Waqf on Infrastructure: How Far has been Researched?

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One of the main objectives of waqf, which is called Tasbil al-Thamarat, is to make waqf assets useful and productive. Waqf properties must be developed using instruments that can provide good benefits for waqf. Profits from waqf assets must be used for the benefit of the welfare of Muslims. Waqf infrastructure is considered as the most effective way to ensure the expansion of waqf while at the same time providing distribution services to the general public. This bibliometric study maps research related to the development of Waqf and Infrastructure research trends published by leading journals from 2001 to 2021 which have been indexed by Scopus. Analysis is focused on trending keywords, authors and institutions. The data analyzed were 118 research publications. This study provides information for researchers who focus on research in the field of Islamic Philanthropy, especially waqf infrastructure instruments. In the end, this theme has the potential to continue to be developed.

Keywords: Waqf; Infrastructure; Bibliometric; Vosviewer.
INTRODUCTION

The importance of infrastructure for the growth and development of any economy cannot be overlooked. Despite the fact that the concept of waqf predates Islam, Islam created waqf institutions based on sharia norms (Islamic law) and encouraged its expansion to the point that it appears to be the basis of progress in Muslim finance (Fawwaz et al., 2021). Waqf has been widely accepted and approved as a supporting economic institution, and has undergone many adjustments in its implementation. In terms of developing waqf properties, the best way to ensure their long-term viability is to invest in infrastructure development.

Waqf is an old Islamic organization that has been recognized as a source of socio-economic growth for Muslims in the world. Waqf is described as a property where the rights (of the waqf giver) for commercial affairs, inheritance, grants, and wills are suspended, while physical resources are maintained (Abdullah, 2016). The benefits of waqf property are for the common good or declared with the purpose of waqf to get closer to God. The property that will be donated, on the other hand, must be beneficial to the community and have shariah value (al-mal mutaqawim) (Razak, 2020).

The existence of waqf is not clearly regulated in the Quran by using the name waqf, but there are some signs from the Quran that encourage people to improve the welfare of society by donating assets. Allah will continue to bless everyone who performs waqf in an honest way.

Waqf institutions were established throughout the Muslim world as a consequence of compassion, acts of devotion to God. According to Nafar (2019), the waqf system was fully responsible for funding health, education and welfare programs during the Ottoman Empire. The potential of waqf groups is largely untapped. It is traditional philanthropic institutions that perform better. As a result, there is an urgent need to reassess current waqf institutions and their requirements. In order to improve its efficiency and performance, efforts should also be made to develop a better approach to its financial management.

The main sources of waqf infrastructure include both traditional waqf, which involve immovable assets (fixed assets) such as land and buildings (Kahf, 2016). Or cash waqf, which involves cash waqf (Rusydiana et al., 2021), where profits are used for charity to draw closer to Allah with the aim of building infrastructure that can be beneficial or generate sustainable income (Kader & Mohamad, 2019). The difference between waqf infrastructure and other waqf lies in the specificity of building infrastructure that is useful and physically present.

The development of waqf management has accelerated in recent years, and is becoming increasingly important as a result of high public understanding and awareness. This condition benefits waqf property institutions in this country and guarantees their survival in the long term because they have a good impact on the people's economy. This is because waqf is one of the most important humanitarian organizations in Islam. Benefits will be given to all beneficiaries, either directly or indirectly, through donated waqf assets. Therefore, waqf institutions that function as trustees of waqf assets must effectively manage and administer all waqf assets.

This study aims to identify and map research related to the development of Waqf and Infrastructure research trends published by leading journals on Islamic economics and finance. The data analyzed consisted of 118 Scopus indexed research publications from 2001 to 2021. This data will be processed and analyzed using the VOS viewer application to find a bibliometric map of research development related to Waqf and Infrastructure.

LITERATURE REVIEW

Waqf has been a voluntary practice in Islam since the time of the Prophet Muhammad (Yakubu et al., 2019). Waqf, according to Imam Abu Hanifah, is described as something specific in the ownership of waqi’ (property owners who devote their money to waqf) and distribute profits or commodities for charity or other useful purposes. Whereas waqf according to Imam Abu Yusuf and Imam Muhammad is the elimination of waqf ownership of sacred items, and everything belongs to Allah implicitly, with income returned or used for the benefit of mankind.

