Waqf Sustainability or Sustainable Waqf? 
A Bibliometric Analysis

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Abstract

Research on waqf sustainability is increasing in popularity, showing exponential growth in publication and citation numbers. The realm of research has grown intricate and fragmented, thereby posing a growing challenge to the regulation of waqf sustainability. The main purpose of this study is to organise and integrate the preliminary studies on the theme of waqf sustainability. To this end, this study involved bibliometric analysis, distinguishing it from previous analyses, which were outdated and/or different focus. We collected 84 articles extracted from Scopus and Web of Science (WoS) databases, covering 20 years from 2001 to 2022. The findings showed that the most prolific authors were from Malaysia. There are five research themes regarding waqf sustainability, including the accountability of Islamic social finance as a third-sector economy, the sustainability of Islamic microfinance, the role of intellectual capital in waqf institutions, the effectiveness of management, and the performance measurement of waqf institutions. This study shows that the performance of waqf institutions for waqf sustainability is scant. Hence, there is an important research gap that can be addressed in future research since sustainability is a priority agenda as outlined in the Sustainable Development Goals (SDGs) blueprint.

Keywords: Bibliometric Analysis; Scopus; Sustainability; Sustainable Development Goals; Waqf; Web of Science
INTRODUCTION

Waqf is one of the developmental instruments of Islamic economics and is considered highly relevant to improving socio-economic development (Qurrata et al., 2021; Zauro et al., 2020). To strengthen the role of waqf in socio-economic development, many waqf managers (Nazir – in Arabic) in various countries have created funding schemes that lead towards waqf contributions (Qurrata et al., 2021; Mohsin et al., 2019; Thaker et al., 2021; Salleh et al., 2020). In addition, the existing studies conclude that the essential characteristics of waqf properties are aligned with the term sustainability, which means resilience, stability, and permanence. To keep the characteristics alive in the waqf, the waqf managers certainly have an essential role to play in ensuring the sustainability of waqf.

Hence, sustainable waqf needs two critical components: assets (property and cash) and management characteristics. The failure to provide those primary components and the ideal situation leads to criticisms of the waqf institution's current state: ineffective management of waqf and information unavailability related to waqf (Sulaiman & Zakari, 2015).

Both above reflect the absence of a good governance system (Prasad, 2003), which results in waqf managers struggling to determine measurements for their performance. The performance that should be assessed in waqf institutions is not only based on economic indicators but also qualitative measurements that include the institution’s growth, effectiveness, transparency, and sustainability (Noordin et al., 2017). In the Western world, waqf institutions are classified as non-profit organisations, attracting much attention among scholars recently (e.g., Qurrata et al., 2021; Azrak, 2022; Amin et al., 2023). Although the donation potential of waqf institutions as non-profit organisations has been escalating, there are problems with
the sustainability of waqf institutions due to major criticisms of these institutions.

The sustainability of an institution can be solved by performance measurement, which so far has only been “top-down”, meaning that this measurement is determined by the highest authorities and not based on the organisational culture (Lewis, 2003) and voluntary norms (Siraj, 2012) of the waqf institution itself. Sustainability in waqf institutional management means that the results of waqf management will benefit the beneficiaries beyond the program’s life (Lewis, 2003). Institutional sustainability in a program setting requires three interrelated issues (Cannon, 2002). First, financial sustainability is necessary to analyse the project’s ability to continue generating income from waqf management so that, over time, it will become less dependent on grantors. The existence of targeted performance indicators will provide the institution with the regulatory capacity to continue to provide benefits to the beneficiary community over time. Ultimately, the benefits provided can be sustained.

Since the continuous escalating studies on waqf, the domain of institutional waqf has evolved into a wide-ranging, intricate, and disjointed area of research, making it progressively challenging to comprehend. A large body of literature has explained the socio-economic role of institutional waqf (e.g., Awaludin et al., 2018; Laallam et al., 2022; Mohd Sharip et al., 2022). A great deal of research conducts bibliometric analysis in the waqf literature (e.g Alshater et al., 2022; Uluyol et al., 2021; Rusydiana, 2019; Ninglasari, 2021). As we know, the sustainability of waqf institutions must be assessed to know the effectiveness and the ability of the institutions to manage the waqf asset. However, there is a short supply of waqf institution performance measurement literature.

The discussion of performance measurement for waqf institutional sustainability requires bibliographical evaluation based
on empirical bibliometric data. Therefore, this pursues three primary research purposes. First, this study aims to identify the key researchers, key journals, and key researchers in the field of waqf and waqf institutions. Second, this present research is intended to organise and integrate the highly cited preliminary studies on waqf and institutional waqf. Third, it provides a research agenda regarding waqf and waqf sustainability. To accomplish these goals, this study involved bibliometric analyses derived from statistics pertaining to a particular publication.

**METHOD**

**Research Design**

Methodology which has been employed in this review study was designed to exploring an eclectic body of research concomitant to studying performance measurement in the waqf institutional sustainability context. Thus, this study has refined through several stages with the notable criteria to find relevant and reputable publications for meta-literature review. During the designing process on the performance measurement on waqf institutional sustainability literature review, this study learns more from several papers on the methodology especially in bibliometric analysis. Donthu et al. (2021a), Rogers et al. (2020), Chen (2017), and Mukherjee et al (2022) are the main papers to ensure the selection and procedures the bibliometric analysis. This paper uses bibliometric analysis to unveil emerging article and journal performance trends. In addition, this paper will also explore the knowledge gaps of a particular theme in the existing literature (Donthu et al., 2021b; Donthu et al., 2020).

