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The intersection between knowledge management and organizational learning in tourism and hospitality: A bibliometric analysis

Abstract

This study aims to investigate the intersection between organizational learning (OL) and knowledge management (KM) in the tourism and hospitality sector by conducting a bibliometric analysis. A total of 628 publications from 293 various sources and 1468 different authors were included in the analysis between 2001-2021. Open-source statistical R software was utilized to conduct the bibliometric analysis, specifically, the Bibliometrix R library and the Biblioshiny version. The VOSviewer program was also used to display the keyword co-occurrence network. The findings show that the implication of KM and OL has been widely recognized as critical learning facilitators and as strategic tools for gaining competitive advantage that recognizes opportunities and threats for possible alignment with environmental change. Organizational learning and KM are particularly relevant for sustainable tourism and hospitality solutions, cutting-edge technologies, and organizational service innovations. Four research clusters were identified that provide critical future research paths.

Keywords: Organizational learning, Knowledge management, bibliometric analysis, tourism and hospitality

1. Introduction

Tourism and hospitality are important economic sectors in terms of overall contribution to GDP and employment (López-Bonilla & López-Bonilla, 2021). Although tourism and hospitality have been investigated from a variety of research perspectives (Harrison, 2007), knowledge management (KM) and organizational learning (OL) are relatively new to tourism studies (Ghaderi & Paraskevas, 2021). This late adoption originates from multiple constraints in the sector, such as the substantial presence of small and family businesses with limited managerial expertise, heterogeneity of supply, a large short-term and seasonal workforce, and a high rate of business and workforce turnover (Cooper, 2006; 2015; 2018). Nevertheless, there is a growing recognition of the importance of knowledge to the success and competitive advantage of enterprises (Paraskevas et al., 2013). The knowledge economy emerged in the 1990s (Cooper, 2015), where knowledge management and organizational learning was recognized as one of the most crucial resources and capabilities of firms to achieve competitive advantage (Eisenhardt & Martin, 2000; Grant, 1996). The knowledge economy differs from conventional economic theory because it is based upon innovation and intellectual capital to generate value, recognizing that knowledge is more than simply information: rather it is a resource to be valued and managed (OECD, 1996). Since the 1990s, knowledge as an intangible resource, and KM itself, has attracted the interest of business management researchers (Gaviria-Marin et al., 2019) and led to the emergence of learning organizations. These are firms that successfully implement and integrate KM and OL capabilities

to achieve competitive advantage and superior performance (Pemberton & Stonehouse, 2000; Sun & Scott, 2003). In addition, KM has helped hospitality organizations to internationalize as this could enhance their learning competences related to organizational ambidexterity and positively influence performance (Ubeda-Garcia et al., 2021).

Knowledge management focuses on addressing issues of organizational adaptation, survival and competitiveness in periods of increasingly discontinuous change (Dutta & Madalli, 2015). It aims to boost efficiency through the elimination of redundant processes and efforts to rediscover what is already known. The potential benefits of KM and OL for tourism and hospitality are clear. They include crisis management (e.g., the COVID 19 pandemic) (Bhaskara & Filimonau, 2021; Paraskevas et al., 2013); changes in stakeholders' demands (e.g., the demand for more socially and environmentally responsible firms) (Nacipucha et al., 2017); the application of cutting-edge technologies (e.g., platform business models) (Akbar & Tracogna, 2018); and the ongoing business need for competitive advantage (Cooper, 2015). Although the application of KM and OL to tourism and hospitality is relatively recent, research growth in the area is significant (Cooper, 2015, 2018). Therefore, structured evaluations using quantitative methodologies are needed to uncover the intellectual structure of the study field (Rejeb et al., 2021).

There have been several efforts to summarize the extant KM and OL literature (Cooper, 2018; Hallin & Marnburg, 2008; Paraskevas et al., 2013; Yiu & Law, 2014). Although these studies provide insightful contributions to the field, to the authors' best knowledge, this is the first study to examine the intersection between KM and OL in tourism and hospitality research using bibliometric analysis. This study sheds light on the critical concepts that shape the domain and identifies the most significant researchers, sources, institutions, and nations, as well as their collaborative networks. Additionally, with the assistance of various keyword analysis approaches, the domain traditions and future research frontiers are better appreciated. The following research questions drive this study:

1. How has the research domain evolved through time?
2. What are the current thematic trends of the KM and OL?
3. Which countries contribute the most to the geographical expansion of the related literature?
4. Which academics and publications have had the most significant influence on the knowledge and OL domain?
5. What are the essential research hotspots in regard to the knowledge and OL domain?
6. What are the various research foci that contributed to shaping the research domain?

The remainder of the paper is organized in the following manner. The next section provides a review of the literature on the research variables. This is followed by a discussion of the methodology utilized to conduct the analysis. We then present the research findings and discussion, including the descriptive analysis, the trend analysis, and the clustering analysis. Finally, the conclusions, contributions, implications, limitations, and a prospective future research agenda are elaborated.

2. Literature reviews

2.1 Knowledge management and organizational learning

Traditional management theories and practices, many people believed, were insufficient in the face of rapid and unexpected global change and the new economic structure of the twenty first century (Antunes & Pinheiro, 2020; Bryans & Smith, 2000; Kelly, 1999; Zaim et al., 2019). Three distinct characteristics describe the new economy: interconnectedness, intangibility, and globalization (Ferreira et al., 2018; Kelly, 1999). In this new economy, intangible assets have become a cornerstone to long-term success and sustained competitive advantage. Here, knowledge has been recognized as a critical necessary resource, and companies' ability to survive and prosper relies heavily on their employees' ability to accumulate and leverage knowledge and skills over time (Dimitriades, 2005; Martelo-Landroguez & Cepeda-Carrión, 2016; Zaim, 2016). Knowledge has been defined by various concepts such as value-full information (Baker et al., 1997), understandings, insights, and know-how (Wiig, 1996), and judgment regarding the importance of events derived from theory or experience (Tsoukas & Vladimirou, 2001).

Turbulence in the business environment has prompted companies to develop their KM and OL capabilities (Oliva & Kotabe, 2019; Zaim et al., 2019). Also, the connection between KM and OL may be conceptualized in a variety of different ways. Information can be stored and easily accessed, whereby knowledge exists in the minds of individuals and can be shared through organizational learning (Beesley & Cooper, 2008). Easterby-Smith and Lyles (2011) believe that OL focuses on the process, whereas KM focuses on the management of the knowledge that an enterprise collects, generates, processes, and ultimately utilizes. Another approach to thinking about the link between OL and KM is to think of KM as the ultimate aim of OL. Knowledge management initiatives pay off by encouraging the production, diffusion, and application of knowledge, which helps the firm integrate knowledge into organizational systems so that it may continually improve its actions and skills and pursue its objectives (Dixon, 1999). Here, organizational learning is vital for a company to sustainably increase its knowledge usage capacity.

Learning happens once knowledge is reconstructed via three basic phases (Antunes & Pinheiro, 2020). First, the knowledge is externalized, then objectified and finally internalized throughout the reconstruction process (Huysman, 1999). The term "externalizing" refers to the practice of distributing one's own personal tacit knowledge to others. It is via the act of objectifying knowledge that externalization of knowledge is made possible. This information is internalized when the individual actors incorporate it into their own personal belief systems (Huysman, 1999). In other words, personal 'tacit' knowledge is transformed into an organization's 'explicit' knowledge. Hence, the set of accumulative understandings ingrained in a company, which empower it to place its resources to specific uses can be characterized as "organizational knowledge" (Dimitriades, 2005). In other words, knowledge may be classified as either explicit or tacit. Knowledge that is explicit is known as strict, structured and objective that can be codified (Baker et al., 1997; Rumanti et al., 2019). Data, corporate processes, rules, and procedures, as well as external sources like intelligence collection, may be used to generate it (Campos & Sánchez,

2003). On the contrary, tacit knowledge is comprised of insights, judgment, know-how, and cognitive patterns, as well as intuition and beliefs held by individuals (Rumanti et al., 2019; Tsoukas & Vladimirou, 2001). The most successful companies are those that are able to absorb new information quickly and apply it effectively (Smith, 2008).

KM and OL are not new concepts (Antunes & Pinheiro, 2020), with the basic principles of KM extending back over two decades and OL practices going back much farther (Castenda et al., 20918; Wiig, 1996; Senge, 1990). The main breakthrough was initially expressed in the book by Cyert and March (1963), who proposed that an organization might acquire and preserve information over time. They first presented the OL notion in the 1960s as part of a decision-making paradigm. They underlined the significance of learning via experience and the methods through which a company may adjust to environmental changes. Cangelosi and Dill (1965) were the first to research OL, using the term "organizational learning" in the title. However, it was not until Argyris and Schön (1997) presented single-and double-loop learning that the discipline began to grow.

In 1991, Huber (1991) postulated four essential OL components, including the acquisition of knowledge, the dissemination of knowledge, the interpretation of knowledge, and organizational memory. The definition of OL by Slater and Narver (1995) also states that it includes information collection, distribution, collaborative interpretation, and organizational memory. There are four sub-processes in this progression: Acquisition allows the organization to produce new information and knowledge, either locally or externally, via the relationships and dialogue of its members. It is then disseminated across the organization and turned from tacit to explicit knowledge. Through formal and informal networks, databases or informal contacts, a shared interpretation of information is developed at the individual and organizational level, creating common knowledge that is incorporated into routines and strengthened through single-or double-loop learning. Here, "organizational memory" refers to the process by which information is ingested into an organization's theory of use, turned into action, and then stored and committed to declarative and procedural memory for future use (Antunes & Pinheiro, 2020; Santos-Vijande et al., 2012).