Waqf requires donors to provide private property and state how the property and income generated will be used (Ahmad, 2015). He also manages the Waqf property personally or appoints a trustee to do so on his behalf to ensure that the anticipated flow of funds occurs. As a result, waqf cannot be withdrawn, inherited, and cannot be sold. In other words, the contributors are no longer the property owners. This corresponds to the literal definition of Waqf, i.e. “stopping,” implying that Waqf property can now only be used indefinitely for its intended purpose (Muneer & Khan, 2019).

Infrastructure is critical to driving long-term growth and development. It refers to all the elements necessary for the economy to function properly (Yaakob et al., 2017). Infrastructure is a broad field with several
components, but all of them can be divided into two categories: economic and social infrastructure (Lawal & Plc, 2018). Basic infrastructure such as telecommunications, electricity, transportation, energy, and stations is referred to as economic infrastructure. They are commercial in nature and supplied to help businesses run more efficiently and profitably. The term "social infrastructure" refers to facilities that help achieve certain economic operations as well as social goals (Abd Mutalib & Md Sabri, 2021). Education, public health services, sanitation, government systems, and prisons are examples of social infrastructure. The externalities of the social infrastructure are enormous.

Although infrastructure is divided into broad categories such as economic and social infrastructure, it is not independent: they are interdependent, and deficiencies in one area can have detrimental effects on others. To ensure that the infrastructure system promotes economic growth and poverty reduction, the right combination of the two is essential (Shaikh, 2015). Therefore, understanding the impact of the relationship between economic and social infrastructure is very important to increase infrastructure investment.

In general, no country can develop without having access to well-functioning infrastructure. In fact, the level of infrastructure development in any country has an impact on the rate of economic growth because it forms the basis for the establishment of a development structure and expansion. It should be noted that many studies show that infrastructure development is necessary but not sufficient to promote economic growth and reduce poverty.

METHODOLOGY

This research uses published paper data sourced from various journals with research on the theme of Waqf and Infrastructure. Data collection was carried out by searching for articles indexed by Scopus, the search was carried out by typing the keyword 'Waqf and Infrastructure'. From the search results, there were 118 articles published from 2001-2021. Data in the form of topics used in the publication of papers on the theme of Waqf and Infrastructure were analyzed using Microsoft Excel 2019. The development trend of publications on the theme of Waqf and Infrastructure was analyzed using VOSViewer software.

The computer program that was introduced was called VOSviewer. VOSviewer is a program developed for creating and viewing bibliometric maps. This program is available free of charge to the bibliometric research community (see www.vosviewer.com). VOSviewer can create maps or author journals based on cocitation data or create keyword maps based on shared incident data. The program offers a viewer which allows bibliometric maps to be examined in detail.

To build the map, VOSviewer uses the VOS mapping technique, where VOS stands for Visualization Similarity. For previous studies where the VOS mapping technique was used. VOSviewer can display maps built using appropriate mapping techniques. Therefore, this program can be used to display maps built using the VOS mapping technique and display maps built using multidimensional scaling techniques. VOSviewer runs on many hardware and operating system platforms and can be started directly from the internet. Some research with other Islamic economic topics with the bibliometric method, for example, can be found in Antonio et al., (2020), and Al-Qital et al., (2022).
RESULT AND ANALYSIS

Meta-Analysis

This section describes the number of published papers on the theme of Waqf and Infrastructure. There were 118 papers published in the 20-year observation period, from 2001 to 2021. Table 1 depicts the distribution of papers per year that varied over the last 20 years with a range of 0 to 19 papers. The most published Waqf and Infrastructure papers were in 2017, 2018, 2019 and 2020, with 15, 13, 19 and 17 papers published each year. The least number of publications are from 2002 - 2007 and 2010, where Scopus does not index the number of publications in that year.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>2</td>
</tr>
<tr>
<td>2008</td>
<td>3</td>
</tr>
<tr>
<td>2009</td>
<td>3</td>
</tr>
<tr>
<td>2011</td>
<td>4</td>
</tr>
<tr>
<td>2012</td>
<td>7</td>
</tr>
<tr>
<td>2013</td>
<td>7</td>
</tr>
<tr>
<td>2014</td>
<td>6</td>
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<tr>
<td>2015</td>
<td>7</td>
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<tr>
<td>2016</td>
<td>9</td>
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<tr>
<td>2017</td>
<td>15</td>
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<tr>
<td>2018</td>
<td>13</td>
</tr>
<tr>
<td>2019</td>
<td>19</td>
</tr>
<tr>
<td>2020</td>
<td>17</td>
</tr>
<tr>
<td>2021</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>118</strong></td>
</tr>
</tbody>
</table>

