

Visualization of Global Research Trends on Religious Tourism and Hajj Pilgrims from 2000 to 2022: A Literature Review and Bibliometric Analysis

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Abstract

Throughout the world, religious tourism and hajj pilgrimage have attracted researchers and scholars. In order to provide a comprehensive overview of the latest results and research trends related to religious tourism and hajj pilgrims around the world, this study provides a literature review and bibliometric analysis of studies related to religious tourism and hajj pilgrims from 2000 to 2022. On 17 June 2022, a textual query was performed on Scopus and Web of Science databases using the terms (“religious” OR “Islamic”) AND (“tourism”) AND (“pilgrims” OR “hajj”) for an analysis of religious tourism and hajj pilgrim studies. According to the findings of the analysis, the annual scientific production in the Scopus database has increased significantly since 2017 until 2020. In Scopus, the most productive journal is International Journal of Religious Tourism and Pilgrimage, with 42 documents (15.7%). In Scopus, “pilgrimage” and “religion” are the most frequently used author’s keywords and keyword plus in the subject discipline. The most productive institution was Istanbul University at Turkey (16 documents; 6.0%). India and China were the leading contributors in scientific document publish in Scopus and Web of Science. The region between Egypt and Saudi Arabia displays one of the highest record of collaboration in the world.

Keywords: Bibliometric Analysis, Religious, Tourism, Hajj pilgrims, RStudio

INTRODUCTION

International tourism has been on the rise since the beginning of the 21st century is an essential economic engine that has an effect all over the world. As of the end of 2018, there had been 1.4 billion arrivals all over the world, which demonstrates the scale and economic importance of global tourism activities in 2018 (UNWTO, 2019). Many areas in underdeveloped and developed countries may benefit from tourism by creating employment and increasing their economies (Sharpley, 2009). Based on records in 2019, the tourism and travel industry were responsible for 10.4% of the global GDP and 334 million employment, which equates to 10.6% of the total number of forms of employment throughout the world (WTTC, 2021). There are many types of tourism, but religious tourism is one of them that has a major influence on country development. In the travel industry, religious tourism refers to activities such as visiting holy places like churches, temples, or monasteries, or taking part in religious festivals and events (Kim et al., 2020).

The term “*religious tourism*” refers to modern travel trends in which people go to religiously significant locations or pilgrimage sites in order to satisfy their spiritual and recreational requirements at the same time (Shinde, 2015; Shinde, 2007). The phenomenon of traveling on a religious tourism in the form of a pilgrimage is not a recent development; in fact, it existed even before the Holy Bible and the Quran were written (Qurashi, 2017; Timothy et al., 2006). Pilgrimages to holy sites are commonly recognized as the first type of tourism (Apollo et al., 2020; Collins-Kreiner, 2015). Pilgrims’ tourism has contributed significantly to the growth of countries’ geographical, cultural, and civilizational perspectives throughout the spectrum of global religions (Singh, 2004). Pilgrimage is an essential aspect of the five major global religions: Buddhism, Hinduism, Islam, Judaism, and Christianity. It is one of the most widespread cultural and religious practises in human history. A pilgrimage

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has been defined as a religious travel to a holy place and to oneself for spiritual and inner enlightenment (Barber, 1993).

The Hajj is the last and most significant of Islam's five pillars, and each year millions of Muslims perform the pilgrimage to Mecca in the kingdom of Saudi Arabia. Muslims perform the Hajj rituals in accordance with Mohammed, the Prophet of Islam, and his teachings and practises. The Hajj is a religious commitment that must be fulfilled by all adult Muslims who are in a position both physically and financially to perform the pilgrimage to fulfil their religious obligation. Once a year during the 12th month of the Islamic lunar calendar, the Hajj starts a religious journey known as the Hajj. People from 183 countries and cultures go to Mecca to do the Hajj because it is important for this act to be performed in specific places in Mecca such as Al Mashaer Al Mugaddasah and Al Kaaba Al Musharrafah in the Al Masjed Al Haram. (Parker & Gaine, 2019). Mecca plays the role as the host city, the pilgrimage, known as the Hajj, was performed by more than 2.3 million people in 2018, according to the General Authority of Statistics in Saudi Arabia (Gastat, 2018). According to Vision 2030, the Saudi government's long-term vision, the number of pilgrims would increase to 2.5 million by 2020, with an annual growth rate of 13% (Arabnews, 2016). This target, however, has not been met because of Covid-19. Researchers Muneeza and Mustapha (2021) looked at the effect the pandemic had on the Hajj and discovered that it had significant consequences on the religious, economic, social, and psychological well-being of those who participate in the Hajj.

Bibliometric analysis reviews is a report that provides an overview of a number of papers that have been analyzed in depth and have been published within the subject area being discussed. This study uses bibliometric analysis and biblioshiny and RStudio software to conduct an in-depth literature review and in-depth analysis of religious tourism research among hajj pilgrims based on this circumstance. The topic of religious tourism research among hajj pilgrims can be shown through analysis of bibliometric. It can help with the understanding of religious tourism and hajj pilgrimage trends. These results will assist the future of academics in determining the trends of global religious tourism and hajj pilgrims with Scopus and Web of Science. On this research, it has been used RStudio 4.2.0 which helps to identify the result of this trend. The software used to access the biblioshiny web-interface to analyse the data. In relation to religious tourism research with hajj pilgrims, biblioshiny analysis functions will generate research output analyses to determine the most productive authors, the most frequently used words, the most famous journals, the collaborations of nations, and so on. Religious tourism research and hajj pilgrims might benefit from this analysis, which will update the present status. This study may also help researchers or academics who are new to religious tourism and hajj pilgrims research by indicating which publications and authors to consult while doing religious tourism and hajj pilgrims' research. Although other researchers have conducted similar studies in the past (Durán-Sánchez et al., 2018), as far as the researcher is aware, there is still no scholarly work that compares two large datasets. In fact, the purpose of this research is to demonstrate the evolving patterns in the academic literature on the Pilgrimage that are explored during this time frame in two significant databases

The article is divided into five parts. In the first part of this paper, we give a short introduction to the topic, followed by a literature review in the area of religious tourism and hajj pilgrims' research. In the third part of this article, we will discuss the sources and methodology for gathering the references that will become the basis for the empirical basis of the study. In part 4, we discuss and explain the main results obtained in the research of the basic bibliometric indicators. Throughout the research, the main conclusions obtained as well as the limitations discovered are discussed in part 5. Every part may be separated into subheadings that give a clear and precise summary of the research data, their interpretation, and possible experimental inferences.

LITERATURE REVIEW

The literature review is divided into three part of research knowledge that are important to this study: 1) Religious tourism and pilgrimage travel, 2) overview of Islamic pilgrimage and 3) implication of pilgrimage.

This aim is to be organising research begins with a review of the background on religious tourism with hajj pilgrims as a general topic and moves on to a discussion of the background literature.

Religious Tourism and Pilgrimage Travel

The practise of pilgrimage which is, the most pervasive components of religious culture, and it can be found in virtually around the world's main religious traditions, such as Buddhism, Christianity, Hinduism, and Islam, amongst many others. The act of undertaking a pilgrimage is a religious ceremony that is carried out in many nations and religions across the world; nevertheless, the importance of this practise has developed over the course of history and among different societies (Schnell & Pali, 2013). Before we go into a more in-depth discussion on this issue, we need to have a solid understanding of the meaning of the word “*pilgrimage*”, which is used throughout this research. What precisely does it mean to go on a pilgrimage? Collins-Kreiner (2010) defines a pilgrimage as “a journey undertaken for religious reasons, both physically to visit a sacred location and inwardly for the sake of spiritual development and personal comprehension”. A pilgrimage can take place either physically to visit a sacred location or inwardly for the sake of spiritual development and personal comprehension. In addition to that, she described pilgrimage as a kind of people movement and circulation. Every single kind of religious tourism and pilgrimage travel adheres to a distinct set of recommended destinations than the others. The next subtopic that we are going to discuss is about the Hajj, which is another term for the Islamic pilgrimage.