Finding the traits or aspects that enable OL was found to be a common focus in the literature on learning organizations. Knowledge management, on the other hand, was initially proposed in the 1990s as a result of economic and market globalization, the emergence of knowledge-intensive goods and services, and the lightning-fast advancement of information and communication technologies (Alavi & Leidner, 2001). Knowledge-intensive organizations and the central role of their knowledge employees were the focus of Drucker's KM research (Drucker, 2018). According to Aggestam (2006), it is unclear which of the two - KM or learning organizations- concepts arose first. Aggestam (2006) came up with the idea of mapping learning organizations and KM. According to him, learning organizations may be seen as the system that comprises the subsystem of KM, which subsequently becomes a precondition for a learning organization: shifts in KM need adjustments in organization, and likewise. In order to maximize the value of its knowledge employees, learning organizations need effective KM tools and techniques (Dahou et al., 2018).

Knowledge management is a system that supports a collaborative environment for recording and distributing current information, facilitates opportunities to produce new knowledge, and provides

techniques and processes needed to implement what the organization knows in its quest to fulfill its strategic objectives (Gorelick & Tantawy- Monsou, 2005). The term "knowledge" is used in the context of an organization's customers, products, processes, failures, and accomplishments (Bollinger & Smith, 2001). Several scholars, on the other hand, argue that a firm's competitive advantage does not come from its existing expertise. What matters most is the capacity to use existing knowledge to generate new knowledge (Dasgupta & Gupta, 2009). Organizational knowledge and its management are inextricably linked to organizational innovation and organizational learning and unlearning (Albino et al., 2001). The knowledge of a company is not only reliant on its own internal learning activities but also on the learning activities of diverse players outside the enterprise (Dasgupta & Gupta, 2009). It is clear though that organizations do not learn per se, but rather it is their members who learn (Senge, 1990) as knowledge is constructed socially and is grounded in conversations among knowledge communities.

There is little doubt that the fields of KM and OL have undergone and will continue to undergo significant transformation (Easterby-Smith & Lyles, 2011). There have been four distinct generations of KM, as outlined by (Serenko, 2013): As far back as the mid-'90s, KM focused on explicit knowledge, codification, and storage. Knowledge management in the mid-1990s and early 2000s primarily focused on human resources, social and cultural elements of OL, applied knowledge, and sharing of knowledge driven by workers. Strategic viewpoints, reconciling human and technocentric perspectives, recognition, development and promotion of self-managed social networks, and knowledge as flow and value creation were all hallmarks of KM from the early 2000s until around the year 2013. Since then, KM has been defined by the rising complexity of the domain of knowledge, knowledge as a relation, concentration on value multiplication, knowledge through questioning, and an expanding role for knowledge-based growth (Cooper, 2018).

2.2. Knowledge management in tourism and hospitality

Tourism and hospitality are significant knowledge-based industries due to the advancement of communication technologies and information processing that allow for extensive use of knowledge transfer, knowledge reuse, storage, and production of knowledge (Hallin & Marnburg, 2008; Paraskevas et al., 2013). Knowledge is regarded as one of the most important assets for tourism and hospitality organizations and helps build and nurture competitive advantage as well as internationalization (Okumus, 2013; Ubeda-Garcia et al., 2021). Nevertheless, there is no common agreement on the definition of knowledge and knowledge management. As a result, it is important to distinguish between the concept of "knowledge" and "information". While information is linked with facts and data, the understanding and interpretation of information demand knowledge (Blair, 2002; Kebede, 2010; Wallace et al., 2011). Thus, "managing knowledge is the capacity and ability to interpret and transform information into knowledge" (Okumus, 2013, p. 3). While tourism and hospitality organizations have access to big data and information technologies such as blockchain, the Internet of Things, and cloud computing, it is very important to promote KM capacities and capabilities (Abdollahi et al., 2022; Ghaderi & Paraskevas, 2021; Okumus, 2013; Pauleen & Wang, 2017) as people generate knowledge and convey it to others through informal and formal

interaction. Among previous studies on KM in tourism and hospitality, Cooper (2018) reviewed the application of KM in tourism, destination innovation and competitiveness and highlighted the imperative of transferring and exchanging knowledge as a competitive mechanism in tourism and hospitality. Here, transfer only occurs when new knowledge prompts the individual to think differently about an issue or topic such as new opportunities for products, services, markets or processes (Beesley & Cooper, 2008). Taking a different perspective, Paraskevas et al. (2013) identified four types of 'crisis-oriented knowledge, namely procedural, behavioral, third-party knowledge, and 'learned ignorance', a classification of crisis knowledge that goes beyond the generally recognized typology of tacit and explicit knowledge in tourism and hospitality.

Yiu and Law (2014) also reviewed prior literature to answer how KM and knowledge sharing could promote the tourism sector. Their study reinforced the significant role of knowledge and knowledge management as a competitive advantage strategy of tourism organizations. In another study, Liu and Dong (2021) note that KM can improve service quality aspect through sustainable marketing commitment. They further informed that consumer interest may reinforce the associations between knowledge management, sustainability marketing and service improvement. Moreover, applying the KM approach can assist hospitality and tourism organizations to address environmental issues (Martinez-Martinez et al., 2019; Rastegar & Ruhanen, 2021), enhance profitability and efficiency, reduce costs (Li et al., 2017), manage different sorts of knowledge, and smooth innovation and organizational learning (Cooper, 2018).

2.3. Organizational learning in tourism and hospitality

Although OL is a well-established concept in management science and it has only recently become significant in the tourism and hospitality literature (Ghaderi & Paraskevas, 2021; Md et al., 2020). Early literature on OL was developed from two perspectives. The first line of research underlined the concept of constant individual learning from casual practices and daily relations with other peers in their organization, while the second perspective conceptualized OL as a learning process where information is collected, analyzed, interpreted, and disseminated as knowledge (Ali et al., 2020). From this perspective, OL was envisioned to be closely associated with KM (Nonaka, 1994). Concurrent with the increasing interdisciplinary research in tourism and hospitality, OL received attention, and seminal works have been published in leading journals (Ghaderi & Paraskevas, 2021). Among the early research, Bayraktaroglu and Kutanis (2003) conducted research on the evaluation of the transformation process of a Turkish hospitality organization and the key success factors to becoming a 'learning organization' in order to develop and maintain a competitive advantage. Similarly, Yang (2004) examined the extent to which hotels in Taiwan implemented the practice of OL and knowledge capture to improve customer satisfaction levels.

Hall (2020) concluded his seminal work on hallmark tourist events by highlighting the importance of learning event organizations. Exploring learning within the crisis management practices, Anderson (2006) examined the crisis preparedness of tourism businesses in Australia and introduced OL as a strategy to better prepare for and respond to crises (see also Jiang et al., 2019). Ghaderi et al. (2014) also investigated the critical role of OL in tourism and hospitality crisis management but in a Malaysian context. They found that few practitioners think about in-depth

learning from the crisis management perspective. They discussed two learning strategies, e.g., single loop and double loop learning, where destinations and tourism organizations could develop various learning methods for their proactive crisis management. Binder (2019) systematically reviewed the extant literature on OL implications in tourism and hospitality industries based on a network perspective. Their results reveal that "the resource, and especially the knowledge-based approach of the organization, social capital theory, the relational view and trust and agglomeration theory represent insightful theoretical approaches to study OL phenomena and OL outcomes such as innovation, value creation and competitive advantage" (p. 2602). More recently, (Ghaderi & Paraskevas, 2021) provided a series of case studies that detail how tourism and hospitality organizations learn from crises and apply knowledge management strategies. However, despite the growth in the literature, further analysis of the field is needed which is the focus of this bibliometric analysis.

3. Methodology

The Journal of Documentation conceptualized bibliometrics in 1969 (Pritchard, 1969). Bibliometrics first statistically investigates the metadata of literature (Broadus, 1987). It tends to focus mainly on the investigation of publications associated with particular phenomena. Bibliometrics assess academic output across time to determine how a body of study evolves and progresses. It is based on a statistical examination of published works and their citations. The number of citations and the connections between publications impact the status of scientific publications in a specific area of research (Culnan et al., 1990). A bibliometric study is often used to summarize and detect hidden, unknown patterns of written communication and the evolution of a subject using statistical and mathematical techniques, and it may be used for massive data sets (Small, 1999; Tahai & Rigsby, 1998). Based on its objective quantitative strength in comparison to other review methods (Casillas & Acedo, 2007), this technique illustrates the intellectual structure of a knowledge domain (Arora & Chakraborty, 2021) as well as the current status, hot topics, and potential future research avenues that may be explored by employing this methodology (Arora & Chakraborty, 2021; Mishra et al., 2017). Bibliometrics is a well-developed methodology in KM, OL, tourism, and hospitality, as well as other research domains (Rejeb, Abdollahi, Rejeb, & Treiblmaier, 2022). This paper takes a contemporary approach to bibliometrics by going beyond counting and classification of the literature and moving on to provide a new contribution to the literature and present a future research agenda for KM and OL.

Using bibliometrics, we can get a better understanding of the current paradigms and study topics in this subject based on commonalities (Thelwall, 2008). We, first, describe the research domain, conducting some descriptive analyses to reveal the most productive or cited countries, journals, affiliations, papers, and authors. Then a trend analysis is conducted to reveal the growth of sources, authors' production, and trend topics over time. Finally, we depict the intellectual structure of the knowledge domain based on the co-occurrence and analysis of keywords as well as by conducting a qualitative analysis of clusters to reveal the current state and future avenues of research for each domain.