**Bibliometrics and Procedures**

Bibliometric analysis is a type of systematic literature review (Fan et al., 2022; Lim et al., 2022) that uses quantitative applications
and statistical techniques on bibliographic data (Donthu et al., 2021b). As a result, bibliometric results are more objective and broader in scope than other types of review research (Donthu et al., 2021b). Donthu et al. (2021a) and Chen (2017) explain that the data in the bibliometric analysis is enormous (hundreds, even thousands) and objective in nature. The recommended sample size for this type of bibliometric research is a minimum of 200, which will show considerable differentiation (Rogers et al., 2020). A sample size of 50 to 100 is considered less accurate in identifying bibliometric research, but it still needs to provide valuable information to skilled and experienced peers.

Due to the large amount of initial data obtained, it is necessary to decompose and map based on keywords, clusters, and countries. Furthermore, to form and evaluate bibliometric research papers, Mukherjee et al. (2022) mentioned seven factors that must be fulfilled. The seven factors are novelty, value, importance, time, exposition, rigor, and complexity. These seven factors are important to fulfil because they can support researchers in building bibliometric studies that will be conducted. After fulfilling the seven factors to build bibliometric studies, the next thing to do is to determine the main objectives and scope of the research. Furthermore, after establishing the main objective, determining keywords is an important thing to do to find codes. Code search is part of the data collection stage, with five stages passed (Chen, 2017).

We used a five-step methodological process (Figure 1) adapted from Alshater et al. (2020), Chen (2017) and Misbah et al. (2022). The first step is to define the main objective and scope of the review. After forming the main objective, we dug deep for a combination of results from searching for the topic on the Web of Science and Scopus online database. Given the importance of mentioning the search engine, it is due to literature searches requiring relevant and reliable sources.
Therefore, this process will provide a lot of article results. Then, an extraction method is needed in the form of literature source selection to reduce articles that are not relevant to the theme of the paper. Article reduction is based on years, document type, subject area and language. This stage is important because it is the main foundation of the research.

**Figure 1**

Research Flowchart

Source: Primary data, adapted from Alshater et al. (2020), Chen (2017) and Misbah et al. (2022).

**ANALYTICAL TOOLS**

In Table 1, we can see the codes used for searching in this study are as follows: ("waqf sustainability" OR "waqf institution performance" OR "non-profit organisation performance"). The codes were typed using asterisks to include all variations in the expression. All searches were conducted on the online databases Web of Science and Scopus. The search was conducted in November 2022, with Scopus retrieving 65 articles and Web of Science retrieving 46 articles for a total of 113 (see Table 2). After obtaining 113 articles, not all articles obtained will be used, but the first is a sorting process that focuses on the title of the article and the year of publication for the last 22 years (2000 - 2022). The selection of 22 years of publication was
made because the total number of articles was limited, so the range of publication years became longer.

Table 1

*Search Queries and the Number of Papers*

<table>
<thead>
<tr>
<th>Database search string</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>(&quot;waqf sustainability&quot; OR &quot;waqf institution performance&quot; OR &quot;non-profit organisation performance&quot;)</td>
<td>113</td>
</tr>
<tr>
<td>Full articles exclude due to article not focus on waqf sustainability; waqf institution performance measurement; waqf institution as Non-Profit Organisation</td>
<td>28</td>
</tr>
<tr>
<td>After manual filtration</td>
<td>84</td>
</tr>
</tbody>
</table>

Source: Authors’ estimation.

Table 2

*Literature Database Classification*

<table>
<thead>
<tr>
<th>Database</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOS (Web of Science)</td>
<td>46</td>
</tr>
<tr>
<td>Scopus</td>
<td>65</td>
</tr>
</tbody>
</table>

Source: Authors’ estimation.

The sorted articles were also narrowed down by document type, with only journal articles selected. Journal articles that have been selected are filtered again on the subject area by selecting social science, economy, business, arts, and humanities. Furthermore, we manually sorted because there was double data due to the article being indexed by Scopus and Web of Science (WoS). Therefore, 84 articles were pulled from Scopus and WoS using the Bibtext format. The analysis used two science mapping tools, VOSviewer and Excel. Microsoft Excel was used before the data was entered in VOSviewer.
Redundant data were filtered with the help of Excel. We used VOSviewer to draw bibliometric networks and content analyses (Van Eck & Waltman, 2010).

In bibliometric research, there are two categories of maps which widely used. These two categories are distance-based maps and graph-based maps. VOSviewer is categorized as distance-based maps. Maps that are distance-based show how strongly two elements are related to one another depending on their distance from one another. In general, a closer relationship is indicated by a smaller distance. In distance-based maps, things are sometimes distributed rather unevenly. This helps to quickly spot groups of related objects, but it can also make it challenging to label every item on a map without having labels that run over one another. VOSviewer can provide a map in nearly four displays, mention to as the label outlook, the density outlook, the cluster density outlook, and the scatter outlook. Therefore, it is functionally for furnishing wide-ranging bibliometric maps in a digestible way. The display above shows the network from many items (van Eck & Waltman, 2010). The relationships depicted in this network can be built by selecting authors, sources, countries, and keywords. The results from VOSviewer were analysed for scientometrics using citation, co-citation, co-word and co-authorship analysis with cluster density.

RESULTS AND DISCUSSION

A summary of the review is presented in Table 3. This table provides key information on 84 documents bridged over 21 years. This number comes from 52 Scopus and WoS-indexed journals. Of the 84 documents, there were 79 articles, three book chapters and three review papers. Twenty per cent of the authors of the total 84 documents after filtration were multiple authors. The exploration presented includes 399 keywords. Figure 2 shows the distribution of
84 documents published between 2001 and 2022. The number of published papers rocketed by 22 per cent from 2015 to 2022, indicating that the performance of waqf institutions in achieving sustainability goals is a topic of interest.