An overview of Islamic Pilgrimage/ Hajj

Although the study of religious tourism has been conducted in a variety of contexts, the concepts on religious tourism and hajj pilgrims were the most significant for this research to be discussed. Islam is expected to have roughly 1.9 billion members in the year 2020, making it the second largest religion in the world (Pew Research Centre, 2021). A pilgrimage, according to Di Giovine and Choe (2019), is one of the earliest forms of human travel and a crucial basis for contemporary tourism. Pilgrimages, whether they be of a religious or secular character, are becoming more popular in a range of regions around the world. Pilgrimages to Mecca, known as the Hajj and the Umrah, are required of all Muslims who actively practise their religion as a method of obtaining financial and spiritual success (Almuhri and Alsawafi, 2017). The al-Masjid al-Haram, the Messenger Mosque, and the Al-Aqsa Mosque are the three mosques that are required to be visited during pilgrimages to Mecca, such as the Hajj and the Umrah. It is obligatory for Muslims to travel with a purpose, and Muslims are strongly urged to travel for religious reasons (Almuhri and Alsawafi, 2017). Religious tourism and pilgrimages have grown in popularity as Muslims are urged to fulfil their religious commitments, and the demand for Umrah among Malaysians is on the increase. There were around 7.5 million pilgrims who came from outside the country in 2019, increasing the total number of those who performed Umrah to 19 million (Othman et al., 2021; Gornall, 2020).

Implication of pilgrimage

Pilgrimages have enormous implications on not just politics and economics but also society and culture and may even have an influence on world trade and public health. The Hajj, like other forms of pilgrimage, may be considered a kind of tourism. Every year, millions of pilgrims from all over the world become Hajji candidates by completing their pilgrimage to Mecca between the eighth and thirteenth days of Dhul Hijjah, which is the final month of the Muslim lunar year, and earning the Hajji title (Akbulut & Ekin, 2018; Almuhri and Alsawafi, 2017). This is how they earn the right to call themselves Hajjis. Because of the strict quota system that is in place in Saudi Arabia for the Hajj, only a select number of those who apply will be able to do the pilgrimage to Mecca. Unlike the Hajj, the Umrah pilgrimage may be performed at any time of the year by Muslims and does not need them to have previously completed the Hajj. Moutamir is the name that is used to refer to them instead. As a direct result of this, the Islamic tourist business has grown significantly over the last several decades and continues to do so (Akbulut & Ekin, 2018; Thimm, 2017).

In 2010, Indonesia had the world’s largest Muslim population, with 209 million people, followed by India with 176 million, Pakistan with 167 million, Bangladesh with 133 million, and Iran with 74 million. The remaining four were allocated to Europe (Turkey), Sub-Saharan Africa (Nigeria), and North Africa (Egypt, Algeria, and Morocco). Muslims are also prevalent in China, Russia, and the United States. Between 2010 and 2030, the worldwide Muslim population is predicted to grow by around 35%, reaching 2.2 billion (Jafari & Scott, 2010). As a result of Hajj and Umrah, this will encourage muslims from throughout the world go to Saudi Arabia’s holy sites every year. The map below clearly demonstrates Islam’s globalised growth as well as the geographical, socioeconomic, and historical diversity of the populations.

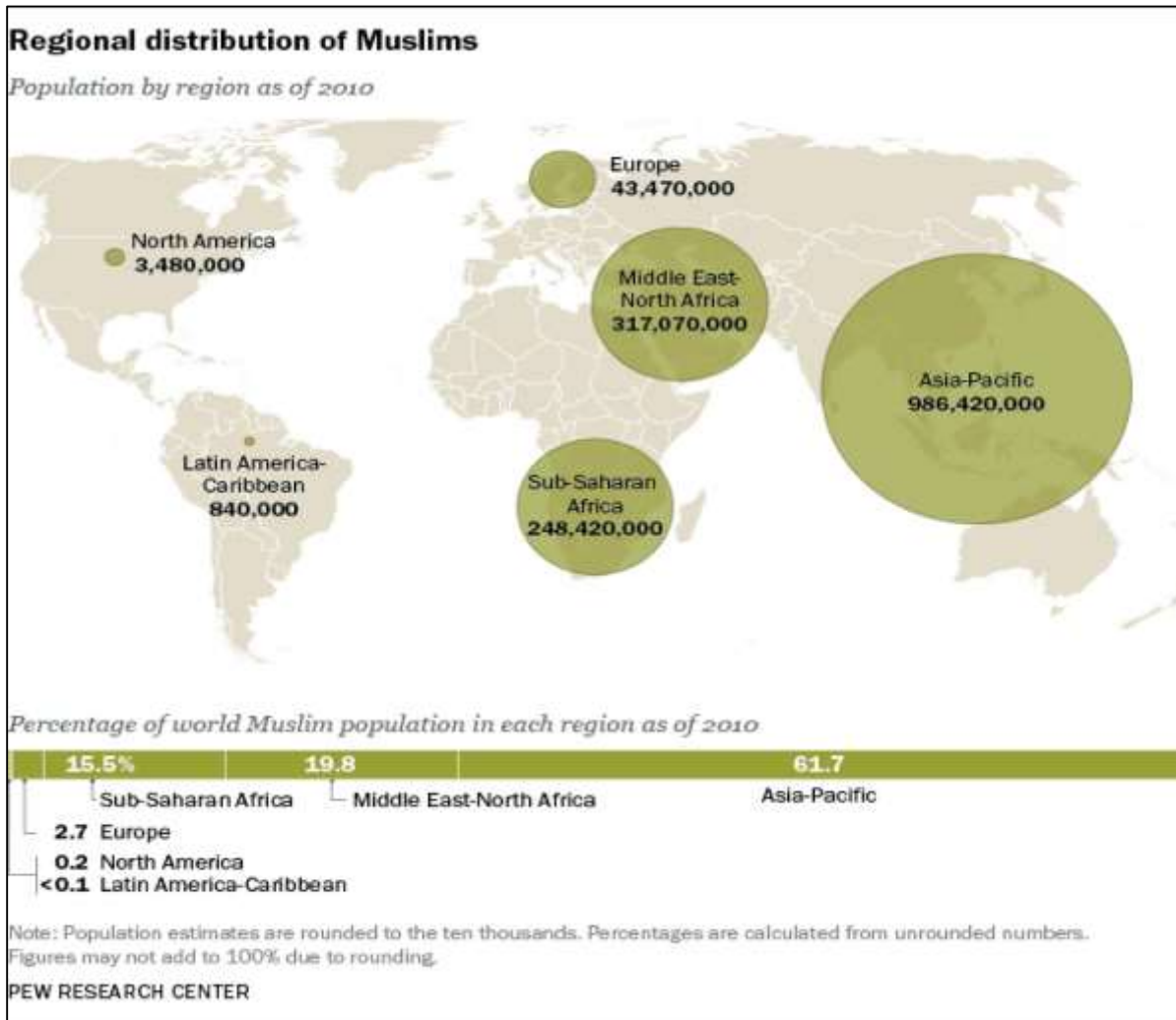


Figure 1. Islam’s globalised growth as well as the geographical, socioeconomic, and historical diversity of the populations.

