and Tourism: A Bibliometric Method 2002-2018	Khaldoon Nusair	2020	hospitality and tourism, keyword and co-word analysis, social media, life cycle framework, bibliometric analysis, systematic literature review	R studio, REFWorks	2002-2018	47	WoS and Scopus
4) A	The Past, Present, and Future of Smart Tourism Destinations: A Bibliometric Analysis	Bastidas-Manzano, Juan Sánchez-Fernández, Luis-Alberto Casado-Aranda	2020	smart tourism destination (ST), consumer behavior, bibliometric research, tourism research	SciMAT	2013-2019	40	WoS and Scopus
5) A	A Look Back and A Leap Forward: A Review and Synthesis of Big Data and Artificial intelligence Literature in Hospitality and Tourism	Hui Lv, Si Shi, and Dogan Gursoy	2022	artificial intelligence, bibliometric analysis, big data, literature review, hospitality, tourism,	Endnote	2007-2020	38	WoS
6) A	Tourism Research After The COVID-19 Outbreak: Insights for More Sustainable, Local and Smart Cities	Luis-Alberto Casado-Aranda, Juan Sanchez-Fernandez, Ana-Belen Bastidas-Manzano	2021	co-word analysis, covid-19, sustainable cities, local development, tourism industry, smart cities	SciMAT	2019-2021	27	WoS and Scopus
7) A	Bibliometric and Visualized Review of Smart Tourism Research	Sirong Chen, Di Tian, Rob Law, Mu Zhang	2021	CiteSpace, smart hospitality, bibliometric analysis, smart tourism, visualized analysis, smart technology	CiteSpace	2010-2021	13	WoS and Scopus
8) A	Smartness and Social Networks as Shapers of The Tourism industry What is Being Done in Academia in This intersection?	Alfonso Vargas-Sánchez Adolfo Elizondo Saltos	2019	smart tourism, smart social data, social networks, smart tourism destinations, smart destinations	-	ALL	9	WoS
9) A	The Impact of Tourism Promotion in Tourist Destinations: A Bibliometric Study	Florido-Benitez	2022	DMOs, Airports, Bibliometric, Airlines, Tourist destinations, Countries, Tourism	VOSviewer	2000-2021	9	WoS

