Bibliometric Analysis in the Development of Research on Covid-19 Policy in Indonesia in 2020-2022

ULFAH OKTARIDA SIHALOHO, HERU NURASA, RAMADHAN PANCASILAWAN

ABSTRACT
This study tries to analyze the bibliographical character and content of covid policy articles published in Scopus indexed journals and written from 2020-2022. We retrieved data from Scopus Database on July 14, 2022 at 13:50. We use “Covid-19 Policy Indonesia” as a keyword with several categories, namely title, abstract and keywords, filtered by subject area (social science; business, management, and accounting). From a global perspective, research on covid policies in the 2020-2022 range has increased. There are 7 clusters. Indonesia has quite a lot of research related to the Covid-19 Policy in Indonesia, but not many studies have discussed Public Administration. Research themes for covid-19 policies in Indonesia related to Public Administration, Policy Innovation and Collaborative Governance will be interesting to be researched in the future. There is also an opportunity to conduct research on Covid-19 Policy in the context of social science related to public administration. Keywords: Covid-19 Policy, Indonesia, Bibliometric Analysis, Public Policy

INTRODUCTION
The presence of the Covid-19 Pandemic has brought a major disruption, especially in public administration throughout the world (Febrianto; Sparrow; Sarrasanti, 2020). As a result of the pandemic, all countries
immediately moved quickly in making new policies that were most effective, effective and in accordance with their countries to prevent the spread of the corona virus while at the same time being able to carry out public administration that remained effective and efficient (Prabowo; Rosyadi; Purnomo, 2022). Regulations related to the pandemic then gave birth to innovations in policies during the pandemic in many countries in the world (Salehudin; Irawanto; Widiana, 2021).

Indonesia is the same way, with the pandemic, the Indonesian government immediately moved quickly to prevent its spread by issuing policies related to the pandemic so that it could prevent transmission and at the same time be able to carry out effective and efficient public administration which was then relegated to regional regulations by each region contained in Indonesia (Andarwulan; Regus; Wahyuni, 2021).

The difference between this study and previous research is that this research focuses on literature related to covid-19 policies in Indonesia, researchers did not find any articles that discussed articles on covid-19 policies that had been published in Indonesia.

The purpose of this article is to provide useful data to understand the trend of publications in Indonesia related to the Covid Policy. This study analyzes the character of the bibliography and the trends in articles on covid policy in Indonesia published in science direct written from 2020-2022 using VOSviewer.

**METHODS**

The following is the method used to analyze the following topics. First, we searched the Scopus database on July 14, 2022 at 13:50 WIB. We searched for articles published on Scopus using the word “Covid-19 Policy Indonesia” as a keyword. At this stage, 608 results were found. This data is data with a range of 2020-2022. Furthermore, we select and limit Subject Areas only to the scope of Social Sciences, and Business, Management and Accounting. To limit our search, we also chose the Document type article, the Final option for the publication stage, Journal for the source type, and English for the Language choice. So, the
Boolean operators that we apply to Scopus are: TITLE-ABS-KEY (covid-19 AND policy AND indonesia) AND (LIMIT-TO (PUBSTAGE , “final”)) AND (LIMIT-TO (DOCTYPE , “ar”)) AND (LIMIT-TO (SUBJAREA , “SOCI”) OR LIMIT-TO (SUBJAREA , “BUSI”)) AND (LIMIT-TO (LANGUAGE , “English”)) AND (LIMIT-TO (SRCTYPE , “j”)). As a result, we found 211 articles related to keywords and the limitations that we have implemented. Then, we downloaded the articles from the Scopus database and analyzed 211 articles that were sorted by relevance.

Next, we carried out the data visualization process using VOSviewer 1.6.16 (https://vosviewer.com) for data interpretation. The first VOSviewer analysis used is co-occurrence to identify themes in the Covid Policy. We chose the “all keyword” option to ensure that all published keywords can be processed in the application. Next, we present trends in covid policy in Indonesia, and then perform an analysis using VOSviewer and bibliographic coupling for sources and countries. As a result of filtering with VOSviewer, finally 177 articles with high relevance to keywords were used. Based on this step, we present the 10 most popular significant journals with their affiliations. The VOSviewer instructions are as follows:
1. Create a map based on text data
2. Read data from reference manager files
4. Title and abstract fields
5. Counting method: Full counting
6. Minimum number of occurrences of a term: 10
7. Of 5594 terms, 177 meet the threshold
8. Number of terms to be selected: 177

