

# Waqf and Sustainability: A Text Mining

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The purpose of this study was to conduct a bibliometric analysis of all publications on Scopus related to waqf and sustainability. The methodology for text mining was carried out in July 2021 by searching for all references related to the themes of "waqf" and "sustainability" in all fields of Scopus and 292 pieces of scientific literature were found. In addition, the results of this review include documents published from 2003 to 2021. The results show that the number of publications on the theme of waqf and sustainability continues to increase. The results showed that the most productive and growing journal was the Journal of Islamic Accounting and Business Research. The most popular authors are Hassan MK, Kassim S, Mohammed MO, and Umar UH, the most productive institution is Universiti Teknologi Mara, the most popular country is Malaysia, and the most popular keyword topics are investment, theoretical model, governance approach, and sustainable development. The number of Waqf articles in their role in sustainability continues to grow. This study also reviews the development of research on waqf trends and sustainability from various fields including citations, journals, countries, authors, institutions, to topics. The implication of this research is to identify the development of research trends in the theme of waqf and sustainability.

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## INTRODUCTION

Waqf (endowment) is a form of Islamic social funds that can be optimized into a productive asset that can generate sustainable benefits. Through the sustainable development of waqf assets, it is possible to plan a contribution program for the socio-economic development of the community (Hassan et al., 2020). Waqf as a philanthropic sector is indispensable in realizing sustainable development (Abdullah, 2018).

Waqf is one of the mechanisms in the Islamic economic system that aims to distribute wealth fairly and equitably. This form of charity guarantees the waqf giver gets continuous goodness as long as the usefulness of the underlying asset remains. The contribution of waqf in the political and socio-economic growth and development of various countries over the years is so relevant that it has become a popular form of charity in Islam. The sustainable nature of waqf is very suitable in providing social and economic security assistance through its role in supporting education, housing, health, food security, and rural-urban transformation (Sulaiman & Zakari, 2019). Good management of waqf assets will greatly assist in stabilizing the economy through financing for entrepreneurs, small and medium enterprises, and other economic activities. Dynamic waqf investment from the community as well as the correct application and management of waqf assets can indeed be a solution for sustainable development (Yakubu & Aziz, 2019).

Linguistically, the term waqf comes from the word waqf, which can have the meaning of al-habsu (holding) or stopping something or staying in place, while in terminology what is meant by waqf is *tahbisul ashli wa tabi'ul manfa'ah*, which means holding back an item and providing its benefits (Utsaimin, 2009). Legally, scholars differ in defining waqf. However, according to the opinion of the majority of scholars, in general, the assets that have been waqf are no longer the property of the party who is waqf and the contract is binding (Nizar, 2016). In the Qur'an al-Karim, the term waqf is not explicitly stated. However, the basis for waqf law is the hadith of the Prophet narrated by Abu Hurairah about 3 things whose rewards continue to flow even though a Muslim has died.

Regarding property, two types of assets can be handed over or waqf, namely immovable assets such as land and buildings and movable assets such as money and shares. For immovable property, the jurists agree on the legitimacy of this type of property, because it fulfills the waqf principles, permanent. As for movable property, there are differences of opinion among the

fuqaha because it is not permanent. However, according to the majority of scholars, such as Imam Al Shafi'i, Imam Malik and Imam Ibn Hanbal said that movable property can be waqf on condition that the property is not used up in value (Sabit, 2006).

Concerning the economic concept, waqf is one of the instruments of Islamic Economics that can support economic development. The number of waqfs and the long-term oriented characteristics of waqf make waqf an instrument that has great potential in helping economic development, especially in the welfare of the community. This is also supported by the condition of Indonesia, where the majority of the population is Muslim, which has a very large potential for waqf even though it has not been managed optimally.

The use of waqf property can be used as funding in improving infrastructure for accelerated development, improving social structure in the development process by taking a role in the health, education, public service investment, and taking over the government investment budget. To help accelerate infrastructure development, productively managed waqf is needed (Fuadi, 2018) so that the benefits derived from the management of productive waqf can be used to help the welfare of the community.

The sustainable nature of waqf has been widely studied in several previous studies and has developed in recent years. Therefore, this study aims to determine the map of the development of research related to waqf on the environment from 2003 to 2021 using bibliometric analysis. The discussion that is studied in the bibliometric analysis in this study is related to the types of publication documents, the average document citation, the most popular journals, the most popular authors, the most popular affiliations, the most popular countries, and the most popular keywords.

## METHOD

Text mining is a research topic in the field of bibliometrics (Börner et al., 2003; Boyack et al., 2005). Two distinct aspects of text mining are the construction of bibliometric maps and the graphical representation of the maps. In the bibliometric literature, the greatest concern is with the construction of bibliometric maps. Research related the effect of differences on similarity measures (Ahlgren et al., 2003), and they were tested with different mapping techniques (Boyack et al., 2005; Klavans & Boyack, 2006). In the graphical representation, bibliometrics receives less attention. Although some researchers

seriously study problems related to graphical representation (Chen, 2003; 2006). Most articles published in the bibliometric literature rely on simple graphical representations provided by computer programs.

This research screening methodology was carried out in July 2021 by searching all references with keywords "waqf" and "sustainability" in all Scopus fields and 292 scientific literature found in the publication period between 2003 to 2021. The Scopus database is a multidisciplinary database suitable for researchers' information systems, as Scopus includes papers that are indexed and ranked according to specific criteria. Therefore, this study uses the Scopus database. The bibliometric analysis was then performed using bibliometrix software. Rigorous bibliometric and network analysis. Network analysis through bibliometric tools has proven useful in identifying established and emerging areas of topical interest.

Bibliometrix – R package for conducting comprehensive quantitative research in bibliometrics allows import of bibliographic data from multiple sources (including Scopus). Also, evaluate co-citation, as well as other types, such as coupling, scientific collaboration, and co-word analysis. Statistical analysis was performed with statistical software R-studio. Similar with this research has done by Rusydiana & Al-Farisi (2016) and Puspita & Devi (2023).

## RESULT AND DISCUSSION

The results of this study found 292 pieces of scientific literature on the theme of waqf and sustainability. The keywords used in the research are "waqf" and "sustainability", the use of these two general terms is intended to broaden the picture of the research field being studied more comprehensively but focused on high-quality journals.