				promotion, Universities				
10) BC	Mapping Tourism and Hospitality Research on Information and Communication Technology: A Bibliometric and Scientific Approach	Arturo Molina-Collado, Mar Gómez-Rico, Marianna Sigala María Victoria Molina, Evangelina Aranda, Yolanda Salinero	2022	technology, ict, tourism, hospitality, science mapping analysis, scimat, co-word analysis, bibliometrics, travel, hotel,	SciMAT	1988-2021	7	WoS and Scopus
11) A	Mapping Smart Experiences in Tourism: A Bibliometric Approach	Mohammad Soliman, Lucília Cardoso, Giovana Goretti Feijó de Almeida, Arthur Filipe Araújo and Noelia Araújo Vila	2021	tourism, bibliometric approach, evaluative metrics, relational techniques, mind mapping, smart experiences	Plotly, Excel, and DB Gnosis	2011-2019	6	WoS
12) BC	Analysis of Scientific Production-Smart Tourism Destination, Technology and Sustainability	Celia Rafael	2019	smart destination, sustainable development, technology, smart tourism destination	VOSviewer	2010-2018	3	WoS and Scopus
13) A	Research Trends in Technology in the Context of Smart Destinations: A Bibliometric Analysis and Network Visualization	Inés Sustacha, José Francisco Baños-Pino, Eduardo del Valle	2022	co-citation, co-word analysis, bibliometrics, smart technology, network visualization, smart destination,	VOSviewer and SciMAT	2013-2021	2	WoS
14) BC	Smart Tourism: A Bibliometric Analysis of Scientific Publications from The Scopus and Web of Science Databases	Maria I. B. Ribeiro, António J. G. Fernandes and Isabel M. Lopes	2021	smart, Scopus, tourism, technologies, web of science, visitors, intelligent,	VOSviewer	2000-2020	2	Scopus
15) A	Decoding The Trends and The Emerging Research Directions of Digital Tourism in The Last Three Decades: A Bibliometric Analysis	Prateek Kalia, Dušan Mladenović, and Ángel Acevedo-Duque	2022	digital tourism, internet, bibliometric, sustainability, technology, consumer behavior,	R, biblioshiny, PCA, MCA, MDS, and Clustering	1987-2020	1	WoS
16) A	Internet of Things (IoT) in Smart Tourism: A Literature Review	Chowdhury Noushin Novera, Zobayer Ahmed, Rafsanjany Kushol, Peter Wanke, Md. Abul Kalam Azad	2022	bibliometric, Internet of Things (IoT), tourism, smart, text mining,	VOSviewer	2012-2021	1	Scopus
17) CP	Tourism and internet of Things: A Bibliometric Analysis of Scientific Production from The Scopus Database	Elisabete Paulo Morais, Carlos R. Cunha, Vftor Mendons	2022	Tourism, bibliometric analysis, Scopus, IoT, vosviewer, Internet of Things	VOSviewer	2011-2022	-	WoS and Scopus
18) A	Smart Tourism Destination: A Bibliometric Review	Ercan, Fatih.	2023	smart tourism destination, citespace, wos database, bibliometric analysis	CiteSpace	1975-2021	-	WoS and Scopus
19) A	Looking at the Tourism Industry Through the Lenses of industry 4.0: A Bibliometric Review of Concerns and Challenges	Sofia Gomes, João M. Lopes, Luís Ferreira	2023	tourism innovation, hotel 4.0, tourism ecosystem, bibliometric analysis, tourism 4.0	VOSviewer	2008-2021	-	WoS and Scopus
20) A	Artificial intelligence in Hospitality and Tourism. State of the Art and Future Research Avenues	Martina Nannelli, Francesco Capone and Luciana Lazzeretti	2023	social network analysis, artificial intelligence, literature review, hospitality and tourism industry	Social network analysis	1986-2021	-	WoS and Scopus
21) A	Digital Transformation in Tourism: Bibliometric Literature Review Based on Machine Learning Approach	Madzík et al.	2023	tourism, bibliometric, digital, digitization, topic modeling, machine learning, lda, digitalization, latent dirichlet allocation, covid, pandemic, digital transformation	R programming	2013-2022	-	Scopus
22) A	Bibliometric Analysis of Maritime Tourism Research	Mahendrran Selvaduraya, Yapa Mahinda Bandarab, Rosmaizura Mohd Zainc, Ainon Ramlicand Mohd Zaimmudin Mohd Zain	2022	smart maritime tourism, virtual reality, maritime tourism, bibliometric analysis, smart tourism	VOSviewer, Nvivo	Last 12 years	-	Scopus
23) BC	Keep it Smart and Sustainable: A Bibliometric Analysis	Sónia Avelar	2020	bibliometric studies, sustainable tourism, smart	-	2008-2019	-	Scopus

				tourism, tourism				
24) A	The Impact of Tourism Promotion in Tourist Destinations: A Bibliometric Study	Lázaro Florido-Benitez	2022	tourism promotion, airlines, bibliometric, DMOS, tourist destinations, countries, universities, airports	VOSviewer	2000-2021	9	WoS

Note: Article (A); Conference Paper (CP), Book Chapter (BC).

Source: Created by authors

Figure 2. The keyword cloud of smart tourism and bibliometric analysis studies-related keywords

When the keyword cloud prepared for the publications is examined (Fig. 2), the keywords tourism, smart tourism, smart, and bibliometric analysis stand out as the most preferred keywords in bibliometric studies on smart tourism.

Figure 3. The cloud of the most used program type in bibliometric analysis

When Figure 3 is examined, it can be seen that the VOSviewer program is the most frequently used in bibliometric studies, followed by the SciMAT and CiteSpace programs. Examples of programs/analysis types used in only one study include Plotly, Nvivo, RefWorks, Endnote, and Gephi.