3.1.Data retrieval and search strategy

Scopus was chosen for this review because it is widely recognized as one of the most credible and trustworthy bibliometric databases, having the largest abstract and citation database of peer-reviewed research (Feng et al., 2017). The research method is illustrated in Figure 1. In the initial phase, we employed terms such as "knowledge management" and "organizational learning", accompanied by "tourism" and "hospitality". The keywords were later revised and used to generate the search string to discover the relevant papers. As depicted by Figure 1, the final search string encompasses of various keywords such as "single loop learning", "double loop learning", "knowledge acquisition", "knowledge creation", and other knowledge management-related concepts. Following the best practices in the context of KM and OL, we made a representative data set of the knowledge domain (Castaneda et al., 2018; Gaviria-Marin et al., 2019). The period chosen was from 2001 to 2021, and the analysis only encompasses journal articles and reviews. Of 1173 publications found, 671 publications were included. We then excluded non-English language papers and refined the results. A total of 43 publications were excluded and 628 articles from 293 various sources and 1468 different authors were considered in the analysis. The primary information of the data set is presented in Table 1, Appendix A.

3.2. Data analysis and visualization tools

Open-source statistical R software was utilized to conduct the bibliometric analysis, and the Bibliometrix R library and the Biblioshiny version (Aria & Cuccurullo, 2017) were used. An overview of the data was compiled using descriptive analysis and bibliometric indicators, including yearly publication growth and analyses of nations, sources, affiliations, authors, and keyword statistics. Analytical methods provided by Sweileh et al. (2017) were used in presenting some of these indicators. Analysis of knowledge structure (Aria et al., 2020) was carried out using a visualization approach for keyword networks.

The VOSviewer program was used to display the keyword co-occurrence network because it employs a consistent framework for mapping and clustering (Waltman et al., 2010). Visualization of large bibliometric networks may be accomplished with the help of VOSviewer, a software tool for creating and interpreting networks (Van Eck & Waltman, 2010).

Insert Figure 1.

4. Results and discussion

4.1. Descriptive Analysis

Various methods were used to trace the patterns of dynamics of KM and OL within the tourism and hospitality sector. Following Della Corte et al. (2018), the analysis illustrated the evolution of the field in terms of annual production levels since 2001. As depicted in Figure 2, although fluctuations can be seen, the overall trend shows a 16.3% annual growth. Fluctuations in publication rates may be a response to challenges in the external business environment as well as

the effects of themed journal issues. However, since 2017 the field has entered a significant growth stage.

Insert Figure 2.

The evolution and the current status of the field can be broadly represented by the most influential countries in terms of sources, affiliations, authors, and papers. China, the UK, and Australia are the three most productive and most cited countries by author affiliation globally (Figure 3) (see Table 2 Appendix A). Cyprus (168) and Norway (50.2), followed by Australia (42.38) and the UK (41.96), have gained the most citations per article. In terms of place of publication, *Tourism Management*, *International Journal of Contemporary Hospitality Management*, and *International Journal of Hospitality Management* have the most articles (see Table 3 Appendix A), and *Tourism Management* and *Annals of Tourism Research* are the most cited (see Table 4 Appendix A). Regarding the most productive affiliations, no significant difference can be seen. Chiang Mai University (Thailand) and the University of Alicante (Spain) are the most influential affiliations (see Table 5 Appendix A). In addition, the most productive authors - Cooper, Ruhanen, and Yang have published the most papers (see Table 6 Appendix A). The majority of authors are specialized in tourism and hospitality management. However, there are a considerable number of authors from the KM field (e.g., Spyros Avdimiotis, Desiderio García-Almeida, and Aurora Martínez-Martínez) and business and strategic management fields (e.g., Saqib Shamim, Bartolome Marco-Lajara, and Fevzi Okumus).

Insert Figure 3.

The top 20 most referenced papers are listed in Table 7 Appendix A. In addition, the sources, titles, total citations, and citations per year are listed. It is evident that the papers mainly belong to a limited number of top-tier tourism journals. Furthermore, a considerable number of papers did not investigate KM and OL in tourism and hospitality as the main research question, although they addressed the domain. Three papers have received more than 300 citations. Raymond et al. (2010) assessed the procedures and strategies for integrating disparate sources of knowledge in the context of environmental management. After discussing the difficulties inherent in knowledge integration, they propose a set of questions for discovering, engaging, assessing, and utilizing diverse knowledge throughout project design and delivery. Novelli et al. (2006) used a tourist network and clusters as a framework for delivering creative options to SMEs. Hu et al. (2009) surveyed the relationship between knowledge sharing and service innovation. Workers of international tourist hotels were asked to test their research framework. The findings confirm the importance of team culture in preserving and moderating the link between knowledge sharing and service innovation.

A further eight papers have received more than 20 citations per year. Song et al. (2012), in their study, sought to summarize the tourism economics domain and identify the most important themes that have emerged from the research. Bilgihan et al. (2016) constructed a theoretical model that may help better understand how people are motivated to share information on online social networks. According to the findings of the research, perceived ease of use has a positive impact on knowledge-sharing behavior. Fuchs et al. (2014) discussed knowledge infrastructure that was recently installed as a true innovation at Sweden's premier mountain tourist resort. A destination

management information system was used to promote knowledge production and application as a prerequisite for organizational learning at tourist destinations. Additionally, Zopiatis et al. (2014) examined the causal links between work participation, organizational commitment, and job satisfaction and the intention of hospitality employees in Cyprus to either stay or quit their employment. Del Chiappa and Baggio (2015) aimed to expand the discussion on the role of ICTs, the Internet of Things, and cloud computing in facilitating the exchange of knowledge across stakeholders, thereby boosting innovation and destination competitiveness. Network analytic methods were used in the case studies of three tourist sites. Findings showed that efficient knowledge-based destination management studies should take into account both the virtual and actual elements of the network structure of the destination.

4.1.2. Keywords dynamics: authors versus keywords plus

The authors' keywords and keywords plus are presented in Table 8 Appendix A. On the left, authors' keywords or the most frequently used keywords assigned by authors are displayed, while on the right, keywords plus or the most frequently used keywords in chosen articles' references are displayed. Keywords plus are not specified by authors and are not always included in the title of publications. Instead, they were discovered by a computer software algorithm. The authors' keywords and keywords plus may complement one another and help researchers better understand the subject. The former is more focused on the research trends related to the interests and interpretation of scholars. On the other hand, the latter may provide further insight into a specified domain and suggest future research paths (Zhang et al., 2016). Considering Table 8, not surprisingly, the keywords used in the search algorithm are highly ranked on both sides.

Various insights can be drawn from the authors' side. "Innovation", as one of the most critical capabilities in the era of the knowledge economy, is among the top keywords indicating firms need to innovate to continuously and dynamically adapt to the changing environment (Liao & Wu, 2010). Knowledge management and OL have been considered an engine for innovation that leads to competitive advantage and superior firm performance (Ponce-Espinosa et al., 2020). "Sustainability" related challenges such as "climate change" are of vital importance in the tourism and hospitality industry as in other industries and domains, which leads to the development of concepts such as "sustainable tourism" (Mayyas et al., 2012; Yang et al., 2021). "Social capital" has also been investigated as a key success factor of tourism and hospitality organizations as the "network" effects interrelated with "innovation", and various parts of KM and OL are critical to firms, as highlighted by Kim and Shim (2018) and Kim et al.(2013). Lastly, "social media" can be leveraged by KM and OL techniques to provide insightful visions and information necessary for firms to flourish by empowering knowledge sharing and collaboration (Sigala & Chalkiti, 2015).

Keywords plus also reinforce the abovementioned arguments about innovation and sustainability by the same and new keywords such as "tourist destination", "ecotourism" and "stakeholders". It also adds a strategic management approach by emphasizing the interrelation of KM and OL with "stakeholders", "decision making," and "competitiveness". It is of vital importance as KM and OL have been recognized as key facilitators of achieving competitive advantage in dynamic capability

theory and knowledge based view (Grant, 1996; Eisenhardt & Martin, 2000). The knowledge distributed among stakeholders can be leveraged and utilized to improve decision-making in the firms' favor (Rupcic, 2019). Additionally, keywords plus address another implication of KM and OL in the tourism and hospitality industry, which is their role in "tourism development" and "tourism economics". Keywords like "tourism management", "tourist destination", and "tourism market" reinforce the reasoning.

4.1.3. Tree map dynamics

In addition, a keyword analysis was conducted of the papers' abstracts. A tree map illustrates the most frequently used keywords in the abstract (see Figure 4). The dimensions of the rectangles are proportionate to the keyword's frequency. The larger the rectangle, the more often the keyword is used in the abstracts. The keywords in the abstracts give further detail to the authors' keywords and keywords plus analyses. By examining the three distinct types of keywords, a more thorough and exact analysis of keyword dynamics may be conducted (Li et al., 2011). Figure 4 shows that "knowledge", "knowledge management", "tourism", "tourism management", "tourist destination", "tourism development", "innovation", "learning", "stakeholder", "decision making", and "ecotourism" are the top-ranked abstract keywords. The analysis not only strengthens previous discussions about sustainability, strategic and economics approaches by providing further details (keywords such as "marketing", "management", and "leadership"), but it also provides novel insights. First, keywords in the abstracts address the consistency of KM and OL in tourism and hospitality as a "service sector" which could convey the critical importance of their implementation in service-oriented domains and product-service systems. Additionally, the analysis demonstrates the "information technologies" and "information management" interrelationship with KM and OL, which are transforming various domains, including tourism and hospitality. For example, information technology can be utilized in developing, storing, sharing, and utilizing explicit and, more importantly, tacit knowledge (Okumus, 2013). "Semantic web" and "ontology" and the vital relationship of KM with future versions of the internet reinforce the argument.

Insert Figure 4.

4.2.Trend Analysis

4.2.1. The most productive sources over time

The dynamic growth of sources publishing research in the intersection of KM and OL with tourism and hospitality is presented in Figure 5. According to the figure, between 2002 and 2020, publications in the *International Journal of Hospitality Management* and between 2009 and 2021, articles in the *International Journal of Contemporary Hospitality Management* increased significantly. As a result, these two outlets publish most articles in the area.

