A Comprehensive Study on the Scientific Literatures Performance of Cash Waqf Linked Sukuk (CWLS) using NVivo

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This study seeks to map research related to Cash Waqf Linked Sukuk (CWLS) published by Dimensions indexed journals from 2019 to 2023. NVivo 12 Plus is used to conduct thematic studies and the frequency is used to evaluate 53 publications in scientific literature. The results of the study found that the number of publications fluctuated from year to year related to CWLS research which indicated that this topic was an interesting topic and should continue to be developed. In addition, various focus discussions and cluster analysis that describe research paths in CWLS Waqf research include economic empowerment, CWLS as productive waqf, social investment, and CWLS research methods. According to the exploratory review and visualization in the cluster analysis, CWLS research includes CWLS Waqf including economic empowerment, CWLS as productive waqf, social investment. This research can be used as a starting point for experts to build graphic visualizations of CWLS research patterns in published scientific research.

Keywords: CWLS; NVivo; Indonesia
INTRODUCTION

Islamic economics is an economic system that focuses on the principles of balance, collaboration, fairness and common good. The focus of the Islamic economy is on the interests of society which encourage productivity, equitable distribution of income, and real sector growth (Arafah, 2019).

Within the sharia economic framework, the economic and financial aspects are not only given a focus on the commercial dimension, but also emphasize the social dimension (Ayub, 2013). This is in line with the main goal of sharia economics or maqashid al-syariah, namely the realization of prosperity both materially and spiritually (Fadlan, 2019). To achieve this prosperity, in addition to utilizing commercial instruments, the Islamic economy is also equipped with social financial instruments which are its characteristics, such as Zakat, Infaq, Sadaqah, and Endowments (Dikuraisyin, 2020).

As a means of Islamic social finance, waqf has proven to be an effective instrument (Siska, 2019). The practice of waqf has been carried out since the time of the Prophet until now. In Indonesia, there is significant potential in implementing the waqf principle. According to data released by the Ministry of Home Affairs (Kemendagri), the population in Indonesia will reach 277.75 million individuals by the end of 2022. This number has increased by 4.43 million people compared to the same period in the previous year, which reached 273.32 million people. Based on religious beliefs, around 241.7 million Indonesians adhered to Islam at the end of last year. This amount is equivalent to 87.02% of the total population in the country. Based on the study of Riani et al., (2022), waqf has a large positive sentiment, especially its role in social development.

With the majority of the population being Muslims and being the country with the largest Muslim population in the world, Indonesia has great potential in utilizing waqf assets and cash waqf. According to data from the Indonesian Waqf Agency, the potential for waqf assets reaches IDR 2,000 trillion and cash waqf reaches IDR 180 trillion. In this context, Indonesia has a great opportunity to develop its waqf sector (Cash Waqf Linked Sukuk Annual Report, 2021). Through efficient management and innovative ideas, productive use of waqf can have a positive impact. This will increase the efficient use of resources, accelerate the process of economic development, and improve the welfare of society as a whole.

Issuance of Waqf Sukuk is proof of the Government’s commitment to encourage social investment and the development of productive waqf in Indonesia. Furthermore, the issuance of the CWLS which began in 2020 indicates the Government’s support in encouraging synergies between the Islamic finance ecosystem and social finance. According to the 2022 Indonesia Sharia Finance Development Report, since it was first launched in 2009, the issuance of Retail SBSN (including CWLS) has reached a total nominal value of IDR 330.00 trillion, with the number of investors that accumulated during the entire issuance period reaching 682,824 people.

By looking at the future potential, several studies have started to investigate topics related to Cash Waqf Linked Sukuk. Fauziah (2021) analyzes CWLS practices and their potential for projects with social and sustainable impacts in Indonesia, and identifies the benefits, opportunities, costs and risks of CWLS. This study found that CWLS can contribute significantly to social impact, as well as facilitate many sustainable development programs including government projects, education and health initiatives, and others. CWLS is believed to be a very potential instrument and has a positive impact on the people in Indonesia because the benefits and opportunities outweigh the risks and costs.

