Biblioshiny-R Application to Map Islamic Audit Research

Syahdatul Maulida¹, Siti Fatimah Mohd Kassim²
¹Tazkia Islamic University College, Indonesia
²Management & Science University (MSU), Selangor, Malaysia

This research uses a qualitative bibliometric analysis approach using Biblioshiny R software, with the aim of evaluating and investigating the development of literature related to Islamic auditing. This research data was obtained from scientific publications contained in the Scopus database during the period 1997-2023. The research results show that the main journal most active in publishing articles on Islamic auditing is Journal of Islamic Accounting and Business Research, reflecting the focus and contribution of the journal in developing literature on this topic. In particular, the most productive author in this context is Hussainey K, who has made a significant contribution in publishing articles on Islamic audits indexed in Scopus. Keyword analysis shows that “Islamic Banks” emerged as the most frequently appearing keyword related to sharia audit, highlighting the importance of sharia audit in the context of Islamic banking and financial institutions. This research also finds 5 (five) clusters of Islamic audit studies.

Keywords: Islamic Audit; Scientometric; Biblioshiny; R
**INTRODUCTION**

Shariah audit is defined as the process of the extent of compliance of financial institutions that follow the rules of Islamic Shariah in all activities, including contracts, risks, and financial statement operations (Khatib et al., 2022). In other words, Shariah audit is an assessment of the degree to which an Islamic financial institution complies with the principles and rules of Islamic law in all its actions, including contracts, risks, and financial statement operations. In addition, Shariah auditing ensures that Islamic financial institutions and other organizations comply with Shariah law, which is a collection of divine values and directives that Muslims follow to lead a good life (Omar, 2019; Puad et al., 2020). On the other hand, Islamic auditing is an important part of the governance organ of Islamic Financial Institutions (IFIs) and operates in accordance with IFI policies. In addition, Shariah audit should be conducted in accordance with fatwas, regulations, and guidelines issued by the Shariah Supervisory Board (DPS), accounting standards of the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), national accounting standards and practices, and other laws and regulations in the applicable conventional law. Sharia auditing practices are mainly focused on the financial aspects of an institution in accordance with Sharia in order to improve the integrity of the report (Shahar et al., 2018). Thus, Shariah auditing is important to ensure that Islamic financial institutions comply with Shariah principles and rules and to improve the integrity of their reports.

In practice, Shariah audits are conducted by internal and external auditors who assess whether material Shariah rules, principles, and guidelines are generally accepted by the Islamic community. This means that there are two types of audits: internal audits conducted by the organization’s internal audit department, while external Shariah audits are conducted by independent external auditors and external audits conducted by external auditors who have professional knowledge and competence of auditing and relevant Shariah principles and rules (Uula, 2020). External Shariah audit provides independent assurance to the Shariah Committee and Board of the company on the Shariah compliance status of its operations, whereas internal audit ensures that the management of the Islamic financial institution fulfills its responsibility of adopting Shariah principles as mandated by the Shariah Supervisory Board. External Shariah audits are important to maintain credibility in the market and to provide a higher level of assurance for the entity (Uula, 2020). In addition, external Shariah audits also ensure that material Shariah rules, principles, and guidelines are generally accepted by the Islamic community. Usually, external sharia audits are conducted annually and verify the company’s financial statements conducted by independent or external auditors (Algabry et al., 2021).

According to Uddin et al (2013), the concept of Islamic auditing should be expanded to cover many different areas ranging from systems, products, employees, environment, and society. To ensure that the objectives of Shariah compliance are achieved and benefit society as a whole, Islamic financial institutions must develop a robust Islamic audit framework. Compared to conventional audits that only involve business owners as clients, audits in the Islamic framework have a broader scope. To ensure sharia compliance, such as contract fulfillment, honesty, avoidance of monopoly, and waste, Islamic auditors must consider religious principles and assess management practices. As a result, Islamic auditors must have a good understanding of Islamic law.

