Digital management on zakat institutions: Mapping using Biblioshiny R

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Abstract

Purpose – This study aims to identify and map the research most relevant to developing digital technology research trends published by leading journals on digital management in zakat institutions.

Methodology – The analysis focused on describing the characteristics and trends of keywords, authors, citations, and journals. The data analyzed were 25 journal publications for the last four years starting from 2019-2022, accessed online by Dimensions on June 09 2022. The methods used were descriptive statistics and bibliometric analysis with Biblioshiny, an R-based application, to generate bibliometric maps.

Findings – The study found that Indonesia’s covid pandemic and zakat management blockchain is the most common words in this topic.

Implications – This paper focuses on the development of the Islamic world in building and contributing to the digital ecosystem in zakat institutions.

Originality – This research is expected to help carry out a comprehensive study of the center, identify research gaps, and help researchers determine research development by exploring findings that can still be developed related to digital management in zakat institutions are still limited.

Cite this article:

Introduction

Currently, the Zakat collection is quite significant compared to the previous year. Based on data from the National Amil Zakat Agency (2019), the collection of zakat funds reached IDR 10 trillion with a total potential of IDR 217 trillion (BAZNAS, 2019). The zakat management system consists of five stages: management planning, collection, regulation, distribution, and distribution (Hamdani, 2020).

Focus on zakat collection; the wrong challenges faced by zakat institutions in gathering, and zakat is zakat prayers (muzakki). Where para muzakki choose no pay zakat through the zakat institution, muzakki choose to pay to direct the zakat to mustahiq than through the zakat institution. This is because system management in zakat institutions is considered inefficient and not transparent enough to distribute zakat funds. As a result, gathering funds through zakat
institutions is not optimal, and the public trust in zakat institutions becomes reduced (Zulfikri et al., 2022; Nur et al., 2021; Lubis & Azizah, 2018; Wahid et al., 2012).

Several other studies that show trust and transparency in zakat institution is study Nikmatuniayah et al. (2017) mention that the process of collecting zakat funds are affected by quality accounting, accountability, and transparency. This strengthened with data from The Star Newspaper reporting that in 2015, more than three thousand people resigned to contribute to zakat through zakat institutions. Issue this appears when wrong one the wrong zakat institution in Malaysia manages zakat funds, and the consequences occur crisis of trust in the zakat institution (Owoyemi, 2020). Temporary, Perbawa and Abdullah (2018) decipher that the perception of the credibility of zakat institutions influence the public's awareness of pay zakat in zakat institutions, so Nasri et al. (2019) recommend zakat institution for improving transparency and professionalism as a form of enhancement performance finance in time front.

Of this phenomenon, zakat institutions are currently required to improve their performance related to transparency, security, and cost-effective transactions. It is also essential for zakat institutions to utilize digital technology in paying zakat. Zakat management with a digital management system has become a trend in zakat institutions (Kassim & Hawariyuni, 2021). The nature of digital technology encourages efficiency, transparency, and expansion of access, and this is in line with the goal of zakat to alleviate poverty and prosper the community (Beik et al., 2021).

On base, this research aims to find out and carry out mapping related to the development of Digital Management research trends in Zakat Institution. Use analysis text with device soft Biblioshiny R describes relevant word analysis, authors analysis, word treemaps, thematic maps, thematic evolution, and related conceptual structures with topics research. With so, this could become very interesting for academics for an added study in the skeleton to give information and recommendation on related parties, especially on government and regulators, in setting necessary policies for arranging management and using funds in zakat institutions. Studying this also could help To do a first comprehensive library, identify research gaps, and help para researcher for determining development study with exploring study more continued.

Literature Review

Zakat is a get-along Islam’s third aim to purify the riches of a Muslim and distribute it return to the rightful accept (Choudhury & Harahap, 2008; Yusoff & Densumite, 2012; Djaghballou et al., 2017). Zakat is a unique form of worship because it reflects the relationship between humans and God and with others. Zakat can also bring social and economic impacts to society (Asfarina et al., 2019; Sulaeman et al., 2021).

Law Number 23 of 2011 explains that Zakat Management is planning, organizing, distributing, and utilizing zakat. There are two types of Zakat Management Organizations (OPZ) recognized by the state, namely the National Amil Zakat Agency (BAZNAS) and the National Amil Zakat Institution (LAZNAS). The government formed BAZNAS with community members and the government to collect, distribute and utilize zakat funds according to religious provisions. In contrast, LAZNAS was formed by the community and authorized by the government to collect, distribute and utilize zakat funds according to religious provisions (Hamdani, 2020).

