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TRENDS IN TOURISM RESEARCH IN MALAYSIA: A BIBLIOMETRIC ANALYSIS

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Abstract:

This article presents a bibliometric review analyzing 43 years of research published between 1979 and 2022 from the Elsevier Scopus database. Through bibliographical analysis of 1,956 Scopus-indexed documents, the review found that this is very recent literature with over 89% of the relevant documents published since 2010. The contributions of institutional tourism publications by affiliation showed that Universiti Teknologi Malaysia (UiTM) had the highest number of publications. Meanwhile the Tourism Management, Current Issues in Hospitality and Tourism Research and Innovations and Planning Malaysia published the most significant number of publications related to tourism research. To the best of the researchers' knowledge, this is the first bibliometric study to analyze tourism research in Malaysia.

Keywords:

Tourism; Malaysia; Bibliometric Analysis; Scopus Database

Introduction

The United Nations World Tourism Organisation (UNWTO) has defined tourism as "the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited" (UNWTO, 2000). Tourism has become an important industry and has grown to become a major contributor to the world economy (UNWTO, 2019). In 1950, approximately 25 million international tourist arrivals



were recorded. In 1960, that number had increased to 70 million visitors; and in 2018, this number had increased to approximately 1.4 billion visitors (see Figure 1). In addition, the UNWTO forecasted that this number would continue to grow – up to 1.8 billion visitors in 2030 (UNWTO, 2011).

Tourism in Malaysia has only been recognised as a strategic national industry during the late 1960s. Since then, tourism has become an important sector in Malaysia. In 2000, total tourist arrivals amounted to 10.22 million people, while tourist receipts amounted to RM17.3 billion. In 2019, these figures increased tremendously: to 26.1 million arrivals and RM86.1 billion. Although the tourist industry has had an exponential growth pattern since the 1950s, there has also been negative growth due to several economic, political, and health crises, including the oil price crisis in the mid-1970s, the global recession in the mid-1980s, the Persian Gulf War in 1991, the Asian financial crisis in late 1997, the terrorist attacks on the World Trade Centre in New York and the Pentagon in the United States in 2001, the outbreak of severe acute respiratory syndrome (SARS) and avian flu in 2003, the global financial crisis in late 2007 and Coronavirus disease 2019 (COVID-19). These crises all significantly affected the international tourist arrivals. Figure 2 shows the trend of Malaysia tourist arrival.

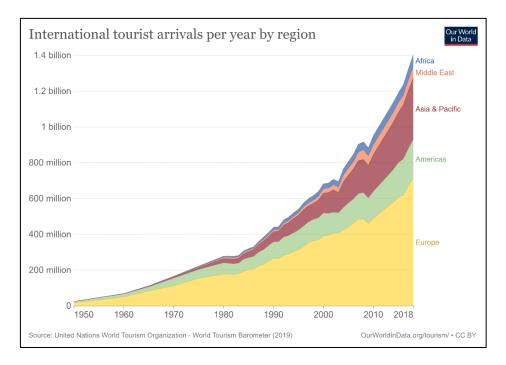


Figure 1: International Tourist Arrivals Per Year by Region

Source: UNWTO http://mkt.unwto.org/barometer

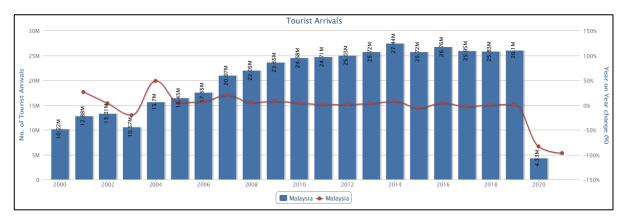


Figure 2: The Trend of Malaysia Tourist Arrivals

Source: Tourism Malaysia

Tourism is an important economic sector for most countries, and it is also one of the world's fastest growing industries. The increasing importance of tourism in boosting national economies such as Malaysia has sparked considerable interest to better understand the entire tourism ecosystem for greater sustainability. Therefore, this study aims to analyze the trends in tourism research in Malaysia using the Elsevier Scopus database from 1979 to 2022.