Furthermore, Shariah auditing has a number of advantages, such as ensuring that Islamic financial institutions and other organizations comply with Shariah law; providing certain assurances to stakeholders that material Shariah rules, principles, and guidelines are generally accepted by the Islamic community; helping to assess how well the internal control system for Shariah compliance is working; and assisting in adopting Shariah governance mechanisms, which contribute to facilitating and enhancing the overall functioning and activities of Islamic financial institutions and help maintain the credibility of Islamic financial institutions in the market and ensure that they follow relevant laws and regulations (Yasoa et al, 2020; Puad et al., 2020; Algabry et al., 2020; Algabry et al., 2021).

However, amidst the advantages and development of Islamic auditing, Islamic auditing faces several challenges or problems. One of the main problems is the limited number of auditors with Shariah and technical accounting and auditing qualifications. As a result, it is difficult to find qualified auditors to conduct Islamic audits. The issue of independence is also an issue that can affect the reputation of Islamic financial institutions as institutions that meet good auditing standards. This issue may impact the financial statements rather than the broader concept of Shariah auditing. It is very
difficult to ensure that all business activities comply with Shariah principles. Islamic auditing also faces issues in terms of audit scope as it tends to have different risks than conventional banking businesses. Standards are used for the most thorough audit techniques, which emphasize that Shariah compliance is the primary and mandatory objective. (Arwani, 2018; Omar, 2019).

Based on this explanation, it can be concluded that Islamic auditing continues to develop in line with the development of the Islamic industry globally. Therefore, it is important to conduct discussions related to Islamic auditing. Research related to literature studies on the development of research related to Islamic auditing is still limited. Some relevant studies include Khatib et al (2022) explaining the development of Islamic auditing. The findings of this study indicate an increase in Islamic audit literature over time, especially in the Malaysian context, with a dearth of research in other contexts and institutions (Takaful). It was also revealed that the existing literature remains unclear on the effectiveness and consequences of effective Shariah auditing, suggesting the need for more work in this area. The authors outline opportunities for future Shariah auditing research.

Arwani (2018) explains the issues and challenges of shariah auditing in Islamic financial institutions and corporate governance compliance. This study focuses on the perspectives of practitioners who are directly or indirectly involved in the shariah compliance and audit process in Islamic financial institutions (IFIs) related to shariah audit standards, auditor qualifications, and independence. Audits in Islamic financial institutions cover a broader scope compared to conventional financial statement audits, where external auditors of IFIs conduct shariah compliance tests in accordance with fatwas and guidelines set by the Sharia Supervisory Board (DPS). This is due to the requirement to ensure that all of the IFI's business activities and operations comply with shariah teachings. This shariah audit process is very important for Islamic financial institutions as it can affect their good reputation. However, there are several obstacles, such as the scarcity of qualified shariah, accounting/auditing auditors, as well as issues related to the threat of self-review that may affect auditor independence.

Other relevant research includes Omar (2019) examining the issues and challenges of shariah compliance auditing in Islamic financial institutions. Algabry et al (2020) explain the conceptual framework of the effectiveness factors of internal Islamic audit in Islamic banks. Abdul Rahman (2010) explains the needs and challenges of Shariah Audit for Islamic Financial Services. Shahar et al (2018) which discusses shariah audit for Islamic financial institutions. Rashid & Ghazi (2021) present a theoretical framework, which helps ascertain the meaning of Sharia audit quality and identify the factors that influence it. And, Shafii et al (2010) discuss the development of a Shariah compliance audit framework and a Shariah audit program to manage Shariah non-compliance audit risk in Islamic financial institutions.

Given the growth and development of Islamic economics, especially in Islamic auditing, which continues to increase, it is important to have further research to see the extent of the development of Islamic audit research. In this case, it can be measured using biblioshiny analysis. Biblioshiny analysis is usually used to measure the distribution of articles, article authors, article publishing organizations or institutions, and keywords along with their development trends discussed in accordance with the research theme raised. Therefore, the purpose of this study is to conduct a thorough literature review by identifying gaps in research and helping academics and practitioners to further explore research on "Islamic audit" in the future.