Table 4. Journals and Journal Citation Indicator

Rank	Journal/Publisher/Country	Number of Studies	Journal Citation Indicator (2021)
1	International Journal of Tourism Research (Wiley/UK)	2	1.03
2	Journal of Hospitality & Tourism Research (Sage/USA)	2	1.09
3	European Journal of Tourism Research (-/Bulgaria)	2	0.39
4	Journal of Hospitality and Tourism Technology (Emerald/UK)	1	0.95
5	Journal of Hospitality Marketing & Management (Taylor & Francis/USA)	1	1.69
6	International Journal of Contemporary Hospitality Management (Taylor & Francis/USA)	1	1.93

7	Journal of Hospitality and Tourism Insights (Emerald/UK)	1	0.65
8	European Planning Studies (Taylor & Francis/UK)	1	0.96
9	Sustainable Cities and Society (Elsevier/ Netherlands)	1	1.6
10	Information Technology & Tourism (Springer/USA)	1	1.3
11	SAGE Open (Sage/USA)	1	0.89
12	Cuadernos de Gestión (Universidad del Pais Vasco/Spain)	1	-
13	Worldwide Hospitality and Tourism Themes (Emerald/UK)	1	0.38
14	Spanish Journal of Marketing-ESIC (Emerald/Spain)	1	-
15	European Journal of Innovation Management (Emerald/UK)	1	1.03
16	Australian Journal of Maritime & Ocean Affairs (Taylor & Francis/UK)	1	0.69

Source: Created by authors

It is seen that the periods between 1975 and 2022 were determined for the bibliometric analysis in the studies. Considering that smart tourism was first used in 2000, information was not found regarding the criteria or criteria used to determine the time intervals in the prepared bibliometric studies. When Table 4 is examined, it can be stated that the articles on the subject were published in journals indexed by well-known publishers such as Wiley, Sage, Emerald, Taylor & Francis, and Elsevier. The journal with the highest Journal Citation Indicator is the International Journal of Contemporary Hospitality Management (Taylor & Francis/USA), with a score of 1.93. Morais et al. (2022) attempted to identify the most advanced terms in the field of tourism and the Internet of Things (IoT). They conducted a bibliometric analysis of 404 publications from the Scopus database using the VOSviewer program. In other words, the study aimed to identify the main thematic research areas in tourism and IoT. The analysis results showed an increasing trend in publications related to the topic in recent years. It was also found that the software categorized tourism and IoT in different clusters, while e-tourism and IoT were evaluated in the same cluster.

In Ercan's study (2023), articles published in journals indexed in the Web of Science (WoS) database from 1975 to 2021 were examined using bibliometric analysis techniques. The analysis revealed that the highest number of publications related to smart tourism destinations (STD) was in 2013. The article productivity was highest in Spain (SEGITTUR, 2023), particularly at Universidad de Alicante, and the most cited article was "Smart Tourism Destinations: Ecosystems for Tourism Destination Competitiveness" by Boes et al. (2016). The author with the highest number of co-citations was Ulrike Gretzel. Casado-Aranda et al. (2021) presented the bibliometric analysis results of academic research on COVID-19 in city destination development between December 1, 2019, and March 31, 2021. They used the SciMAT software to determine the main research clusters, thematic structure, and emerging trends and visualize them. The findings indicated that social media and smart tourism were the themes with the most significant potential.

Sustainable cities, local destination development, changes in tourist behavior, and tourists' risk perception were identified as significant emerging trends in the new normal. In conclusion, this article contributes to the literature on COVID-19 and sustainable cities. Chen et al. (2022) present a comprehensive, systematic, and visual synthesis of 441 studies on smart tourism, spanning from 2010 to 2021. The study meticulously assesses the evolution and trends within the field, tracing its trajectory from the inception of smart tourism through the advent of fifth-generation mobile communication technology and the disruptions caused by the COVID-19 pandemic. Furthermore, it offers invaluable insights and forecasts intended to shape the future research trajectory and

advancement of smart tourism. The research findings underscore a consistent upward trajectory in publications within this domain over the past decade.