Methodology

This study gathered all data from the Scopus database as of September 25th, 2022. The Scopus database was chosen since it is the "largest single abstract and indexing database ever built" (Burnham, 2006) and the most searchable citation and abstract source of literature searches (Chadegani et al., 2013). The Elsevier Scopus database was thoroughly searched using "tourism" as the keyword and "Malaysia" as the affiliation country. It is possible to find papers on tourism-related subjects where Malaysian academics, organisations, institutions, and their colleagues have made significant contributions. Scopus is a useful tool for extracting information about tourism searches (KEY, COUNTRY, AND PUBYEAR), and other scholars have used it in the past to do tourism research in other nations (Viana-Lora and Nel-lo-Andreu, 2022; Sigala, 2021; Qiao et al., 2021; Strandberg et al., 2018). The search covered the years 1979 to 2023, and a total of 2,058 papers were found and carefully examined before being narrowed down to 1,956 items. This was accomplished by eliminating unrelated terms, as seen in the search term in Table 1 and Figure 3. The Scopus search had no start date selected, enabling the search engine to find the oldest publications in the literature. Based on the document type, other papers were also rejected. At this point, everything like letters, short surveys, notes, editorial, and errata were dropped. All papers on the list had their abstracts scanned, and further exclusions were made based on subject relevancy.

Table 1: Malaysia Tourism Search String for The Test Case

TITLE-ABS-KEY ("tourism" AND "54alaysia") AND (EXCLUDE (PUBYEAR, 2023)) AND (EXCLUDE (DOCTYPE, "re") OR EXCLUDE (DOCTYPE, "no") OR EXCLUDE (DOCTYPE, "ed") OR EXCLUDE (DOCTYPE, "ed") OR EXCLUDE (DOCTYPE, "er") OR EXCLUDE (DOCTYPE, "sh") OR EXCLUDE (DOCTYPE, "tb"))

Note: Filter by the year 2023 and by document type which "re" refers to a review, "no" refer to a note, "sh" refers to a short survey, "ed" refers to the editorial, "er" refer to erratum and "le" refer to a letter.

Results and Discussion

The bibliometric methodology demonstrates the use of a statistical method to analyse the tourism publishing results and trends in postulating the gap, remedy, and active areas of study while providing some input to the research community. The documents were retrieved from 1979 to 2022, and 1,956 results were obtained based on document types, source types, annual growth, languages, subject areas, keywords, authorships, and citations. The results are described in further detail in the subsections that follow.

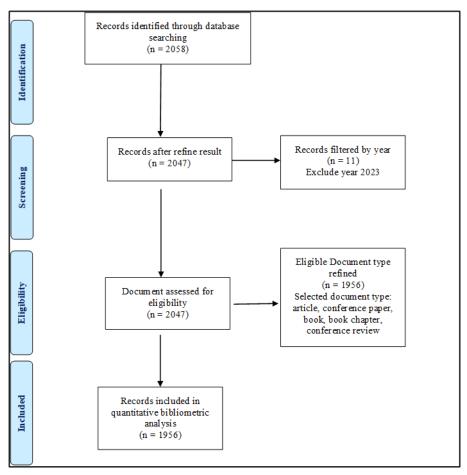


Figure 3: PRISMA Flow Diagram

Source: Adapted from Moher, et al. (2009)

Document and Source Types

This study found five documents published related to tourism research in Malaysia; articles, conference paper, book chapters, conference reviews and book. As per Table 2, most publications were from articles represented by 74.03%, followed by conference papers, 16.10%. The other types of documents are collectively represented by almost 10%. The lowest two types were conference reviews and books, with 1.33% and 1.18% respectively. Table 3 presents five source types where the highest represented type is journals (73.88%), followed by conference proceedings with 15.29%. Book series, books and trade publications contribute a total of 10.84%.