Based on the table and graph above, there is a tendency to increase the number of published papers with the theme of Waqf and Infrastructure indexed by Scopus, where in 2001 there were two papers. There was a vacancy in indexed publications from 2002 - 2007 and 2010, then after 2014 there was a fluctuating increase, where in 2012 there were 4 publications and increased in 2012-2013 to 7 publications. However, in 2014 it decreased to 6 publications, but increased quite rapidly in 2016 to 9 from the previous year. Furthermore, it
achieved the highest number of publications in 2019 with a total of 19 papers, dropping to only 6 publications in 2021.

**Bibliometrics Analysis**

**Bibliometric Graph Analysis**

Bibliometrics is based on calculations and statistical analysis of scientific outcomes in the form of articles, publications, citations, patents and other more complex indicators. It is an important tool in evaluating research activities, laboratories and scientists, as well as scientific specialties and country performance. The report, after setting out the background to the development of the bibliometrics, presents the database on which the bibliometrics was created, as well as the main indicators used.

To explore the results of the meta-analysis, this section presents visual mapping graphs from 118 journals published by Waqf and Infrastructure. The results of the keyword mapping analysis become the basis for mapping together important or unique terms contained in certain articles. Mapping is a process that allows one to recognize elements of knowledge and their configurations, dynamics, interdependencies and interactions.

Regarding bibliometrics, scientific mapping is a method of visualizing a field of knowledge. This visualization is done by creating a landscape map that can display topics from science (Royani, et al., 2013). The network visualization results of 144 word map journals with the theme Waqf and Infrastructure can be seen:

**Co-Authorship Analysis**

Furthermore, the bibliometric results will be displayed based on sub-themes, namely authors, organizations, and countries.

1. **Co-authorship Authors**

Using the VOSViewer software, we find the author’s bibliometric mapping as shown in the following figure. The bigger the shape and the brighter the color indicates that the author is publishing more and more of his writings related to Waqf and Infrastructure.

![VOSViewer](image)

**Figure 1: Co-authorship Authors**

The appearance of cluster density depends on the level of brightness of the yellow light. This identifies that the yellow color on the map depends on the number of items associated with other items. This section is useful for obtaining an overview of the general structure of a bibliometric map by paying attention to which part of the light is considered important for analysis. From this map, it is possible to interpret the authors who publish the most.

In general, every researcher has a different tendency. Some write indexed as a single author, others write together with other researchers so that several clusters appear with different densities. However, authors whose density is large enough show that they
publish more research on the theme of Waqf and Infrastructure compared to those who have a lower density, so these results can be used as a reference for future researchers.

Based on these results, the bigger and brighter the author’s name, the more papers he publishes. The author of the most published publications related to the theme of Waqf and Infrastructure based on bibliometric mapping, namely Suliaman I.

2. Co-authorship Institution (Co-citation)

In the bibliometric analysis, the author’s institution can be seen from which institution they come from. Through these results, we can interpret the institutions that author the most publications.

Based on the following figure, the institutional clusters seen with glowing circles show how productive these institutions have contributed in publishing papers with the theme of Waqf and Infrastructure. The largest number of institutions is calculated from the number of publications and the number of links to other institutions, where an author can write many papers in different journals.

The most popular institutions are calculated based on the number of publications and the number of links to other institutions, where a paper author can write many papers in different journals. The ranking of the most well-known institutions shown by the results of the bibliometric mapping is the Faculty of Islamic Studies, National University of Malaysia, Malaysia.

3. Co-authorship Country

Furthermore, the visualization of journal publisher mapping is illustrated in the bibliometric image of the journal source below. Based on the figure, it can be seen that several clusters of countries have published the most articles on the theme of Waqf and Infrastructure.
Based on the figure above, the larger the circle of the publishing country, the more papers that country publishes. It can be seen that Malaysia has the brightest light. This means that Malaysia has published the most Waqf and Infrastructure themed papers compared to other countries.

**Co-occurrence Analysis**

Furthermore, the bibliometric results will be displayed based on sub-themes, namely all keywords, author keywords, and index keywords.