Description of Types and Publication Quantity

Table 3

Summary of The Review

<table>
<thead>
<tr>
<th>Summary of the review</th>
<th>Description</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Main information about data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intervals</td>
<td>2001-2022</td>
</tr>
<tr>
<td></td>
<td>Sources (number of journals)</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>Documents</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>Document types</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Article</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>Article; book chapter</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Review</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Authors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Author's keywords</td>
<td>399</td>
</tr>
<tr>
<td></td>
<td>Authors</td>
<td>236</td>
</tr>
<tr>
<td></td>
<td>Authors of single-authored documents</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Authors of multi-authored documents</td>
<td>67</td>
</tr>
</tbody>
</table>

Source: Authors’ estimation.

Figure 2

Article Growth by Year

Source: Authors’ estimation.
The rise in the number of articles in this field is analogous to the scientific community of the authors. The annual increase in the number of papers on waqf shows that the crucial role of waqf as a social finance tool is starting to be seen by many researchers (Alshater 2021). The attention of researchers on waqf has increased in line with the growing attention to social welfare and sustainability issues discussed in the Sustainable Development Goals (SDG) (Aldeen, 2021). Figure 3 shows the most prolific authors in this field. Noordin and Mohd Thas Thaker are the most influential authors, with three papers published, followed by Faizah and Abdullah, each with two manuscripts. However, this paper only shows four authors, as the other authors only have one manuscript.

**Figure 3**

*Most Relevant Authors*

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Number of Manuscripts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noordin, Nazrul Hazizi</td>
<td>3</td>
</tr>
<tr>
<td>Mohd Thas Thaker, Mohamed Asmy</td>
<td>3</td>
</tr>
<tr>
<td>Faizah, Darus</td>
<td>2</td>
</tr>
<tr>
<td>Abdullah, Rose</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Authors’ estimation.

**Citation Analysis**

Citation analysis is used to analyse the relationship between publications by identifying the publications most impacting the research area. Citation reflects the intellectual relationship between publications. It is determined by the number of citations received (Appio et al., 2014). The data required for citation analysis are author name, citations, title, journals, DOI, and References (Donthu et al.,
Although citation analysis is the most fundamental technique in science mapping, it is still reliable to determine how important a publication theme is in the research area. Furthermore, to recognise this, the most objective and direct measure of impact is citation analysis (Pieters & Baumgartner, 2002; Stremersch, Verniers, & Verhoef, 2007). This segment provides citation analysis of sources, citations, documents, and author impact.

Table 4 presents the author's impact so that we know that Darus Faizah contributed the most to this topic by publishing 41 documents. She started publishing in 2004 and has 396 citations on Scopus. However, Mohd. Thas Thaker MA got the highest Scopus h-Index compared to the other authors. He received a score of 11, meaning that the author is considered productive, and his 31 published documents impact the documents of other scientists or authors.

Furthermore, Table 5 reveals the top ten most cited papers on the sustainability of waqf institutions as non-profit organisations. There is no intellectual dominance of authors on this topic. However, considering the impact of the source, we know that three of the ten most cited documents have been published in the Journal of Islamic Accounting and Business Research. Furthermore, 2 of the ten most cited documents have been published in the International Journal of Economics Management and Accounting.

The article by Laallam et al. (2022) is the most cited on the sustainability of waqf institutions as non-profit organisations because they raise the issue of intellectual capital on organisational performance using mathematical models. Laallam et al. (2022) criticised the lack of focus on intellectual capital in non-profit religious organisations. They found that human capital, structural capital and spiritual capital impact organisational performance but not waqf institutions. Meanwhile, Sharip et al. (2022) discussed the effectiveness of management and leadership style through motivation.
in waqf institutions. The similarity of these two studies is that they discuss the management of waqf institutions as non-profit organisations for the institution's sustainability.

Table 4
Authors Impact

<table>
<thead>
<tr>
<th>Name</th>
<th>Documents</th>
<th>Scopus H-index</th>
<th>Google H-index</th>
<th>Publication Year</th>
<th>M-index</th>
<th>Total Citation in Scopus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Darus, Faizah</td>
<td>41</td>
<td>9</td>
<td>22</td>
<td>2004</td>
<td>0.53</td>
<td>396</td>
</tr>
<tr>
<td>Mohd. Thas Thaker, M. Asmy</td>
<td>31</td>
<td>11</td>
<td>19</td>
<td>2009</td>
<td>0.53</td>
<td>190</td>
</tr>
<tr>
<td>Noordin, Nazrul Hazizi Rose, Abdullah</td>
<td>12</td>
<td>7</td>
<td>8</td>
<td>2015</td>
<td>0.53</td>
<td>97</td>
</tr>
</tbody>
</table>

Source: Authors’ estimation.