Table 2: Document Type

Document Type	Total Publications (TP)	Percentage (%)
Article	1448	74.03
Conference Paper	315	16.10
Book Chapter	144	7.36
Conference Review	26	1.33
Book	23	1.18
Total	1956	100.00

Table 3: Source Type

	Total Publications	
Source Type	(TP)	Percentage (%)
Journal	1445	73.88
Conference Proceeding	299	15.29
Book	150	7.67
Book Series	58	2.97
Trade Journal	4	0.20
	1956	100.00

Year of Publications – Evolution of Published Studies

The 1,956 Scopus-indexed documents published over the past 43 years represent a large and rapidly growing knowledge base on Malaysia's tourism research. The first research on tourism was published in 1979 by Hanna (1979) in paper titled, "Penang". This paper is a Reports by the American Universities field staff. Interest in tourism research emerged slowly during the 1970s until 1990s (70 documents) but picked up the pace with the publication of 142 documents during the 2000s. 89% of this literature was published between 2010 and 2022 leading to the conclusion that this is a rapidly emerging literature (see Figure 4).

Language of Documents

The collected data sets have also been examined to identify the language used in the published documents. According to Table 4, most publications on tourism are written in English (97.76%). It is interesting to note that publications were also written in Malay, French, Japanese, German, Chinese, Bosnian, Croatian and Indonesian.

Table 4: Languages Used for Publications

Language	Total Publications (TP)*	Percentage (%)
English	1918	97.76
Malay	20	1.02
French	4	0.20
Japanese	4	0.20
Others	16	0.82
Total	1962	100.00

^{*}One document has been prepared in dual languages

Subject Area

Table 5 summarizes the publications based on the subject area. It demonstrates that the largest number of publications were categorized under "Business, Management and Accounting" with a total of 819 (21.87%) publications. This is followed by "Social Sciences" (21.20%),

"Environmental Science" (11.19%), "Economics, Econometrics and Finance" (7.34%) and "Engineering" (7.32%). Other subject areas were below 6% of the total publications, including Computer Science, Earth and Planetary Sciences, Agricultural and Biological Sciences Arts and Humanities and Energy.

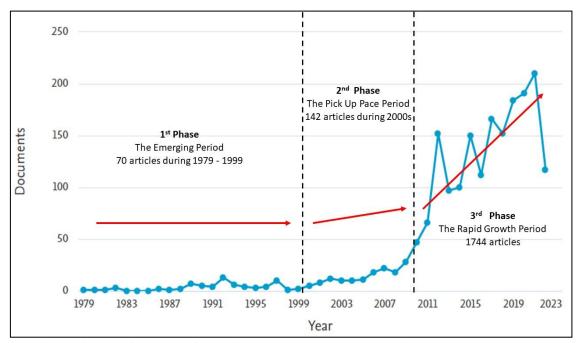


Figure 4: The Growth of Tourism Research in Malaysia, 1979-2022 (n=1956)

Table 5: Subject Area

	Total Publications	
Subject Area	(TP)	Percentage (%)
Business, Management and Accounting	819	21.87
Social Sciences	794	21.20
Environmental Science	419	11.19
Economics, Econometrics and Finance	275	7.34
Engineering	274	7.32
Computer Science	201	5.37
Earth and Planetary Sciences	190	5.07
Agricultural and Biological Sciences	168	4.49
Arts and Humanities	141	3.77
Energy	92	2.46

Note: Top ten subject area

Most Influential Institutions

Figure 5 shows the ranking of Malaysia's top 10 most prolific institutions in tourism research. Universiti Teknologi Malaysia (UiTM) is the most influential institution with 295 publications. It is followed by Universiti Sains Malaysia and Universiti Putra Malaysia with 230 and 189 publications, respectively. Furthermore, Universiti Utara Malaysia, Universiti Malaysia Terengganu, Taylor's University Malaysia, International Islamic University Malaysia and Universiti Malaysia Sarawak amount to less than 100 publications per institution.