1. **Co-occurrence All Key Word**

   VOSViewer can also find a bibliometric mapping of the most used keywords in Waqf and Infrastructure themes related to Islamic economics. The bibliometric mapping of the keywords used can be seen in the image below. Keywords that have a larger form indicate that the word is more widely used in journals related to Waqf and Infrastructure.
This data can be used to find out the trend of keywords in the last few years. Bibliometric analysis shows several keywords that are widely used in research papers. The more keywords that appear, the wider the circle indication will be. While the line relationship between keywords shows how much they are related to other keywords.

Based on the results of the analysis using VOSviewer, the keywords with the theme Waqf and Infrastructure have many clusters and are interrelated with other keywords. Keywords that have the same color indicate a very close relationship. The most used keyword in the Waqf and Infrastructure themed journal is Waqf.

2. Co-occurrence Authors Key Word
   VOSViewer can also find a bibliometric mapping of the keywords most used by authors in the Waqf and Infrastructure theme related to Islamic economics. The bibliometric mapping of the keywords used can be seen in the image below. Keywords that have a larger form indicate that the word is used more by authors in journals related to Waqf and Infrastructure.

![Figure 5: Co-occurrence Authors Key Word](image_url)

3. Co-occurrence Index
   Then, this study also obtained results in the form of indexes that are often used by the author and are interrelated in the Waqf and Infrastructure theme related to Islamic economics as shown in the figure below. Indexes that have the same color indicate a very close relationship.
Based on the results obtained, keywords that have a larger form indicate that the more frequently the words in the index are used. In the word index paper with the theme of Waqf and Infrastructure related to Islamic economics, there are several words that are most widely used, namely Islamism.

Findings

<table>
<thead>
<tr>
<th>Rank</th>
<th>Keyword by Occurrence</th>
<th>Authors with The Highest Publication</th>
<th>An institution with The Highest Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Waqf</td>
<td>Suliaman I</td>
<td>Faculty of Islamic Studies, National University of Malaysia, Malaysia</td>
</tr>
<tr>
<td>2.</td>
<td>Development</td>
<td>Yakoob M.A.Z</td>
<td>Dartmouth College, United States</td>
</tr>
<tr>
<td>3.</td>
<td>Zakat</td>
<td>Muzani W.K</td>
<td>Center for Middle Eastern Studies, Harvard University, United States</td>
</tr>
<tr>
<td>4.</td>
<td>Hadith</td>
<td>Wilson R</td>
<td>Durham University, United Kingdom</td>
</tr>
<tr>
<td>5.</td>
<td>Islamic law</td>
<td>Khalid M.M</td>
<td>Faculty of defence Studies and Management. National defence of Malaysia, Kuala Lumpur, Malaysia</td>
</tr>
<tr>
<td>6.</td>
<td>Cash Waqf</td>
<td>Khalfan K.A</td>
<td>Mershon Center, the Ohio States, United States</td>
</tr>
<tr>
<td>7.</td>
<td>Economic Development</td>
<td>Fathurahman A</td>
<td>Netherlands Academy of arts and Science, Netherlands</td>
</tr>
<tr>
<td>8.</td>
<td>Financing</td>
<td>Bhari A</td>
<td>Royal Academy of history, Madrid, Spain</td>
</tr>
<tr>
<td>9.</td>
<td>Urban Area</td>
<td>Ismail A.S</td>
<td>Spanish-American Academy of Art and Science, Cadiz, Spain</td>
</tr>
<tr>
<td>10.</td>
<td>Turkey</td>
<td>Rosdiana H</td>
<td>University of British, Columbia, Canada</td>
</tr>
</tbody>
</table>

The results of the research above show a bibliometric analysis using the VOS Viewer application of Scopus indexed journal articles with the theme Waqf and Infrastructure. Research related to Waqf and Infrastructure has become an interesting discussion among researchers since 1990 and continues to grow throughout the world so that researchers in the field of Waqf and Infrastructure have begun to produce various scientific studies in developing research related to Islamic Philanthropy. The development of literature on
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Waqf instruments has also continued to develop to date, along with the development of the Islamic Philanthropy sector, both zakat, waqf and qard hassan (Hydara, 2020; Muneer & Khan, 2019; Yusuf Sanyinna et al., 2018).