Source: (Luz, 2020)

METHODOLOGY

Bibliometrics refers to a group of quantitative techniques used to measure trends within the field of research (Niu et al., 2016). In order to conduct the bibliometric analysis review, it was decided to follow the PRISMA guidelines, which are used for conducting systematic reviews. The PRISMA guidelines provide a comprehensive set of principles that help to ensure that the review is rigorous and that the results are reliable. They also provide a clear structure for the review and make it easier to compare studies. In order to ensure the quality and accuracy

of a review, publication guidelines are expected to provide authors with relevant and suitable information that will aid them in assessing and evaluating the review. Below are the steps need to follow in order to discover and extract information for bibliometric analysis review, as recommended by PRISMA.

Data Source and Search Strategy (Identification)

Using a generic search query, we retrieved the data for this study from two electronic databases, Scopus and Web of Science. There are more social science journals covered in the Scopus database, especially since 1996, whereas the Web of Science (Web of Science) database is a popular choice among researchers when conducting bibliometric analyses (Thananusak, 2019; Zheng & Kouwenberg, 2019). It is one of the most comprehensive databases of scientific literature that has been evaluated by other experts and contains information pertaining to a wide range of topics (Romero and Portillo-Salido, 2019). The Scopus database is one of four well-known databases frequently used in bibliometric analyses, along with the Web of Science, Google Scholar, and PubMed (Falagas et al. 2008). The Scopus database is the most accessible of the four databases, as it allows users to search across a wide range of topics, including medicine, engineering, and computer science. Additionally, the database is regularly updated, allowing researchers to access the latest research.

A comprehensive and systematic search was carried out using the online databases Scopus and Web of Science (Web of Science) on June 17, 2022. Searches of the database were limited to a single day in order to eliminate any potential for bias caused by the frequent updates on a regular basis. The researcher focused on publications about religious tourism and hajj pilgrims that were indexed by Scopus and Web of Science databases between the years 2000 and 2022 for the purpose of bibliometric analysis review. This article’s keywords were chosen based on an analysis of the literature on pilgrimage research (Durán-Sánchez et al., 2018). The researcher’s search for records pertaining to hajj or pilgrimage has been narrowed to publications pertaining to these topics, notably those written only in English. The search query for this article contained the specific terms “religious tourism” and “hajj pilgrims” that effectively defined the results based on research topic area. According to Scopus and Web of Science database standards, words enclosed in double quotes are regarded as a whole (one unit) throughout the search process, and they will appear together in the same order as the formula used. In order to cover all related literature, the Boolean operators OR and AND have been used to merge the different elements of the search query. Below is an example of a search strategy that was implemented using the Boolean operations (OR, AND) in both databases:

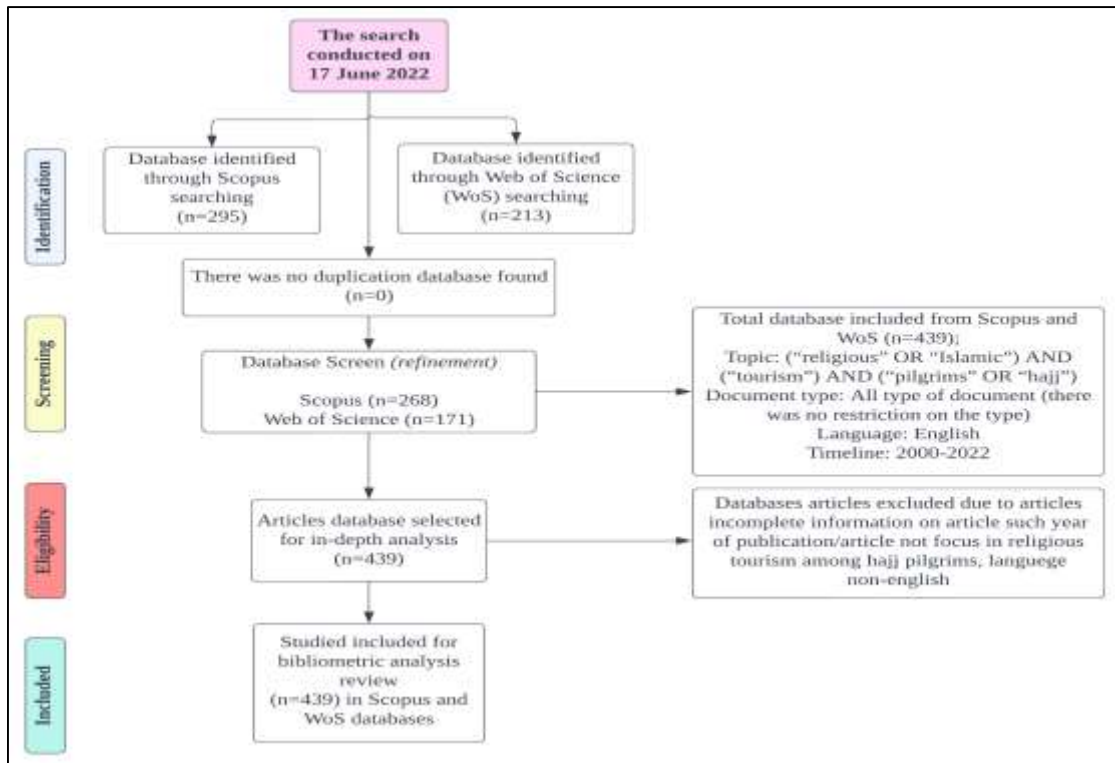
Table 1. The search string

Database	Search string	Search string strategy Boolean operators	No. Documents
Scopus		TITLE-ABS-KEY((“religious” OR “Islamic”) AND (“tourism”) AND (“pilgrims” OR “hajj”)) AND (LIMIT-TO (PUBYEAR,2022) OR LIMIT-TO (PUBYEAR,2021) OR LIMIT-TO (PUBYEAR,2020) OR LIMIT-TO (PUBYEAR,2019) OR LIMIT-TO (PUBYEAR,2018) OR LIMIT-TO (PUBYEAR,2017) OR LIMIT-TO (PUBYEAR,2016) OR LIMIT-TO (PUBYEAR,2015) OR LIMIT-TO (PUBYEAR,2014) OR LIMIT-TO (PUBYEAR,2013) OR LIMIT-TO (PUBYEAR,2012) OR LIMIT-TO (PUBYEAR,2011) OR LIMIT-TO (PUBYEAR,2010) OR LIMIT-TO (PUBYEAR,2009) OR LIMIT-TO (PUBYEAR,2008) OR LIMIT-TO (PUBYEAR,2007) OR LIMIT-TO (PUBYEAR,2006) OR LIMIT-TO (PUBYEAR,2005) OR LIMIT-TO (PUBYEAR,2004) OR LIMIT-TO (PUBYEAR,2003) OR LIMIT-TO (PUBYEAR,2002) OR LIMIT-TO (PUBYEAR,2001) OR LIMIT-TO (PUBYEAR,2000)) AND (LIMIT-TO (LANGUAGE,“English”))	268
Web of Science		TS=((“religious” OR “Islamic”) AND (“tourism”) AND (“pilgrims” OR “hajj”)) and 2022 or 2021 or 2020 or 2019 or 2018 or 2017 or 2016 or 2015 or 2014 or 2013 or 2012 or 2011 or 2010 or 2009 or 2008 or 2007 or 2006 or 2005 or 2004 or 2003 or 2001 or 2000 (Publication Years) and English (Languages)	171
Scopus & Web of Science		Total databases	439

Source: Author, 2023

Researchers downloaded two sample database of documents from Scopus in the *CSV format and from Web of Science in the *Text Document format in order to analyse all of the essential information that is contained within the publication databases. This information includes the paper title, author name and affiliation, abstract,

keywords, journals name, references, and so on. The researcher used RStudio software, version 4.2.0, to conduct the analysis on the collected data. The databases publication after the refining result is 268 documents were downloaded from Scopus, while only 171 were retrieved from Web of Science. It is possible to visualise and analyse trends of religious tourism among hajj pilgrims by making use of the bibliometric tool known as biblioshiny. This article’s objective is to analyse the present status of religious tourism among hajj pilgrims all over the world from the years 2000 to 2022 and to present the findings about those trends.