Table 5
Top Ten Cited World Documents

<table>
<thead>
<tr>
<th>AUTHOR</th>
<th>TITLE</th>
<th>YEAR</th>
<th>JOURNAL</th>
<th>CITATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laallam, A; Uluyol, B; Kassim, S; Ali, Erae</td>
<td>The components of intellectual capital and organisational performance in waqf institutions: evidence from Algeria based on structural equation modelling</td>
<td>2022</td>
<td>JOURNAL OF ISLAMIC ACCOUNTING AND BUSINESS RESEARCH</td>
<td>136</td>
</tr>
<tr>
<td>Sharip, SM; Awang, M; Ismail, R</td>
<td>The effect of motivating language and management effectiveness: empirical evidence from Waqf institutions in Malaysia</td>
<td>2022</td>
<td>JOURNAL OF ISLAMIC ACCOUNTING AND BUSINESS RESEARCH</td>
<td>106</td>
</tr>
<tr>
<td>AUTHOR</td>
<td>TITLE</td>
<td>YEAR</td>
<td>JOURNAL</td>
<td>CITATIONS</td>
</tr>
<tr>
<td>--------</td>
<td>-------</td>
<td>------</td>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>Bazzi, S; Koehler-Derrick, G; Marx, B</td>
<td>The Institutional Foundations of Religious Politics: Evidence from Indonesia</td>
<td>2020</td>
<td>QUARTERLY JOURNAL OF ECONOMICS</td>
<td>102</td>
</tr>
<tr>
<td>Hasan, R; Ahmad, AF; Siraj, SAB</td>
<td>Building Trust in Waqf Management – Implications of Good Governance and Transparent Reporting</td>
<td>2022</td>
<td>SINGAPORE ECONOMIC REVIEW</td>
<td>82</td>
</tr>
<tr>
<td>Alshater, MM; Hassan, MK; Sarea, A; Samhan, HM</td>
<td>Islamic accounting research between 1982 and 2020: a hybrid review</td>
<td>2022</td>
<td>JOURNAL OF ISLAMIC ACCOUNTING AND BUSINESS RESEARCH</td>
<td>78</td>
</tr>
<tr>
<td>Sobhan; Setiawan, P; Kholidah; Ritonga, R; Hasibuan, K</td>
<td>Quality Of Human Resources in Waqf Institution: Counterproductive Study on Muhammadiyah Charity Business</td>
<td>2022</td>
<td>QUALITY-ACCESS TO SUCCESS</td>
<td>63</td>
</tr>
<tr>
<td>Sulaiman, S; Hasan, A; Noor, AM; Ismail, MI; Noordin, NH</td>
<td>Proposed models for unit trust waqf and the parameters for their application</td>
<td>2019</td>
<td>ISRA INTERNATIONAL JOURNAL OF ISLAMIC FINANCE</td>
<td>60</td>
</tr>
<tr>
<td>Umar, UH; Kademti, TT; Haron, MH</td>
<td>Integrating Waqf and Business: Ensuring Business Sustainability for The Welfare of Heirs and Non-Heirs</td>
<td>2020</td>
<td>INTERNATIONAL JOURNAL OF ECONOMICS MANAGEMENT AND ACCOUNTING</td>
<td>58</td>
</tr>
<tr>
<td>Afroz, R; Muhibullah, M; Morshed, MN</td>
<td>Factors Affecting the Intention of the Rice Farmers to Adopt the Integrated Cash Waqf Environmental Protection Model: An Empirical Study in Kedah Malaysia</td>
<td>2019</td>
<td>JOURNAL OF ASIAN FINANCE ECONOMICS AND BUSINESS</td>
<td>57</td>
</tr>
</tbody>
</table>
Network Analysis

Most Productive Countries

Tracking the country of origin of publications on the sustainability of waqf institutions as non-profit organisations is essential because it is related to the authors' origin and affiliations. Then, to evaluate the performance of contributing publications by country from 2001 to 2022, the metrics revealed the five most productive countries. Table 6 provides precise data that Malaysia is where authors in the sustainability of waqf institutions thrive. This fact is not surprising given the dominance of Malaysian authors on this topic, as waqf institutions are thriving, a fact that can reinforce and increase the relevance of this research.

Table 6

*Top Five Authors’ Countries of Origin*

<table>
<thead>
<tr>
<th>Country</th>
<th>Documents</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>52</td>
<td>786</td>
</tr>
<tr>
<td>Indonesia</td>
<td>16</td>
<td>156</td>
</tr>
<tr>
<td>Brunei Darussalam</td>
<td>3</td>
<td>28</td>
</tr>
<tr>
<td>Morocco</td>
<td>3</td>
<td>44</td>
</tr>
<tr>
<td>Turkey</td>
<td>3</td>
<td>156</td>
</tr>
</tbody>
</table>

Source: Authors’ estimation.
The commitment of Malaysian scholars and their educational institutions is undoubted in the development of waqf, given that many large Islamic financial institutions have their headquarters in Malaysia, which makes waqf-related research even more desirable (Aldeen, 2021). In addition, the many documents Malaysian authors produce result in high citation rates. Figure 4 clearly shows that Malaysia conducts most research on waqf institutions.

Co-citation analysis

Co-citation analysis is used to analyse publications frequently co-cited within the same domain (Hjørland, 2013). This analysis reveals the scholarly structure of a research field (Rosetto, Bernandes, Borini, & Gattaz, 2018). In a co-citation relationship, two publications are linked together when they appear in the bibliography of another publication. Co-citation serves to find the most influential publications so that researchers can find thematic clusters. The determination of thematic clusters is derived from the number of cited
publications (Donthu et al., 2021a). It suits researchers who want to uncover the basis of publications and knowledge.

Figure 5 allows us to explore the keywords frequently used by authors from year to year. The colour indicator in figure 5 indicates the year. In 2018, in dark purple, the most frequent keywords were sustainability, Malaysia, micro-enterprises, corporate social responsibility and management. The turquoise colour shows that in 2019, the most used keywords were waqf, zakat, Islamic finance, cash waqf, and thematic analysis. The keywords mentioned in 2020 are Islamic philanthropy, case study and performance measurement. The green colour shows that the most frequently written keywords in 2021 are crowdfunding, trust, accountability, intellectual capital, and Islamic social finance.