Insert Figure 5.

4.2.2. The most productive authors over time

We investigated the most prolific authors during the evaluated study period using the author's dominance map. The top 20 writers are depicted in Figure 6 across time. As can be seen, the most prominent authors investigating KM and OL dynamics in tourism and hospitality from 2001 to 2021 were Chris Cooper and Lisa Ruhanen. The findings of this analysis suggest that the role of these authors have been crucial in the development of the field. Additionally, the graphic indicates that new researchers like Chui-Hua Liu and Saqib Shamim have recently entered KM and OL research in the tourism and hospitality industry, and their work is garnering increased attention and recognition.

Insert Figure 6.

4.2.3. Trend topic analysis

A trend topics analysis was conducted to illustrate the progression of dominant author keywords (unit of analysis) each year. It complements the previous trend and keywords analyses by revealing the evolution of the KM and OL intersection with the tourism and hospitality sector. As depicted in Figure 7, "destination management" dominated the research in the intersection in 2008. The importance of learning from crises and developing crisis management strategies have been another hot spot started in 2009. The Covid-19 pandemic caused this to gain attention once again in 2021. The role of cutting-edge technologies in transforming KM and OL practices and their inter-relationship in the tourism and hospitality industry is illustrated by various keywords in different years. This started with "semantic web" in 2010 and continued with the incorporation of information and communication technologies (ICT) in tourism or "e-tourism" in 2011 and "social media" in 2018.

Furthermore, the graphic in Figure 7 indicates the importance of human resources and knowledge workers as one of the most critical factors in KM and OL practices (Lendzion, 2015), with the "workplace learning" keyword in 2011 and "innovative work behavior" in 2021. The role of KM and OL in developing sustainable solutions and achieving sustainability goals have also been among popular topics for multiple years, including "sustainable development" in 2014, "conservation" in 2016, "climate change" in 2019, and "sustainability" and "geo-tourism" in 2020. Sustainability could be considered a research frontier in the domain as the results show increasing attention towards the sustainability concept in recent years. In addition, the interrelation and complementarity between KM, OL, innovation, business management, and strategic management have been emphasized by various keywords in different years.

Excluding keywords in the search query, the rest include "tourism management" in 2013," competitiveness" in 2014, "innovation" in 2015, "networks" and "absorptive capacity" in 2016", "entrepreneurial orientation" in 2018, "leadership", and "customer orientation" in 2019, "decision making" in 2020, and "innovative work behavior" in 2021. They are closely interrelated as, for example, firms with entrepreneurial orientation are risk-taking and innovative firms looking for opportunities to develop innovative initiatives in order to achieve competitive advantage (Lumpkin & Dess, 1996). Also, innovation has been considered a key parameter for firms' survival. Here, KM and OL facilitate innovation by acquiring explicit and tacit knowledge distributed inside and among stakeholders, sharing and integrating the knowledge, and exploiting it with novel

applications (Edghiem & Mouzughi, 2018; Hassi, 2019). Innovation could address consumer needs specifically for firms with "customer orientation," which puts them first. Knowledge management and OL can also improve decision-making by providing the necessary knowledge and insights (Yeh et al., 2011). Finally, the increasing role of "social capital" and the need for knowledge-sharing management among various social units to provide intellectual resources for innovation attracted attention in 2015 and "innovative work behavior" in 2021.

Insert Figure 7.

4.3. Keywords Co-occurrence clustering methods

Co-occurrence analysis of keywords was conducted in conjunction with other clustering techniques such as co-citation network analysis and bibliographic coupling. Although all of these techniques effectively identify distinct paradigms within a topic area, the method was used first to supplement the analysis of the primary keyword and, second, to extract the actual content of publications (Feng et al., 2017). The examination of keyword co-occurrences sheds light on a variety of research areas that contribute to the enhancement of knowledge at the intersection of KM and OL within tourism and hospitality. This relational bibliometric technique identifies author keywords (unit of analysis) that exist in publications concurrently and clusters the more frequent ones. As a result, researchers may get critical insights into knowledge divergence and various paradigms at the interface between KM and OL and tourism and hospitality (Börner et al., 2003). To develop the network, we began by extracting and refining the authors' keywords from chosen publications. Following that, the data was imported into VOSviewer. The network was created using density-based spatial clustering based on the full counting method (Kriegel et al., 2011). The minimum number of keyword co-occurrences was set at three to generate a reasonable number of clusters for analysis (Shi et al., 2021). We excluded the keywords in the search query and irrelevant keywords that may negatively impact the search results (Prashar, 2020).

The results uncovered a network containing four clusters (see Figure 8). Each node in the graphic represents a keyword whose size is proportionate to its frequency. The color of the nodes shows if they belong to a cluster for the keywords. The next sections supplement our bibliometric analysis with a qualitative examination of the intersection in order to offer further insight into the keyword co-occurrence network results. More precisely, we explain the research that has been conducted on the content of detected clusters. Each cluster analysis provides vital insight into established and new issues in KM and OL research in tourism and hospitality.

The first cluster (red) is concerned with the interaction of KM and OL, technology, and organizations' competitive advantage. According to dynamic capabilities theory and KBV, firms not only need rare, valuable, imperfectly mobile, imitable, and substitutable resources to develop competitive advantage but also the capability to dynamically align to a volatile environment to sustain their advantages. Knowledge as a resource and KM and OL as a capability have been dubbed as the most valuable assets of the new era (Eisenhardt & Martin, 2000). Information technologies and other cutting-edge technologies could impact supply chain collaboration, coordination, and efficiency, and firms' competitiveness directly and indirectly through KM and

OL (Jalilvand et al., 2019). These technologies have transformed the tourism and hospitality industries' routines for all parties and gave birth to e-tourism and smart tourism through novel initiatives such as online booking, service comparison, and rating systems, interconnecting customers to share their experiences (Ye et al., 2011).

The technologies provide powerful tools and insights to KM and OL. For instance, the massive amount of tourists and travelers' data available on social networking sites could be exploited and analyzed by incorporating big data to generate fruitful insights enhancing tourism destination competitiveness (Del Vecchio et al., 2018). Furthermore, utilizing big data can facilitate better prediction of changing demand and lead to greater resilience in a volatile changing environment (Belias et al., 2021). The semantic web, which provides semantic information, refers to the provision of machine-readable data, such as when a search engine directs the traveler straight to the solution to a search question rather than exhibiting several links to various pages. Ontology in the semantic web is a technique that enables the classification and representation of knowledge for various disciplines (Lam et al., 2008). The enormous potential of semantic applications and their influence on knowledge management has drawn the interest of tourism and hospitality researchers (Lam et al., 2008; Muniz et al., 2020). In addition, technological leadership has been considered a vital factor in KM and specifically knowledge-sharing behavior (Srivastava & Joshi, 2018).

In terms of future research directions, under-researched cutting-edge technologies and late adoption in tourism and hospitality make interesting future research paths (Ayoobkhan & Kaldeen, 2020). Technologies such as the Internet of Things (Wise & Heidari, 2019), artificial intelligence techniques (Parvez, 2020), cloud computing technologies (Ayoobkhan & Kaldeen, 2020), and blockchain (Nam et al., 2021), among others, could bring massive opportunities to enhance KM and OL in the tourism and hospitality industry. In addition, the combination of smart tourism and smart cities is a worthwhile study topic to pursue (Nam et al., 2021). Furthermore, due to complementarity between humans and technologies and the importance of human resources and knowledge workers, and as a considerable number of the tourism and hospitality workers are contractual and less skilled, future research should address this issue to facilitate the incorporation of novel technologies and developing competitive advantage (Srivastava & Joshi, 2018). In addition, as a multi-stakeholder sector, developing ontologies based on the semantic web and natural language processing for KM to promote value co-creation and collaboration between the parties could be an attractive future research avenue (Muniz et al., 2020).

The green cluster focuses on the interrelation between KM and OL, with sustainability in the tourism and hospitality sector. Climate change has been identified as a major issue for tourism and hospitality growth (Nacipucha et al., 2017). Subsequent issues, such as higher and prolonged summer temperature, water supply issues and droughts, floods, among many others, have impacts on tourism experiences which make a loop of negative impacts both on the environment and also on tourism and hospitality sectors that should be addressed urgently (Bramwell & Lane, 2012; Scott, 2011). In this vein, KM and OL offer promising solutions to sustainable tourism development which simultaneously benefit economic, environmental, social perspectives (Nacipucha et al., 2017). This is because the lack of knowledge and awareness among various stakeholders about the relationship between environmental and economic factors in the industry

have been identified as one of the most vital barriers toward adaptation and mitigation strategies. Also, because mitigation and adaptation strategies usually need participation, collaboration and knowledge-sharing between multiple stakeholders is important (Whitford & Ruhanen, 2016; Zeppel & Beaumont, 2012).

Apart from economic and environmental aspects, the social dimension of sustainability solutions is also of vital importance as human resource development and the local community prosperity are part of the focus of such research (Yulianeu et al., 2021). Additionally, action learning and workplace learning have been emphasized by scholars as key learning mechanisms for local communities to develop entrepreneurial practices with limited resources and knowledge (Rao et al., 2021; Teare et al., 2013).