Source: Author, 2023

Figure 2. Flowchart for study selection

Eligibility criteria (Screening process)

We analyzed at 439 documents from Scopus (295 documents database) and Web of Science (171 documents database). At this step, it is important to carefully analyze all publications based on the title, abstract, and main content to verify they fulfil the inclusion criteria and are appropriate for use in the present research and achieve the objectives. Thus, a total of 439 complying documents would have to be analysed based on the research related on religious tourism among hajj pilgrims. Only documents published between 2000 to 2022 were selected. Moreover, there was no restriction on the type of documents that were included, but only a restriction on the language of the documents.

Table 2. The Inclusion and Exclusion Criteria

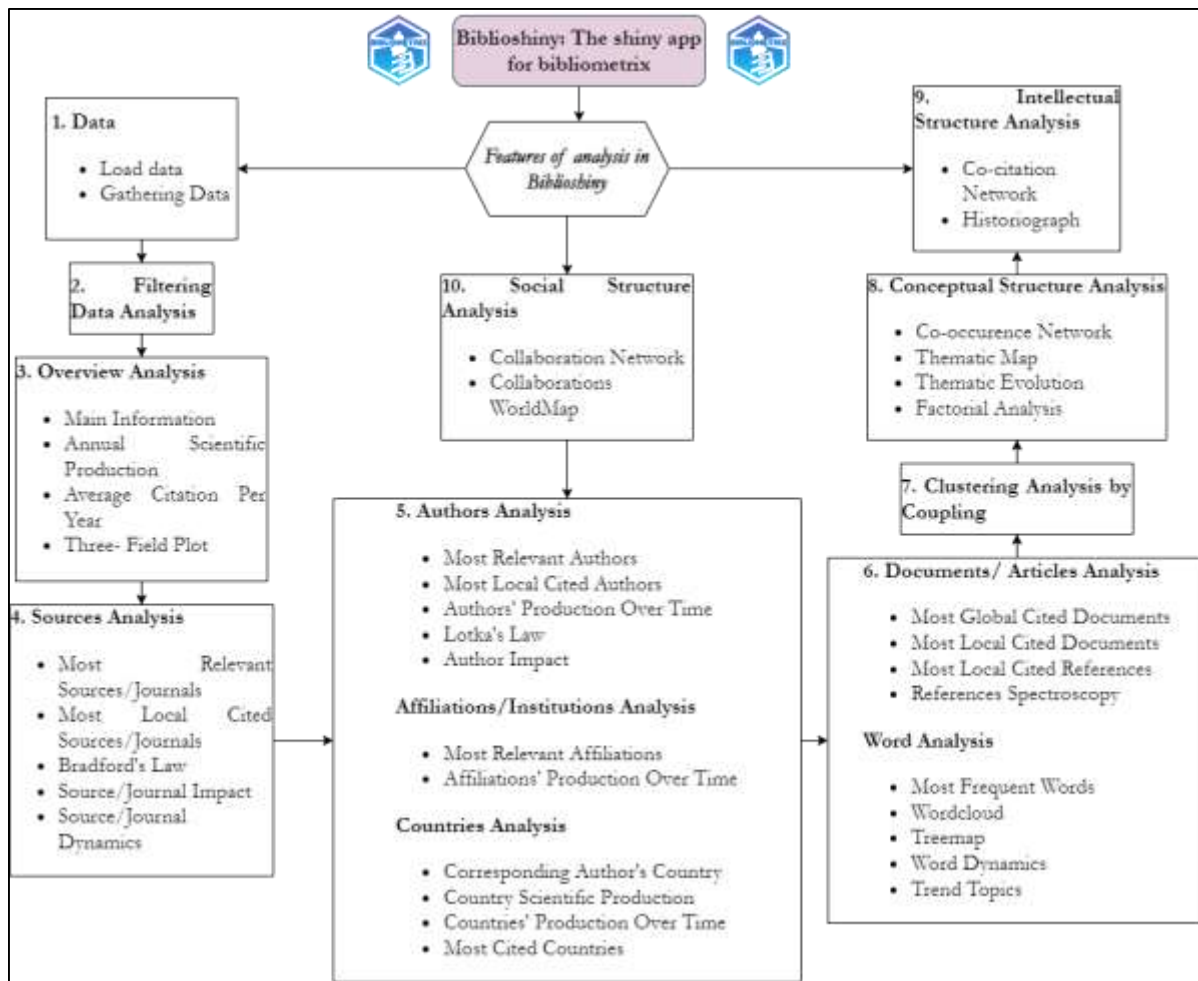
Database Criteria	Eligibility	Exclusion
Document type	All type of document (there was no restriction on the type)	Not aplicable
Language	English	Non-English
Timeline	2000 - 2022	<2000
Location and Country	Worldwide (there was no restriction on the type)	Not aplicable

Source: Author, 2023

Data Analysis

It was undertaken using the R programming language to conduct a bibliometric analysis of documents related to religious tourism among hajj pilgrims based on a systematic evaluation of the available documents. With open-source tools, such as the bibliometric R-package, bibliometric and scientometric analyses can be performed. This research uses the bibliometric R package, which is effective, flexible, and customizable. Bibliometric is a R package designed specifically for bibliometric and scientometric analysis and is free and suitable software. For the present study's bibliometric analysis to utilize the bibliometric R-package. This is because it is a flexible, effective, and adaptable tool (Aria & Cuccurullo, 2017).

RStudio 4.2.0 was the software that was used by the researcher and it was running on a Windows 8.1 computer. In order to install bibliometrix software, researchers must install RStudio first, and then use the command line to type >install.packages("bibliometrix") on the command line console. As soon as bibliometrix is installed, a researcher can launch the biblioshiny web-interface by typing >library(bibliometrix) and biblioshiny(bibliometrix) in RStudio at the command console to launch the bibliometrix library. In order to analyze the data, researchers imported data from Scopus and Web of Science databases into the biblioshiny programme (Fakruhayat et al., 2022). In order to analyze the research output of the research area of religious tourism among hajj pilgrims, a bibliometric analysis was carried out in order to obtain an analysis of research output based on the annual scientific production, the country scientific production, the most relevant authors, the most relevant journals, the most common words, the networks of co-occurrence and the collaborations between countries. The following figure illustrates the features of biblioshiny's web-interface for analyzing data.



Source: (Ab Rashid, 2023)

Figure 3. Features of Biblioshiny app for bibliometrix

RESULTS AND DISCUSSION

Researchers retrieved 439 databases of publications (journal, book, book chapter, conference paper, review, etc) from two different indexed by Scopus and Web of Science on relevant topics to “religious tourism and hajj pilgrims” from 2000 to 2022 throughout the world using the search method mentioned above.