Figure 5
Author Keywords Trend

Meanwhile, in 2022 the latest keywords that are most documented are motivating language, Islamic accounting, and governance. Governance is part of the institutional theory that...
explains how an entity controls and manages the system. Therefore, the sustainability of waqf institutions as non-profit organisations is something new in the scope of governance in waqf institutions.

The network in Figure 6 indicates their relationship. We set the citation limit at 10, dividing the 84 articles into seven clusters. Using VOSviewer, we obtained seven clusters that can identify from the co-citation analysis disclose the information that waqf-themed papers have close relationships with various themes. In this case, waqf is related to sustainability, governance, Islamic Social Finance, and performance measurement. At the same time, the sustainability theme has a relationship with cash waqf, intellectual capital, Malaysia and accountability.

**Figure 6**

*Author Keywords Cluster*

Source: Authors’ estimation.
Co-Authorship Analysis

We conducted cluster exploration by interrogating co-authorship results with social network analysis techniques. This method in mapping science can help decipher social patterns, such as relationships between authors and their affiliations (e.g., countries) and relationships between authors, which reflect the characteristics of relationships between groups of authors (Mukherjee et al., 2022). Furthermore, thriving understanding and knowing the words and language that individuals frequently share in these clusters is important (Nerur et al., 2008), and we can identify the social processes that coproduce, sharing and pervasiveness of knowledge within and between different clusters.

Our process of co-authorship is divided into two analyses. First, we analysed co-authorship using countries as the unit of study. Secondly, we set a minimum number of documents for each country and a minimum number of citations capped at '1' for a complete analysis of the origin of the document sources. These parameters resulted in five clusters. Figure 7 provides the results of the co-authorship analysis using the country as the unit of analysis. The five clusters are divided into 'red' consisting of Malaysia and Brunei Darussalam, 'green' representing Indonesia, 'yellow' describing Oman, 'blue' representing Morocco, and 'purple' reflecting Turkey. The research trend from year to year is illustrated in figure 8. Research on the theme of sustainability of waqf institutions as non-profit organisations was conducted by Brunei Darussalam in 2017. Between 2018 and 2019, Malaysia, Morocco, and Oman conducted research on the same theme. Indonesia and Turkey conducted further research in 2020-2021.
Figure 7
Co-Authorship by Countries

Source: Authors’ estimation.

Figure 8
Co-Authorship by Countries, Year-to-Year Trend

Source: Authors’ estimation.
Furthermore, we performed the same steps as the co-authorship by countries analysis to analyse the co-authorship by authors' year-to-year trend. The results of the co-authorship by authors analysis show the social relationships between authors. Figure 9 shows in detail that there are four clusters of researchers. The first cluster was started by Noordin NH's document in 2018, cited by Kassim S and Hassan R in the first semester of 2019 and finally cited by Engku Ali E.R.A in the second semester of 2019. Apart from citing Noordin NH, Engku Ali E.R.A also cited documents belonging to Kassim S and Hassan R. The second cluster is inhabited by Darus F, who cited Ramli A and Yusoff H in 2019. The third cluster was Abdullah R's documents in 2018, and the fourth cluster was Masruki R's documents in the second semester of 2019.

Figure 9
Co-Authorship by Authors, Year-to-Year Trend

Source: Authors’ estimation.
**Cartography Analysis Using Keywords Occurrence**

We found contradictory results between co-citation and co-authorship. While the co-citation results found 7 clusters, the co-authorship results indicated 5 clusters for the 84 waqf papers selected in this bibliometric analysis. Therefore, we conducted Cartography Analysis Using Keywords Occurrence to see the characteristics of research themes based on keywords in articles. This analysis was performed by Alshater et al. (2021) because, using co-occurrence, we can select all keywords as the unit of analysis. Furthermore, co-occurrence analysis explains potential relationships between research units, so the results found are more related than in co-citation. Revealing these relationships reveals words that appear in the same theme. This finding outlines scholarly clusters achieved through the co-occurrence of keywords analysis, which can show network relationships on the theme (Chabowski et al., 2013). Furthermore, co-occurrence analysis aims to lead to an organised framework for theme refinement and future research.

Figure 10 presents the cartography analysis results from VOSviewer. In the co-occurrence analysis, we selected all keywords as the unit of analysis. We set the minimum number of citations at '3'. With the above analysis, we found five clusters represented by 'red', 'green', 'yellow', 'blue', and 'purple'. The most dominating networks are waqf, sustainability and Malaysia. As presented in figure 11, we also found that in 2018, the most important occurrence was the sustainability network with Malaysia and Islamic microfinance. The co-occurrence of sustainability keywords in 2019 developed towards Waqf, Islamic finance and the third sector. Developing sustainability keywords also led to waqf institutions, effectiveness, thematic analysis and cash waqf in 2020. Then it increasingly led to Islamic philanthropy and accountability in 2021. Meanwhile, the novelty of waqf keywords
in 2021 is the connection with waqf institutions, intellectual capital, Islamic altruism, accountability and trust (see fig 12).

**Figure 10**

*Keyword Co-Occurrence Network Visualisation*

![Image of network visualization](image)

Source: Authors’ estimation.