Musari (2022) provides an overview of the three securitizations of Islamic fiscal instruments as an alternative to sustainable financing to face public economic challenges in the era of globalization. Furthermore, Musari (2022) focuses his research on three conceptual issues, namely describing sovereign Indonesian Green Sukuk, explaining CWLS and explaining the Perpetual Green CWLS proposal as an alternative to sharia green financing.

Furthermore, using the Analytical Hierarchical Process (AHP) approach, Sukmadilaga (2021) found that CWLS is still lagging behind in terms of appropriate regulations and laws. In addition, there is a lack of socialization or education to introduce the CWLS instrument to potential investor communities. However, along with these challenges, the adaptability of the population to information technology and financial literacy has an impact on the lack of growth and development of CWLS to be implemented.

Based on previous research and researchers' observations, there have been no scientometric analysis studies related to this topic using NVivo. Scientometrics is the study of the quantitative aspects of science as a discipline, as well as statistical analysis to examine research developments in a particular field of science.
Thus, the renewal of this study includes the latest methods and data sources.

The purpose of this research is to identify and map research developments related to Cash Waqf Linked Sukuk (CWLS) in the world of research. This research also tries to combine new results and collect research studies related to these keywords from various literature that has been published in various indexed journals in Dimensions, by taking data from 53 journals published between 2019-2023. The data was then processed and analyzed using the NVivo 12 Plus software for automatic coding with a qualitative approach.

Furthermore, this paper will be structured as follows: First, the background and research objectives will be presented. The second part will discuss related literature, while the third part will explain the methodology used, including the data and approaches used. The fourth part will present and report the research results. Finally, the fifth section will contain a closing which summarizes the main discussion and provides recommendations.

RESEARCH METHOD

Data

This study uses Dimensions.ai indexed metadata to analyze data from research publications with the keywords "CWLS", "waqf" based on titles and abstracts published within the 2019-2023 timeframe. The results obtained were 53 selected articles.

Method

As for the analysis of the 53 papers, this combines qualitative methods with descriptive statistics. According to Yusuf (2017: 328), qualitative in-depth research is a research technique that focuses on exploring the meaning, characteristics, symptoms, understanding, concepts, symbols, and descriptions of a phenomenon using multiple methodologies and narrative styles. Qualitative methods are seeking, collecting, evaluating, and interpreting extensive visual and narrative data to gain deeper knowledge about an event or topic of interest. Descriptive research is qualitative in nature; learn the techniques of collecting, collating, and summarizing research data in the discipline of statistics. Data must be frequent and sufficiently summarized for evaluation in tables, graphs, and other graphical displays. In addition, other advantages of qualitative methods are richness in data collection, valid coding, and reliable interpretation (Moretti et al., 2011).

Furthermore, the research process is described in terms of the study framework as shown in Figure 1, which describes the methodology used to carry out the qualitative study using the NVivo 12 Plus software. NVivo, one of today's most popular qualitative data management programs, has its roots in NUD*IST. Software developers have described it as an improved and extended version of NUD*IST. NVivo has features such as character-based encoding, rich text analysis capabilities and multimedia functions which are essential for qualitative data management (Izza, 2021). One of NVivo's strengths lies in its high compatibility with research designs. The software is not methodologically specific and works well with a variety of qualitative research designs and data analysis methods such as discourse analysis, grounded theory, conversation analysis, ethnography, literature review, phenomenology, and mixed methods (Zamawe, 2015).

In addition, another advantage of using NVivo 12 Plus is that it can collect, organize, analyze, and visualize unstructured or semi-structured data by importing data in various file formats, organizing demographic data, source code, capturing ideas, running queries, and visualizing project items (Izza & Rusydiana, 2022; Izza et al., 2021).

Finally, data in excel and csv formats are processed and then analyzed using the NVivo 12 Plus software to automatically utilize and separate data in files with sentences, paragraphs or unique text strings using the autocode wizard. From the analyzed sources then use the Auto Code Wizard to provide results. After the node matrix is created, and the content is encoded to the sentiment nodes.
RESULTS AND DISCUSSION
Main Information

Table 1: Publication All Years

<table>
<thead>
<tr>
<th>No.</th>
<th>Document Type</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Articles</td>
<td>49</td>
<td>92%</td>
</tr>
<tr>
<td>2.</td>
<td>Chapter</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>3.</td>
<td>Preprint</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>53</td>
<td>100%</td>
</tr>
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Based on the results of the initial search analysis in conducting an analysis of the metadata collected and obtained after running the search query, information and general descriptions regarding research articles with the keyword "cwls waqf" are obtained. From these results there are 53 documents with an observation period of 4 years, namely 2019-2023 with the number of publications ranging from 3 to 29 with the most published publication being in 2021, namely with 29 articles. Meanwhile, the publication for 2023 does not cover everything considering that the data was taken in August 2023.