As previously mentioned, sustainability-related subjects in tourism and hospitality could be considered a research frontier in this area. Although numerous studies have reported the lack of knowledge as the main reason for neglecting environmental-conservational strategies, there may be other causes. According to Nacipucha et al. (2017) and Ruhanen and Shakeela (2013), stakeholders are aware of the consequences of climate change. They are, however, unwilling to respond appropriately. Hence, psychological and sociological perspectives could aid in elucidating hidden motivations for behavior and exposing acceptance hurdles. In addition, future researchers could investigate the facilitation and strategic role of ICT and other cutting-edge technologies to promote KM and OL in the sustainable development of tourism (Balletto et al., 2020). Similarly, the role of governments and how they could facilitate the process and share knowledge through integrated platforms for all stakeholders is another interesting future direction (Nacipucha et al., 2017). Furthermore, to gain a thorough understanding of indigenous communities and propose sustainable solutions, future research methodologies could be more participatory, collaborative, and guided by local people, leveraging 'indigenous' knowledge (Whitford & Ruhanen, 2016).

The role of KM and OL in firms' performance and their interrelationship with firms' orientation are the focus of the blue cluster. The entrepreneurial and market orientations relationship with a firms' performance have been recognized by the extant literature (Awang et al., 2010; Horng et al., 2021), where an entrepreneurial orientation is associated with discovering opportunities, exploiting markets, developing innovative initiatives, creativity, risk-taking, proactiveness, competitive aggressiveness, and wealth creation (Lumpkin & Dess, 1996); and, market orientation encompasses three constructs: customer orientation to understand customer needs and motives, competitor orientation to understand competitors' strength and weaknesses, and inter-functional coordination to collaboratively apply resources for co-creating value and achieve superior performance (Narver & Slater, 1990). Market orientation is also inextricably linked with entrepreneurial orientation as, for example, exploiting new market's needs and in-depth insight into changing customer needs and competitors' behaviors (Seilov, 2015). Firms with an entrepreneurial orientation need to exploit markets, enter new markets, and act aggressively, which derives from learning orientation and OL (Santra, 2018). Furthermore, market-oriented firms should amass data on their customers and competitors. They then need to share the data across all the units for better decision-making and provide superior value to their customers, which demonstrates the vital role of KM in market-oriented firms (Yeh et al., 2011).

Knowledge management and OL can also contribute to firms' performance and survival as a tool to overcome crises (Dimitrios et al., 2018). Here, the Covid-19 pandemic had a detrimental impact on the tourism and hospitality industry, demonstrating once again the critical importance of KM and OL in crisis management (Bhaskara & Filimonau, 2021). As with previous disasters (Orchiston, 2013), organizational resilience, along with collaboration between businesses, stakeholders, and employees, will play a vital role (Jiang et al., 2019). Hence, systems thinking approaches could be beneficial.

This focus also points toward intriguing future directions. Entrepreneurial activity and the performance of firms may be affected by other social and environmental variables, such as public policies and external and internal transportation, which indicate the need for holistic systems thinking approaches to the problem (Ghasemi et al., 2021; Sa et al., 2020). Additionally, the incorporation of KM and OL techniques in tourism crisis management is fragmented. This is partly due to the diverse nature of disasters and the managerial guidelines related to them. For example, businesses may face different circumstances facing floods, hurricanes, and pandemics that needs various actions. Hence an exciting potential for further research could be adopting holistic and comprehensive approaches toward crisis management in the sector (Bhaskara & Filimonau, 2021). Also, the value creation potential of cutting-edge technologies in crisis times such as Covid-19 could be considered an interesting research avenue (Belias et al., 2021). Policy-making and managerial interventions will facilitate the KM and OL specifically for small and medium enterprises in crisis times. Future researchers could investigate the various kinds of interventions and the ways to improve them in order to promote businesses' KM and OL capabilities (Bhaskara & Filimonau, 2021).

The last cluster (yellow) indicates the interrelationship between KM and OL, social capital, and innovation. In highly competitive environments with turbulent changes, innovation is a necessity for firms to survive and flourish. Otherwise, businesses risk losing their competitive edge (Lane et al., 2006). Tourism and hospitality are not immune to disruptive, transformative change, as seen by the rise of sharing platform business models (e.g., Airbnb) (Akbar & Tracogna, 2018; Guttentag & Smith, 2017). Conventional businesses in the industry need to keep up with the changes. Absorptive capacity refers to the ability of an organization to determine and acquire external knowledge, assimilate it, and use the knowledge for commercial purposes and the decision-making process (Cohen & Levinthal, 1990). Absorptive capacity comprises knowledge acquisition, knowledge assimilation, knowledge transformation, and knowledge exploitation (Zahra & George, 2002). Besides external knowledge, internal knowledge is also of vital importance, and innovative efforts may arise as a result of sharing and synthesizing existing knowledge (Rodan & Galunic, 2004; Tsai, 2001). The argument indicates the vital function of human capital, which refers to employees' knowledge, abilities, and skills (Youndt et al., 2004). Innovative work behavior, as a result, has gained scholars' attention in this cluster. It refers to the accumulation of individual acts aimed at developing and utilizing innovation at the organizational level (Işık et al., 2021).

In a larger sense, social capital refers to tangible and intangible actual and potential resources available to a social unit based on its relationships (Nahapiet & Ghoshal, 1998). The resources can be the source of new knowledge generation (Tsai & Ghoshal, 1998) or acquiring OL capabilities

which in turn could contribute to firms' collaborative innovation, for example, in a strategic alliance landscape (Toylan et al., 2020). In a social network context such as regional networks of entrepreneurs, this knowledge-sharing not only could promote social capital and innovation, but it also contributes to regional and destination development (Bernhard & Olsson, 2020).

This cluster also offers exciting future research directions. Based on novel arguments on open innovation, future researchers could explore how tourism and hospitality firms could co-create innovation and value with all the stakeholders, including supply chain members, customers, and the public sector (Kim & Shim, 2018). Improving social capital could enhance regional learning and cause regional development (Kim & Shim, 2018). Drawing inspiration from best practices, developing countries could develop social networks that facilitate knowledge-sharing to contribute to regional and destination development (Schuhbert, 2021).

Insert Figure 8.

5. Discussion and Conclusions

This study implemented bibliometric methods to investigate the intersection between OL and KM in tourism and hospitality research over two decades. From the results, several conclusions can be extracted. First, while these fields of research have been well-established in other disciplines, our findings point to the immaturity of the tourism, and hospitality field with fewer citations in tourism and hospitality up until a growth stage from 2017 onwards (almost 17% annually). In other words, research on KM and OL emerged relatively late in tourism and hospitality. This is likely explained by the growing understanding of the significant role of KM and OL in enhancing organizations' performance and competitive advantage (Hassi, 2019), organizational innovation and sustainability, and crisis management practices. These topics have been at the frontline of much research, especially in the second decade of the 21st century.

Second, as discussed, social capital is highlighted as a key organizational success factor that is significantly attributed to the application of KM and OL through network creation and knowledge sharing (Kim & Shim, 2018; Paraskevas et al., 2013). Both OL and KM can boost social capital and improve human resource capabilities.

Third, many studies have highlighted the intersection of KM and OL with information technologies as well as information management systems. These spectra of research show the dominating role of IT in enhancing KM and OL in the digital era. The importance of cutting-edge technologies in transforming OL and KM practices in managing customer demand changes is widely recognized. While the majority of tourism and hospitality firms are considered SMEs, with limited organizational resources, neglecting technological improvement within their organizations can result in failure.

Fourth, the result of trend topic analysis indicates that OL and KM have been interrelated with destination management as a critical facilitator to enhance the learning of different stakeholders, destinations' crisis management, and resilience to external turbulence. Furthermore, OL and KM

were highly regarded for developing sustainable solutions and achieving sustainability goals over the two decades.

Finally, four clusters were identified which provide insights into established and new issues in KM and OL which provided future research directions: 1) the first cluster found the intersection of OL and KM with technology and competitive advantage; 2) the second cluster identified the intersection of OL and KM with sustainability; 3) the third cluster found interrelations with firm performance, firm orientation, and OL and KM; and, 4) the fourth cluster dealt with the intersection between OL and KM with social capital and innovation.

5.1. Theoretical and practical implications

This study of journal publications on the intersection between OL and KM in tourism and hospitality is timely and offers several theoretical and practical implications. The study discovered who and what were the most significant writers, journals, and institutions in the field. This important data serves as a foundation for identifying future research directions and their consequences for management as well as providing insights for both academics and business.

For academics, practitioners, regulators, and authorities will benefit from this study's findings on the development of the ideas and context, as well as new prospects and trends for furthering KM and OL research in tourism and hospitality, especially in countries that have lagged behind. Academics can fully understand the domain, including both what has been done by whom and research gaps and prospects. The study also may facilitate their endeavors in finding value-adding collaboration. Hence, they may direct their research toward more value-creating fields.

For business practitioners, regulators and authorities, the study can enhance their insights regarding promoting sustainable competitive advantage and focal firms' performance by enhancing KM and OL complemented by implementing ICT and other cutting-edge technologies, addressing sustainability-related concerns, innovating, and co-creating value with their stakeholders, including their customers. Additionally, governments and regulators can improve their knowledge regarding how to promote a tourism area, for example, by providing KM and OL infrastructure for supporting entrepreneurial practices and SMEs, and how to make the foundation for sustainable tourism development, for example, by improving public policies.

The majority of earlier studies have not considered KM and OL as the main research inquiry, but they rather have addressed the domain. Thus, the contribution of OL and KM in the tourism and hospitality literature is limited to competitive advantage, sustainability solutions, organizational service innovation, and crisis management, which have been mostly published in top-tier tourism and hospitality journals. More advanced studies with robust theoretical underpinning are essential to enhance the contribution of these research fields to the literature. Drawing on the four clusters outlined above we can identify seven key foci for future research in the field.

Firstly, the significant role of both KM and OL in effective crisis management has been demonstrated (Oktari et al., 2020; Paraskevas et al., 2013), but innovative theoretical models need to be developed to efficiently incorporate knowledge, experience, and learning from different

crises in future risk and crisis management preparation plans. As the trend topic analysis showed, the importance of learning from crises and disasters and developing crisis management strategies has been evident since 2009, but it gained even more attention during the COVID-19 pandemic in 2020. Both OL and KM could be utilized as an effective tool in destinations 'crisis management practices to overcome fragmentation and encourage a holistic approach.