Based on the results of the analysis above, it was found that research with the theme of Waqf and Infrastructure has been published by various journals and many authors, resulting in a variety of topics. Then related to the most used keywords in the most popular Waqf and Infrastructure themed articles, including waqf, development, zakat and others. These keywords often appear from all the researched article data, most of which focus on the topic of Islamic Philanthropy, then are linked to the topic of Islamic Economics, then explore the broader theme of Sustainability Development Goals (SDGs) with the most keywords. Popular words used in the theme of Waqf and Infrastructure show a significant increase in the use of Islam as a basis for the development of waqf instruments, especially waqf infrastructure, which is shown by a graph that continues to increase.

In the literature which is the object of this research, it was found that the fundamental goal of Islamic economics is to improve social welfare, social security, debt, wealth management, and distribution of wealth, consumption, monetary policy, market exchanges, and investment (Aldeen et al., 2020; Diniya, 2019). This topic has received a lot of attention from academics and researchers around the world. Especially in the last few decades. Waqf is seen as a useful socio-economic tool that embodies Islamic ethical ideals and is one of the financial vehicles that helps Islam and society.

One of the main objectives of waqf, which is called Tasbil al-Thamarat, is to make waqf assets useful and productive (Nafar, 2019). Waqf properties must be developed using instruments that can provide good benefits for waqf. Profits from waqf assets must be used for the benefit of the welfare of Muslims. Waqf infrastructure is considered as the most effective way to ensure the expansion of waqf while at the same time providing distribution services to the general public.

So that abandoned waqf assets must be turned into valuable assets. As a result, the anticipated infrastructure development of waqf holdings requires investment in waqf property (Lawal & Plc, 2018). In this perspective, development through infrastructure investment is the biggest way to realize the true meaning of waqf, namely Tasbil al-Thamarah (distribution of property benefits to beneficiaries) and Tahbis al-Asl (mastery and management), namely protecting waqf assets from damage or loss.

Many efforts have been made in recent years to revitalize waqf institutions, given the large potential of waqf funds in financing social and economic infrastructure. Several countries, for example, Lebanon, Turkey, Jordan, Sudan, Morocco, Qatar, Kuwait, Malaysia, Iran, Brunei and Algeria, have taken considerable initiatives to revitalize and develop waqf properties (Kader & Mohamad, 2019). They have adopted new waqf rules that will assist in the restoration, preservation, and development of various waqf properties to meet their economic demands.

To support efforts in other Islamic countries, it is necessary to improve the waqf mechanism by incorporating innovative elements to support various socio-economic activities in an inclusive economic growth process. To achieve this, a holistic approach must be created to achieve harmonization and coordination of national, regional and global norms and principles among the diverse waqf entities.

CONCLUSION

This study tries to examine and map research related to the development of research trends on the theme of Waqf and Infrastructure published by leading journals on Islamic economics and finance, especially Islamic Philanthropy. The data analyzed consisted of 118 Scopus indexed research publications from 2001 to 2021. The results showed that quite a number of papers were published on this theme in recent years, especially in 2017 to 2020, there have been more than 60 published studies.

The bibliometric mapping visualization found that the author published the most publications related to the theme of Waqf and Infrastructure, namely Suliaman I. The most popular institution was calculated based on the number of publications and the number of links to other institutions, shown by the results of the bibliometric mapping was the Faculty of Islamic Studies, National University of Malaysia, Malaysia. Furthermore, the bibliometric results show that Malaysia publishes the most Waqf and Infrastructure themed papers compared to other countries.

Visual mapping analysis also found the bibliometric mapping of keywords that were most widely used in the Waqf and Infrastructure theme related to Islamic economics. The results show that the research development map has the theme of Waqf and Infrastructure with the most popular keywords being Waqf, Development and Zakat. This means that in the
literature which is the object of this research, it is found that the waqf instrument is the most widely discussed instrument related to the literature on Islamic Philanthropy where infrastructure waqf plays an important role in the economic development of a country.

This research is a basic reference to see how the graphical visualization of the development of research trends themed the role of Waqf and Infrastructure in published scientific research, so that it can still be developed by experts. Recommendations for further research can refer to the most popular keywords that still have the opportunity to be discussed in more depth. Suggestions for further research are to carry out a complete bibliometric analysis using more study elements or using other types of software tools to produce more comprehensive results.

REFERENCES