**Figure 11**

*Keyword Co-Occurrence Overlay Visualisation*

![Image of overlay visualization](image)

Source: Authors’ estimation.
Through co-occurrence analysis, we found five research streams obtained from the keyword clustering results. The first cluster found relates to the issue of accountability in Islamic Social Finance (ISF). Moreover, the issue of accountability is linked to ISF as a third-sector economy. In the second cluster, we grouped papers on the contemporary theme of sustainability in Islamic Microfinance. In the third cluster, we identify the role of intellectual capital in waqf institutions. The fourth cluster focuses on management effectiveness in Malaysia. Finally, in the fifth cluster, we cluster the theme of performance measurement in waqf institutions. Based on the analysis above, we finalised five groups in 84 papers related to the sustainability of waqf institutions as non-profit organisations. A more in-depth discussion will be presented in the research streams section.
### Table 7

**Cluster Analysis by Keywords**

<table>
<thead>
<tr>
<th>Cluster Name</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Accountability of Islamic Social Finance as Third Sector Economy</td>
<td>Accountability, Islamic Social Finance, Third Sector, Trust, Waqf, Zakat</td>
</tr>
<tr>
<td>The Sustainability of Islamic Microfinance</td>
<td>Cash Waqf, Islamic Microfinance, Islamic Philanthropy, Sustainability, Thematic Analysis</td>
</tr>
<tr>
<td>The Role of Intellectual Capital on Waqf Institution</td>
<td>Intellectual Capital, Islamic Finance, Waqf Institution</td>
</tr>
<tr>
<td>The Effectiveness of Management in Malaysia</td>
<td>Effectiveness, Malaysia, Management</td>
</tr>
<tr>
<td>Performance Measurement of Waqf Institution</td>
<td>Performance Measurement, Waqf Institution</td>
</tr>
</tbody>
</table>

Source: Authors’ estimation.

### Research Streams

**Research Agenda 1: The Accountability of Islamic Social Finance as Third Sector Economy**

The first research agenda focuses on the accountability of Islamic Social Finance (ISF) as a third-sector economy. The theme of
accountability in ISF institutions, especially waqf, is currently in demand, among other topics. Among others, accountability is among the top ten keywords of interest in waqf, which indicates accountability problems in waqf management (Sukmana, 2020; Alshater et al., 2022). Accountability is the foundation of endowment and religion-based institutions, as it impacts an institution's trust and sustainability (Agyemang et al., 2017; Yasmin & Ghafran, 2019). Waqf institutions are endowment- and religion-based institutions, part of the third-sector economy that plays a vital role in Islamic culture and teachings (Arshad et al., 2016). Therefore, waqf, like other third-sector organisations (TSOs), must be formally recognised to build public trust.

Abdullahi, SI (2022) illustrates that waqf institutions have financial problems running their activities. The cause of these circumstances is due to poor performance, historical neglect and the colonial past. Kamaruddin et al. (2022) reported the case of Malaysia, where waqf reporting practices are weak due to the absence of standardised waqf reporting, lack of awareness of mutawalli (waqf managers) to report, limited reporting channels from state authorities to national authorities, diverse governance structures, and the unwillingness of mutawalli to disclose the performance of waqf institutions. The influencing factors are leadership, institutional culture, and politics as push factors. In addition, the limitations of qualified personnel and sustainability issues ultimately impact the visibility of the waqf report.

Consequently, there is a need for efforts to rebuild the impression of waqf institutions. This suggestion is because the trust of funders and public support for the sustainability of waqf institutions depend on the impression given. Furthermore, the given impression relates to how institutions showcase their effectiveness of accountability (Yang & Northcott, 2019). Without accountability, waqf
institutions, as voluntary-based institutions operating through the concept of trust, will not be able to successfully manage and develop waqf assets as public goods.

Waqf institutions need sustainability to mobilise resources. For that reason, social development can be achieved with the important role of waqf in public. The sustainability of waqf institutions requires accountability which depends on the mutawalli's policy to implement good governance. Therefore, mutawalli accountability is a fundamental issue as it is intrinsically linked to the sustainability and survival of the waqf institution. As a waqf manager, mutawalli accountability is expected to be considered for the trust of wakif (funders) and hence their continued donations (Hairul-Suhaimi et al., 2018).

In Islamic teachings, accountability, governance and sustainability are central to the management of Islamic Social Finance because ISF has a strategy to support the current economy through religious and social sides (Awaludin et al., 2018). Thus, governance in ISF institutions, especially waqf, still has the potential to be improved. Quantitative measurement through the PLS-SEM technique has also been conducted by Hasan et al. (2022) to prove that the management ability of mutawalli has a positive impact on accountability. As a result, trust in waqf management also increases. Therefore, it is in line with implementing accountability through formal reporting to increase waqf trust in institutions. Waqf institutions need to conduct operational arrangements and performance measurements to provide measurable indications and indirectly show the success of the institution's management.

Thus, the criticism of the review in this research agenda is that the different implementation of accountability in each waqf institution has not yet found a middle ground on how waqf institutions should carry out the standard of accountability. This situation raises an
intelligent discussion about the key dimensions waqf institutions should have in disclosing their accountability. The key dimension should be based on the accountability relationship with the sharia perspective among waqifs to raise the standard for waqf institutions.

Research Agenda 2: The Sustainability of Islamic Microfinance
The second research agenda describes the increasing demand for issues on the sustainability of Islamic microfinance. We identified several papers that influence the sustainability of Islamic Microfinance. Waqf institutions are related to Islamic Microfinance as most authors focus on the importance of waqf in poverty alleviation. For example, Abdullah & Ismail (2017) explain that waqf management with good governance principles is a funding source for Islamic Microfinance Institutions (MFIs). It means that the sustainability of waqf management with good governance principles will ensure the sustainability of MFIs. Under the nature of permanence, irrevocability and perpetuity of waqf, the waqif is not allowed to get any monetary benefits; accordingly, waqf-based MFIs can provide capital with low returns to poor entrepreneurs. Poor entrepreneurs also do not require collateral to obtain the loan.