RESULTS
NUMBER OF STUDIES RELATED TO “COVID-19 POLICY INDONESIA” IN 2020-2022

The number of publications on covid policies in 2 subject
areas (Social Sciences, and Business, Management and Accounting) for the past 4 years shows an increasing trend, where in 2020 there are as many as 36 articles. In 2021 there will be 118 articles and in 2022 until July 14, 2022 at 13:57 WIB there are as many as 57 studies and will continue to grow included in the search results. Social sciences is the topic subject area with the most publications with 183 followed by Business, Management, and Accounting with 50 articles. The lack of results in previous years was due to Covid only appearing at the end of 2019.

Graph 1. Trends in Indonesia's Covid-19 Research in the Scopus Database

CONTENT ANALYSIS OF THE COVID POLICY IN INDONESIA BASED ON PUBLICATION RESULTS

Content analysis based on 211 articles searched by relevance. Next, we use co-occurrence analysis with VOSviewer, using the “all keyword” unit of analysis and the “full counting” method. We limit the frequency of keyword occurrence to 10 times, out of 5,594 terms, VOSviewer found 177 that match the threshold, the results are shown in Figure 2. We omitted the words “Study” “data” and “article” “Indonesia” and “research”. because it doesn’t have any context. As a result, there are 3 highest word occurrences, namely Covid (694), pandemic (357) and policy (305). Meanwhile, the words with the highest relevance are the words
“sexual violence” (13.29), “victim” (11.32), and “motivation” (6.56).

From the results of this analysis, we found 7 clusters. The first cluster is represented in red, consistent with 50 keywords with the word that appears most often is covid, which is indicated by a large circle when compared to other red circles. Next, followed by the words policy, analysis and government. It is the topic that most often appears in the red cluster in the subject areas of social science and business, management and accounting. Interestingly, the subjects studied during the pandemic in the subject areas of social science and business, management and accounting in Indonesia are related to sexual violence, tweets, and victims.

The second cluster, (green) consists of 34 keywords such as “teacher”, “Student”, “Online learning”, “e-learning” and others. The second cluster shows a significant correlation because the keywords support each other with the big theme of Education. This is interesting, which means that in this second cluster many researchers are interested in researching the condition of education in Indonesia during the pandemic.

Third Cluster, 26 keywords talk about “health protocol”, “Strategy”, “Implementation”, “local government”, “new normal era” and others. It can be concluded that in the third cluster these researchers focused on research related to new habits made by the Indonesian government to reduce the spread of the covid-19 virus.

The fourth cluster, as many as 25 keywords with the keywords “business”, “company”, “performance” “regulation” and others. Researchers in this cluster seem to be researching the impact of covid-19 on business behavior in Indonesia.

The fifth cluster with 16 keywords has the keywords “community” “city” “effectiveness” “government policy” “psbb” “spread” “transmission”. Jakarta also appears in this cluster. From these keywords, this cluster examines the spread of the corona and its influence on government policies and communities in society.
The sixth cluster with 14 keywords brings up the names of countries such as “Australia” “China” “India” “Malaysia” and Thailand while words other than countries are “economic growth” “export” and “increase”.

The seventh cluster with 7 keywords gave rise to the keywords “health” “home” “wfh” “women” and “work”. From this it can be concluded that the seventh cluster discusses the conditions of work from home faced after the COVID-19 pandemic.

Figure 1. Network Visualization of the Covid-19 Policy Indonesia articles published in Scopus from 2020-2022

Figure 2 shows an overlay visualization of Indonesia’s covid-19 policy literature with an average number of publications from 2020 to 2022. From the colors in 2022 there will not be much research on Covid-19 policies in Indonesia, in contrast to 2021 which dominates the seen in the picture.
Density visualization analysis shows that research with keywords related to public administration such as “government policy” “health protocol” “local government” “social distancing policy” has limited impact. Although it appears in clusters, this study is not broadly associated with the research shown in Figure 3. Future research on covid-19 policy can use issues related to government, health protocols, policy implementation and social distancing policy.
BIBLIOGRAPHIC COUPLING OF SOURCES ON COVID-19 POLICY INDONESIA IN SOCIAL SCIENCE AND BUSINESS, MANAGEMENT AND ACCOUNTING

We limited the search for articles by selecting only areas from social science and business, management, and accounting and returned 984 articles. We limit articles based on their relevance. The Review of International Geographical Education Online published 11 articles related to “Covid-19 policy Indonesia” in the title/keyword and abstract. The second journal that publishes the most articles is the Bulletin of Indonesian Economic Studies with 7 articles. Although the topic is Indonesia’s covid-19 policy, it turns out that there are not many journals from Indonesia.