Table 1. Document Types

Source	Scopus	Number of Articles
Time period	All years	
Keyword	“Waqf” and “sustainability”	
Document type	Total Documents	292
	Journal article	220
	Book chapter	15
	Conference paper	13
	Review	12
	Book	1
	Editorial	1
	Other	30
Language	English	292

The table above shows the number of document collections studied under the theme of waqf and sustainability, which is a total of 42 data consisting of 4 different types of documents, with the following explanations: (1) types of published journal articles totaling 220 documents, (2) types of books chapters totaling 15 documents, (3) conference paper types totaling 14 documents, (4) review article types totaling 12 documents, (5) book types totaling 1 document, (6) editorial types totaling 1 document, and (7) other types comprising a total of 15 documents. 30 documents.

Based on the table above, it can be concluded that the most widely used documents as objects of study in research discussing waqf and sustainability in

the first rank are journal articles with a percentage of 75.3% or 220 documents. While the least used documents are books and editorials which have a percentage of 0.3% or 1 document. This data shows that the references used are quite valid because they come from written documents of a scientific nature and even most are dominated by published papers.

The seven types of documents above are used in this study as objects of study to be processed and analyzed to produce the desired bibliometric visualization. The use of various types of documents is intended to make research results in the form of an overview of trend developments more comprehensive. This is because not all documents on the theme of

waqf and sustainability are published in the form of journals, but some are in the type of book chapters, conference papers, reviews, books, editorials and others.

However, documents in the form of journals are still the main reference, apart from having the largest quantity, they are also stronger in nature because they have gone through a review process by experts in the relevant publishing journal, making them more scientific and more widely used than other types of

documents. However, what you also need to know is that journals have their qualification levels ranging from those indexed only by Google Scholar to those indexed by Scopus and Web of Science.

In this study, in addition to various types of documents, various published journal papers, both indexed and not, are also registered as long as they are still relevant to the theme of this research, namely waqf, and sustainability.

*Table 2. Total Citation*

Year	N	Mean TC per Article	Mean TC per Year	Citable Years
2003	1	8.00	0.44	18
2004	1	22.00	1.29	17
2005	0	0.00	0.00	0
2006	2	4.00	0.27	15
2007	0	0.00	0.00	0
2008	2	15.00	1.15	13
2009	2	8.00	0.67	12
2010	0	0.00	0.00	0
2011	5	33.60	3.36	10
2012	3	9.33	1.04	9
2013	15	25.07	3.13	8
2014	10	8.80	1.26	7
2015	17	7.65	1.27	6
2016	21	3.52	0.70	5
2017	25	6.48	1.62	4
2018	27	3.22	1.07	3
2019	47	3.02	1.51	2
2020	63	1.19	1.19	1
2021	51	0.33		0
<b>Total</b>				

Table 2 shows the number of citations both from the average per article and per year in the waqf and sustainability-themed paper. This study examines documents on that theme which were published in a span of 19 years or from 2003 to 2021. Based on this table, it can be seen that most publications on the theme of waqf and sustainability were published in 2020 and 2021 with 63 each. and 51 documents.

Furthermore, it can be seen that the highest average total citation for each article was in 2011 with an average of 33.00 citations. Interestingly, in the same year, there was the highest average total citation per

year with a value of 3.36. These results indicate that the paper published in 2011 was the paper that was most cited or quoted on the theme of waqf and sustainability when compared to the previous year and the following years which experienced relatively lower fluctuations in general.

The increasing number of documents published every year has implications for the increasing number of citations to documents related to waqf and sustainability. This increase also shows that the theme of waqf is increasingly attractive in economic research and development in general, and Islamic economics in

particular. Research on waqf is one of the topics that have a high enough interest given its unique nature compared to other Islamic social financial instruments, thus making the exploration of waqf published in papers also increase, and has a wider impact as shown by the increase in citations.

This finding is in line with the research conducted by Tijjani et al. (2020) which analyzes the development of Islamic finance literature in Web of Science indexed journals during the period 1939 to 2019, covering 80 years of data. The research shows a sizeable increase in publications on Islamic finance in the last five years covering 2015 to 2019, especially the waqf theme. The tremendous spike in the topic of waqf

may be related to a similar increase in the number of journals and awareness of Islamic countries seeking to contribute to the waqf literature.

Other studies also state that the focus of recent research from Islamic economics is Islamic social funds, namely waqf. So there is a wide scope for research on how waqf practices and innovations are related to economic growth. Thus, the fields related to waqf also have a broad scope for future research, thus providing great opportunities for further research. In addition, research sources on waqf topics are widely available and accessible for future research (Handoko, 2020).