The prevalent research themes include "smart tourism," "smart city," "smart tourism destination," "technology," and "social media." In Molina-Collado et al. (2022)'s study, they aim to synthesize the academic literature on "technology and ICT" in the tourism and hospitality sector through bibliometric analysis. The investigation identifies 2,424 documents within the tourism and hospitality journals archived in the Web of Science (WoS) and Scopus databases, spanning 1988 to 2021. The search involved keywords 'technology*' and 'ICT' in combination with 'tourist*,' 'hospitality,' 'hotel,' and 'travel.' Employing the SciMAT software, which encompasses various bibliometric tools and methods such as co-occurrence analysis and an evolutionary map, the analysis aimed for robust and coherent outcomes. The findings highlight several pivotal research themes, including the technology acceptance model, electronic word-of-mouth, user-generated content, self-service technologies, robotics, smart tourism, virtual reality, and trust in technology.

5. DISCUSSION AND CONCLUSION

A research study that explicitly examines bibliometric studies related to smart tourism in the literature has not been found. This study is vital in terms of guiding future bibliometric research on smart tourism. In other words, this research is expected to serve as a significant reference source for academia and industry, revealing the current state of bibliographic research on smart tourism in WoS and Scopus databases and providing insights into how academia and industry should progress in the future. Furthermore, considering that technology is accelerating societal and individual change in today's world, it is also expected that this study is poised to serve as a compass for researchers exploring the realm of smart tourism and technologies aimed at amplifying tourists' familiarity with destinations, enriching their acquired services and experiences, and augmenting their overall satisfaction.

The most prominent finding is that smart tourism is a developing field in tourism, and further research is needed. In particular, smart tourism destinations, developed through collaborative networks, are one of the main themes in the field of smart tourism. The fact that six studies in the document analysis cover bibliometric research on smart tourism destinations and use the concept of smart destinations in their keywords confirms this information. When examining the keywords of the studies found in WoS, it is determined that the most frequently recurring keyword is "bibliometrics" found in 14 studies, followed by "smart destination" and "smart tourism destination," found in 7 studies each, and "smart tourism" found in 3 studies. These results indicate that most bibliometric studies in WoS focus on smart destinations. Only two studies were found to be precisely on the topic of smart experiences. Based on this, it is recommended to give more emphasis to topics such as smart travel experiences, smart cities and smart tourism destinations, smart cities and tourism, information systems and technologies in smart tourism destinations, smart tourism cities, recommendation systems, and smart tourism in future bibliometric analysis studies.

When examining the WoS and Scopus databases, it is observed that bibliometric studies on smart tourism mainly focus on author analysis, distribution of articles by year of publication, the network of country collaborations, co-citation network of authors and journals, frequencies of keywords, and co-occurrence map analysis. Currently, in science mapping or bibliometric research, the most preferred databases are Google Scholar, PubMed, Scopus, Medline, and WoS databases (Chen, 2017). The studies predominantly analyzed articles from WoS and Scopus databases. However, there are many analysis programs developed for scientific mapping analysis, such as Pajek, Gephi,

UCINET, Cytoscape, Bibexcel, CiteSpace II, CoPalRed, IN-SPIRE, VantagePoint, Science of Science Tool, SciMAT, which can be used for bibliometric analysis. It is suggested that future studies should consider using multiple bibliometric analysis programs simultaneously to present their research from different perspectives. Additionally, more emphasis should be given to inferential analyses on which topics to focus on in bibliographic research on smart tourism. This will help researchers in the preparation of studies to identify research gaps and shift their focus to these areas.

Another point to be mentioned is the time intervals selected for the analyzed documents in bibliometric studies. Notably, a wide publication selection from 1975 to 2022 is made for document analysis. Ercan (2023) is the author who analyzed publications with the most comprehensive time range of 46 years (1975-2021). When examining the studies, no explanatory information was found regarding the criteria for selecting the time intervals for analysis. In fact, although the scanning year in the relevant article is 1975, it is stated that the first publication on smart tourism destination was in 2013. Furthermore, it is evaluated that authors consider the minimum number of publications required for the selected program in their publication interval preference, which can be considered as an insufficient and invalid criterion.