Building on the concept of Abdullah & Ismail (2017), Ascarya & Masrifah (2022) implemented a cash waqf system in Baitul Maal wat Tamwil (BMT) in Indonesia. Baitul Maal wat Tamwil is one form of MFI that aims to optimise social and commercial activities for poor entrepreneurs so that they get welfare impacts. However, financial problems still need to be solved for small businesses in Indonesia. Hence BMTs can help poor entrepreneurs through cash waqf (Fauziah NN, 2021). The irrevocable nature of waqf does not allow waqf to be used arbitrarily. Ascarya & Masrifah (2022) reminded the most critical policies in waqf management for Islamic Microfinance are the shiddiq, Amanah, and professional traits that the mutawalli must possess. All of these traits need to be incorporated in the recruitment of BMT
employees and members, the creation of standard operating procedures, standard operating management, and the information technology system used for administration. The formation of the above essential components will ensure the sustainability of Islamic Microfinance formed with cash waqf.

The concept of waqf management through Islamic microfinance is limited to small entrepreneurs and can provide financing for cultural heritage maintenance in Palestine (Assi E, 2008). Islamic microfinance funded by waqf can create a third sector related to charity and be adapted for cultural heritage management. Well-maintained cultural heritage sites can be used as tourist sites, so the sustainability of waqf funding in Islamic microfinance through cultural heritage maintenance can be done. In financing cultural heritage maintenance, waqf funds for Islamic Microfinance can also help renovate houses damaged by war in the Philippines (Bayram & Altarturi, 2020). Waqf, managed through Islamic microfinance, will be used as a soft loan without interest so that refugees can get funds to renovate their homes.

The management of waqf funds for social activities, as above, requires Islamic financial planning to achieve the realisation of Islamic microfinance sustainability. Mutawalli needs the help of financial managers who can calculate and mitigate risks so that the waqf funds given to the community do not run out (Billah & Saiti, 2017). A third party for waqf financial management is also needed to offer prospective waqifs about projects that waqf institutions will carry out through Islamic Microfinance schemes (Hapsari et al., 2022). Financial planning can help mutawalli to be responsible for the sustainable development of waqf, significantly cash and property waqf. Mutawalli is responsible for the productivity of waqf so that it can generate value from waqf property or cash. It proves that waqf in the form of productive cash and property can provide income that has a
sustainable impact on socioeconomic development (Hassana et al., 2020).

Furthermore, we find limitations in the research stream on the Islamic ecosystem that must be built to realise the sustainability of Islamic microfinance. The required Islamic ecosystem is the participation of waqf institutions, crowdfunding, Baitul maal wat Tamwil (BMT), zakat institutions and Islamic banks. However, we still have not found the participation ability of the institutions involved in the sustainability impact of Islamic microfinance. So, what can be further researched is the regulations suitable for waqf institutions to develop Islamic microfinance. Then, the challenges faced in building integration between waqf institutions and Islamic microfinance also need to be explored more deeply.

Research Agenda 3: The Role of Intellectual Capital on Waqf Institution

We have discussed the role of intellectual capital in waqf institutions. Waqf management, which requires accountability, governance and sustainability, can only be achieved with human resource management. The human resource management process includes recruitment, selection, performance appraisal, training and development, and compensation. These processes are implemented to achieve the goal of good governance of waqf institutions (Hasan et al., 2019). Good governance can be achieved if human resources' effectiveness plays a significant role in the management of waqf institutions (Sharip et al., 2016). Human resources are related to intellectual capital (IC) for implementing waqf institution operations. The assessment of intellectual capital (IC) can help waqf institutions achieve effectiveness and sustainability of performance (Laallam et al., 2020).

IC is an intangible asset expected to improve worker performance and job satisfaction. Increasing worker performance and
job satisfaction will affect organisational performance (Muwardi et al., 2020). On top of that, IC can be maximised by implementing knowledge discussions between workers and experts. Until 2020, IC is still a conceptual analysis, so further empirical testing related to IC and the performance of endowment institutions is needed. However, Laallam et al. (2022) empirically tested the relationship between IC and organisational performance in Algeria. The results of this test explain that human capital, structural capital, and spiritual capital have a positive relationship with organisational performance. However, relational capital, social capital and technological capital still do not show a positive relationship with the performance of waqf institutions in Algeria. Furthermore, research on IC still needs to be conducted in countries that are demographically similar and different from Algeria.

**Research Agenda 4: The Effectiveness of Waqf Management in Malaysia**

For the fourth research stream, we identified an issue with effective management in Malaysia. This fourth research agenda is different from the other research agendas. This issue concerns the widespread issue of waqf management. Chowdhury et al. (2011) examined the cash waqf management system in Malaysia and evaluated the factors that affect the performance of the cash waqf management system. The research conducted by Chowdhury et al. (2011) wanted to improve the current institutional arrangements and enhance network relationships across Malaysia to improve performance towards efficient and need-based dynamic management. Thus, waqf institutions can formulate various innovations and development of waqf management systems following Islamic sharia. Sharip et al. (2022) used the motivating language (ML) of the leaders of waqf institutions in Malaysia to achieve this.
However, Sharip et al. (2022) failed to deliver the research findings as their findings cannot be considered a comprehensive solution to improve management effectiveness in waqf institutions. It is due to the fact that the focus of the analysis is only on the communication aspect of the leaders, so it cannot be generalised to other contexts. Thus, the problems in waqf management, such as inefficiency, have yet to be solved (Sapuan & Zeni, 2021). Finally, waqf institutions need to reform waqf management in order to waqf institutions have sustainability. Using a quantitative approach, Sapuan & Zeni (2021) found that the following factors: strengthening policies and legislation, increasing human capital capacity and capability, intensifying financial assistance programmes for entrepreneurs, strengthening infrastructure, and effective governance affect the long-term sustainability of waqf institutions.