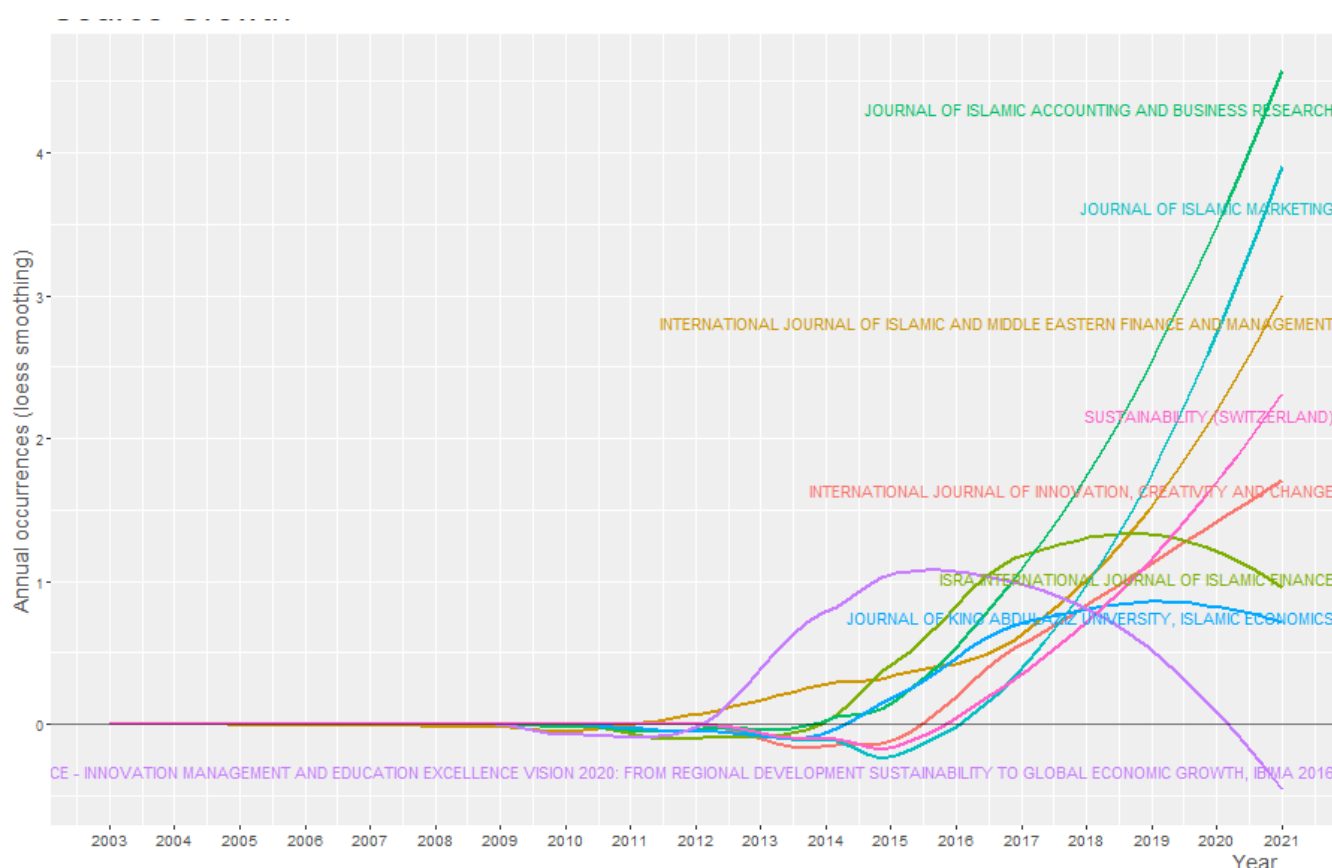


Figure 1. Source Growth

frequency of distribution of articles, as presented in Figure 1, Source Growth shows journals that deal with topics and issues related to waqf and sustainability. The data above shows the development of the annual occurrence of each journal from 2003 to 2021, so we get an idea of whether the journal has increased or decreased with a curve line during the research period, especially in the publication of waqf and sustainability-themed papers.

Based on the figure, 2015 to 2021 is a period that shows a significant growth in the number of

publications for each journal, where the highest is occupied by the Journal of Islamic Accounting and Business Research with annual occurrences of more than 5 in 2021.

The paper published by the Journal of Islamic Accounting and Business Research is a paper entitled "Financial sustainability of state waqf institutions (SWIs) in Malaysia". The paper aims to measure the sustainability and financial vulnerability of waqf institutions. This study applies the commonly used Tuckman and Chang model to measure the financial

health of nonprofit organizations. The results show that there are financially sustainable waqf institutions in the components of their equity balance, income concentration, administrative costs, and operating margin ratio (Sulaiman & Zakari, 2019).

However, this figure also shows several journals that experienced an increase followed by a decline, especially sources from Innovation Management and Education Excellence Vision 2020: From Regional Development Sustainability to Global Economic Growth.

Based on the source growth results above, the top three journals with the largest increase until 2021 are the Journal of Islamic Accounting and Business Research, the Journal of Islamic Marketing, and the International Journal of Islamic and Middle Eastern Finance and Management. The three journals have something in common, they are under the same publisher, Emerald. This shows that Emerald journals have their positioning with a lot of focus on publishing papers on the theme of Islamic economics, including waqf.

The Journal of Islamic Accounting and Business Research (JIABR) is an important platform for those who are interested in acquiring knowledge and finding alternative solutions to protect society from unethical business behavior and to uphold justice based on the teachings of Islamic philosophy and practice. The Journal of Islamic Marketing (JIMA) is the first journal dedicated to investigating the relationship of marketing to Islam, in theory, and practice, across Muslim-majority and minority geographies. And the International Journal of Islamic and Middle Eastern Finance and Management (IMEFM) publishes quality and in-depth analysis of current issues in Islamic and Middle Eastern finance and management.

Other journals such as the journal Sustainability (Switzerland) and the Journal of King Abdulaziz University (JKAU) are old journals that do have their specialty with their role in publishing research that is concerned with the topic of sustainability (Sustainability Switzerland) and Islamic economics, especially waqf (JKAU).

*Table 3. Top Contributors*

Name of Author	No of articles
Mohammed MO	4
Kassim S	4
Hassan MK	4
Umar UH	4
Aliyu S	3
Ismail S	3
Johari F	3
Saad Raj	3
Shaikh SA	3
Zauro NA	3

Table 3 identifies the most prolific writers in the literature published on waqf and sustainability themes. The table shows the top 10 authors who generated the most number of publications. Table 3 lists the authors and their documents that are in the top 10. The table also shows that based on the literature that is the object of research, the authors with the highest number of articles are Mohammed MO, Kassim S, Hassan MK, and Umar UH with 4 articles each.

Among the examples of papers written by Mustafa Omar Mohammed is a paper with the title examining the behavioral intention to participate in a Cash Waqf-Financial Cooperative-Musharakah

Mutanaqisah home financing model. The research in this paper attempts to assess the intention of homeowners in Malaysia to participate in the Cash Waqf-Financial Cooperative-Musharakah Mutanaqisah (CWFCMM) home financing model. The results further support the theory of planned behavior (TPB) with the original three constructs of attitude, subjective norm, and perceived behavioral control and additional constructs of perceived cost advantage from the CWFCMM Model (Zabri & Mohammed, 2018).

Another paper by the author Salina Kassim is a paper entitled Waqf Forest: How Waqf Can Play a Role In Forest Preservation and SDGs Achievement?. This paper states that waqf for forest conservation is mostly

concentrated on its potential or prospects for forest conservation or environmental protection. Kassim's research formulates a productive waqf forest scheme that can help achieve the Sustainable Development Goals (SDGs). The results show that productive waqf forests support several main points of SDGs, such as reducing poverty and hunger, maintaining climate, health, biodiversity, and water supply, especially conveyed to *manqaf' alaihi* (Khalifah Muhamad Ali & Kassim, 2020).