**METHODOLOGY**

This research is a qualitative research with bibliometric analysis with the analytical tool used, namely R Biblioshiny from various publications on Islamic Audit. The data source of this research uses secondary data in the form of books, articles, or other publications published in various journals with research topics on Islamic Audit indexed by Scopus. The search results found 213 research publications which then became the sample in this study. Bibliometric analysis identifies various elements associated with research articles, including keywords used, authors, publishing journals, and topics discussed. In bibliometric analysis, bibliometric mapping is a frequent research topic, with at least two different bibliometric elements, namely, the construction of bibliometric maps and their graphical representation. Most bibliometric literature focuses on the construction of bibliometric maps (Marlina et al., 2021).

Furthermore, the R Biblioshiny analysis tool is a widely used tool for conducting bibliometric studies and produces reliable results (Alshater et al., 2022). The bibliometric mapping was analyzed using R Biblioshiny.
software which is freely available at: https://bibliometrix.org/. Graphical representation of bibliometric maps has received less attention. Although there are some researchers who seriously study issues related to graphical representation, most articles published in the bibliometric literature rely on simple graphical representations provided by computer programs (Assalafiyah et al., 2022).

RESULTS AND DISCUSSION

<table>
<thead>
<tr>
<th>Description</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAIN INFORMATION ABOUT DATA</td>
<td></td>
</tr>
<tr>
<td>Timespan</td>
<td>1997:2023</td>
</tr>
<tr>
<td>Sources (Journals, Books, etc)</td>
<td>117</td>
</tr>
<tr>
<td>Documents</td>
<td>213</td>
</tr>
<tr>
<td>Annual Growth Rate %</td>
<td>13,51</td>
</tr>
<tr>
<td>Document Average Age</td>
<td>5,13</td>
</tr>
<tr>
<td>Average citations per doc</td>
<td>12,77</td>
</tr>
<tr>
<td>References</td>
<td>1</td>
</tr>
<tr>
<td>DOCUMENT CONTENTS</td>
<td></td>
</tr>
<tr>
<td>Keywords Plus (ID)</td>
<td>87</td>
</tr>
<tr>
<td>Author’s Keywords (DE)</td>
<td>576</td>
</tr>
<tr>
<td>AUTHORS</td>
<td></td>
</tr>
<tr>
<td>Authors</td>
<td>393</td>
</tr>
<tr>
<td>Authors of single-authored docs</td>
<td>50</td>
</tr>
<tr>
<td>AUTHORS COLLABORATION</td>
<td></td>
</tr>
<tr>
<td>Single-authored docs</td>
<td>54</td>
</tr>
<tr>
<td>Co-Authors per Doc</td>
<td>2,3</td>
</tr>
<tr>
<td>International co-authorships %</td>
<td>30,05</td>
</tr>
<tr>
<td>DOCUMENT TYPES</td>
<td></td>
</tr>
<tr>
<td>article</td>
<td>170</td>
</tr>
<tr>
<td>book</td>
<td>6</td>
</tr>
<tr>
<td>book chapter</td>
<td>16</td>
</tr>
<tr>
<td>conference paper</td>
<td>6</td>
</tr>
<tr>
<td>conference review</td>
<td>2</td>
</tr>
<tr>
<td>note</td>
<td>1</td>
</tr>
<tr>
<td>review</td>
<td>12</td>
</tr>
</tbody>
</table>

The table above shows the main metadata information used as a research sample. The total number of documents in this study is 213 documents indexed in the Scopus database during the period 1997 to November 16, 2023. These documents came from 117 different journal sources, showing the diversity of information sources used in the research. Involving a total of 393 authors, this study covers a wide range of contributions in scientific publications related to Islamic auditing. Furthermore, the types of documents identified in this study include 170 journal articles, 6 books, 16 book chapters, 6 conference papers, 2 conference reviews, 1 note, and 12 reviews. This data illustrates the diversity in publications related to Islamic auditing, with journal articles dominating as the main document type used in the sample.
The graph illustrates the number of published documents on the topic of Islamic auditing indexed in Scopus over a 26-year period, starting from 1997 until November 16, 2023. Trend analysis shows a significant increase in scholarly publications on Islamic auditing each year. There is a noticeable difference in the number of documents over the observation period.