Table 1. Top 10 Journals that have the most publications on the keyword “Covid-19 Policy”

<table>
<thead>
<tr>
<th>No</th>
<th>Journal Name</th>
<th>Number of Article</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Review of International Geographical Education Online</td>
<td>11</td>
<td>England</td>
</tr>
<tr>
<td>2</td>
<td>Bulletin of Indonesian Economic Studies</td>
<td>7</td>
<td>England</td>
</tr>
<tr>
<td>3</td>
<td>Sustainability Switzerland</td>
<td>6</td>
<td>Switzerland</td>
</tr>
<tr>
<td>4</td>
<td>Jurnal Ilmu Sosial Dan Ilmu Politik</td>
<td>6</td>
<td>Indonesia</td>
</tr>
<tr>
<td>5</td>
<td>Jurnal Komunikasi Malaysian Journal Of Communication</td>
<td>5</td>
<td>Malaysia</td>
</tr>
<tr>
<td>6</td>
<td>International Journal Of Public Health Science</td>
<td>5</td>
<td>Indonesia</td>
</tr>
<tr>
<td>7</td>
<td>International Journal Of Criminology and Sociology</td>
<td>4</td>
<td>Canada</td>
</tr>
<tr>
<td>8</td>
<td>Journal Of Social Studies Education Research</td>
<td>4</td>
<td>Turki</td>
</tr>
<tr>
<td>9</td>
<td>Library Philosophy and Practice</td>
<td>4</td>
<td>Nebraska</td>
</tr>
<tr>
<td>10</td>
<td>Sage Open</td>
<td>4</td>
<td>United States</td>
</tr>
</tbody>
</table>

Next, we search for Bibliographic Coupling of this topic based on Journal Source. Bibliographic analysis of coupling of sources with a minimum of 2 documents and a minimum of 1 citation. From 136 sources, 25 met the threshold. Based on network visualization as shown in the following figure. There are 5 journal clusters. The first 8 journals are in the red cluster. The first cluster journal is dominated by the theme of Education and the environment. The second cluster journal is more diverse, consisting of 5 journals on economics, health and transportation. Furthermore, the third cluster journal with a total of 4 journals also has different themes. Fourth cluster journal with 3 major finan-
cial themed journals. The last cluster journal with a total of 3 journals.

Interestingly, the first cluster with the theme of Education and the strongest relationship with each other. Frontiers in education, Asian journal of university education, quality assurance in education, Review of international geographical education online. It means that it can be concluded that in the areas of social science and business management and accounting, people research more about education during a pandemic than about health, or health quarantine.

From the overlay visualization, it can be seen that the latest discussion on Indonesia’s covid-19 policy in 2022 is dominated by the Sage Open (United States).

Figure 4. Network Visualization Bibliographic Coupling of Sources from Covid-19 Policy Indonesia articles published in Scopus from 2020-2022
Figure 5. Overlay Visualization Bibliographic Coupling of Sources from Covid-19 Policy Indonesia articles published in Scopus from 2020-2022

Table 2 shows the top 5 journals with 2 subject areas. However, these articles are not widely cited by other researchers.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Social Science</th>
<th>Document</th>
<th>Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Review Of International Geographical Education Online</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>2nd</td>
<td>Bulletin Of Indonesian Economic Studies</td>
<td>7</td>
<td>70</td>
</tr>
<tr>
<td>3rd</td>
<td>Jurnal Ilmu Sosial dan Ilmu Politik</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>4th</td>
<td>Sustainability Switzerland</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>5th</td>
<td>International Journal Of Public Health Science</td>
<td>5</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Business, Management and Accounting</th>
<th>Document</th>
<th>Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Academic Journal Of Interdisciplinary Studies</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>2nd</td>
<td>Journal Of Asian Finance Economic and Bussiness</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>3rd</td>
<td>Sociologia Y Tecnociencia</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4th</td>
<td>Asian Economic And Financial Review</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>5th</td>
<td>Banks And Bank Systems</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Bibliographic coupling of countries for research on covid-19 Policy Indonesia in the areas of social science and business, management and accounting