The research articles were categorized into five groups with the most being articles (49), preprints (2), and chapters (2). From the results of the analysis of these types of documents, the ones that are widely used are articles which account for 92% of the total research subjects. This means that the references used in the research can be trusted because most of them come from journal articles.
Analysis through the word frequency tool aims to find research problems with the highest repetition seen from the material sought. Frequently used words and terms in the text are shown in Figure 2 based on automatic coding. The word size in the word frequency results shows a higher frequency of occurrence than the others.

Based on the results of the word frequency of 53 Dimensions.ai indexed publications with the theme CWLS Waqf obtained from mapping and percentages calculated automatically by the Nvivo 12 Plus auto code wizard. The words with the highest frequency in research published after the word CWLS Waqf were "covid" with a percentage of 0.95%, followed by "economics" at 0.95%, and followed by the third highest word, namely "instrument" at 0.79 %. In addition, the automatic coding results also show several other interesting terms such as model, development, implementation, management, optimizing, recovery, retail, and others.

Hierarchy Chart

Based on the coding, it automatically generates a hierarchical chart on the title that raises several relevant themes that often appear, including cash, empowerment, implementation, economy, and cash waqf. Among the charts the word "cash" has a larger square size than the others.
Based on coding, automatically generates a hierarchical chart based on author keywords. Figure 3 presents relevant themes that often arise including waqf, cash, productive, sukuk, social, financing, investment, and cash waqf. The word "waqf" has a larger square size than the others.

**Treemap**

![Treemap](image)

**Figure 4:** Treemap of Essential Concerns and Focus of CWLS Waqf Theme

The next tool presented from Word Frequency analysis is a treemap. A treemap is a chart that shows data in hierarchical order, as a collection of nested rectangles with different dimensions, sizes, and shapes. Size shows amount based on frequency and percentage. The treemap is scaled to fit the space offered. The sizes of the rectangles should be considered in a grid relationship with each other which results in a larger display area on the top left of the chart, compared to, a smaller rectangle on the bottom right (Help NVivo, 2020). From the analysis of Word frequency in the form of a treemap resulting from this analysis it has shown two different aspects, namely: (a) **Concerns**, the main concern in grouping related general topics. Among those related to this topic is the CWLS Waqf ; (b) **Focus**, this section discusses the focus/topics of volunteers discussed in the CWLS Waqf research including those related to covid, economy, instruments, models, management, recovery, challenges, fiscal, investment, resilience, optimization.

**Cluster Analysis**

![Cluster Analysis](image)

**Figure 5:** Items Clustered Analysis of CWLS Waqf based on Title and Abstract
Furthermore, Figure 5 shows cluster analysis, which is a technique used in exploring and visualizing patterns in the CWLS Waqf theme in general in scientific research by grouping sources or words that are similar or related using code automatically from the NVivo 12 software based on titles and abstracts. This is used to obtain detailed and comprehensive results so that they can determine research paths related to CWLS Waqf research. There are 4 research lines that are summarized in the main cluster in general which groups words and their relationships.

**Cluster 1: CWLS and Economic Empowerment**

The potential and opportunities for cash waqf in economic empowerment are a serious study for the government and waqf stakeholders so that waqf assets can be optimally and maximally managed and developed. Several studies have been found to have discussed CWLS in economic empowerment including research by Lail (2022) examining and dissecting more closely the optimization of the role of Cash Waqf Linked Sukuk as a new idea for the Islamic financial system as an effort to empower communities, so that their lives are more quality and competitive. The results of the study show that Cash Waqf Linked Sukuk have several very significant roles in increasing community empowerment in various programs and fields, such as the health, education, social and economic sectors. BWI in utilizing the CWLS fee uses several contract variants, ijarah, wakalah, qordhul hasan and mudarabah.