In the early period, from 1997 to 2008, it appears that the production of scholarly publications on Islamic auditing was very limited. However, from 2009 to 2023, there was a significant surge in the number of publications. The peak occurred in 2020, with 34 scientific publications. This striking difference reflects an increase in public awareness and interest in sharia auditing over time.

The graph illustrates that the topic of Islamic auditing is gaining wider attention and acceptance, especially since 2009. The increase in the number of scientific publications can be interpreted as an indication of the increasing need for information and understanding related to Islamic auditing among academics, researchers, and practitioners. This data provides a perspective on the dynamics of knowledge growth in the field of Islamic auditing during the time period studied.
The figure illustrates the graph of average citations per year in scientific publications on the topic of Islamic auditing indexed in Scopus. Analysis of the graph shows fluctuations in the average citations from year to year. It can be seen that the average number of citations in the documents tends to vary throughout the observation period. However, it is interesting to note that 2001 reflects the year in which these documents received the highest average number of citations per year. This was approximately 5.4 citations per year. This suggests that scholarly publications on Islamic auditing in that year received greater attention and recognition compared to other years.

Figure 3. Three Fields Plot

The image above is a visual representation of three main interconnected elements: the names of the journal publications, the author list, and the keywords. The connections between these elements are shown through gray lines, which indicate the relationship between them. Meanwhile, rectangles of various sizes reflect the frequency of each element.

In the first element, there are eleven Scopus-indexed journals in the Three Fields Plot that publish papers related to the theme of Islamic auditing. The main journal that stands out is the "Journal of Islamic Accounting and Business Research," marked with a red rectangle linked to the authors. This indicates that the journal is the main source of publications in Islamic auditing.

The second element lists the names of the authors, where some authors are associated with the journals mentioned earlier. In this context, Hussainey K, depicted with an orange rectangle, is seen as the most prolific author in publishing articles on the theme of Islamic auditing indexed in Scopus.

The third element on the right of the image depicts related research topics. Each topic is linked to authors who are actively writing about the relevant topic. From the figure, there are 20 keyword topics listed. The keyword "Islamic Banks" appears with the highest frequency, marked with a light green rectangle. This reflects the close relationship between the keyword "Islamic Banks" and the theme of Islamic auditing.
The figure listed above shows a visual representation of the network of keywords found in published articles on Islamic auditing. This visualization forms groups of interrelated keywords, forming five clusters that can be identified through different colors. Each cluster is connected through the network to other keywords, and each cluster has a specific theme that helps in categorizing relevant research. This network map provides assistance to researchers and academics to understand the structure of interrelated research topics in Islamic auditing literature. These clusters play a role in organizing and grouping research with a similar focus or theme, thus facilitating further analysis and understanding of the topic. The following table contains the research clusters:

Table 2. Research Clusters

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Keywords.</th>
<th>Relevant journals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Shariah governance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- AAOIFI accounting standards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Financial performance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Earnings management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Audit committee</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Board of directors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Corporate governance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- IFRS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Accounting standards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Corporate social responsibility</td>
<td></td>
</tr>
</tbody>
</table>
Cluster 3:  
- Islamic accounting  
- Islamic finance  
- Sharia audit  
- Accountability  
- Financial reporting  

(Karim, 2001) (M. K. Hassan et al., 2019)

Cluster 4:  
- Islamic financial institutions  
- Accounting  
- Auditing  
- Finance  

(Kamla, 2009) (Khatib et al., 2022)

Cluster 5:  
- Sharia audit  
- Sharia supervisory board  
- AAOIFI governance standards  


DISCUSSION

Based on research findings, it can be observed that the trend of scientific publications related to sharia auditing has experienced significant growth in the last few decades. It is important to remember that this research has a dynamic nature, so the results may fluctuate along with the research period which is influenced by various variables and other factors. Nevertheless, the visible increase in the number of scientific publications and average article citations reflects an increase in interest in research in the sharia audit domain. This increase reflects the relevance and increasing need for sharia audit practices among academics and practitioners. These results can be interpreted as a response to the complexity and importance of sharia auditing in the context of Islamic finance. This increasing interest can also be reflected in the increasing amount of research conducted in this area, which in turn can enrich the shariah audit literature and provide new insights regarding audit practices that are in accordance with shariah principles.