The documents show that the first bibliometric analysis on the topic of "Smart Tourism" was published in 2019. From this, it can be concluded that bibliographic studies on smart tourism started in the recent past and there is a need for more bibliometric analyses that evaluate different aspects of the overarching theme of smart tourism. The study only focused on documents scanned in the WoS and Scopus databases and only included documents written in English. Researchers can conduct further studies by conducting document scans on different databases related to the topic. In the future, researchers can prepare publications by including other databases and bibliographic programs to approach the topic from different perspectives. The results can help researchers decide how to develop the literature on smart tourism.

Tourism is a complex field and has much in common with technology. Semantically, there are many intangible values through which both exchange knowledge. Therefore, technology changes the tourism sector and the tourism sector supports new technological developments. In this direction, more advanced algorithms and calculations are needed to solve problems through research on information technologies in tourism (Gretzel, 2011). In addition, the extent to which cities are equipped with ICT, smart technologies and smart management applications will enrich and facilitate the experience of tourists in destinations, events, tourist attractions, tourism, hospitality and travel industry businesses, increase business value by enriching and facilitating the experience of tourists, and enable tourism business management to create a fast and effective data management. There is a significant gap in the literature on the use of all kinds of integrated applications of developing technology in the services and facilities offered to both local people and visitors in the perspective of smart governance and sustainability of DMOs and/or local governments in tourism destinations.

One of the essential conclusions of this article is that there is a need for more studies on smart destinations, internet of things, mobile communication, cloud computing and artificial intelligence technologies, the benefits of smart technologies to local people and visitors, the impact of smart technologies on the sustainability of resources, the solutions that smart technologies can offer for managing mass tourism, innovative solutions that smart technologies can offer for spatial carrying capacity management such as destination/airport, and especially destination management organizations should prioritize these issues in their destination planning. In this study, only the

documents scanned in WOS and SCOPUS databases and written only in English were analyzed. Researchers can prepare publications by searching for documents on the subject in different databases in their future research. In the future, researchers can include other databases and bibliographic programs to prepare publications that can address the subject from different angles.

REFERENCES

Almobaideen, W., Allan, M., & Saadeh, M. (2016). Smart archaeological tourism: Contention, convenience and accessibility in the context of cloud-centric IoT. *Mediterranean Archaeology & Archaeometry*, *16*(1).

Arıca, R., & Çorbacı, A. (2019). Turizm sektöründe müşterilerin bilgi üretici rolü: Adıyaman'daki turistik çekiciliklere yönelik Tripadvisor sitesinde yer alan yorumlar üzerine bir araştırma. *Seyahat ve Otel İşletmeciliği Dergisi*, *16*(3), 437-455.

Aslan, A. (2022). Kültürel zeka ve davranışsal niyet arasındaki ilişkide algılanan değer ve turist deneyiminin aracı rolü (Doktora Tezi). İstanbul Üniversitesi Sosyal Bilimler Enstitüsü.

Ataman, H. (2018). Akıllı turizm ve akıllı destinasyonlar: Edremit körfezine yönelik uygulama (Yüksek Lisans Tezi), Balıkesir Üniversitesi Sosyal Bilimler Enstitüsü.

AU, W. C. W., & Tsang, N. K. (2022). Smart travel experiences: A bibliometric analysis of knowledge domains and research areas. *Journal of Hospitality & Tourism Research*, 10963480221130998.

Avelar, S. (2020). Keep it smart and sustainable: A bibliometric analysis. In *Strategic Innovative Marketing and Tourism: 8th ICSIMAT, Northern Aegean, Greece, 2019* (pp. 557-563). Springer International Publishing.

Bartol, T., & Mackiewicz-Talarczyk, M. (2015). Bibliometric analysis of publishing trends in fiber crops in Google Scholar, Scopus, and Web of Science. *Journal of Natural Fibers*, *12*(6), 531-541.

Bastidas-Manzano, A. B., Sánchez-Fernández, J., & Casado-Aranda, L. A. (2021). The past, present, and future of smart tourism destinations: A bibliometric analysis. *Journal of Hospitality & Tourism Research*, *45*(3), 529-552.