The example of a paper from M. Kabir Hassan is a paper entitled The Role of Waqf in Educational Development - Evidence from Malaysia. This study explores the role of waqf in the development of education for developing countries in the face of

economic crises and financial problems. The results of this study indicate that waqf-based financing has a significant positive impact on the development of education in Malaysia (Hasan et al., 2019).

The author with a large number of articles is occupied by Umar Habibu Umar who wrote a paper, one of which was entitled Integrating Waqf and Business: Ensuring Business Sustainability for the Welfare of Heirs and Non-Heirs. According to him, Islam has a concern for the sustainable welfare of the heirs through the preservation and maximization of wealth. He then provided a model for the sustainability of the family business through its integration with waqf to continue to generate income (Umar et al., 2020).

Table 4. Top Affiliations

Affiliations	No of articles
Universiti Teknologi Mara	30
International Islamic University Malaysia	29
Universiti Sains Islam Malaysia	19
Universiti Kebangsaan Malaysia	13
Universiti Utara Malaysia	12
University of Malaya	10
Universiti Sultan Zainal Abidin	8
Universidad Loyola Andaluc�a	6
Universitas Indonesia	6
International Islamic University	5
Universiti Teknologi Mara Selangor	5
University of Luxembourg	5
Cairo University	4
Hamad Bin Khalifa University	4
Iium Institute Of Islamic Banking And Finance	4
King Abdulaziz University	4
State Islamic University Sunan Kalijaga	4
Universiti Pendidikan Sultan Idris	4
Universiti Sains Malaysia	4
Universiti Teknologi Malaysia	4

Furthermore, in table 4, namely the author's affiliated institutions, based on a literature review, it is found that Universiti Teknologi Mara is the most productive university with 30 articles, followed by International Islamic University Malaysia with 29 articles and Universiti Sains Islam Malaysia with 19 articles. Interestingly, the majority of affiliates, even the top six in the most productive rankings, are occupied by institutions located in Malaysia.

The research conducted by the author who is affiliated with Universiti Teknologi Mara is a paper entitled "Sustainable development of endowment (Waqf) properties". The research states that the development of waqf property can contribute to the welfare and is a form of sustainable development. This proves that the sustainable development of waqf property can contribute to the socio-economic development of Muslims. The results of the study found elements in the concept of sustainable

development of waqf assets. Another analysis also found that there is a form of sustainable development through waqf land that involves socio-economic development because it can generate funds and increase the value of the waqf property (Hassan et al., 2020).

Based on the results of the affiliations and institutions of the researchers above, it was found that the majority of the top affiliates were universities from Malaysia, including Universiti Teknologi Mara, International Islamic University Malaysia, Universiti Sains Islam Malaysia, Universiti Kebangsaan Malaysia, Universiti Utara Malaysia, University of Malaya, and Universiti Sultan Zainal Abidin where each has many articles ranging from 8 to 30 articles. This shows that waqf and sustainability research in Malaysia is already popular.

This fact is consistent with data from the State of the Global Islamic Economy Report 2020/21 which

states that Malaysia has led the overall Global Islamic Economy Indicator (GIEI) ranking for the past eight years. Malaysia maintains its top position in the overall GIEI rankings, as well as leading in Islamic finance, halal food, travel, and pharmaceuticals & cosmetics. Malaysia has shown consistent growth across all sectors, with exports to the OIC increasing in terms of food, medicine, and media, and recreation. Strong awareness and governance credentials have allowed Malaysia to rank higher than other countries with larger export volumes.

Malaysia is a hub for Islamic banking knowledge and the government plans to send Islamic finance graduates abroad to help build the industry globally, especially in non-Muslim majority countries. Malaysia was also ranked as the best country in the world to invest in or do business with by CEO World Magazine in 2019, which demonstrates its strong trade partnerships with fellow OIC countries.

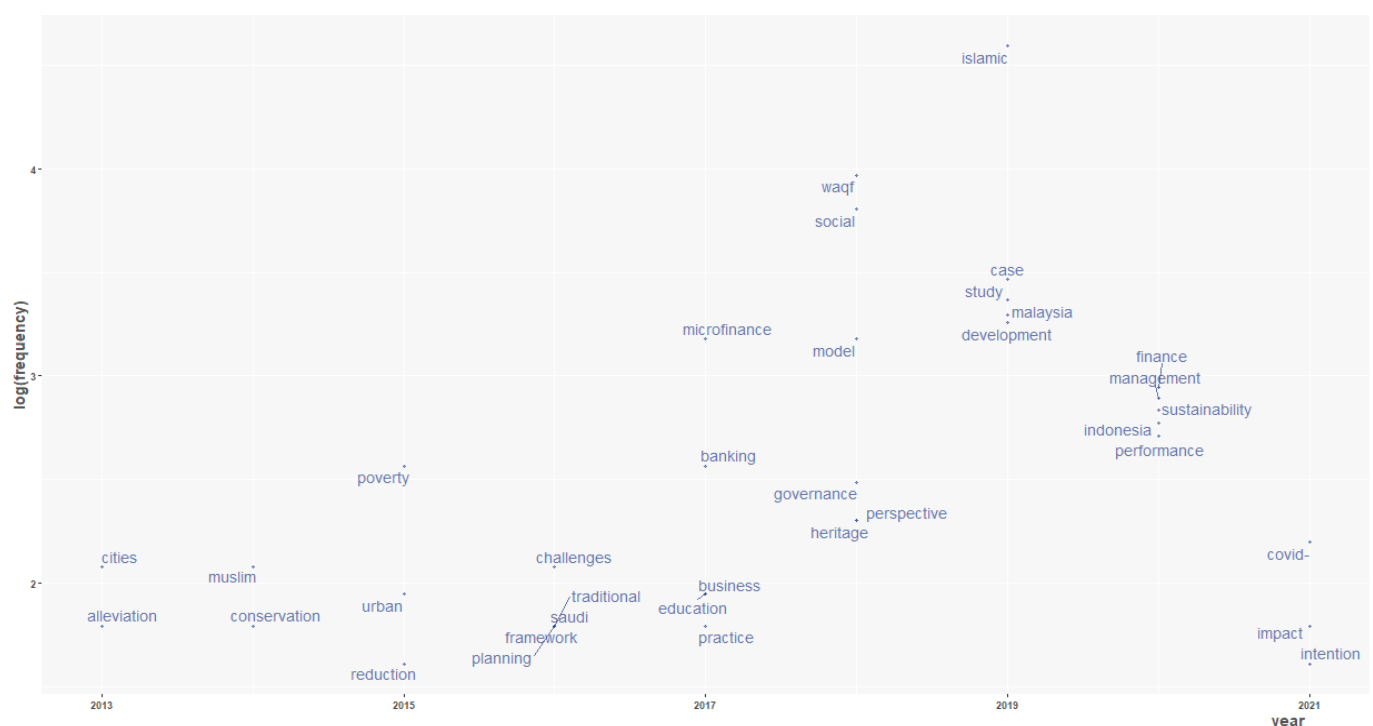


Figure 2. Trend Topics

Figure 2 shows search trends based on the analyzed keywords. The picture above shows an overview of the development of topics in the field of waqf and sustainability from time to time with the division per year so that it is known what topics have been used for a long time and what topics have been used recently. This trending topic also considers the frequency value of each word indicated by the log axis. Topics with the highest quantity were obtained by the