Secondly, whilst most tourism and hospitality businesses are considered SMEs, the majority of the studies reviewed have focused on large companies and give limited attention to how different learning and KM mechanisms should be developed to suit the needs of SMEs. More research needs to be conducted on how OL and KM can effectively be integrated into SME business models to enhance performance.

Thirdly, one critical line of investigation is the application of KM in customer demand, where KM mechanisms could play a significant role in providing innovative services to different market segments. Arguably, tourism organizations should be knowledge-based, and KM and OL tools play a significant part in achieving competitive advantage and customer satisfaction.

Fourthly, the findings of this study also apply to DMOs and destination management information systems and linking KM to decision making. These can use business intelligence tools to promote knowledge production among various destination stakeholders and understand the total knowledge base of the destination (Del Chiappa & Baggio, 2015). The network structure of tourist destinations should also be taken into account for distributing knowledge more efficiently among business actors to create 'learning destinations' to enhance competitiveness and resilience in the face of discontinuous change and ICTs and cloud computing would facilitate the creation and exchange of knowledge among tourism stakeholders in destinations, where they also could boost innovation and competitiveness.

Fifthly, given the intersection of OL and KM with information technologies in tourism and hospitality and understanding the essential role of IT tools in learning and managing knowledge, practitioners could utilize these mediums in creating, sharing, and storing explicit and implicit knowledge in a more appropriate way. Here integration of KM and OL with new technologies include the Internet of Things, Blockchain, Artificial Intelligence and cloud computing are fruitful areas for research.

Sixthly, the significant role of workplace learning and human resources' knowledge capabilities has also been identified as a trend in 2011, but the trend has shifted to "innovative work behavior" in 2021, resulting from in-depth learning and the application of creative KM tools to enhance the company's performance. Being an innovative thinker and actor is an essential part of criteria selection in innovative service-oriented companies. Thus, DMOs and managers should facilitate and encourage in-depth learning through technological leadership and help develop a service culture where employees can apply innovative methods of OL and KM. Additionally, the study revealed that action learning and workplace learning are key learning strategies for communities with limited resources and knowledge to develop entrepreneurial capabilities. Thus, it is advised that DMOs and decision-makers promote such learning practices to empower communities involved in the related businesses.

Finally, the intersection of OL and KM with sustainability in tourism and hospitality is both timely and clear (Martinez-Martinez et al, 2022). Issues such as climate change and other environmental challenges are current tourism development issues, and both KM and OL offer promising solutions and increasing awareness of sustainable tourism practices, particularly for knowledge sharing. Researching barriers to the adoption of sustainable approaches and incorporating perspectives from psychology, sociology and linguistics are future research areas.

5.2. Research limitations

Bibliometric analysis faces its own challenges in revealing the comprehensive picture of a research area. The dataset may be skewed as a result of the filtering criteria, even if the sample of chosen articles is thorough. Focusing primarily on journal articles in English is prevalent in review-based studies, excluding potentially interesting and relevant research from other sources (such as books and conference proceedings). Additional data from the Web of Science, as well as other significant academic databases, should be included in future research based on the conclusions of this investigation. For future bibliometric research, it's possible to include even more essential information sources, including books, book chapters, and conference papers. Future bibliometric studies may find it useful to cluster research paradigms based on co-citation networks or bibliographic coupling.

Additionally, this study focused on displaying and mapping the connections between articles, researchers, journals, and nations without incorporating a content analysis except for keywords analysis. There might be some sort of content analysis on the articles that make up the data collection to get a comprehensive picture of what is going on in the domain. It is important to note that our research did not particularly analyze factors that may have boosted publication growth and the occurrence of long-term alterations in the KM and OL in tourism and hospitality research structure. Thus, future research may consider and investigate this issue.

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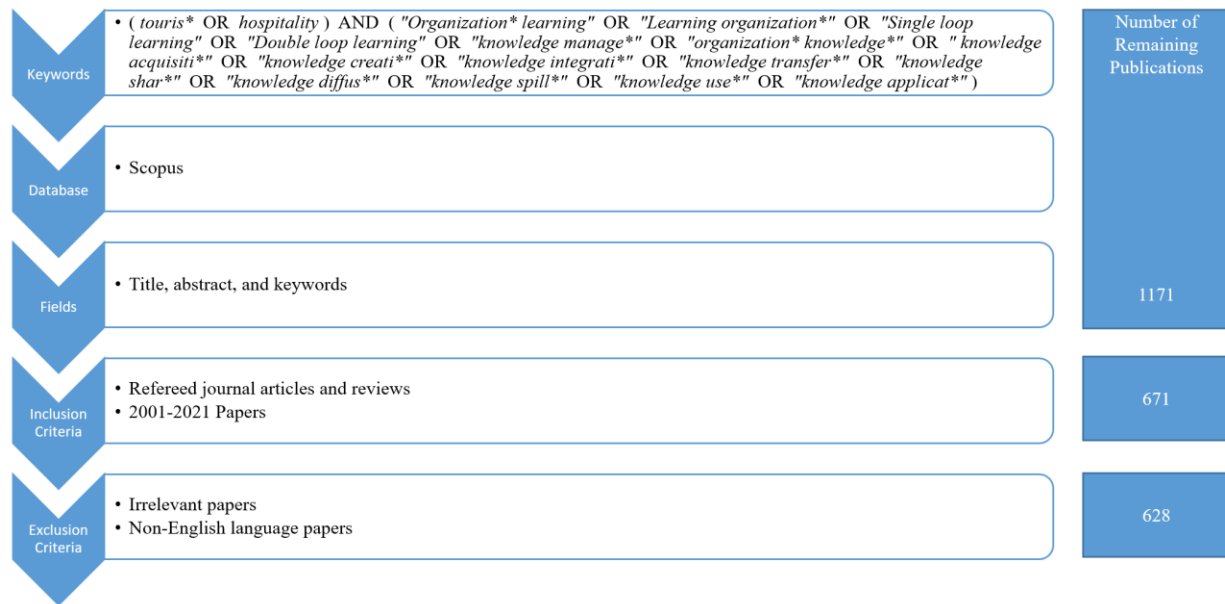
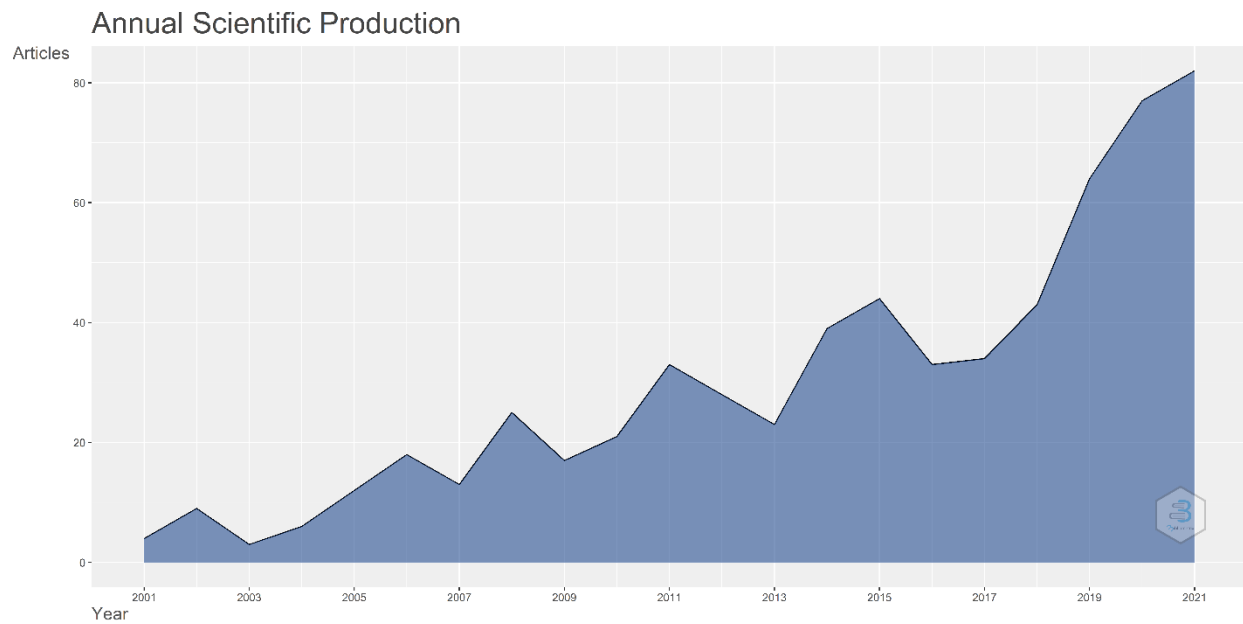**Figures**

Fig. 1. Research process.