The sustainability and growth of the Islamic banking and finance industry is one of the main factors driving the urgency of sharia audit practices (Rahman, 2007). Islamic banking requires strong and efficient corporate governance mechanisms in the context of Islamic principles to ensure compliance with sharia values. One of the key steps in maintaining stakeholder compliance and trust is through the assurance function, which is realized by the sharia audit unit. This function allows Islamic financial institutions to routinely monitor their Shariah compliance, which in turn increases stakeholder trust (Mohd Ali et al., 2020).

Sharia audit practices have a positive impact on the credibility of financial institutions. In general, investors tend to view audited information as more trustworthy than unaudited information (El-Halaby & Hussainey, 2015).

Sharia audits have a crucial role as periodic assessments to provide independent assessments and objective guarantees. The main objective is to increase value and ensure the level of compliance with sharia principles in the business operations of financial institutions (BNM, 2010). Sharia audit practices vary among Islamic financial institutions. Although some carry out internal sharia audit activities by internal departments, there are also those who outsource these activities to external service providers (Algabry et al., 2020). Although sharia audit plays an important role in ensuring compliance and operational integrity of sharia financial institutions, this practice is also faced with a number of challenges, as highlighted by research by Kasim & Sanusi (2013), engaging external auditors to carry out the sharia audit function can lead to increased operational costs for the institution Islamic finance. These challenges reflect the complex dynamics involved in implementing shariah audit practices and maintaining expected levels of compliance.

Furthermore, the results of this research also identify research clusters related to sharia auditing. In a number of clusters, AAOIFI is a word that appears frequently. AAOIFI’s presence in this cluster can be explained by its central role as an international institution that has responsibility for developing and issuing financial, accounting and auditing standards specifically for Islamic financial institutions. Sharia audit standards issued by AAOIFI play a key role in providing guidance and guidelines for auditors involved in Islamic financial institutions.
in the audit process of financial institutions that operate in accordance with sharia principles. This is directed at ensuring compliance with sharia principles that underlie sharia banking operations (Sarea & Hanefah, 2013).

The formation of AAOIFI in 1991 is also recognized as a significant step in filling the gap in the spectrum of Islamic finance operations. Previously, this spectrum did not fully reflect the actual performance of sharia banking. By developing standards and guidelines, AAOIFI helps direct Islamic financial institutions to operate in accordance with sharia principles, and therefore, can ensure their financial reports provide an accurate picture and comply with Islamic principles (Quttainah et al., 2013).

Thus, this research highlights the important role of AAOIFI in sharia audit practices at the global level. AAOIFI standards mandate transparency in audits, with a focus on providing adequate evidence to confirm Islamic banking's compliance with sharia principles and fatwas issued by the Sharia Supervisory Board (SSB). In addition, AAOIFI governance standards for sharia banking emphasize the importance of the auditor's contribution in providing observations on annual financial reports (AAOIFI, 1999). Through its comprehensive role, AAOIFI plays a key role in advancing sharia auditing standards and practices throughout the world.

CONCLUSION

Sharia audit is an assessment of the level of compliance of an Islamic financial institution with the principles and rules of Islamic law in all its actions, including contracts, risks and financial reporting operations. This research aims to evaluate and investigate the development of literature related to sharia auditing. The research results show that the number of scientific publications related to sharia auditing has increased significantly every year, reflecting the increasing interest and relevance of this topic in academic literature. However, the average citations from year to year fluctuate, indicating variations in the level of influence and acceptance of sharia audit literature. The main journal most active in publishing articles on sharia auditing is the "Journal of Islamic Accounting and Business Research," reflecting the journal's focus and contribution in developing literature on this topic. In particular, the most productive author in this context is Hussainey K, who has made a significant contribution in publishing articles on sharia audits indexed in Scopus. Keyword analysis shows that “Islamic Banks” emerged as the most frequently appearing keyword related to sharia audit, highlighting the importance of sharia audit in the context of Islamic banking and financial institutions.

REFERENCES


Biblioshiny-R. Journal of Islamic Economic Literatures, 3(2).