Role amil in managing zakat funds can create a strong zakat climate. According to Hafidhudin (2019), four aspects can make ample zakat funds to parse poverty, including amil who is trustworthy, professional, fair, and responsible answer. The fourth aspect that could minimize the imbalance Between potential zakat and zakat realizes that many of the community still distributes the funds independently without through zakat institution.

Research Methods

The methodology used in this study is a tan qualitative method with descriptive statistical literature from various publications on Management Institution Zakat. Qualitative research methods are based on the philosophy of postpositivism, which is used to study the state of natural objects (as opposed to experimentation). The researcher is the key instrument. Data collection techniques are
Data sources study this in the form of articles published in various journals with research topics Management Zakat Institution. Data was collected through an online article search via Dimensions on June 09th 2022, and the investigation was carried out by entering the keyword "Digital Zakat Management." The search results found 25 articles published between 2019 and 2022. Data in the form of topics used in publishing papers on philanthropy economy Islam, especially on management zakat institutions, were analyzed using Microsoft Excel 2016. For knowledge, the trend of publication development used the device Biblioshiny software. Device soft it’s free and supported by the R environment (https://cran.r-project.org/) which offers various tools for studying qualitative in bibliometrics and scientometrics (Cuccurullo et al., 2016). In the study of bibliometrics, a development map could show the influence of differences in similarity in the size which is the subject study (Ahlgren et al., 2003), and different approaches used to check it out (Boyack et al., 2005) as well as analysis text obtained from results mapping related to "word".

Results and Discussion

Sources Types

The following is a table data source used to study this.

<table>
<thead>
<tr>
<th>Description</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timespan</td>
<td>2019-2022</td>
</tr>
<tr>
<td>Sources (Journals, Books, etc.)</td>
<td>20</td>
</tr>
<tr>
<td>Documents</td>
<td>25</td>
</tr>
<tr>
<td>Average years from publication</td>
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<tr>
<td>Average citations per document</td>
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<td>Average citations per year per doc</td>
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<tr>
<td>DOCUMENT TYPES</td>
<td></td>
</tr>
<tr>
<td>Article</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: Authors’ elaboration based on Dimensions

Based on data retrieval results from 2019 to 2022, the total documents, as many as 25 publications, were all sources originated from an article, so the source in a study is this strong.

Meta-Analysis

This section describes the number of publications of papers by topic management at Zakat Institution. There were 25 papers published over a 4-year observation period from 2019 to 2022.
Based on Figure 1, there is a tendency to increase the number of papers published on Management Zakat Institution for four years. However, there will be a decrease in the number of publications by 11 from 2021 to 2022. However, there may be additional publications in 2022 because this data was accessed on June 09, 2022, so there is still an opportunity to increase publications in 2022. From graph 1, the highest number of publications is in 2021, with a total of 14 publications.

**Text Analysis**

The text analysis will visually map 25 documents connected to digital management at zakat institutions. Mapping is a process that allows someone to identify each element that is displayed. Text analysis was carried out using R-studio and Biblioshiny software to examine in depth when searching for frequently occurring terms (Cuccurullo et al., 2016).

**Most Relevant Sources**

Figure 2 shows the number of documents published by every journal based on relevance with digital management topics on zakat institution in research economy Islam. Result showing list What is the name journal issue top and Lowest with -shaped diagram colored stems blue. The color increasingly blue dark indicates the more a lot journal and relevant to the topics researched. There are 20 registered journals on relevant data sources. The amount of published documents from journals ranges from 0 to 3 issues. Most journals publish Management of Zakat and Waqf Journal (MAZAWA) with as many as three documents.

Temporarily, 16 journals occupy the lowest position, with some publications as many as 1. One example of published papers by Management of Zakat and related Waqf Journal digital management in zakat institutions is a study by Gumiri and Alghifari (2020) titled "Management Asset Productive for Empower Mustahik: Analysis Distribution Zakat based on MUI Fatwa Number 14 of 2011". There are two papers with the researcher (Isnaini & Utami, 2021) and (Munir & Zidna, 2021).
Most Local Cited Sources

![Most Local Cited Sources](image)

**Figure 3. Most Local Cite Sources**

Most Local Cite Sources show journals which one is a lot quoted for made source research. The 20 journals in the picture above show that the journal with topics that study management in zakat institutions most often quoted is the International Journal of Islamic and Middle Eastern Finance and Management, with citations as many as 13. Where journal this is wrong one indexed journal scope Q2, and wrong one his research entitled "Zakat Administration in Times of Covid-19 Pandemic in Indonesia: A knowledge Discovery Via Text Mining" (Hudaefi et al., 2021) is relevant to topics management in zakat institutions. Besides that, there are four journals with the color blue, a bright signifying journal with amount most petite citation that is a total of 2 citations, namely Al-Balagh Journal Da’wah and Communication, Bulletin of Indonesia Economic Studies, Business Horizon, and Computers & Electrical Engineering.