Fig. 2. Annual production.
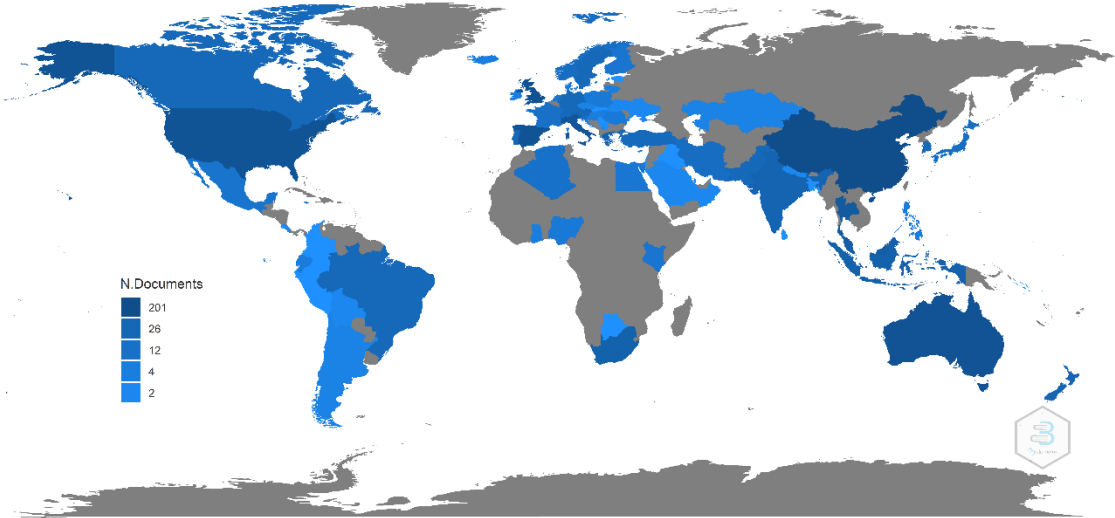
Country Scientific Production

Fig. 3. Most productive countries.
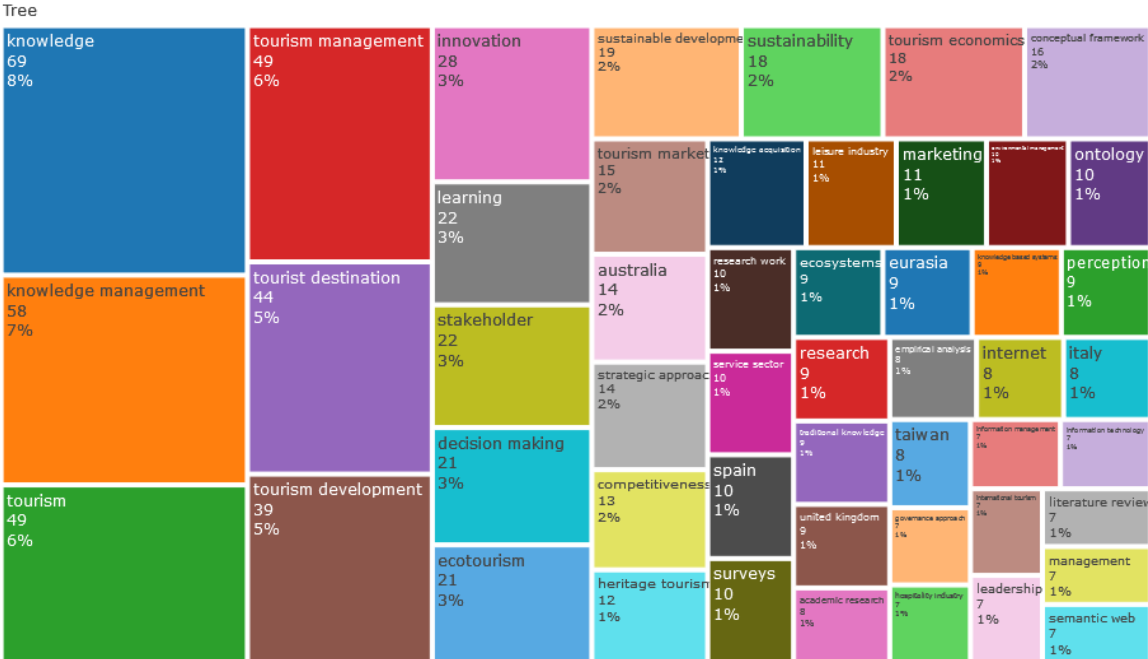
Fig. 4. Abstract keywords visualization by Treemap.
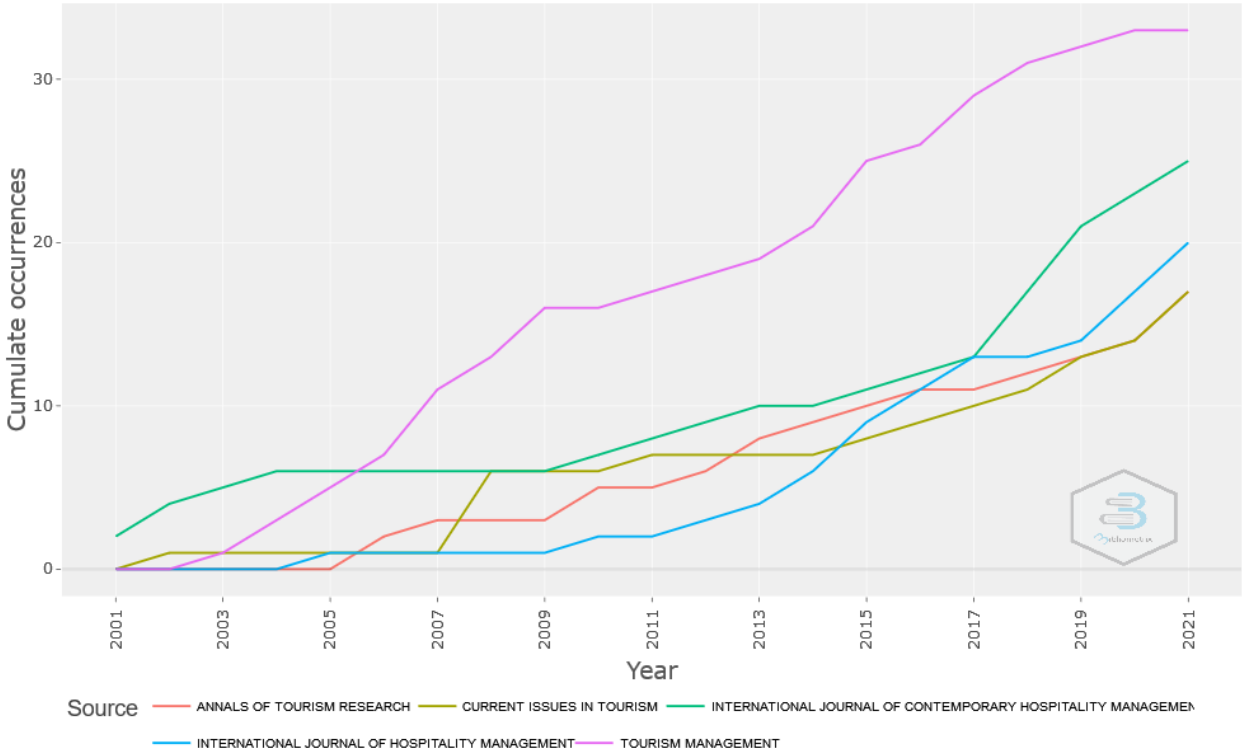
Fig. 5. Source growth.

Fig. 6. Top authors' production over the time.
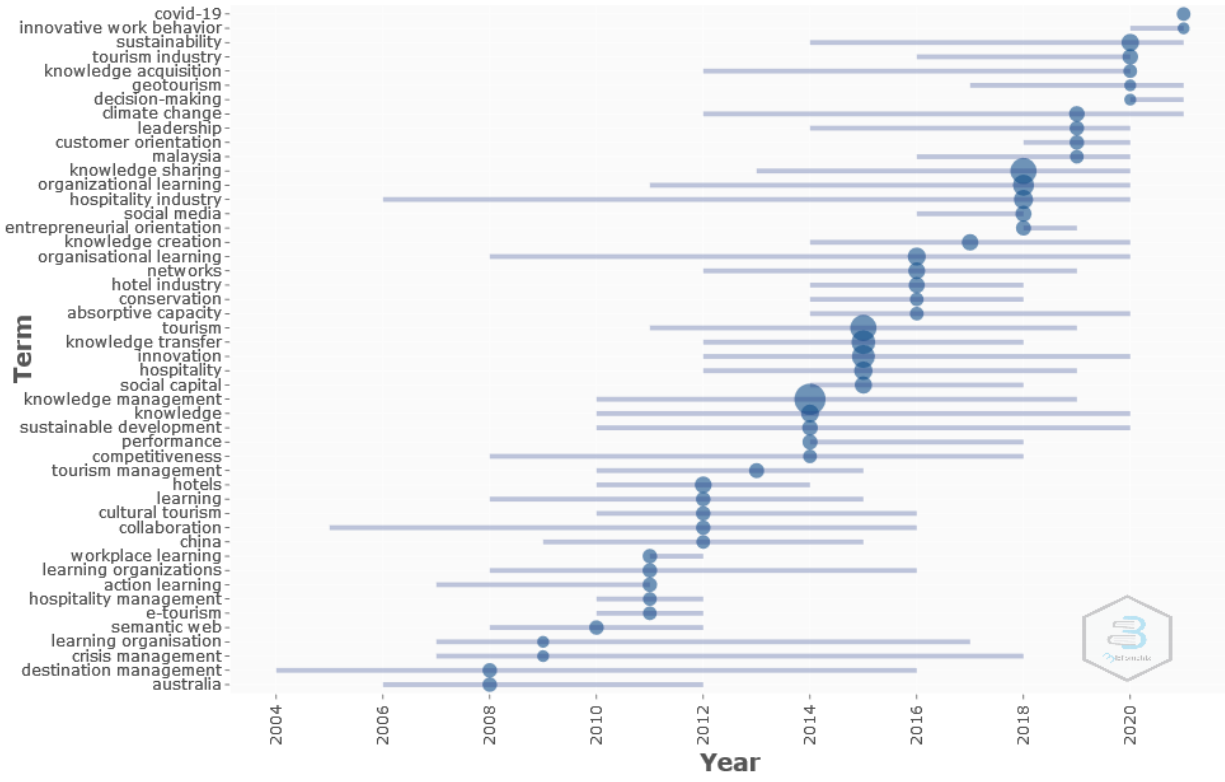
Fig. 7. Trend topic analysis.
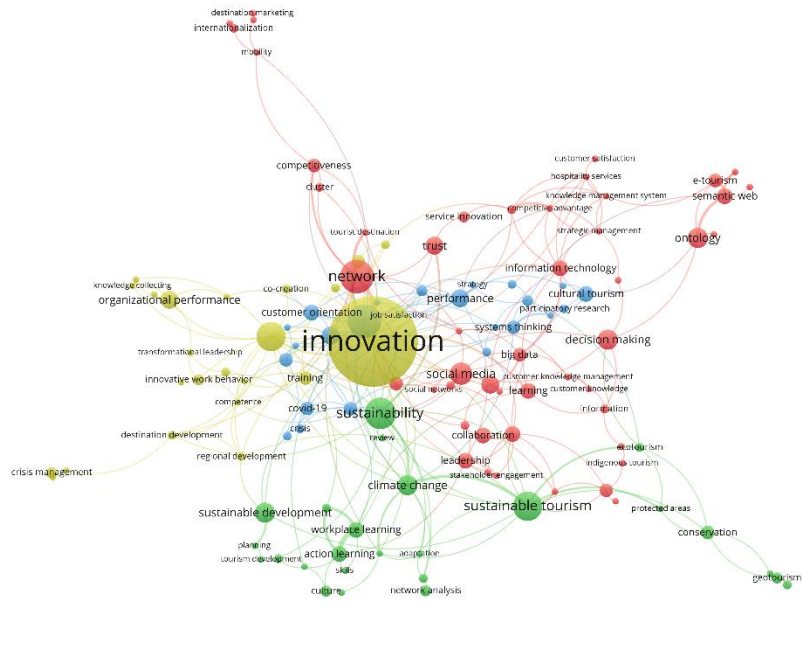
Fig. 8. Keywords co-occurrence analysis.