Annual Scientific Production and Average Citation Per Year

Table 3 below shows finding analysis of annual scientific publications and average citation per year. From 2000 to 2022, 439 documents relating to religious tourism and hajj pilgrims’ publications were published, with Scopus (268 documents) and Web of Science (171 documents). The highest number of documents published in Scopus indexed journals was in 2020 (40 of 268), while the lowest number was in 2000, 2001, 2002, 2003, and 2008 (1 of 268), respectively. Furthermore, there is a significant increase in global trends in yearly scientific production in the Scopus database for the topic of religious tourism and hajj pilgrims from 2017 to 2020. Annual scientific production in Web of Science revealed that the highest number of documents published was in 2019 (20 of 171), while the least number of documents published was in 2000, when no publication was reported. Furthermore, global trends in yearly scientific production revealed an inconsistency with the number of publications from 2000 to 2022. Furthermore, the annual growth rate was 13.1% (Scopus), and 7.97% (Web of Science).

Table 3. Annual scientific publications and average citation per year from 2000 to 2022

Year	Scopus			Web of Science		
	N. Documents	Percentage (%)	MeanTCperYear	N. Documents	Percentage (%)	MeanTCperYear
2000	1	0.4	7.090909	0	0	0
2001	1	0.4	1	1	0.6	0.761905
2002	1	0.4	2.6	1	0.6	2.05
2003	1	0.4	13.15789	1	0.6	10
2004	3	1.1	0.481481	1	0.6	0
2005	3	1.1	2.27451	2	1.2	1.058824
2006	3	1.1	9.895833	3	1.8	2.104167
2007	2	0.7	1.366667	1	0.6	0.733333
2008	1	0.4	0.214286	3	1.8	0.309524
2009	4	1.5	3.692308	4	2.3	3.326923
2010	12	4.5	1.381944	6	3.5	0.930556
2011	3	1.1	2.454545	1	0.6	4.818182
2012	16	6.0	1.36875	12	7.0	1.033333
2013	10	3.7	2	4	2.3	3.638889
2014	8	3.0	5.03125	9	5.3	1.222222
2015	9	3.4	3.539683	6	3.5	4.666667
2016	25	9.3	1.58	23	13.5	1.594203
2017	19	7.1	1.821053	14	8.2	1.885714
2018	27	10.1	1.962963	14	8.2	1.892857
2019	30	11.2	1.566667	20	11.7	1.3
2020	40	15.0	1.175	14	8.2	0.964286
2021	34	12.7	1.323529	17	9.9	1.470588
2022	15	5.5	0	5	3.0	0

Source: Author, 2023

Most Relevant Journals (Sources)

Table 4 below shows top ten most relevant journals in Scopus database. The Scopus database found 139 journals in 268 publications including the most important journal documents in religious tourism and hajj pilgrims' studies. From a total of 268 papers published, the table below represents the top ten most relevant journal documents in religious tourism and hajj pilgrims' studies. The most popular journals, according to the findings of the analysis, are International Journal of Religious Tourism and Pilgrimage, which has 42 documents published. Religions journals came in second with 10 total documents published, followed by the Journal of Heritage Tourism and the Journal of Tourism and Cultural Change (7 documents each), Annals of Tourism Research (6 documents), and so on. Geojournal of Tourism and Geosites was placed tenth, with 4 publications. The Annals of Tourism Research publication has the most total citations (581).

Table 4. Top 10 most relevant journals (Scopus)

Most Relevant Journal (Scopus)	N. Documents	(%)	h_index	g_index	m_index	TC
International Journal of Religious Tourism and Pilgrimage	42	15.7	6	9	1	141
Religions	10	3.7	2	4	0.5	23
Journal of Heritage Tourism	7	2.6	6	7	0.352941	225
Journal of Tourism and Cultural Change	7	2.6	4	5	0.363636	105
Annals of Tourism Research	6	2.2	5	6	0.25	581
Sustainability (Switzerland)	6	2.2	3	4	0.5	46
Tourist Studies	6	2.2	4	5	0.571429	33
Tourism Management	5	1.9	4	4	0.285714	291
Tourism Management Perspectives	5	1.9	5	5	0.714286	203
Geojournal of Tourism and Geosites	4	1.5	1	1	0.25	4

Source: Author, 2023

Table 5 below shows top ten most relevant journals in Web of Science database. The analysis of the most relevant journal documents in the field of religious tourism and hajj pilgrim research revealed that there were 105 different journals in 171 databases in the Web of Science online database. The following table shows the top ten journals in the Web of Science database on the topic of religious tourism and hajj pilgrims in the field of religious tourism. According to the results of the analysis, one of the most frequently read journals is Religions, which has 12 documents in the Web of Science database. The Journal of Heritage Tourism ranked second with 8 published documents, followed by the Journal of Tourism and Cultural Change with 7 documents, the Tourism Management Perspectives journal with 6 documents, the Annals of Tourism Research journal with 5 documents, and so on. Asia Pacific Journal of Tourism Research ranked tenth with 3 documents published. Annals of Tourism Research has the highest total number of citations with 237 citations.

Table 5. Top 10 most relevant journals (Web of Science)

Most Relevant Journal (Web of Science)	N. Documents	(%)	h_index	g_index	m_index	TC
Religions	12	7.0	2	3	0.5	15
Journal of Heritage Tourism	8	4.7	5	7	0	161
Journal of Tourism and Cultural Change	7	4.1	4	5	0.363636	77
Tourism Management Perspectives	6	3.5	6	6	0.857143	169
Annals of Tourism Research	5	3.0	3	4	0.15	237
Sustainability	5	3.0	2	3	0.333333	29
Tourism Management	5	3.0	5	5	0.357143	240
International Journal of Tourism Research	4	2.3	4	4	0.333333	121
Tourist Studies	4	2.3	3	3	0.428571	16
Asia Pacific Journal of Tourism Research	3	1.8	3	3	0.428571	33

Source: Author, 2023

Most Frequent Words and Co-Occurrence Network

Figure 4 below shows the tree map of top frequently utilized author keywords in Scopus database. In bibliometric analysis, keywords are essential for revealing the study field’s trend. Author’s keyword and keyword plus may be divided into two categories for the purposes of keyword analysis. The number of the author's keyword is 878, while the number of keywords plus is 380. The author’s keyword with the highest frequency might indicate research objective and researcher interests (Zhang et al., 2019). The study of keyword co-occurrence networks will offer a comprehensive overview of the relationships between several terms through nodes. Below is a tree map displaying the 50 most frequently used keywords in religious tourism and hajj pilgrims research documents published in the Scopus database. The most frequently used author’s keywords in the religious tourism and hajj pilgrims research discipline are “pilgrimage” (86 occurrences), “religious tourism” (84 occurrences), “tourism” (48 occurrences), “pilgrims” (18 occurrences), “religion” (16 occurrences), and so on. The finding analysis of keyword plus showed the most relevant word has been using is “religion” (32 occurrences), “heritage tourism” (25 occurrences), “tourism” (19 occurrences) and so on.



Figure 5: The most top 50 frequently utilized a) author’s keywords and b) keyword (Web of Science)

Most Relevant Authors and Author’s Production over Time

Table 6 shows finding analysis of most relevant authors and author’s production over in Scopus database. Time It has been determined that a total of 489 authors contributed to the work that resulted in the publication of 268 papers in Scopus journals within the field of religious tourism and hajj pilgrims. The following table provides a list of the top 10 authors. According to the findings, it was found that an author by the name of Collins-Kreiner N recorded a total of seven publications in that study. This author was followed by Olsen DH, who has a total of six publications; Di Giovine MA, who has approximately five publications; Timothy DJ and Sojan I, who has approximately four publications. In the meanwhile, others have contributed to this work with three papers each. We can also observe from the table that the publication with the highest number of citations within the overall top 10 publications has roughly 332 citations, while the publication with the lowest number of citations overall has none. Furthermore, depending on the frequency with which each author publishes, the maximum number of publications each year is just two.