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Most Active Source Titles

Table 6 addresses the most active source titles on tourism research in Malaysia. The total publications in this table show that the highest source was IOP Conference Series Earth and Environmental Science, with 53 (4.17%) publications. The second and third highest was Current Issues in Hospitality and Tourism Research and Innovations Proceedings of The International Hospitality and Tourism Conference Ihtc 2012 and Tourism Management with 31 publications per source. Figure 6 further illustrates the trends of these documents per year by source with a clear observation that Tourism Management is the only journal from 1982 until 2022. While, Asia Pacific Journal of Tourism Research show that it soared rapidly from 2005 until 2022. On the other hand, the other three sources Iop Conference Series Earth and Environmental Science and Aip Conference Proceeding fluctuate from 2013 until 2022.

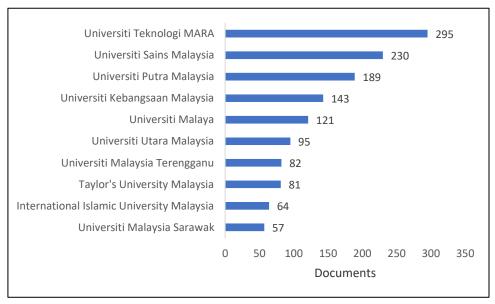


Figure 5: Documents by Institution

Table 6: Most Active Source Title

	Total Publications	
Source Title	(TP)	Percentage (%)
Iop Conference Series Earth and Environmental		
Science	53	4.17
Current Issues in Hospitality and Tourism Research and		
Innovations Proceedings of The International		
Hospitality and Tourism Conference Ihtc 2012	31	2.44
Tourism Management	31	2.44
Advanced Science Letters	29	2.28
Current Issues in Hospitality and Tourism Research and		
Innovations	29	2.28
Aip Conference Proceedings	28	2.20
Asia Pacific Journal of Tourism Research	28	2.20
International Journal of Business and Society	28	2.20
Planning Malaysia	26	2.05
Geojournal Of Tourism and Geosites	24	1.89

Note: Top ten most active source title

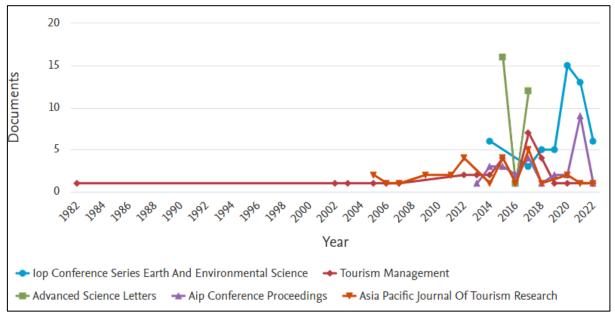


Figure 6: Documents Per Year by Source

Documents by Author

This study also presents the most active authors that published the documents tourism in Malaysia. Figure 7 shows the top fifteen authors with more than ten publications. Based on the figure, Jaafar, M., Marzuki, A., Mohamed, B., Awang, K.W., Musa, G., Tang, C.F., Ramachandran, S., Nair, V. and Lo, M.C. are among the most active authors in this field of research that published more than 20 publications on tourism in Malaysia.