keyword 'Islamic' in 2019 with a log value (frequency) greater than 5.

In addition to looking at annual trends, the emergence of topics is also adjusted to the frequency with which the word appears in this research on the theme of waqf and sustainability. The higher indicates the more the word is used, and the further to the right, the more recently the word has been used. The development of the topic of waqf on health began to experience a significant increase since 2017.

The research began in 2013. The keywords identified in the research topic of waqf and sustainability in 2013 included 'cities' and 'alleviation'. This continued to grow until 2018 became a crucial year because many keywords were developing, especially with the emergence of the keywords 'waqf', as well as 'social', 'model', 'governance', 'heritage'. Furthermore, in 2020, as can be seen from the graph, the keyword 'sustainability' began to appear. The new framework was developed between 2015 and 2018. It further appears that in 2021, research on waqf and sustainability will begin to focus on the keywords 'covid', 'impact', and 'intention' due to the COVID-19 pandemic.

Based on the results above, it appears that the development of waqf research and sustainability can be divided into three major topics. The coverage of the first topic is about waqf with poverty, like the keywords that emerged in 2015. The research conducted focuses on waqf as one of the instruments instituted by Islam to combat poverty and improve welfare in society. Waqf creates a source of income to be used, among others, in activities to increase social welfare at the family, community, and state levels (Saad et al., 2016).

Furthermore, the scope of the second topic regarding the sustainability of waqf began to develop in the field of microfinance which began in 2017, where waqf is used for sustainable socio-economic development through an integrated and developable waqf-based Islamic microfinance model that is following Sharia to empower the poor. Utilization of waqf proceeds will be a catalyst for using Islamic microfinance to combat poverty. In addition, microfinance institutions as waqf fund managers have the potential to utilize the results of waqf for the socio-economic development of the poor in their respective communities (Khalifa Mohamed Ali et al., 2019).

Waqf can also be formed to disseminate knowledge and training skills in entrepreneurship development among the poor because microfinance can create wealth unless it is combined with entrepreneurial skills (Ab. Aziz & Yusof, 2019) and assistance from institutions such as waqf banks which are starting to be implemented in various countries, one of them is Indonesia.

As for the development of waqf research in the third stage, namely in 2020 to 2021, namely focusing on the COVID-19 pandemic, so that waqf is researched to be a solution because of its sustainable nature. Various studies were conducted to examine waqf projects in their role and potential prospects in

helping to stabilize the economic situation faced after the Covid-19 pandemic, especially among the poor. (Nabiha, 2020).

In addition, these results show the development of waqf research and sustainability from the side of affiliated countries, wherein 2016 emerged Saudi Arabia which has indeed made waqf one of the instruments that are widely used for infrastructure in general and have become a culture. Then Malaysia emerged in 2019 accompanied by its rapid development in various fields of Islamic economics. Followed by Indonesia in 2020 along with increasing public awareness and sharia economists about the great potential of waqf. In addition, the development of research in Indonesia is also supported by the government's obligation to publish research in Scopus indexed journals for academics, so that there is an increase in the potential and quantity of research, especially in the field of Islamic economics, and waqf in particular.

Other analysis is about thematic map. Figure 3 shows the most commonly used keywords in waqf and sustainability articles. These results are obtained from a semi-automatic algorithm by reviewing all references to the object of research with the addition of relevant keywords so that the results can capture deeper variations. The image also shows the most commonly used keywords in waqf and sustainability publications. Some of these words are keywords provided by the original author at the time of publication of the document. By applying a semi-automatic algorithm by reviewing the titles of all research object references with the addition of relevant keywords other than the author's keywords so that the results can capture deeper variations.

It is possible to group various themes from a particular domain into 4 clusters. Each cluster containing several themes can be represented on a specific plot known as a strategic or thematic map. The division is based on the elements of centrality and density. Centrality indicates the subject's interest in the whole field of research while density indicates a measure of the subject's development.

The upper right quadrant is a driving theme characterized by high density and centrality, so it needs to be developed and is important to be studied in further research. In this quadrant, the themes caught are investment, theoretical model, governance approach, and human.

The topics that appear in this motor themes quadrant show the urgency of improving the quality of

waqf managers (*nadzir*) in terms of governance and governance, this is important to do to produce a better impact on waqf management. In addition, nadzir also needs to pay attention to professionalism in

determining the right investment allocation for waqf funds with a large enough potential to generate wider benefits for the recipients.