The factors mentioned above affect the management effectiveness of waqf institutions in Malaysia, but the management of waqf institutions, especially in terms of administration, requires new innovative ways. A hybrid model can be an example to generate more benefits for all parties involved (Chowdhury et al., 2012). Sulaiman & Zakari (2019) conducted empirical research to measure management effectiveness through financial ratios. They set seven waqf institutions as the analysis unit, but only one institution was financially sustainable. The components used to measure financial ratios are equity balance, revenue concentration, administrative cost and operating margin ratios. Furthermore, Yakob et al. (2022) conducted a study to measure enterprise risk management (ERM) in waqf institutions. The finding is that waqf institutions have a less-than-optimal implementation of ERM, so its aspects need to be improved over time. Its finding supports the research of Pyeman et al. (2016), who measured the efficiency of all waqf institutions in Malaysia and found that only the state of Penang has highly efficient management.
Research Agenda 5: Performance Measurement of Waqf Institution and non-profit institutions.

In the last research agenda, we find contemporary issues in waqf literature. The fifth research agenda relates to performance measurement in waqf institutions. Our finding shows that this is the least topic has been conducted in relation to waqf. Waqf institutions are categorised as non-profit institutions due to the permanence, irrevocability, and perpetuity nature of waqf. Som & Nam (2009) clearly show that organisational learning is required to perform performance measurement in non-profit institutions. Organisational learning has a strong relationship with organisational performance. Performance measurement in non-profit organisations is about financial and social measurements (Alfirević et al., 2014). Effective performance measurement is crucial in promoting good governance and ethical management in waqf institutions. Thus, Noordin et al. (2017) developed a framework for assessing the performance of waqf institutions and outlined eight important stages that can serve as guidelines for waqf institutions in designing their performance measurement.

The conceptual framework established by Noordin et al. (2017) was refined by Arshad et al. (2018), who explored the performance measurement indicators of waqf institutions based on non-profit organisations. These indicators are built from a maqasid sharia perspective. This research results in a performance measurement model in waqf institutions with maqashid sharia-based; consequently, waqf institutions can adapt in assessing their performance and fulfilling accountability for waqif. Although waqf institutions facilitate socio-economic growth for society, implementing waqf management as a prominent organisation remains a challenge. Ramli et al. (2018) explain that to overcome problems such as underdeveloped waqf property, the unproductive nature of assets, the
inability to generate their own income, and inadequate documentation systems, it is necessary to create performance measurements that can provide evaluation for waqf institutions. This finding is in line with the research of Masruki et al. (2019) and Bernal-Torres et al. (2021), who developed a measurement of the socio-economic impact of waqf institutions. The identification conducted by Masruki et al. (2019) includes input, output, outcome, impact, effectiveness, and efficiency. Meanwhile, Bernal-Torres et al. (2021) innovate the performance measurement of non-profit organisations so that they can be immediately connected to the social problems that become the institution’s mission.

Widiastuti et al. (2021) contributed to the financial measurement model to assess the performance of the mutawalli. This model evaluates the mutawalli in managing waqf assets based on laws and regulations, the objectives of the institution, and the requests of the wakif and mauquf alaih (beneficiaries). Performance measurement is organised into three groups: performance, impact, and results. Each group has ratios with several segments for several groups. This research expects to contribute to objective and informative financial performance measurement for the decision-making process in managing waqf assets. Implementing performance measurement is not easy, considering there must be a cultural transition to organisational performance if waqf institutions are to conduct performance assessments (Jiao et al., 2022). However, if changes in organisational culture and performance can lead to improved performance of waqf institutions, it is worth implementing.

CONCLUSION

As a result of increasing research contributions on the sustainability of waqf institutions as non-profit organisations, waqf is receiving attention from around the world. This paper aims to present
a systematic review of the sustainability literature of waqf institutions using bibliometric analysis. The purpose of this research results in two outcomes. First, we identify and discuss bibliometric results on waqf institutional sustainability literature. We used VoSViewer to generate bibliometric reviews on 84 documents in the Web of Science (WoS) and Scopus databases. An important result of this process is that the countries with the most research in this area are Malaysia and Indonesia. With co-citation analysis, we found seven clusters that waqf-themed papers have close relationships with various themes. In this case, waqf is related to sustainability, governance, Islamic Social Finance, and performance measurement. At the same time, the sustainability theme has a relationship with cash waqf, intellectual capital, Malaysia and accountability. Noordin and Mohd Thas Thaker are the most influential authors. Second, this paper delivers five significant themes on the sustainability of waqf institutions as non-profit organisations. These themes are 1) The Accountability of Islamic Social Finance as Third Sector Economy, 2) The Sustainability of Islamic Microfinance, 3) The Role of Intellectual Capital in Waqf Institution, 4) The Effectiveness of Management in Malaysia, and 5) Performance Measurement of Waqf Institution. The themes above can be future research recommendations for other scholars. However, there is a limitation on these papers due to the lack of article numbers that discuss. Therefore, this paper is having to be improve by adding more articles to retrieve and filter using others papers search engine.

Author Contributions

A Bibliomatric Analysis of Waqf

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Informed Consent Statement
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Data Availability Statement
The data presented in this study are available upon request from the corresponding author.

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Conflicts of Interest
The authors declare that they have no conflicts of interest.

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