Research Article

Understanding the Research of Bureaucracy in Indonesia: A Bibliometric Analysis

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Abstract.
A bibliometric analysis was conducted to understand and analyze the growth of publications on bureaucracy in Indonesia. This is conducted by collecting several journal-based data sources using Google Scholar, which is then integrated using Publish or Perish. Using Mendeley, 606 journal articles were examined pertaining to the year of publication, the author's name, the institution, and the title of the article. Additionally, a visualization of co-occurrence and co-authorship was constructed using VOSviewer to show the evolution and interconnections across published journals. Further, a density visualization indicates the relationship through color saturation. Lastly, mapping visualization demonstrates the relationship between topics by thread lines. This analysis shows that the research on Indonesian bureaucracy is becoming more prevalent throughout the year. Further, the topic of good governance is the most over-researched topic.

Keywords: Bureaucracy, Indonesian Bureaucracy, bibliometric analysis

1. Introduction

Bibliometric analysis is an analytical study of scientific research based on the premise that in order for knowledge to advance, a researcher must share the results of his research with other scholars. According to Diodato in Royani, bibliometric analysis is the measurement or examination of various literary works using mathematical and statistical methods. According to Ishak (2005), the benefits of bibliometric analysis include recognizing the direction of science in various subjects, examining the distribution of scientific literature, and assisting in determining how comprehensive secondary literature is in a particular field of study. Bibliometrics is also defined as the mathematical and statistical analysis of documents' use and publication patterns.

Numerous articles and scientific journals discuss various aspects of bureaucracy in Indonesia. From the development of bureaucracy in Indonesia, good governance, to case studies of bureaucracy being tested in specific government institutions, and so
on. Bureaucracy research is widely disseminated in national and international journals, as well as by universities, government institutions, and collaborations between the two.

It is critical to evaluate research on Indonesian bureaucracy so that future scholars can determine which issues have received the most and which have received the least attention. It is expected that this will serve as a resource for scholars to elaborate on still-controversial themes and inspire further study of unexplored areas, resulting in a more comprehensive and diverse range of publications than previously available. It also aims to provide readers with access to the most recent data as well as advancements in Indonesian bureaucracy that authors or scholars have researched. Furthermore, the urgency to understand what research in Indonesian bureaucracy comes from the empirical practices of bureaucracy in Indonesia. The practice of bureaucracy in Indonesia continues to leave many complex problems, ranging from achieving bureaucratic efficiency, quality of bureaucracy, meritocracy issues, and the idealism of achieving world-class bureaucracy.

It is then critical to evaluate research on Indonesian bureaucracy so that future scholars can determine which issues have received the most and which have received the least attention. It is expected that this will serve as a resource for scholars to elaborate on still-controversial themes and inspire further study of unexplored areas, resulting in a more comprehensive and diverse range of publications than previously available. It also aims to provide readers with access to the most recent data as well as advancements in Indonesian bureaucracy that have been researched by authors or scholars.
2. Method

The bibliometric analysis method was used in the investigation of the development of research in Indonesian bureaucracy. This analysis is being conducted with the goal of assessing the interrelationships between journal articles about the Indonesian bureaucracy as well as knowing and analyzing advancements in bureaucratic research in Indonesia. Data mining was used to obtain 606 journal articles using the Publish or Perish and Google Scholar. For that data mining, the keywords "Bureaucracy," "Indonesian Bureaucracy," and "Indonesian Bureaucracy" were used. Further, using VOS Viewer, macroscopic images of the relevance of journal publications on bureaucracy were visualized.

Schematic of Bibliometric Analysis Method

2.1. Publish or Perish

Publish or Perish is used to collect journals about "Indonesian Bureaucracy." We use Publish or Perish because it is already integrated with Google Scholar, which greatly improves the effectiveness of the journal gathering and sorting process. We searched for various journals using the keywords "Bureaucracy," "Indonesian Bureaucracy," and "Indonesian Bureaucracy." Following that, we gathered the journals that had been manually collected with Publish or Perish and re-sorted them based on their relevance. 606 of the 1000 articles found are relevant to our investigation and are displayed as schematics or charts before being saved in RIS (Research Information Systems Documents) format. We then used Mendeley and VosViewer to evaluate the collection of journals we had compiled into a RIS.

2.2. Mendeley

Mendeley was used to examine the journals we collected. The examination focuses on the author's name, affiliated institution, publication name, and year of publication. For the literature reviews, we also use Mendeley to generate citations and a bibliography. The results and analysis section contains additional information about the analysis.
2.3. VOSviewer

VOSviewer is used to obtain co-occurrence and co-authorship visualization results in order to evaluate the association between each research article. In this analysis, the full counting method was used, which counts every instance of each word as well as the author's name. The results were then visualized in three ways: network visualization,
overlay visualization, and density visualization, which will be discussed in greater detail in the results and analysis section.

2.3.1. Co-authorship

The first step in creating a visualization is selecting the data type & visualization map type. Hence, in this paper, the data visualization was based on the bibliographic data.
The next step is data reading. The articles were collected using a reference management tool, therefore the data was in RIS files.

Upon the completion of the data reading, we select the right articles that fall under the discussed topic.

*Further, we employed the full-counting method to conduct the co-authorship analysis.*
Next, we established a threshold, or the minimum number of papers that each author published. One is the cutoff point.