Furthermore, using a sociological functionalist perspective approach, research by Abdulloh, Sukardi & Qomar (2021) found that the productive business that can be carried out is in the creative economy sector and the manufacturing industry with three stages namely initial, transitional, and final with several considerations namely capital, human resources, technological developments, and changing times. With this mechanism and with the assumption that waqf management institutions or institutions can be sustainable and centrally coordinated and support each other, national scale economic empowerment can be achieved and sustainable productive efforts will create cash-linked sukuk-based community economic independence (CWLS). Primarily, the combination of waqf and microfinance as a social finance mechanism (As-Salafiyah & Kartikawati, 2022).

Finally, Suratman (2023) developed a strategy for implementing CWLS management in supporting the economic development of the people in Indonesia. This study found that issues of regulation, sharia, trust, IT systems, and human resources were the main obstacles in handling Cash Waqf Linked Sukuk in Indonesia. Sharia solutions, regulations, IT systems, trust and HR solutions are offered to manage CSWL. Strategies that can be used to build community economic empowerment in Indonesia, namely transparency and accountability strategies, improving the quality of individual and institutional nazhir, strengthening risk management, computerizing waqf management, expanding socialization of the benefits of Cash Waqf Sukuk, optimizing investment, and collaboration with stakeholders, raising funds waqf through E-Waq, and the establishment of waqf educational institutions.

**Cluster 2: CWLS as Productive Waqf**

The Cash Waqf Linked Sukuk (CWLS) concept introduces a new approach to harnessing the potential of waqf, a form of charitable donation in Islamic finance. This innovative financial instrument involves channeling funds generated from cash waqf into productive projects, ranging from infrastructure development (Riani & Fatoni, 2022) and education to economic advancement.

This is as reviewed in by Musari (2022) that CWLS is the first blended Islamic finance for fiscal instruments in Indonesia that integrates Islamic commercial finance and Islamic social finance and supports the development of social investment and productive waqf.

Furthermore, using the innovative productive waqf model research by Yunita (2020) builds an integration model between Islamic social finance, government sukuk financing and Indonesia’s food security. As for the management, it involves the government and the private sector. With the scheme built, it is expected to be able to maintain food security in Indonesia and be sustainable.

In other discussions it is also related that CWLS is able to be an alternative to optimizing the potential of productive waqf, there are several obstacles and challenges faced. Maulina (2022) explains that among these obstacles are the level of literacy as a community insight in waqf and the level of community religiosity in waqf.

**Cluster 3: Social Investment**

Cash Waqf Linked Sukuk is an interesting example of social investment within an Islamic finance framework. This innovative financial instrument leverages the principles of waqf, a form of charitable donation, to channel funds from individual donors into...
impactful projects that serve the wider community. These projects cover areas such as education, health, and community development (Sa'idaturrohmah, 2022).

Contributions made through cash waqf are then linked to sukuk, a tradable Islamic financial instrument, resulting in a structured mechanism that generates returns. This return is not only financially rewarding but also socially enriching, as it is reinvested in projects aimed at increasing the welfare of society as a whole. Furthermore, explaining that Ubaidillah, Masyhuri & Wahyuni (2021) examines sukuk and waqf as important components and contributes to the development of a country. Evidence of the success of waqf can be seen from its contribution to the public interest, therefore waqf institutions are required to make it happen. In realizing the goal of creating productive waqf instruments, BWI together with several stakeholders have created Cash Waqf Linked Sukuk (CWLS) instruments.

Especially after the pandemic, the impact of the global and Indonesian economic slowdown was felt by the public, plus the threat of an economic recession. Thus, a new creative investment innovation that utilizes movable waqf as its object becomes a state sukuk in the form of Cash Waqf Linked Sukuk to assist government funding for Indonesia's economic recovery. This is in line with Sari's research (2023) which found that Cash Waqf Linked Sukuk can contribute to economic recovery through 2 definite paths; 1) Cash Waqf Linked Sukuk can assist government funding in supporting APBN funds through the development of educational facilities, health facilities, and public infrastructure. Second, Cash Waqf Linked Sukuk can simultaneously provide support for economic equity to overcome socio-economic inequality through community empowerment from proceeds provided by the government.