Table 6. Top 10 most relevant author (Scopus)

Author’s Name	Total Publication	Percentage (%)	Year	Frequency	Total Citation	Affiliations/ Country
Collins-Kreiner N	7	2.6	2000	1	156	University Of Haifa, Israel
			2006	2	143	
			2007	1	21	
			2010	1	21	
			2017	1	4	
			2018	1	32	
Olsen DH	6	2.2	2006	1	332	Department of Geography, Faculty Of Science, Brandon University, Brandon, Mb, Canada
			2010	1	66	
			2012	1	20	
			2018	1	8	
			2019	1	2	
			2020	1	4	
Di Giovine MA	5	1.9	2015	2	20	Department of Anthropology and Sociology, West Chester University, West Chester, United States
			2016	1	3	
			2019	1	18	
			2020	1	3	
Soljan I	4	1.5	2011	1	4	Jagiellonian University In Kraków, Institute of Geography and Spatial Management, Poland
			2018	1	8	
			2021	1	0	
			2022	1	4	
Timothy DJ	4	1.5	2006	1	332	School of Community Resources and Development, Arizona State University, Phoenix, Az, United States
			2013	1	40	
			2015	1	103	
			2018	1	8	
Cusack CM	3	1.1	2013	1	7	Studies In Religion A20, University of Sydney, Australia
			2016	2	1	
Liro J	3	1.1	2018	1	8	Research Team on Geography of Religion, Institute Geography and Spatial
			2021	1	0	
			2022	1	4	

						Management, Jagiellonian University (Poland)
Lūtikas D	3	1.1	2015 2017 2020	1 1 1	6 21 2	Lithuanian Social Research Centre, Lithuania
Lücking M	3	1.1	2019 2021	1 2	2 0	Martin Buber Society of Fellows, The Hebrew University of Jerusalem, Israel
Mróz F	3	1.1	2019 2021	2 1	14 16	Pedagogical University of Krakow Institute of Geography, Department of Tourism And Regional Studies, Poland

Source: Author, 2023

Table 7 shows finding analysis of most relevant authors and author’s production over in Web of Science database. In the study documents about religious tourism and hajj pilgrims that were published in Web of Science journals, the following table identifies a total of 346 numerous authors. There was a list of the top 10 authors. Collins-Kreiner N., who had published a total of four documents, was the researcher who had the most publications around this study’s research, as determined by the findings of the analysis. After then, others took over, and most of them published a maximum of three publications each, while just a few authors wrote about two publications each. The total number of citations that have been cited is around 101 for maximum and none for lowest. The most recent publication, as shown by the list, was made around the year 2022, which is the current year.

Table 7. Top 10 most relevant author (Web of Science)

Author's Name	Total Publication	Percentage (%)	Year	Frequency	Total Citation	Affiliations/ Country
Collins-Kreiner N	4	2.3	2006 2010	3 1	101 15	University Of Haifa, Israel
Alhothali GT	3	1.8	2021 2022	1 2	5 0	Department of Marketing, College of Business, University of Jeddah, Saudi Arabia
Elgammal I	3	1.8	2021 2022	1 2	5 0	Business Administration Department, College of Business, University of Jeddah, Saudi Arabia
Gonzalez Rcl	3	1.8	2016 2017 2020	1 1 1	12 6 5	Department Of Architecture And Urban Studies;University Of Santiago De Compostela, Chile
Liro J	3	1.8	2018 2021 2022	1 1 1	8 0 3	Research Team on Geography of Religion, Institute Geography and Spatial Management, Jagiellonian University (Poland)
Lopez L	3	1.8	2016 2017 2020	1 1 1	12 6 5	Department of Geography, Spain

Lucking M	3	1.8	2019 2021	1 2	2 0	Martin Buber Society of Fellows, The Hebrew University of Jerusalem, Israel
Soljan I	3	1.8	2018 2021 2022	1 1 1	8 0 3	Jagiellonian University In Kraków, Institute of Geography and Spatial Management, Poland
Abdulredha M	2	1.2	2017 2020	1 1	30 4	Department of Chemistry, College of Science, University of Babylon, Iraq
Alvarado-Sizzo I	2	1.2	2017 2022	1 1	3 0	Instituto De Geografia, Universidad Nacional Autónoma De México

Source: Author, 2023

Country Scientific Production, Collaboration among countries and Top Productive Institutions

Table 8 shows the top ten country scientific production in Scopus database. In this section, the researchers investigate the various patterns of scientific output and cooperation that are prominent among the regions across the globe in Scopus database. India has produced around 59 publications, making it the country with the highest level of scientific output at the nationally. However, the United States follows closely after with roughly 38 publications, while Australia comes third with a total of 32 publications and is the most prolific nation in terms of publication creation. According to the list, each of the other nations received at least the minimal number of outputs, which was around 22 publications (Table 8).

According to the results, around 58 partnerships between nations in the study of religious tourism and hajj pilgrims around the globe. These collaborations were found throughout the world. The following table provides a list of the top 10 nations that have participated in the research for this study. The United States and Israel have worked together around three times, while Egypt and Saudi Arabia have worked together four times. Egypt and Saudi Arabia are the nations with which the United States has the greatest frequency of cooperation. In the meanwhile, other nations have completed their maximum level of partnership, which has occurred with twice as much regularity. The topmost productive institutions is Istanbul University at Turkey with 16 documents.

Table 8. The top 10 country scientific production (Scopus)

Country Scientific Production			Collaboration Among Country			Institutions/Affiliations	
Country	Frequency	Percentage (%)	From	To	Frequency	Affiliations/ Country	No. of documents (%)
India	59	22.0	Egypt	Saudi Arabia	4	Istanbul University (Turkey)	16 (6.0)
USA	38	14.2	USA	Israel	3	University Of Haifa (Israel)	13 (4.9)
Australia	32	11.9	China	Malaysia	2	University Of Santiago De Compostela (Spain)	9 (3.4)
UK	31	11.6	China	New Zealand	2	Indian Institute Of Science (India)	7 (2.6)
Poland	29	10.8	India	United Kingdom	2	Jagiellonian University (Poland)	7 (2.6)

Israel	27	10.0	Malaysia	Iran	2	University Of Venda (South Africa)	6 (2.2)
Portugal	26	9.7	Poland	Slovakia	2	Alexandru Ioan Cuza University Of Iasi (Romania)	5 (1.7)
Turkey	26	9.7	Portugal	Spain	2	Arizona State University (United States)	5 (1.7)
China	23	8.6	South Africa	Zimbabwe	2	Polytechnic Institute Of Viseu (Portugal)	5 (1.7)
Spain	22	8.2	Spain	Italy	2	Sunway University (Malaysia)	5 (1.7)

Source: Author, 2023

In Table 9, we display the top ten countries in terms of scientific production in the Web of Science database. According to an analysis of the scientific productivity of individual countries in the Web of Science database, China has the greatest contribution, with 23 documents. It is followed by India, which has generally published about 20 documents, and Israel, which has published 18 documents, making it the third highest country in terms of total publications. The nation with the fewest publications, which is Saudi Arabia, would appear to have eleven different documents. All other nations on the list have their own publishing output, which ranges from 12 to 17 publish document in total.