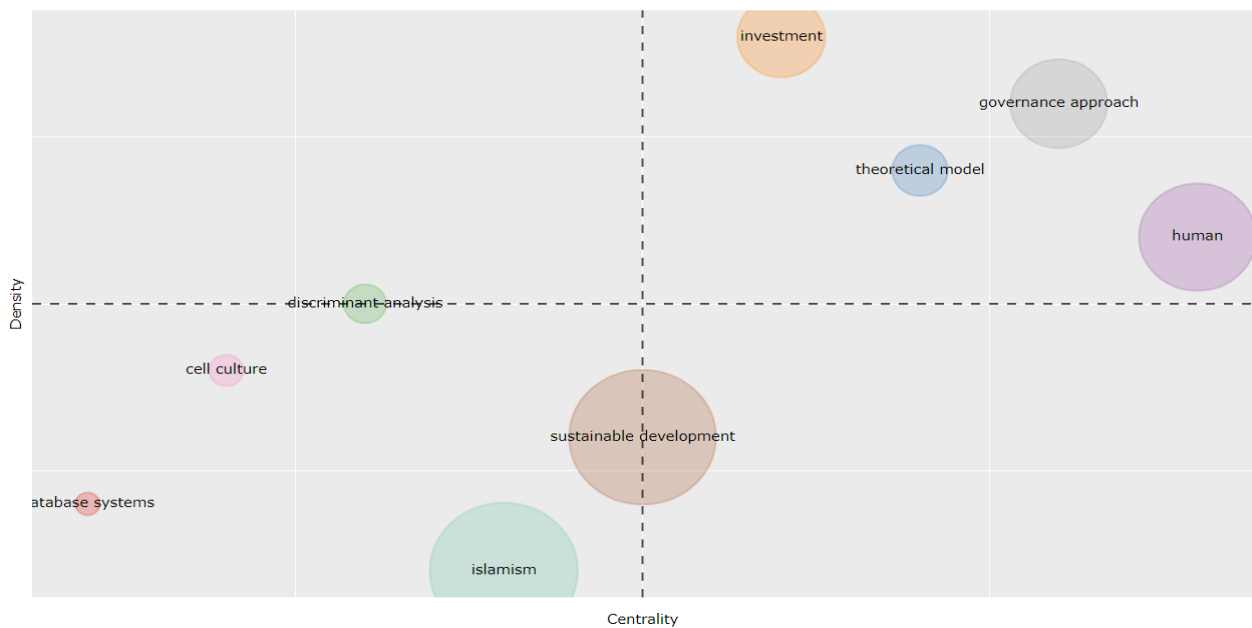


Figure 3. Thematic Map

Furthermore, the upper left quadrant shows specific and rare themes but has high development, which is indicated by high density but low centrality. The theme in this quadrant is discriminant analysis. The lower left quadrant is the theme that has been used for a long time and experienced a declining trend marked by low centrality, for example in this study the themes of database systems, cell culture, Islamism were detected.

Finally, the lower right quadrant is the basic theme which is characterized by high centrality but low

density. These themes are important to be included in the research because they are general topics that are commonly used, namely the theme of sustainable development. The link between waqf and sustainability, especially related to SDGs programs, is a basic theme that must be continuously developed and studied by experts so that new ideas continue to emerge and provide inclusive education about the unique nature of waqf sustainability that needs to be optimized with various innovations relevant to the SDGs.

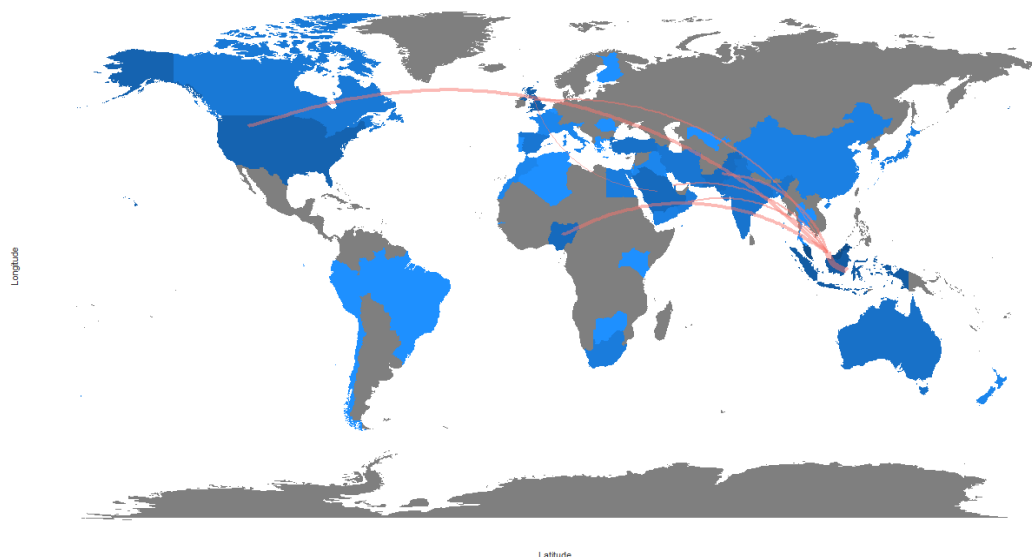


Figure 4. Country Collaboration Map

Figure 4 is the country collaboration map providing evidence of country collaboration. The world map shown in the figure has various color gradations that reflect the level of productivity where the darker blue color means high productivity, while the gray color means no published documents. This study shows the results that several countries have the highest productivity in the field of waqf and sustainability which is indicated by the area of the country having the darkest blue color compared to other countries.

The image shows a map of the collaboration of the top countries in research on waqf and sustainability themes in the form of red lines connecting countries that collaborate in publishing articles. Based on the analysis of the keywords "Malaysia", "Indonesia", "United States", "United Kingdom" and "Nigeria", it can be identified that these countries are the main collaborative networks in the world and consequently are at the forefront of high production levels.

An example of a research written by a researcher from Malaysia and making Malaysia the object of the study is a paper entitled "Developing a sustainable model of Waqf-based Takaful for flood victims in Malaysia". This study aims to propose an alternative Takaful model based on the Waqf principle for flood victims in Malaysia. To ease the financial

burden of flood-affected businesses and individuals, the Takaful industry needs to offer special Takaful schemes to flood victims and achieve its main goal of providing financial protection for sustainable social welfare. Thus, the Waqf-based Takaful model will be a means for operators to play their role in society (Salleh et al., 2020).

Apart from Malaysia, a country that is quite influential is also Indonesia. This is because Indonesia's overall ranking continues to improve in the Global Islamic Economy Report. In Islamic finance, Indonesia has experienced an increase in the value of Sukuk. The Halal Product Assurance Law No.13/2014 came into force in October 2019 and requires a halal certification for all halal products. This has led to significant growth in the halal food, pharmaceutical and cosmetic sectors and is a trend that is expected to continue (DinarStandard, 2020).

Likewise, United States is an affiliate of researcher M. Kabir Hassan as Professor of Economics and Finance at the University of New Orleans. Then the United Kingdom with Durham University has several Islamic economic researchers such as Mehmet Asutay and Habib Ahmed. Next is Nigeria which has many students studying Islamic economics in Malaysia, so that many students in various countries make Nigeria the object of their research.