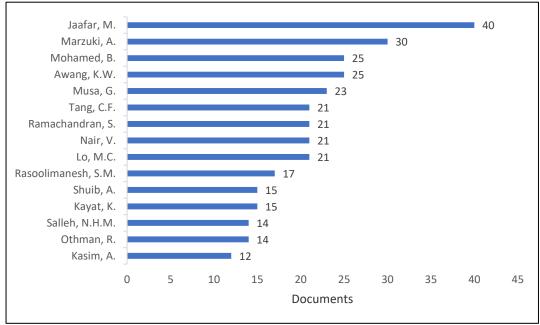


Figure 7: Documents by Author

Note: Top 15 authors



This study further analyses the collaboration of the authors by conducting the co-authorship analysis using VOSviewer. The analysis is based on the influential authors that have more than five citations and calculated using fractional counting method. The colour, circle size, font size and thickness of connecting lines indicates the strength of the relationship amongst the authors. Connected authors, as indicated by the same colour, are commonly grouped together. For example, the diagram suggests that Jaafar, M., Marzuki, A., Md Noor, S., Mohamad, D. and Rasoolimanesh, S.M. were collaborating closely and usually conduct research together (Figure 8). Figure 8 also shows that Hanafiah, M.H. has a group of authors (which is coloured in red) that he collaborates with.

Citation Analysis

Table 7 presents the citation metrics for the retrieved documents as of September 25th, 2022. Harzing's Publish or Perish software was utilized to find the citation metric for the retrieved data from the Scopus database. The short description contains the number of citations with their citations per year, citations per paper, and citations per author. In total, there were 1,956 papers with 20,862 citations averaging 485.16 per year of tourism publications. Each paper was cited 10.67 times, and the total of h-index and the g-index at 65 and 93 for all the publications. The top 20 most cited articles in tourism research in Malaysia were presented in Table 8 below. Richlen et al. (2010), with the title "The catastrophic 2008-2009 red tide in the Arabian gulf region, with observations on the identification and phylogeny of the fish-killing dinoflagellate Cochlodinium polykrikoides" was the most cited article to date with 243 total citations. Followed by Farsani et al. (2011), with the article entitled "Geotourism and geoparks as novel strategies for socio-economic development in rural areas" and Lim and McAleer (2002), with the title "Time series forecasts of international travel demand for Australia" which 210 citations and 201 citations respectively. The latest articles in top twenty paper were by Azam et al. (2018), with the title "Effect of tourism on environmental pollution: Further evidence from Malaysia, Singapore and Thailand", Olya and Al-ansi (2018), with the title "Risk assessment of halal products and services: Implication for tourism industry", Ali et al. (2018), with the title "Make it delightful: Customers' experience, satisfaction and loyalty in Malaysian theme parks" and Hew et al. (2018), with the title "Mobile social tourism shopping: A dual-stage analysis of a multi-mediation model".

Table 7: Citations Metrics

Metrics	Data
Publication years	1979-2022
Citation years	43 (1979-2022)
Papers	1956
Citations	20862
Citations/year	485.16
Citations/paper	10.67
Citations/author	9446
Papers/author	797.4
h-index	65
g-index	93

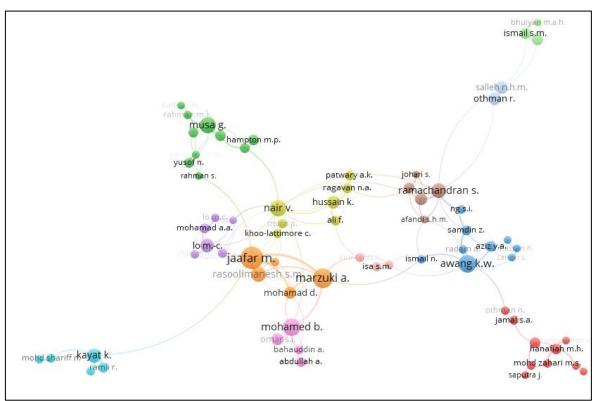


Figure 8: Network Visualisation Map of The Co-Authorship Based on Authors That Have a Minimum of Five Number of Citations (Fractional Counting)