Because we employ the cutoff point of 1, all 749 articles (the total number of authors) were included in the visualization analysis.

At this stage of analysis using the VosViewer, the choice to exclude specific writers’ names from the graphic was given.
However, in order to enrich the analysis, we did not remove the names of writers who are unrelated to other authors. As a result, 9 author names were analyzed.

2.3.2. Co-occurrence

For the co-occurrence analysis, the first three steps are similar to co-authorship analysis. These steps are as follows:

1. Selection of data type
2. Selection of data source, and

3. Selection of RIS data from the reference manager files

Further step is choosing the title and abstract fields from the list of fields to be extracted. When this is done, the next step is choosing the counting method. For this analysis we chose ‘full counting method’
The next step is to determine the cutoff point (or threshold) of the minimum occurrences. This is done to reach the ideal number of occurrences for solid analysis.

The next step is verifying the selected terms. The terms verification is done by re-checking the terms, all over again, and removing unnecessary or unrelated terms.

The last step of the co-occurrence visualization is deciding whether or not unrelated items will be included in the analysis.

The last step of the co-occurrence method is deciding on whether or not words that are unrelated to other words are included in the visualization analysis.
3. Results and Analysis

Through Mendeley, we were able to identify 606 journal articles on bureaucracy in Indonesia. The publications were gathered across the year of 2000 to 2022, with the completed information on the number of journals published by the publisher. Three additional visualizations were also added to complement the co-occurrence and co-authorship visualization in VosViewer.

3.1. Year of Publication and Development of Bureaucracy Publications in Indonesia

Using Publish or Perish, there were only a few or even no journal articles found for the year 2000 and before. Therefore, we decided we would analyze the articles published after 2002 to 2022. The table below shows the number of journal articles published throughout the year.

3.2. Name of the Journal (Publisher) and Total Number of the Journals Article

Further, using publish or perish we were also able to identify the name of the journals in which research articles using the keywords of ‘Bureaucracy’ and ‘Indonesia’. This is completed with the information on the number of articles per journal. Journal of Borneo
Administrator and Journal of Administrative Science: Media Development Science and Practice are two top journals publishing research on bureaucracy in Indonesia.

3.3. Author's Name and Number of Journals Published

Upon analyzing 606 journals from 749 authors, we were able to identify that 16 authors wrote more than two articles. Out of these 16 authors, six stand out to authoring most articles with the topic of bureaucracy in Indonesia. Prasojo, Wahyudi, Katharina, Sudrajat Wakhid and Jati are the top six authors.
3.4. Top Publisher and Number of Articles

We were also able to identify top publications for the topic of bureaucracy in Indonesia. The publisher name & the affiliated organization and also the number of publications.
3.5. Co-authorship Visualization

Co-authorship visualization shows the network among authors researching & publishing topics on the Indonesian bureaucracy. In co-authorship visualization, the closer the dots are between the authors, the more their collaboration. By analyzing 606 journal articles, co-authorship analysis shows that there are 9 authors who are related to each other. They are Lawere, Kairupan, Pangemanan, Reynaldi, Sumampouw, Mosso, Singkoh, Moniung and Liando. In addition, co-authorship analysis can also show the level of activity of each author in publishing research articles on Indonesian bureaucracy. In 2017, two authors, Moniung and Liando, are among the top researchers actively publishing articles. In 2019 two other names, Lawere and Kairupan are top authors.

![Figure 21]

3.6. Co-occurrence Visualization

In the Co-occurrence Visualization, we were able to do a sub-topic clustering that each consisted of keywords that fell under the topic of Indonesian Bureaucracy. The table below shows the nine clusters of related keywords.

An overlay visualization in the VoSviewer gives more insight in understanding these nine clusters. During the period of 2012-2014 it can be understood that research in the Indonesian Bureaucracy has revolved around the sub-topics of government. Further in 2018, the research focus more on the implementation and public servant.
Using VOS Viewer, a Density Visualization helps to highlight what keywords that frequently appear and discussed by way of color saturation. The brighter the color, the more frequent the keyword appears and vice versa. Hence, sub-topics such as government, implementation, performance, civil society and good governance have been widely studied by researchers working on the Indonesian bureaucracy. However, other sub-topics such as reviews and culture are under-researched. Thus,
it is recommended that the future research of bureaucracy in Indonesia should focus more on culture in bureaucracy and review of bureaucracy.
4. Conclusion

This paper has analyzed 606 journal articles about bureaucracy in Indonesia. With such a large amount of publications, this paper is able to show the development of research on bureaucracy in Indonesia. Here are the highlights of the finding:

1. The production of knowledge on the Indonesian Bureaucracy has shown significant progress during the last 22 years.

2. Journal of Borneo Administrator and Journal of Administrative Science: Media Development Science and Practice are two top journals publishing research on bureaucracy in Indonesia.

3. The institutions that publish the most journals related to bureaucracy in Indonesia are higher education institutions.

4. Prasojo, Wahyudi, Katharina, Sudrajat Wakhid and Jati are the top six authors in the research of Bureaucracy in Indonesia.

5. In 2017, two authors, Moniung and Liando, are among the top researchers actively publishing articles. In 2019 two other names, Lawere and Kairupan are top authors.

6. Sub topics such as government, implementation, performance, civil society and good governance have been widely studied, yet the sub-topics such as reviews and culture are under-researched.

References