In addition, the findings shows that there are a total of 47 cooperation with nations all over the world in the area of research regarding religious tourism and hajj pilgrims. The following table lists, in descending order, the top ten nations that collaborate the most with one another on research projects relating to religious tourism and hajj pilgrims. Saudi Arabia and Egypt have collaborated four times, which the nations has the greatest frequency of working together out of all the countries in the world according to the list. On the other side, Australia and Brazil are the countries that collaborated on this project the fewest times, with both countries working together just once. While this was going on, every other nation on the list received a maximum of three collaborations and a minimum of two collaborations. The most popular institutions is Istanbul University at Turkey with 16 documents.

Table 9. The top 10 country scientific (Web of Science)

Country Scientific Production			Collaboration Among Country			Institutions/Affiliations	
Country	Frequency	Percentage (%)	From	To	Frequency	Affiliations/ Country	N. Documents (%)
China	23	13.5	Saudi Arabia	Egypt	4	Istanbul University (Turkey)	16 (9.4)
India	20	11.6	China	New Zealand	3	University of Haifa (Israel)	13 (7.6)
Israel	18	10.5	Israel	USA	3	University of Santiago De Compostela (Spain)	9 (5.2)
Australia	17	9.9	Australia	Saudi Arabia	2	Indian Institute of Science (India)	7 (4.1)
USA	16	9.3	China	Malaysia	2	Jagiellonian University (Poland)	7 (4.1)
Poland	15	8.7	Italy	Portugal	2	University of Venda (South Africa)	6 (3.5)
UK	14	8.2	Italy	Spain	2	Alexandru Ioan Cuza University of Iasi (Romania)	5 (2.9)
Italy	12	7.0	United Kingdom	Iraq	2	Arizona State University (United States)	5 (2.9)
Spain	12	7.0	United Kingdom	Ireland	2	Polytechnic Institute of Viseu (Portugal)	5 (2.9)
Saudi Arabia	11	6.4	Australia	Brazil	1	Sunway University (Malaysia)	5 (2.9)

Source: Author, 2023

DISCUSSION

To the best of our knowledge, this is the first bibliometric analysis of religious tourism and hajj pilgrims research conducted using two separate online databases, Scopus and Web of Science. The bibliometric analysis is a method for conducting research that involves statistically analyzing scientific documents with the goal of uncovering links between citations in publications and research trends in a specific field through a statistical analysis. The study is useful for comparing the contributions of scholars from different countries (Şenel & Demir, 2018). Based on a bibliometric analysis, we examined global trends in religious tourism and hajj pilgrims research from 2000 to 2022. An analysis has been conducted on the annual scientific output and the average citations per year, the most relevant journals, the most frequently used keywords, the most relevant authors and the author's production over time, the country's scientific production, and the collaboration among countries to obtain research output.

The research published between 2000 and 2022 on this subject was analyzed in order to construct a comprehensive summary. The result of this is a comprehensive bibliometric analysis of the output and visibility of research activity in religious tourism and hajj pilgrims. The first scholarly publications concerning religious tourism and hajj pilgrims were published at the end of the 1960s. These documents were published in Arabic. Since that time, the number of publications that are published at a world level has seen an exponential growth, which is backed by the yearly increase in the number of citations that are obtained (Rinschede 1992). This exponential growth in publications is largely due to the increased interest in exploring and understanding the impact of religious tourism on the global economy. Additionally, the increased availability of technology and the availability of online resources have made research in this area more accessible to researchers.

There is an attractive visual bibliometric indicator that may point to the development of a field of study, which is the number of scholarly publications in that field (Sun et al., 2018). According to the researcher's current analysis, Scopus publications have experienced a significant increase in global trends since 2017 to 2020, whereas the number of scientific publications in Web of Science databases has increased slowly but steadily between 2000 and 2022, despite having an inconsistency in the number of publications between 2000 and 2022, which sometimes increases and sometimes decreases. There are several factors that contribute to the expansion of religious tourism as well as research on hajj pilgrims. Some of these factors include the enhancement of facilities conditions and technological advancements, the rise in the number of researchers, and the widening of governmental policies that support the industry (Sharma et al., 2018). According to the findings of the analysis, International Journal of Religious Tourism and Pilgrimage is the most popular journal in Scopus, whereas Religions journals are the most popular journal in Web of Science. In Scopus, the most frequently used author's keywords in topic discipline are "pilgrimage" and keyword plus shows the most relevant word has been used is "religion" in the topics discipline, whereas in Web of Science, the author's keywords are "pilgrimage" and keyword plus is "tourism", which indicates that the topic discipline is pilgrimage. Based on the findings of the study, it was found that an author by the name of Collins-Kreiner N leads the list of the most famous authors in the Scopus and Web of Science databases, respectively. According to Scopus and Web of Science, India and China are also the countries with the highest contribution to the production of scientific papers. Egypt and Saudi Arabia are the two countries that have the highest level of collaboration among other countries in the world.

CONCLUSION

Religious tourism is an important element of the world's that widespread religious and cultural phenomenon in the history of human civilization in main religions like Buddhism, Hinduism, Islam, Judaism, and Christianity. Since the late 1980s, academics have been paying more attention to religious tourism, which may be defined as travelling toward a holy centre with the intention of experiencing God's presence there. As part of this article, a literature review and bibliometric analysis of research on religious tourism and hajj pilgrims is presented in order to identify the areas containing the highest annual scientific production, the highest citation rates, the

most relevant journals, the most frequently used keywords, the most relevant authors and their production over time, country scientific production, and collaboration between countries. Based on Scopus and Web of Science research documents, we analysed 439 religious tourism and hajj pilgrims research documents. It is demonstrated in this study that bibliometric analyses of academic literature are important not only for discovering and cataloguing documents within a particular field of study, but also for analysing existing data and noticing patterns based on it.

Using bibliometric analysis, the main result of this study is that from 2017 until 2020, Scopus' annual scientific production has increased significantly. However, Web of Science databases have an inconsistent annual scientific production from 2000 to 2022, according to the bibliometric analysis. Scopus' most popular journals are International Journal of Religious Tourism and Pilgrimage, while Web of Science's most popular journals are Religions journals. As far as author's keywords and keywords plus are concerned, "pilgrimage" and "religion" are the most commonly used words in Scopus, while in Web of Science, the most frequently used words are "pilgrimage" and "tourism". According to Scopus and Web of Science databases, Collins-Kreiner N is the most popular author. As far as scientific documents are concerned, India and China contributed the most to Scopus and Web of Science. There is a strong level of collaboration between Egypt and Saudi Arabia that can be rated as one of the highest in the world.

It is important to consider the limitations of using a particular database and search algorithm when analysing the results of any bibliometric research. Rather than evaluating the quality of the content of the selected documents, which can be considered in a subsequent analysis, we have conducted a descriptive-quantitative analysis of the Scopus and Web of Science archives of documents and citations related to religious tourism and hajj pilgrims. By using Scopus and Web of Science databases, this study fills in gaps in earlier research on religious tourism and hajj pilgrims and performs a new result analysis. Hence, it is recommended for future research to analyze publications from different databases and to place emphasis on data from these databases to determine whether comparable trends are evident for religious tourism, hajj pilgrims, pilgrimage, and other topics related to religious tourism.

