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# A WEB APPLICATION DASHBOARD: AN APPLICATION OF BIBLIOMETRIC ANALYSIS OF ZAKAT

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## ABSTRACT

In general, displaying Bibliometric Analysis of Zakat results as a dashboard is difficult for researchers, especially when certain graph outputs cannot be included due to limited technical knowledge and the limited type of charts available in the market. This web application displays Bibliometric analysis with the *Biblioshiny* web application from R programming. Bibliometric analysis, including several charts, is used to visualize the science mapping. One of the major benefits is for non-coders which the researcher can create an interactive dashboard utilizing an open-source dashboard platform without having to go through a hassle in coding to perform bibliometric Analysis. Researchers will also benefit from Diversity: which can display results through interactive charts and visuals, Rapid prototyping: which can reuse the dashboard for another subject and parameters, Design: sophisticated graphic capabilities can be created, and Structured: having a clear framework of analysis and the results can be added into report compilation and be downloaded in single Excel document with different sheets according to analysis flow.

**Key Words:** Bibliometric Analysis, Web dashboard, Zakat bibliometric, Zakat trend

## 1. INTRODUCTION

Zakat is a Muslim obligation. Paying zakat is proof of a Muslim's faith and piety besides praying (Hayeeharasah et al., 2013). Zakat has become one of the Islamic financial instruments that have significant roles in overcoming the problem of poverty (Amalia et al., 2020). The contribution of zakat to Islamic social well-being has long been recognized on its significant role. Due to the rapid growth of scientific research in Zakat, there is an urgent need to examine trends in knowledge construction and plan future research and Bibliometric analysis is one of the solutions to this need.

Organizing bibliometric analysis could be time-consuming and challenging especially when certain graph outputs cannot be included due to limited technical knowledge and the limited type of charts available in the market. Therefore, the *Biblioshiny* web application dashboard can be utilized to address these challenges.

This web application displays Bibliometric analysis with the *Biblioshiny* web application from R programming. Bibliometric analysis, including several charts, is used to visualize the science mapping.

## 2. LITERATURE REVIEW

Few researchers were found to explore bibliometric analysis in the Zakat area. It would be wise to look at the bibliometric tools in general and the application of Zakat recently.

## 2.1 Biblioshiny Application

Biblioshiny is an open-source tool for executing a comprehensive science mapping analysis of scientific literature (Aria & Cuccurullo, 2017). It was programmed in R to be adaptable and simple to integrate with other statistical and graphical packages. Indeed, bibliometrics is an ever-changing science, and bibliometrics has the ability to be rapidly improved and incorporated.

## 2.2 Bibliometric Analysis of Zakat

Researcher globally has utilized different tools in performing bibliometric analysis Haneef (2022) has focused on examining and evaluating the trends in Islamic economics research, analysing the contents and topics in relation to the primary objectives of the discipline, and recommending future research trends based on current realities and objectives which has adopted the PRISMA-P process in the research.

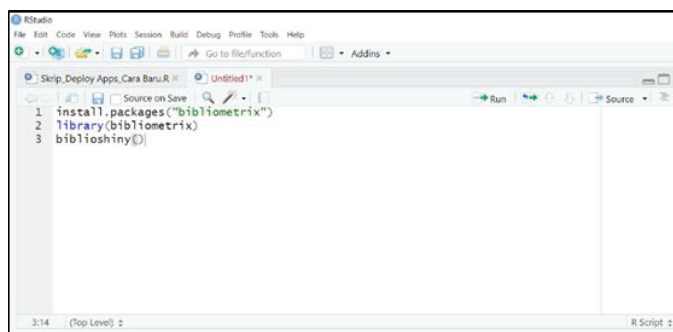
Wahyudi, M., Ahmi, A., & Herianingrum, S. (2022) in their research of Zakat was aimed to examine the development of zakat research from the aspects of five bibliometric indicators: (1) current development of zakat research and its distribution; (2) topic areas and themes in zakat research; (3) main contributors of zakat research; (4) current collaboration pattern in zakat studies; and (5) most influential documents in zakat literature has utilized Microsoft Excel for frequency analysis, VOS viewer for data visualization, and Harzing's Publish or Perish for metrics and citation analysis

## 3. METHODOLOGY

This study aims to demonstrate the *Biblioshiny* web application dashboard from R programming in performing bibliometric analysis. The keyword Zakat is used to retrieve articles from the Scopus database and metadata of the articles obtained was downloaded into CSV files which contained the metadata of 661 articles. The web application dashboard was generated from Rstudio.

## 4. RESULTS & DISCUSSION

Figure 1 shows three lines of code that were used to generate the web dashboard.

The image shows a screenshot of the RStudio interface. The main window displays an R script with three lines of code:

```
1 install.packages("bibliometrix")  
2 library(bibliometrix)  
3 biblioshiny@
```

The RStudio window includes a menu bar at the top with options like File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, and Help. Below the menu bar is a toolbar with various icons. The script editor shows the code lines with line numbers. The status bar at the bottom indicates the current line is 3:14 and the file is 'R Script 1'.

Figure 1. Generating Biblioshiny web dashboard.

The metadata then was loaded into the web dashboard and ready to perform a bibliometric analysis. The completeness of bibliometric metadata can be observed once the data was loaded in the dashboard as shown in Figure 2.



themes. Researchers were free to choose the unit of analysis according to their research focus and objectives. The user-friendly interface with additional features of compiling the report into one document can greatly reduce the amount of time needed to perform the bibliometric analysis.

## 5. CONCLUSION

The current research has demonstrated the application of Biblioshiny in performing bibliometric analysis of Zakat. One of the major benefits is for **non-coders** which the researcher can create an interactive dashboard utilizing an open-source dashboard platform without having to go through a hassle in coding to perform bibliometric Analysis. Researchers will also benefit from **diversity**: which can display results through interactive charts and visuals, **rapid prototyping**: which can reuse the dashboard for another subject and parameters, **design**: sophisticated graphic capabilities can be created, and **structured**: having a clear framework of analysis and the results can be added into report compilation and be downloaded in single Excel document with different sheets according to analysis flow.

## RECOMMENDATION

One of the study's limitations is that the data for this study was only gathered from the Scopus database. It would be far more advantageous if other researchers could conduct bibliometric analyses of Waqf by combining the data from Dimensions, PubMed, Web of Science (WoS/Wok), the Cochrane Library, or another database.

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