Benckendorff, P., & Zehrer, A. (2013). A network analysis of tourism research. *Annals of Tourism Research*, *43*, 121-149.

Boes, K., Buhalis, D., & Inversini, A. (2016). Smart tourism destinations: ecosystems for tourism destination competitiveness. *International Journal of Tourism Cities*, *2*(2), 108-124.

Casado-Aranda, L. A., Sánchez-Fernández, J., & Bastidas-Manzano, A. B. (2021). Tourism research after the COVID-19 outbreak: Insights for more sustainable, local and smart cities. *Sustainable Cities and Society*, *73*, 103126.

Chen, C. (2006). CiteSpace II: Detecting and visualizing emerging trends and transient patterns in scientific literature. *Journal of the American Society for information Science and Technology*, *57*(3), 359-377.

Chen, C., Ibekwe-SanJuan, F., & Hou, J. (2010). The structure and dynamics of cocitation clusters: A multiple-perspective cocitation analysis. *Journal of the American Society for information Science and Technology*, *61*(7), 1386-1409.

Chen, C. (2017). Science mapping: a systematic review of the literature. *Journal of data and information science*, *2*(2), 1-40.

Chen, Z., Chan, I. C. C., Mehraliyev, F., Law, R., & Choi, Y. (2021). Typology of people–process–technology framework in refining smart tourism from the perspective of tourism academic experts. *Tourism Recreation Research*, 1-13.

Chen, S., Tian, D., Law, R., & Zhang, M. (2022). Bibliometric and visualized review of smart tourism research. *International Journal of Tourism Research*, *24*(2), 298-307.

Cobo, M. J., López-Herrera, A. G., Herrera-Viedma, E., & Herrera, F. (2011). Science mapping software tools: Review, analysis, and cooperative study among tools. *Journal of the American Society for information Science and Technology*, *62*(7), 1382-1402.

Corrêa, S. C. H., & Gosling, M. D. S. (2021). Travelers' perception of smart tourism experiences in smart tourism destinations. *Tourism Planning & Development*, *18*(4), 415-434.

Demir, H., & Erigüç, G. (2018). Bibliyometrik bir analiz ile yönetim düşünce sisteminin incelenmesi. *İş ve İnsan Dergisi*, *5*(2), 91-114.

Dredge, D., & Jamal, T. (2015). Progress in tourism planning and policy: A post-structural perspective on knowledge production. *Tourism Management*, *51*, 285-297.

Ercan, F. (2023). Smart tourism destination: A bibliometric review. *European Journal of Tourism Research*, *34*, 3409-3409.

Florido-Benítez, L. (2022). The impact of tourism promotion in tourist destinations: A bibliometric study. *International Journal of Tourism Cities*, *8*(4), 844-882.

Gomes, S., Lopes, J. M., & Ferreira, L. (2023). Looking at the tourism industry through the lenses of industry 4.0: a bibliometric review of concerns and challenges. *Journal of Hospitality and Tourism Insights*.

Gretzel, U. (2011). Intelligent systems in tourism: A social science perspective. *Annals of tourism research*, *38*(3), 757-779.

Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2015a). Smart tourism: foundations and developments. *Electronic markets*, *25*, 179-188.

Gretzel, U., Werthner, H., Koo, C., & Lamsfus, C. (2015b). Conceptual foundations for understanding smart tourism ecosystems. *Computers in Human Behavior*, *50*, 558-563.

Guo, Y., Liu, H., & Chai, Y. (2014). The embedding convergence of smart cities and tourism internet of things in China: An advance perspective. *Advances in Hospitality and Tourism Research (AHTR)*, *2*(1), 54-69.

Hall, C. M. (2011). Publish and perish? Bibliometric analysis, journal ranking and the assessment of research quality in tourism. *Tourism Management*, *32*(1), 16-27.

Huang, S., & Hsu, C. H. (2008). Recent tourism and hospitality research in China. *International Journal of Hospitality & Tourism Administration*, *9*(3), 267-287.