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REFERENCES

- Ab Rashid, M. F. 2023. Analyzing of global mapping research trends on firefly tourism and fireflies (Coleoptera: Lampyridae) from the year 2000–2022: A literature review and bibliometric analysis. *Geografia-Malaysian Journal of Society and Space*, 19(1), 133-151
- Akbulut, O., & Ekin, Y. 2018. Reflections of Hajj and Umrah pilgrimage on religious stores in Mugla-Turkey. *International Journal of Religious Tourism and Pilgrimage*, 6(3), 4.
- Almuhzzi, H.M., & Alsawafi, A.M. 2017. Muslim perspectives on spiritual and religious travel beyond Hajj: Toward understanding motivations for Umrah travel in Oman. *Tourism Management Perspectives*, 24, 235–242. <https://doi.org/10.1016/j.tmp.2017.07.016>
- Apollo, M., Wengel, Y., Schänzel, H., & Musa, G. 2020. Hinduism, ecological conservation, and public health: What are the health hazards for religious tourists at Hindu temples?. *Religions*, 11(8), 416.
- Arabnews. 2016. 30% increase in Umrah pilgrims seen by 2020. *Arab News*, 6 June.
- Aria, M., & Cuccurullo, C. 2017. Bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959–975. <https://doi.org/10.1016/j.joi.2017.08.007>
- Barber, R. P. 1993. The Boydell Press: London.
- Collins-Kreiner, N. 2010. Researching pilgrimage: Continuity and transformations. *Annals of tourism research*, 37(2), 440-456.
- Collins-Kreiner, N. 2016. Dark tourism as/is pilgrimage. *Current Issues in Tourism*, 19(12), 1185-1189.
- Di Giovine, M.A., & Choe, J. 2019. Geographies of religion and spirituality: pilgrimage beyond the 'officially' sacred. *Tourism Geographies*, 21(3), 361–383. <https://doi.org/10.1080/14616688.2019.1625072>
- Durán-Sánchez, A., Álvarez-García, J., del Río-Rama, M., & Oliveira, C. 2018. Religious Tourism and Pilgrimage: Bibliometric Overview. *Religions*, 9(9), 249. <https://doi.org/10.3390/rel9090249>
- Fakruhayat, M., Rashid, A., Rahman, A. A., Masayu, S., & Abdul, R. 2022. Research Related To Fireflies (Coleoptera : Lampyridae) Around The World Over The Year 2000 – 2021 : An Overview And Guidelines. 19(3), 123–150.

- Falagas, M. E., Pitsouni, E. I., Malietzis, G. A., & Pappas, G. 2008. Comparison of PubMed, Scopus, web of science, and Google scholar: strengths and weaknesses. *The FASEB journal*, 22(2), 338-342.
- Gastat. 2018. Hajj Statistics 2018–1439. General Authority for Statistics, Riyadh.
- Gornall, J. 2020. Saudi Arabia taking all measures to keep Hajj safe. *Arab News*. <https://www.arabnews.com/node/1710066/saudi-arabia>
- Jafari J and Scott N. 2010. Muslim world and its Tourisms. *Annals of Tourism Research* 44: 1- 19.
- Kim, B., Kim, S., & King, B. 2020. Religious tourism studies: evolution, progress, and future prospects. *Tourism Recreation Research*, 45(2), 185–203. <https://doi.org/10.1080/02508281.2019.1664084>
- Luz, N. 2020. Pilgrimage and religious tourism in Islam. *Annals Of Tourism Research*, 82, 102915. doi: 10.1016/j.annals.2020.102915
- Muneeza, A., & Mustapha, Z. 2021. COVID-19: it's impact in Hajj and Umrah and a future direction. *Journal of Islamic Accounting and Business Research* 12(5): 661-679.
- Niu, J., Tang, W., Xu, F., Zhou, X., & Song, Y. 2016. Global research on artificial intelligence from 1990–2014: Spatially-explicit bibliometric analysis. *ISPRS International Journal of Geo-Information*, 5(5), 66.
- Othman, B.A., Harun, A., De Almeida, N.M., & Sadq, Z.M. 2021. The effects on customer satisfaction and customer loyalty by integrating marketing communication and after sale service into the traditional marketing mix model of Umrah travel services in Malaysia. *Journal of Islamic Marketing*, 12(2), 363–388. <https://doi.org/10.1108/JIMA-09-2019-0198>
- Parker S and Gaine J. 2019. Saudi Arabia: Hajj/Umrah Pilgrimage. Available at: <https://wwwnc.cdc.gov/travel/yellowbook/2020/popular-itineraries/saudi-arabiahajj-umrah-pilgrimage>.
- Pew Research Centre. 2021. Muslims are a growing presence in U.S., but still face negative views from the public. <https://www.pewresearch.org/fact-tank/2021/09/01/muslims-are-a-growing-presence-in-u-s-but-still-face-negative-views-from-the-public>
- Qurashi, J. 2017. Commodification of Islamic religious tourism: from spiritual to touristic experience. *International Journal of Religious Tourism and Pilgrimage*, 5(1), 89-104.
- Rinschede, G. 1992. Forms of religious tourism. *Annals of tourism Research*, 19(1), 51-67.
- Romero, L., & Portillo-Salido, E. 2019. Trends in sigma-1 receptor research: a 25-year bibliometric analysis. *Frontiers in pharmacology*, 10, 564.
- Schnell, T., & Pali, S. 2013. Pilgrimage today: The meaning-making potential of ritual. *Mental Health, Religion & Culture*, 16(9), 887-902.
- Sharma, N., Bairwa, M., Gowthamghosh, B., Gupta, S. D., & Mangal, D. K. 2018. A bibliometric analysis of the published road traffic injuries research in India, post -1990. *Health research policy and systems*, 16(1), 1-11.
- Sharpley, R. 2009. *Tourism development and the environment: Beyond sustainability?*. Routledge.
- Shinde, K. A. 2015. Religious tourism and religious tolerance: insights from pilgrimage sites in India. *Tourism Review*, 70(3), 179-196.
- Shinde, K.A. 2007, "Visiting sacred sites in india: religious tourism or pilgrimage?" in Raj, R. and Morpeth, N.D. (Eds), *Religious Tourism and Pilgrimage Festivals Management: An International Perspective*, CABI, Wallingford, pp. 186-199.
- Singh, S. 2004. Religion, heritage and travel: Case references from the Indian Himalayas. *Current Issues in Tourism*, 7(1), 44–65.
- Sun, J., Guo, Y., Scarlat, M. M., Lv, G., Yang, X. G., & Hu, Y. C. 2018. Bibliometric study of the orthopaedic publications from China. *International orthopaedics*, 42(3), 461-468.
- Thananusak, T. 2019. Science mapping of the knowledge base on sustainable entrepreneurship, 1996-2019. *Sustainability*, 11(13). <https://doi.org/10.3390/su11133565>
- Thimm V. 2017. Commercialising Islam in Malaysia: 'Ziarah' at the intersection of Muslim pilgrimage and the market driven tourism industry. *UKM Ethnic Studies Paper Series* 56: 1-50.
- Timothy, D. J., & Olsen, D. H. (Eds.). 2006. *Tourism, religion and spiritual journeys* (Vol. 4). London: Routledge.
- UNWTO. 2019. International tourist arrivals reach 1.4 billion two years ahead of forecasts. Available at: <https://www.unwto.org/global/press-release/2019-01-21/international-tourist-arrivals-reach-14-billion-two-years-ahead-forecasts>.
- WTTC. 2021. Global economic impact and trends 2021. Available at: <https://wtcc.org/Portals/0/Documents/Reports/2021/Global%20Economic%20Impact%20and%20Trends%202021.pdf?ver=2021-07-01-114957-177>.
- Zhang, X., Estoque, R. C., Xie, H., Murayama, Y., & Ranagalage, M. 2019. Bibliometric analysis of highly cited documents on ecosystem services. *PloS ONE*, 14(2), e0210707. <https://doi.org/10.1371/journal.pone.0210707>
- Zheng, C., & Kouwenberg, R. 2019. A bibliometric review of global research on corporate governance and board attributes. *Sustainability*, 11(12), 1–25. <https://doi.org/10.3390/su11123428>