## Historical Direct Citation Network

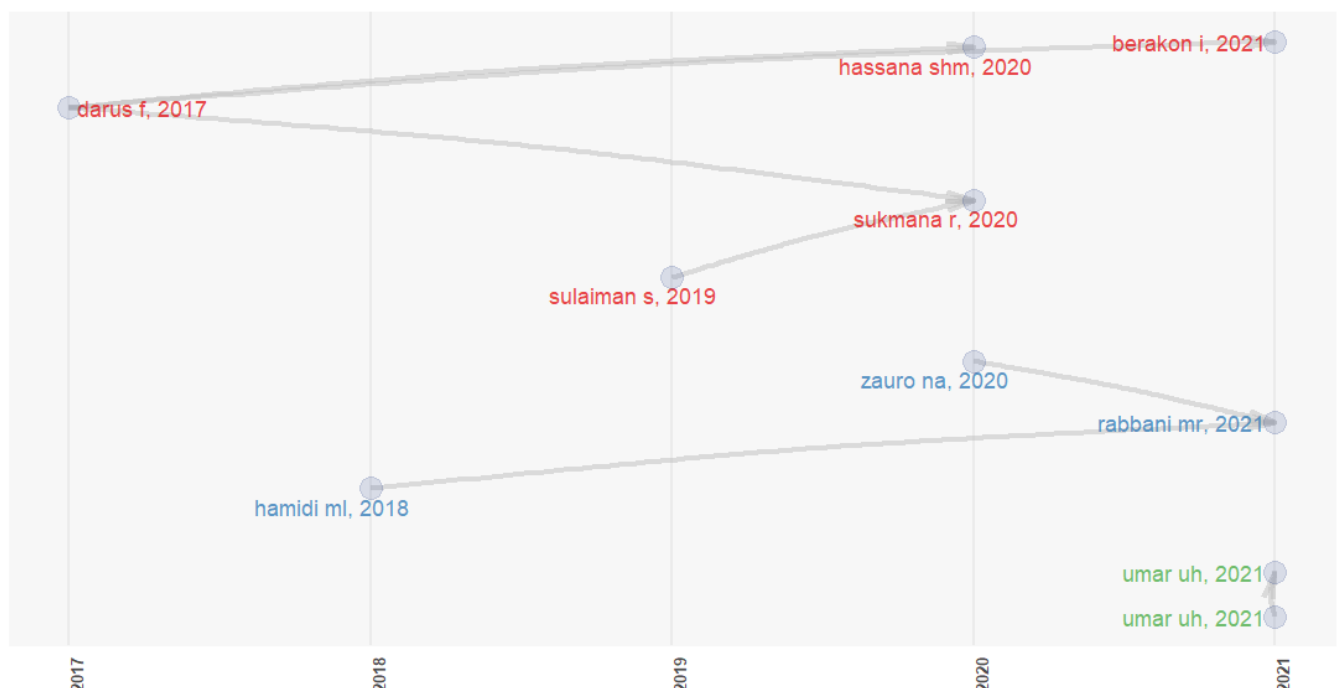


Figure 5. Historical Direct Citation Network

Figure 5, the historical direct citation network, explains the evolution of changing research trends from the past. This overview is used as a chronological network map of the most relevant direct quotes from the database. This visualization structure shows the development of the research. This representation allows the identification of the most significant documents on the subject being analyzed. For example in the red cluster, starting with Darus F's research in 2007 affecting the writings of Hassana SHM and Sukmana R in 2020, Sukmana R was also influenced by documents belonging to Sulaiman S in 2019. From Hassana SHM, it was developed again until writings by Berakon I appeared in the year 2021.

Research conducted by Darus et al. (2017) published under the title "Empowering social responsibility of Islamic organizations through Waqf". The potential use of waqf as a source of funding for social responsibility practices for Islamic organizations is very important but has not been explored much. The study aims to provide evidence of corporate social responsibility (CSR) practices of Islamic financial institutions and to test the feasibility of using waqf for CSR purposes. The results show that Islamic financial institutions focus their CSR practices in the work environment and the focus is on community issues. The company's waqf is then concluded to be an alternative that organizations can use to help sustainably address community social-economic problems.

Another document in the figure above which is the successor to Darus's paper is Raditya Sukmana's paper entitled critical assessment of Islamic endowment funds (Waqf) literature: lessons for government and future directions. This paper reviews the literature on Islamic waqf funds. The data show that banking, accountability, law, and norms make up most of the coverage in this collection of literature. The topic of finance, with a coverage of 35%, dominates the literature, while history (with a coverage of 6%) records the least interest. This paper can then continue to be developed through its role in providing input for government policies and directions for further researchers (Sukmana, 2020).

For the sustainable development of waqf, various models have been researched by experts in the scientific literature, which ultimately aims to provide support in various fields, such as religion, health, economics, social, and education. Collaboration

between parties involved in waqf management through the application of waqf systems and models is expected to strengthen the role of waqf sustainability in providing benefits to the wider community (Gamon & Tagoranao, 2018).

Research by Salleh et al. (2020) found that waqf could be used as a basis for takaful for disaster victims. To ease the financial burden of businesses and individuals affected by the disaster, the Takaful industry needs to offer a special Takaful scheme to flood victims and achieve its main goal of preparing financial protection for social welfare through a waqf-based takaful model to achieve maqashid sharia as the higher objective.

Omar et al. (2020) examine family business sustainability models through integration with waqf to continue to generate income. The inexhaustible nature of the waqf will prevent the family inheritance business from liquidating and ensure it continues to run to generate income for the heirs. The profits will be divided among the heirs based on the profit-sharing ratio set by Islamic law.

Another model, namely sukuk, has the potential to become an Islamic nano finance instrument to mobilize funds to very micro-communities. Even the cooperation of sukuk and waqf can be an innovation for economic sustainability, especially to get cheap funds to finance a very micro-society without interest. This model is in the form of a waqf-sukuk linkage program for nano finance by synergizing Islamic banks, waqf institutions, and microfinance institutions (Baitul mal wat tamwiil) to encourage Islamic financial inclusion for very micro-communities (Musari, 2016).

The model in the form of expert waqf can also be considered to achieve family security and ensure a sustainable family economy. This is like the purpose of waqf in protecting assets for public use, including expenses for the family. In addition, family waqf saves the property or business of the heirs from disintegration and ensures sustainable family financial planning within the Shariah framework and at the same time adds value to the assets or family business (Asiah, 2018).