Johnson, A. G., & Samakovlis, I. (2019). A bibliometric analysis of knowledge development in smart tourism research. *Journal of Hospitality and Tourism Technology*, *10*(4), 600-623.

Jovicic, D. Z. (2019). From the traditional understanding of tourism destination to the smart tourism destination. *Current Issues in Tourism*, *22*(3), 276-282.

Kalia, P., Mladenović, D., & Acevedo-Duque, Á. (2022). Decoding the trends and the emerging research directions of digital tourism in the last three decades: a bibliometric analysis. *SAGE Open*, *12*(4), 21582440221128179.

Li, Y., Hu, C., Huang, C., & Duan, L. (2017). The concept of smart tourism in the context of tourism information services. *Tourism Management*, *58*, 293-300.

Lopez de Avila, A. (2015, February). Smart destinations: XXI century tourism. In ENTER2015 conference on information and communication technologies in tourism, Lugano, Switzerland (pp. 4-6).

Lv, H., Shi, S., & Gursoy, D. (2022). A look back and a leap forward: a review and synthesis of big data and artificial intelligence literature in hospitality and tourism. *Journal of Hospitality Marketing & Management*, *31*(2), 145-175.

Ma, J., & Law, R. (2009). Components of tourism research: Evidence from annals of tourism research. *Anatolia*, *20*(1), 62-74.

Madzík, P., Falát, L., Copuš, L., & Valeri, M. (2023). Digital transformation in tourism: bibliometric literature review based on machine learning approach. *European Journal of Innovation Management*, *26*(7), 177-205.

McKercher, B., Law, R., & Lam, T. (2006). Rating tourism and hospitality journals. *Tourism Management*, *27*(6), 1235-1252.

Mehraliyev, F., Choi, Y., & Köseoglu, M. A. (2019). Progress on smart tourism research. *Journal of Hospitality and Tourism Technology*, *10*(4), 522-538.

Molina-Collado, A., Gómez-Rico, M., Sigala, M., Molina, M. V., Aranda, E., & Salinero, Y. (2022). Mapping tourism and hospitality research on information and communication technology: a bibliometric and scientific approach. *Information Technology & Tourism*, *24*(2), 299-340.

Morais, E. P., Cunha, C. R., & Mendonça, V. (2022). Tourism and Internet of Things: A bibliometric analysis of scientific production from the Scopus database. In *Advanced Research in Technologies, Information, Innovation and Sustainability: Second International Conference, ARTIIS 2022, Santiago de Compostela, Spain, September 12–15, 2022, Revised Selected Papers, Part II* (pp. 244-255). Cham: Springer Nature Switzerland.

Muñoz, A. D. A., & Sánchez, S. G. (2015). Destinos turísticos inteligentes. *Economía industrial*, *395*, 61-69.

Nannelli, M., Capone, F., & Lazzeretti, L. (2023). Artificial intelligence in hospitality and tourism. State of the art and future research avenues. *European Planning Studies*, 1-20.

Novera, C. N., Ahmed, Z., Kushol, R., Wanke, P., & Azad, M. A. K. (2022). Internet of Things (IoT) in smart tourism: a literature review. *Spanish Journal of Marketing-ESIC*, (ahead-of-print).

Nusair, K. (2020). Developing a comprehensive life cycle framework for social media research in hospitality and tourism: a bibliometric method 2002-2018. *International Journal of Contemporary Hospitality Management*.

Özköse, H., Uyar Oğuz, H., & Aslan, A. (2023). Scientific mapping of smart tourism: a content analysis study. *Asia Pacific Journal of Tourism Research. 28 (9),* 923-948.

Racherla, P., Hu, C., & Hyun, M. Y. (2008). Exploring the role of innovative technologies in building a knowledge-based destination. *Current Issues in Tourism*, *11*(5), 407-428.

Racherla, P., & Hu, C. (2010). A social network perspective of tourism research collaborations. *Annals of Tourism Research*, *37*(4), 1012-1034.

Rafael, C. (2019). Analysis of scientific production-smart tourism destination, technology and sustainability. In *Advances in Tourism, Technology and Smart Systems: Proceedings of ICOTTS 2019* (pp. 599-613). Singapore: Springer Singapore.