Appendices

Appendix A: Tables

Table 1

Overview of the data set.

Description	Results
Timespan	2001:2021
Sources	293
Documents	628
Average citations per documents	22.04
Average citations per year per doc	2.873
Nunber of references	35211
Document Types	
article	606
review	22
Document Contents	
Keywords Plus (ID)	1366
Author's Keywords (DE)	1997
Authors	
Authors	1468
Author appearances	1685
Authors of single-authored documents	131
Authors of multi-authored documents	1337
Author Collaboration	

Single-authored documents	147
Documents per author	0.428
Authors per document	2.34
Co-authors per documents	2.68
Collaboration index	2.78

Table 2

Most cited countries.

Country	Total Citations	Average Article Citations
China	1970	32.30
Australia	1907	42.38
United Kingdom	1888	41.96
Italy	777	29.88
Spain	761	23.06
Usa	705	19.58
Korea	451	34.69
Hong Kong	395	32.92
Greece	290	22.31
Turkey	269	24.45
Norway	251	50.20
New Zealand	248	22.55
Canada	211	23.44
Sweden	205	34.17
Cyprus	168	168.00
Germany	107	9.73
Slovenia	93	23.25
Netherlands	92	18.40
Austria	86	10.75
India	81	9.00

Table 3

Most productive sources.

Sources	Articles
Tourism Management	33
International Journal of Contemporary Hospitality Management	25
International Journal of Hospitality Management	20
Annals of Tourism Research	17
Current Issues in Tourism	17
Journal of Sustainable Tourism	15
Sustainability (Switzerland)	12
Journal of Quality Assurance in Hospitality And Tourism	11
Tourism Geographies	9
Service Industries Journal	8
Tourism Review	8
Worldwide Hospitality and Tourism Themes	8
Journal of Hospitality and Tourism Management	7
Tourism	7
Tourism and Hospitality Research	7
Geoheritage	6
International Journal of Tourism Research	6
Journal of Destination Marketing and Management	6
Journal of Travel and Tourism Marketing	6
Journal of Travel Research	6

Table 4

Most local cited sources.

Sources	Articles
Tourism Management	1603
Annals of Tourism Research	929
Journal of Knowledge Management	488
International Journal of Contemporary Hospitality Management	486
International Journal of Hospitality Management	439
Strategic Management Journal	437
Journal of Sustainable Tourism	391
Journal of Travel Research	318
Academy of Management Review	256
Academy of Management Journal	253
Current Issues in Tourism	253
Journal of Business Research	240
Organization Science	219
Harvard Business Review	189
Journal of Marketing	150
Journal of Applied Psychology	146
Administrative Science Quarterly	143
International Journal of Tourism Research	142
Journal of Management	138
Research Policy	137

Table 5

Most productive affiliations.

Affiliations	Articles
Chiang Mai University	20
University of Alicante	18
Bournemouth University	16
The Hong Kong Polytechnic University	15
University of Las Palmas De Gran Canaria	15
Ming Chuan University	12
The University of Queensland	12
Charles Darwin University	11
Griffith University	10
Hong Kong Polytechnic University	10
Oxford Brookes University	10
Universidade Federal De Santa Catarina	10
University of Florence	10
Temple University	9
Art University of Isfahan	8
Karakoram International University	8
Tsinghua University	8
Universiti Putra Malaysia	8
University of Cagliari	8

Table 6

Most productive authors.

Authors	Articles	Articles Fractionalized
Chris Cooper	8	5.42
Lisa Ruhanen	7	4.17
Jen-Te Yang	7	6.50
Chui-Hua Liu	6	2.65
Richard Teare	6	2.67
Rodolfo Baggio	5	2.00
Nopasit Chakpitak	5	1.87
Kalotina Chalkiti	5	3.00
Julia Nieves	5	2.17
Harald Pechlaner	5	1.92
Noel Scott	5	2.08
Marianna Sigala	5	3.00
Spyros Avdimiotis	4	4.00
Desiderio J. García-Almeida	4	2.25
Jeou-Shyan Horng	4	0.98
Bartolomé Marco-Lajara	4	0.90
Aurora Martínez-Martínez	4	1.17
Fevzi Okumus	4	2.75
Sungsoo Pyo	4	2.83
Saqib Shamim	4	1.17

Table 7

Most global cited documents.

Reference	Title	Source	TC	TCY
(Raymond et al., 2010)	Integrating local and scientific knowledge for environmental management	Journal of Environmental Management	586	48.833
(Novelli et al., 2006)	Networks, clusters and innovation in tourism: A UK experience	Tourism Management	437	27.313
(Hu et al., 2009)	Hospitality teams: Knowledge sharing and service innovation performance	Tourism Management	324	24.923
(C. Cooper, 2006)	Knowledge management and tourism	Annals of Tourism Research	282	17.625
(Song et al., 2012)	Tourism economics research: A review and assessment	Annals of Tourism Research	269	26.9
(Tribe, 2006)	The truth about tourism	Annals of Tourism Research	251	15.688
(J.-T. Yang, 2007)	Knowledge sharing: Investigating appropriate leadership roles and collaborative culture	Tourism Management	245	16.333
(Shaw & Williams, 2009)	Knowledge transfer and management in tourism organisations: An emerging research agenda	Tourism Management	233	17.923

Reference	Title	Journal	Citations	Citations/year
(Baggio & Cooper, 2010)	Knowledge transfer in a tourism destination: the effects of a network structure	The Service Industries Journal	192	16
(Fuchs et al., 2014)	Big data analytics for knowledge generation in tourism destinations – A case from Sweden	Journal of Destination Marketing & Management	171	21.375
(Zopiatis et al., 2014)	Job involvement, commitment, satisfaction and turnover: Evidence from hotel employees in Cyprus	Tourism Management	168	21
(Hallin & Marnburg, 2008)	Knowledge management in the hospitality industry: A review of empirical research	Tourism Management	157	11.214
(Bilgihan et al., 2016)	Consumer perception of knowledge-sharing in travel-related Online Social Networks	Tourism Management	155	25.833
(J. Yang, 2007)	The impact of knowledge sharing on organizational learning and effectiveness	Journal of Knowledge Management	152	10.133
(Del Chiappa & Baggio, 2015)	Knowledge transfer in smart tourism destinations: Analyzing the effects of a network structure	Journal of Destination Marketing & Management	147	21
(T. T. Kim & Lee, 2013)	Hospitality employee knowledge-sharing behaviors in the relationship between goal orientations and service innovative behavior	International Journal of Hospitality Management	143	15.889
(Ren et al., 2010)	Constructing tourism research: A Critical Inquiry	Annals of Tourism Research	143	11.917

(Sigala & Chalkiti, 2015)	Knowledge management, social media and employee creativity	International Journal of Hospitality Management	136	19.429
(Sigala, 2005)	Integrating customer relationship management in hotel operations: managerial and operational implications	International Journal of Hospitality Management	135	7.9412
(Morrison et al., 2004)	International tourism networks	International Journal of Contemporary Hospitality Management	131	7.2778

Table 8

Most frequent words (authors keywords vs. keywords plus).

Authors' keywords		Keywords plus	
Words	**Occurrences**	**Words**	**Occurrences**
knowledge management	109	knowledge	69
knowledge sharing	62	knowledge management	58
tourism	62	tourism	49
knowledge transfer	45	tourism management	49
innovation	40	tourist destination	44
organizational learning	29	tourism development	39
hospitality industry	20	innovation	28
hospitality	17	learning	22
organisational learning	16	stakeholder	22
knowledge	15	decision making	21
sustainability	14	ecotourism	21

social capital	13	sustainable development	19
sustainable tourism	13	sustainability	18
hotels	12	tourism economics	18
networks	12	conceptual framework	16
knowledge creation	11	tourism market	15
hotel industry	10	Australia	14
social media	10	strategic approach	14
climate change	9	competitiveness	13
sustainable development	9	heritage tourism	12