Authors Analysis

![Most Relevant Authors](image)

**Figure 4. Most Relevant Authors**
Figure 4 illustrates the number of research publications published by each author. This section also presents the data of the most prolific authors with a blue chart. The darker the blue, the greater the number of publications related to the research topic. The number of publications produced by the author ranges from 0 to 3 documents. The author with the most publications relevant to the research topic is Irfan Syauqi Beik. Here are some of his works, namely papers entitled "The Optimization of Blockchain for Greater Transparency in Zakat Management," "Zakat Standard Framework of Halal Cryptocurrency," and "Problems and Solutions in Zakat Digitalization: Evidence from South Kalimantan, Indonesia."

Affiliates Analysis

Affiliates Analysis shows affiliation writer, the most published document about digital management in zakat institutions. The dark blue on the picture shows the published documents from the affiliation.

![Most Relevant Affiliations](image-url)

**Figure 5.** Most Relevant Affiliations

Airlangga University is an agency for writers that is at position top with amount publication of as many as four documents. From the data obtained, the University of Airlangga this To do publication related to topics studied in managed journal University Airlangga alone that is Journal Economy Sharia Theory and theory, and also in other journals, namely the Journal of Islamic Economic Laws and Shirkah Journal of Economics and Business.

Word Tree Map

Word TreeMap is a description of words that often appear in a data set of papers researched on the topic of management systems in zakat institutions in various forms. Word Tree Map displays word images of various sizes according to the number of words that appear.

Based on the Word TreeMap in Figure 6, the dominant words that appear most often are Zakat, Digital, Management, Blockchain, Era, Indonesia, Model, Strategy, Technology, and Amil.
Most of the zakat research is related to digital and management. That is in line with developments in the current industrial era, where everything can be accessed digitally. From this word tree map mapping, the word blockchain also emerges. The rapid development of technology today has caused several economic sectors to experience technological changes. Digitalization in the financial sector is a form of innovation, one of which is blockchain technology. This technology can be adopted and developed in any institution, including zakat institutions. Zakat management can be more accountable, practical, efficient, and transparent (Beik et al., 2021). That way, this blockchain technology can help amil in managing zakat in zakat institutions to be even better.

Thematic Map

In this study, thematic map analysis was carried out based on density and centrality and analyzed from document title data related to research topics divided into four quadrants.
This mapping shows an analysis of thematic maps based on density and centrality divided into four theme quadrants, as shown above. These results are obtained from a semi-automatic algorithm by reviewing the titles of all references to the research object and adding relevant keywords other than the authors. So the results can capture more profound variations.

The quadrant on the top left shows specific and underrepresented topics that remain areas of rapid development, as indicated by their high density but low centrality; those topics are "amil and Kalimantan," to some extent, "waqf technology model." the upper right quadrant represents the topic "motor" or "driving", meaning high density and centrality. The topics in this quadrant are "digital era BAZNAS." These topics should be further developed, considering their importance for future research.

Furthermore, the lower left quadrant is a topic that has been used for a long time but is experiencing a downward trend with a prominent low centrality. The topic is, to some extent, "asset management analysis," and the last one is the lower right quadrant is an essential topic characterized by high centrality. But low density. Among them are "Indonesia Covid Pandemic" and "Zakat Management Blockchain."

**Thematic Evolution**

The themes that are used and become the object of research continue to change, this can be known by comparing the newly published papers with those that have been published for a long time.

![Thematic Evolution](image)

**Figure 8. Thematic Evolution**

The evolution of research development can be seen in Figure 8. From the theme of management studies in zakat institutions, the thematic evolution results show several widely used sub-themes. The left section shows some of the widely used themes from 2019 to 2021, and there are four listed themes with different sizes depending on the number of themes used. The “results” theme took first place, followed by the “study” and “zakat” themes.

Meanwhile, on the right, several themes are widely used in 2022. Several themes that emerged during this period were an evolution of the previously used themes and were related in their content. For example, the “zakat” theme emerged as a form of revolution in the "results," "study," and "zakat" themes, and the "marketing" theme emerged from the theme "results," which. Indicated by the colorful groove. Two themes are listed in this section: "zakat" and "marketing."