Ribeiro, M. I., Fernandes, A. J., & Lopes, I. M. (2021). Smart tourism: A bibliometric analysis of scientific publications from the Scopus and Web of Science databases. In *Advances in Tourism, Technology and Systems: Selected Papers from ICOTTS20, Volume 2* (pp. 1-14). Springer Singapore.

SEGITTUR, (2023). Smart destinations. Retrieved from https://www.segittur.es/en/lines-of-action/

Selvaduray, M., Bandara, Y. M., Zain, R. M., Ramli, A., & Mohd Zain, M. Z. (2022). Bibliometric analysis of maritime tourism research. *Australian Journal of Maritime & Ocean Affairs*, 1-27.

Sigala, M. (2018). New technologies in tourism: From multi-disciplinary to anti-disciplinary advances and trajectories. *Tourism management perspectives*, *25*, 151-155.

Soliman, M., Lyulyov, O., Shvindina, H., Figueiredo, R., & Pimonenko, T. (2021). Scientific output of the European Journal of Tourism Research: A bibliometric overview and visualization. *European Journal of Tourism Research*, *28*, 2801-2801.

Sustacha, I., Baños-Pino, J. F., & del Valle, E. (2022). Research trends in technology in the context of smart destinations: a bibliometric analysis and network visualization. *Cuadernos de Gestión*, *22*(1), 161-173.

Türkmendağ, Z. (2021). SSCI Turizm ve Ağırlama Dergilerinde Bulunan Bilgi Teknolojileri Araştırmalarının Bibliyometrik Analizi. *Yaşar Üniversitesi E-Dergisi*, *16*, 94-110.

UNWTO (2009). Tourism resilience committee stresses need for "Smart Tourism". Retrieved March 15, 2023, from http://sdg.iisd.org/news/unwto-tourism-resilience-committee-stresses-need-for-%E2%80%9Csmart-tourism%E2%80%9D/

UNWTO (2015). World summit on sustainable tourism +20. Retrieved March 15, 2023, from https://www.skal.org/sites/default/files/media/Public/Web/PDFs/1015_peterclaesen_english.pdf

UNWTO (2017). 1st UNWTO world conference on smart destinations, Murcia, 15-17 February 2017. Retrieved March 15, 2023, from http://sdt.unwto.org/smartdestinations

Van Eck, N., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, *84*(2), 523-538.

Vargas-Sánchez, A., & Saltos, A. E. (2019). Smartness and social networks as shapers of the tourism industry: What is being done in Academia in this intersection?. *Worldwide Hospitality and Tourism Themes*.

Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of marketing*, *68*(1), 1-17.

Wang, X., Li, X. R., Zhen, F., & Zhang, J. (2016). How smart is your tourist attraction?: Measuring tourist preferences of smart tourism attractions via a FCEM-AHP and IPA approach. *Tourism management*, *54*, 309-320.

Xiang, Z., Stienmetz, J., & Fesenmaier, D. R. (2021). Smart tourism design: Launching the annals of tourism research curated collection on designing tourism places. *Annals of Tourism Research*, *86*, 103154.

Ye, B. H., Ye, H., & Law, R. (2020). Systematic review of smart tourism research. *Sustainability*, *12*(8), 3401.

Zsarnoczky, M. (2018). The digital future of the tourism & hospitality industry. *Boston Hospitality Review*, *6*, 1-9.

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ETİK BEYAN FORMU

Araştırma Desteği Bilgisi: Araştırma desteği alınmamıştır.
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Etik Kurul Raporunu Veren Kurum
Etik kurul raporu karar tarihi: **Karar Sayı No:**
( ) Etik kurul onayı gerekmemektedir. Nedeni aşağıda belirtilmiştir.
( ) Veriler 2020 tarihinden önce toplandığından etik kurul izni alınmamıştır.
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Yazar(lar)ın Katkı Oranı
1.Yazar: % 50
2.Yazar: % 50
Bilgilendirilmiş Onam Formu: Tüm taraflar kendi rızaları ile çalışmaya dâhil olmuşlardır.