In the period 2020 to 2022, Indonesia is the country with the highest number of Scopus publications for this keyword even
though the journal that publishes the most articles comes from England. Indonesia published 183 articles followed by Australia with 11 articles. Malaysia, India, the Philippines and China are the 4 countries that produce the most publications in the journal. Meanwhile, the United States, Portugal, Germany and the Netherlands are the European and American countries that publish the most journals in the west.

Graph 2. Top 10 Countries with Publications on “Covid-19 Policy Indonesia”

Figure 5. Network Visualization Bibliographic Coupling of Country from Covid-19 Policy Indonesia articles published in Scopus from 2020-2022

Analysis of bibliographic coupling of countries with at least one document and one citation found 25 countries out of 39 that met the threshold. Based on the network visualization as shown in the picture above, there are 10 clusters. The big circle above indicates that the country is the most productive country in this keyword. Indonesia is in the same cluster as Austria, New
Zealand, and Malaysia. India is the only country in the cluster but has relations with Malaysia which is in a different cluster.

**CHART 3. TOP 10 INSTITUTIONS WITH AFFILIATE WITH GLOBAL**

In the past 2 years, the University of Indonesia is the institution that publishes the most articles on the topic of Indonesia’s covid-19 policy. With 13 documents, then followed by Gadjah Mada University with 12 articles on Scopus. These 10 institutions are all located in Indonesia. There are no institutions from other countries that research the Covid-19 policy in Indonesia in the areas of social science and business, management and accounting.

**DISCUSSION**

Interpretation: Based on Scopus data, publication trends, journal performance, content analysis and bibliographic coupling of countries and sources analyzed for research on Indonesia’s covid-19 policy issues around the world, the results found that scientific publications for Indonesia’s covid-19 policy developed very significantly. Of the 2 subject areas analyzed, social science is the most productive publication on this topic. From the 7 clusters that have been mentioned, it can be seen that in the two subject areas there are pending issues raised around the Covid-
policies in Indonesia, namely Education, sexual violence, business regulation, community transmission, the country’s economic growth, and work from home. But the topic that is being researched the most is the issue of Education during the COVID-19 pandemic.

The UK, Switzerland and Indonesia are the most productive countries in conducting research in this subject area. Even so, most articles are still published by Indonesia. There are no published articles related to the Covid-19 policy in Indonesia that have discussed the process of making this policy, nor have they discussed the implementation of health protocols at the regional level. Collaboration between sectors during the pandemic in Indonesia will also be an interesting discussion, as well as the innovations that have been made by the government in preventing covid-19 will be interesting to be topics in the future.

Limitations: we realize that this study is not free from limitations due to several reasons. First, we only take data from Scopus and don’t use other sources like Web of Science, Crossref, or PubMed Central because they don’t have access. Second, we only analyze two subject areas, namely Social Science and Business, Management and Accounting. Lastly, we do not use any other Analysis tools in VOSviewer such as co-citation or co-authorship. We hope that future bibliometric research can be even wider in scope by using a larger database with a wider subject area so that the analysis made can cover many issues.

CONCLUSION

In the last three years, research related to Indonesia’s covid-19 policy has increased. Previous research on this topic has focused a lot on education, sexual violence, business regulation, community transmission, national economic growth, and work from home but not much has been discussed about regulations related to health protocols or public administration during a pandemic. Research themes related to covid-19 policy related to public administration, policy innovation, and collaborative gov-
ernance related to the pandemic will be an interesting topic to discuss. There is also an opportunity to issue this discussion to public administration issues that occurred during the pandemic so that if the next pandemic occurs, the government will be better prepared to regulate governance during the pandemic. Finally, although the pandemic has only lasted for three years, articles published on Scopus on these two subject areas can still be reproduced in the future. This is an opportunity for policy researchers to be able to add research topics related to Indonesia’s covid-19 policy for further pandemic lessons in the future.

Conflict of Interest: No potential Conflict of Interest relevant to this article was reported

Data availability: Data can be downloaded via https://bit.ly/BibliometricanalysisCovid-19Indonesia

REFERENCES