Cluster 4: CWLS Research Methodology (Additional)

This diagram summarizes the research approach used in research methodology related to CWLS in the scientific literature.

It can be concluded that in the realm of research on CWLS, the dominant prevalence was found in the form of qualitative investigations in the form of literature studies with a percentage of 64.71% (Abdullah et al., 2021; Afrianti, 2022; Anindhita et al., 2022; Armen et al., 2022; Cahyono et al., 2022; Hafandi et al., 2021; Indra et al., 2020; Istikomah et al., 2021; Lailatullailia et al., 2021; Maesarach et al., 2022; Musari, 2022; Nugroho et al., 2022; Puspitasari et al., 2022; Putri et al., 2020; Rahayu et al., 2020; Rahman et al., 2021; Maulina, 2022; Sa'idaturrohmah, ; Sasongko et al., 2021; Siswantoro, ; Sulaeman et al., 2022; Tanjung & Agus, 2021 ; Ubaidilaah & Wahyu, 2021; Winarto et al., 2021; Yasin, 2021) ANP (Afifah et al., 2022; Rabbani et al.; Suratman et al., 2023) in-depth interviews (Ashfahany & Novita, 2023), bibliometrics (Danugroho & Halimatus, 2021) legal research.
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(Nurjamil, 2021), content analysis (Wati et al., 2022) and SLR (Yasin, 2021; Joseph, 2022).

As for quantitative research, they are dominated by the SEM approach methodology of 5.88% (Afandi et al., 2022; Berakon, 2022; Wulandari et al., 2022). The other quantitative approaches include multiple linear regression (Ofaffiana et al., 2023), linear regression (Sheila & Achiria, 2022). Meanwhile, the mixed method approach is still limited to the use of project finance theory and NPV (Rifki, 2022) and SWOT analysis and questionnaires (Hosen et al. 2022). As a suggestion for future research it is hoped that it can fill the knowledge gap with a more exploratory approach, involving both quantitative methods and a combination of methods (mix methods). Thus, this combination will provide a wider depth of analysis and a more holistic understanding of CWLS and create space for a more inclusive and comprehensive approach in generating new insights regarding CWLS.

Text Search Query

Next is an analysis of the use of words in word frequency from various research data sources, which can be seen through the Text Search Query feature. The search results are presented in the Word Tree as follows:

![Text Search Query Results](Figure 7)

Based on the results of the Text Search Query in the Word Tree, there is information that in general research is related to Cash Waqf Linked Sukuk (CWLS) as an instrument that not only has the potential to meet the financing needs of vital projects, but also strengthens financial inclusion, stimulates economic growth, and creates sustainable social impact. Especially in the post-pandemic period, CWLS is an Islamic financial instrument that can be integrated into national and global economic recovery strategies, while still adhering to the principles of ethics and justice.

CONCLUSION

This study aims to identify and map research related to the extent of the development of CWLS Waqf research in the scientific literature. The results show that there have been a number of CWLS-themed paper publications in the last 4 years from 2019 to 2023 with 53 studies equipped with Digital-Object-Identifier (DOI) indexed Dimensions. In addition, this review includes metadata information, co-occurrence, and sentiment analysis. This study also found that the number of publications fluctuated from year to year related to CWLS Waqf research, which indicated that...
this topic was an interesting topic and should continue to be developed. In addition, various focus discussions and cluster analysis that describe research paths in CWLS Waqf research include economic empowerment, CWLS as productive waqf, social investment, and CWLS research methods.

Thus, it is hoped that the results of this study can be used as a basic reference to see how graphic visualization of the development of CWLS Waqf research trends is in published scientific research so that it can be further developed by experts. Recommendations for further research can refer to the most popular keywords that can be discussed further. In addition, it is possible to perform more complete bibliometric analyzes with other types of software. Finally, it should be noted that this research has limitations, namely the limited time frame and the results offered are still dynamic besides the database used is Dimensions. Suggestions for further research can use better databases such as Scopus, WoS, and other sources for more comprehensive results.

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