**Findings**

Based on the results of the analysis above, it found that research on the topic of Digital Management in Zakat Institutions has been published by various journals and authors, resulting in
various topics. The number of research publications on digital management in zakat institutions is relatively small. During the last four years, only 25 articles were found. That indicates that the discussion related to this topic is still limited, so this research is instrumental in developing research on digital management at zakat institutions. Regarding the most widely used keywords in articles with the theme of Digital Management at Zakat Institutions, including Zakat, Digital, Management, Blockchain, Era, and Indonesia. Thematic map visualization shows that the terms Indonesia covid pandemic and zakat management blockchains are words or sentences in the lower right quadrant, which is referred to as the primary theme. These words and sentences become a central and relevant topic in research with the theme of Digital Management in Zakat Institutions. These keywords that often appear from all the data of the articles studied, mostly focus on the topic of digital zakat.

The use of digital technology is an opportunity as well as an innovation to develop a management system in zakat institutions. In its journey, blockchain and cryptocurrencies have been in the spotlight in discussions at zakat institutions, and this can be seen in the results of the mapping visualization that raises the term blockchain and cryptocurrency. Blockchain technology and cryptocurrency use in zakat institutions have also begun to be discovered.

Blockchain zakat is one of the media instruments to break the chain of zakat management and distribution, which requires quite a lot of time so that time efficiency is achieved in distribution and zakat to asnaf wherever they are. Blockchain has significant potential in the world of Islamic philanthropy because it is transparent (blockchain provides transparent origin, tracing, and transactions), controlled (access restricted to identified users), secure (ledgers cannot be altered or tampered with once data is entered so they are easily recognizable and avoid fraud), and real-time information (information will be updated for everyone on the network at the same time) (Hamdani, 2020).

Blockchain is created from data blocks that are connected through a cryptographic chain that is ordered by hash which contains 3 elements, namely block-data, chaining-hash, and block-hash. This technology pays attention to Islamic values (trust, justice, equality, and efficiency) in the financial sector to align with Islamic financial expectations. In the blockchain mechanism for zakat institutions, muzakki only needs to pay zakat through a blockchain application where the zakat institution program is listed. When the muzakki has paid zakat by choosing one of the zakat institutions, the transaction funds will be recorded in the blockchain ledger. So that transactions become transparent and easily accessible, every transaction on the blockchain is permanent. This can prevent the misuse of funds in zakat institutions (Beik et al., 2021).

In addition, the issue of the legality of cryptocurrencies is still a matter of debate. Cryptocurrency is a digital way to exchange currency and a digital payment network based on blockchain technology. Technically, we cannot use cryptocurrencies as more than just a medium of exchange during the process. To make an exchange, the system of 1 local currency for one cryptocurrency remains in effect to avoid fluctuations in value (An & Seo, 2018). Muslims are concerned about the halalness of the cryptocurrency payment platform and whether it is by sharia principles. Yaakob et al. (2022) conducted interviews with ten academic and practitioner experts to discuss the readiness to use cryptocurrency for digital zakat management. The results show that five main principles can be used as guidelines for readiness to accept cryptocurrency in zakat transactions, including knowledge, security, economy, improvisation, and technology.

Conclusion

This study focuses on the trend of research development with the theme of digital management in zakat institutions for the last four years, namely 2019-2022. The resulting data are from 25 published and indexed journals accessed online through dimensions.ai. The results show that some articles with the theme of digital management in zakat institutions have been published, whether seen from the mapping of journal publications, authors, and affiliates, so this topic has the potential to develop. Several topics and keywords in this research can be developed further, especially in research related to Islamic finance. In addition, prolific journals and writers can be used as references for other researchers researching this theme.
Therefore, it is necessary to encourage Islamic scholars to contribute to research on zakat management so that they can integrate knowledge into Islamic financial practices, especially in zakat institutions so that the management and distribution of funds in zakat institutions can be managed properly and appropriately.

**Author Contributions**

Conceptualization: Silma Lafifa Sunarya, Sabiq Al Qital  
Data curation: Sabiq Al Qital  
Formal analysis: Silma Lafifa Sunarya  
Investigation: Sabiq Al Qital  
Methodology: Sabiq Al Qital  
Project administration: Silma Lafifa Sunarya  
Supervision: Sabiq Al Qital  
Validation: Sabiq Al Qital  
Visualization: Silma Lafifa Sunarya  
Writing – original draft: Silma Lafifa Sunarya  
Writing – review & editing: Silma Lafifa Sunarya

**References**