In the end, all models studied in the various scientific literature show that waqf is an instrument that is closely related to various sustainability programs because of its focus on social justice, balance, and the common good (Robani & Salih, 2018).

Table 5. Waqf and SDGs

No	SDGs	Possible Waqf Instruments
1	No Poverty	BWM; Waqf based MFI; Waqf Bank
2	Zero Hunger	Imarat; Agriculture land Waqf; <i>Waqf al-'Awaarid</i> for research laboratory funding & sustainable agriculture
3	Good Health & Well-being	Bimaristan; Waqf An-Nur; Myint Myat Phu Zin; Kaiser Foundation Hospital; RSAW
4	Quality Education	Kuttab; Madrasa; Baitul Hikma; New York Public Library; TWS
5	Gender Equality	Khadija Learning Center DD
6	Clean Water and Sanitation	Cesme; Azbilah; Ain Zubaida; Fountains/ <i>Sabils</i> ; Water canals/ <i>Qanats</i> ; Aflaj; Wells; <i>Hammam</i> ; Sabil CW Fund
7	Affordable and Clean Energy	ISFD Renewable Energy for the Poor (REP)
8	Decent Work and Economic Growth	Bazaar; Waqf Bank
9	Industry, Innovation, and Infrastructure	Qarah Thay (waqf hotel); Caravansary; BOT scheme; Waqf based research center; Sukuk Waqf
10	Reduced Inequalities	Cash waqf; CWLS
11	Sustainable Cities and Communities	Madinat al-Hikmah; Qaryat; Cultural Heritage Waqf; Warees; Waqf Irshad
12	Responsible Consumption and Production	Waqf-based waste management system
13	Climate Action	Waqf based Green Climate Fund
14	Life below Water	Waqf for Watershed Management & Wild-life Conservation
15	Life on Land	Waqf Forest; Waqf fund for deforestation
16	Peace, Justice, and Strong Institutions	Cash Waqf Refugee Microfinance Fund (CWRMF)
17	Partnerships for the Goals	Stock Waqf, Global waqf

In general, sustainable development has three major dimensions, namely people, planet, and prosperity or better known as the triple P. These three areas are the main focus of the SDGs. Waqf has a significant role and contribution. [Suhaimi & Suhaimi \(2020\)](#) found that waqf has a vital role as a source of financing that can meet the needs of the community. The function of waqf in the economy is seen in the use of resources and assets, such as land or buildings. According to [Kahf \(1999\)](#), waqf assets are used either for the construction of mosques, schools, hospitals, and orphanages, or as investments that produce goods and services for the market.

The role of waqf in the economy is also to create jobs. [Cizakça \(2004\)](#) and [Toraman et al. \(2004\)](#) stated that waqf contributed significantly to the economy by creating jobs. Waqf has a significant impact on the economy by promoting the use of resources and assets, generating income, and creating jobs. Projects or other activities have the potential to be developed through the acquisition of income from waqf assets.

In the social aspect, waqf institutions have provided many social welfare services throughout the world ([Sadeq, 2002](#)). The establishment of waqf

institutions around the world has encouraged economic sustainability and poverty reduction ([Khan, 2013](#)). At the time of the Ottoman Caliphate, many free public facilities covered the basic needs of the people on a waqf basis. In the field of education, there are Kuttab (elementary schools), Madrasa (middle and high schools), Bayt wisdom (libraries), and Zawiya (religious schools) institutions, all of which are waqf-based and free of charge. In the health sector, the Bimaristan institution is known as an Islamic hospital which is entirely free of charge. In addition, there are many social facilities provided by the state and fully utilized for the benefit of the people.

Waqf also has a role in the environmental field. Some examples of cases are forest waqf and nature conservation ([Yaakob et al., 2017](#); [Ali & Kassim, 2020](#)). Likewise waqf for conservation and world cultural heritage ([Assi, 2008](#); [Khalfan & Ogura, 2012](#)). Waqf in the issue of world heritage (heritage) both cultural (culture) and natural (nature) are also found. For example, research conducted by [Baraldi et al. \(2014\)](#) stated that during the Ottoman era several heritage assets were waqf such as mosques and city infrastructure which are currently guarded and even recognized by international institutions such as

UNESCO. Several recent studies related to waqf and SDGs can be seen, for example, in Irfany et al., (2023), Rusydiana et al., (2023), and Sukmana & Rusydiana (2023).

Waqf plays a role in religious, social, economic, and cultural development. The ownership of the waqf asset is transferred to become an eternal asset which is then taken advantage of without reducing the value of the waqf object. Waqf does not only focus on collecting asset/fund donations but also how waqf assets become a productive source of funding to meet the interests of the wider community. The development of the practice of waqf itself has existed since the time of the Prophet where the prophet gave his land to build a mosque. Then the practice of waqf became even more widespread during the Umayyad and Abbasid dynasties (Asuhaimi et al. 2017).

Waqf that has existed since the time of the Prophet *Sallallahu Alaihi Wasallam* continues to develop at various times and in various countries with different models according to the background of the place and time the waqf innovation was issued. The application of the waqf model with its style is intended for the common good while still holding tightly to the basic concept of returning ownership of assets to Allah and sharing the resulting benefits to the ummah in general.

## CONCLUSION

The text mining study was conducted to determine the development of waqf and sustainability research in Islamic economics and finance research during the period 2003 to 2021. A total of 292 documents used in this study indicate that research with the theme of waqf and sustainability is increasing every year. The authors who often research the theme of waqf and sustainability are Hassan MK, Kassim S, Mohammed MO, and Umar UH who consistently research this theme. While the keywords that are often used in waqf and sustainability research are investment, theoretical model, governance approach, and sustainable development.

This study also finds that research on waqf and sustainability is increasingly interesting in the area of Islamic economics research as indicated by the increasing citations, then the Emerald journal has a positioning in research topics. The most popular country in research on the topic of waqf sustainability is Malaysia, as indicated by the number of publications by its authors, institutions, and collaborations with other countries. Trends in the topic of waqf have evolved from discussing poverty, microfinance, to

sustainable COVID-19 solutions, as also shown by the thematic map linking waqf with sustainable development.

Based on the results of this study and the continued development of various waqf product innovations, research on the role of waqf and sustainability may continue to grow significantly. Therefore, research with the theme of waqf and sustainability needs to be continuously developed in Islamic economics and finance research

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