Table 8: Highly cited articles

No.	Authors	Title	Year	Cites	Cites per Year
1		The catastrophic 2008-2009 red tide in the Arabian gulf region, with observations on the identification and phylogeny of the fish-killing dinoflagellate Cochlodinium polykrikoides	2010	243	20.25
2	N.T. Farsani, C. Coelho, C. Costa	Geotourism and geoparks as novel strategies for socio-economic development in rural areas	2011	210	19.09
3	C. Lim, M. McAleer	Time series forecasts of international travel demand for Australia	2002	201	10.05
4	M. Hossain, S. Mekhilef, L. Olatomiwa	Performance evaluation of a stand- alone PV-wind-diesel-battery hybrid system feasible for a large resort center in South China Sea, Malaysia	2017	198	39.6
5	C.F. Tang, E.C. Tan	Does tourism effectively stimulate Malaysia's economic growth?	2015	181	25.86
6	K.H. Din	Islam and tourism. Patterns, issues, and options	1989	168	5.09



			DOI 10	0/35631/J	THEM.831005
7	M. Azam, M.M. Alam, M. Haroon Hafeez	Effect of tourism on environmental pollution: Further evidence from Malaysia, Singapore and Thailand	2018	163	40.75
8	J.C. Henderson	Managing tourism and Islam in Peninsular Malaysia	2003	161	8.47
9	C.F. Tang, E.C.	How stable is the tourism-led growth hypothesis in Malaysia? Evidence from disaggregated tourism markets	2013	154	17.11
10	K.W. Markwell	Dimensions of photography in a nature-based tour	1997	152	6.08
11	S.M. Rasoolimanesh, M. Jaafar, N. Kock, T. Ramayah	A revised framework of social exchange theory to investigate the factors influencing residents' perceptions	2015	151	21.57
12	H.G.T. Olya, A. Al-ansi	Risk assessment of halal products and services: Implication for tourism industry	2018	147	36.75
13	K. Harvey, D.H. Esposito, P. Han, P. Kozarsky, D.O. Freedman, D. Adam Plier, M.J. Sotir	Surveillance for travel-related disease - GeoSentinel surveillance system, United States, 1997-2011	2013	146	16.22
14	M. Battour, M.N. Ismail, M. Battor	The impact of destination attributes on Muslim tourist's choice	2011	145	13.18
15	F. Ali, W.G. Kim, J. Li, HM. Jeon	Make it delightful: Customers' experience, satisfaction and loyalty in Malaysian theme parks	2018	140	35
16	S.A. Solarin	Tourist arrivals and macroeconomic determinants of CO2 emissions in Malaysia	2014	136	17
17	J.K.L. Chan, T. Baum	Ecotourists' perception of ecotourism experience in Lower Kinabatangan, Sabah, Malaysia	2007	134	8.93
18	C. Lim, M. McAleer	Monthly seasonal variations: Asian tourism to Australia	2001	133	6.33
19	JJ. Hew, LY. Leong, G.WH. Tan, VH. Lee, K B. Ooi	Mobile social tourism shopping: A dual-stage analysis of a multimediation model	2018	125	31.25
20	H.H. Im, S.S. Kim, S. Elliot, H. Han	Conceptualizing Destination Brand Equity Dimensions from a Consumer-Based Brand Equity Perspective	2012	123	12.3

Conclusion

The trend of tourism research in Malaysia is analysed in this research by utilizing a bibliometric analysis method. A quantity of 1,956 articles in the Scopus database published between 1979 and 2022 was analyzed. This publication number increased from 1 document in 1979 to 117 in September 2022, as generally observed. Within this stipulated period, a gradual increment in the number of publications became noteworthy from 2010 to 2015 with an average of 102 publications per year, to an average of 162 publications per year from 2016 to 2022. These documents were mostly published in journal articles (1,448 or 74%%) and conference proceedings (315 or 16%), where the prevalent language of publications is written in English (98%). Furthermore, Universiti Teknologi Malaysia (UiTM) is the most influential institution followed by Universiti Sains Malaysia and Universiti Putra Malaysia.

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Paper Contribution to Related Field of Study

This paper contributes to the literature on tourism research in Malaysia.

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