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Bibliometric Analysis on Governance Index Topics Using Scopus Database and Vosviewer

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Abstract. This article aims to re-identify government management performance appraisal indicators/index by highlighting publications in public libraries from years 2005 to 2020. The research used Scopus citation database over 15 years to collect articles. The keywords used in this study is "good governance" and "governance index" with english document filter. Simple statistical methods were used, and a bibliometric analysis was conducted using VOS-viewer software. This study visualized patterns of the co-occurrence of keywords, citations of documents, and primary keywords mapping. The study revealed trend in the analysis of governance measurement is increased significantly from 15 years ago. In the origin aspect of the country that conducts the publication dominated by developed countries and some of the developing countries. Based on the network visualization is seen a large cluster that hosts the concept of governance index known that the dominant economic aspect as the background of its presence, then there are also keywords related to the role of government and concepts in the organization. Many government performance index are conducted qualitatively or quantitatively, but no one has used the bibliometric method to re-identify the keywords that are consistent with the development of the concept of government performance itself.

1. Introduction

Performance assessment is an important key to improvement and progress for both an institution and an individual. In Indonesia, the tradition of assessing government performance was originally based on the classical bureaucracy paradigm in which performance was measured by the ability of government agencies to fund inputs, and the involvement of governance followed the process, but was minimal attention to the achievement of the final goals (Keban, 2000). One of the standard flaws of government performance assessments, is the theoretical or paradigmatic orientation that leads to classical bureaucracy and prioritizes "means" rather than "ends". Further developments show the orientation of government performance assessment began to follow the "reinventing government" paradigm that prioritizes performance measurements on the end result or objectives and organizational vision, and not the ability to fund inputs and run processes. This reinventing government then encourages the occurrence of a redesign government that in principle focuses on management of management change strategies that are more focused on performance and performance assessment results (Svara, 2017).

In subsequent developments, the concept of "Governance" was used to replace the term "government", which demonstrates the use of political, economic, and administrative authorities in managing state issues. The main attention center of "governance" is performance improvement or quality improvement, even encouraging improved democratic climate and public service improvements as well as the level of citizen happiness (Helliwell *et al.*, 2018). The term "governance" was promoted with pressure on several indicators, among others: (1) democracy, decentralization, and



increased government capacity; (2) Respect for human rights and adherence to applicable law; (3) People's participation; (4) Efficiency, accountability, transparency in government and public administration; (5) Reduction in military budget; and (6) market-oriented economic (Addink, 2019).

In its development, governance goes into various sectors and marks more complex and scalable performance (Parkhurst, 2017). At the regional government, adoption of good governance principle marks its readiness to measure its performance as political, policy, and social implications, although it is sometimes only a sweetener (Lamoreaux, Litov and Mauler, 2018). In some of the government's performance assessment policies led to the presence of incentives (Sari, Setiawan and Adilah, 2017). Further developments bring up variable variations and indicators in the performance assessment of local governments, e.g. emerging organizational culture variables, leadership, organizational commitments and internal controls (Prayoga, Desmiyawati and Safitri, 2017), including variable of legislative size (Hutapea and Widyaningsih, 2017), Characteristic variables of regional head and government size (Tama and Adi, 2018) And more technically like a system of financial accounting areas (Annisa, Darlis and A, 2017).

Observing the importance of governance development, the study of the indicators should be more vigorous, especially in Indonesia (Nasution, 2017). This article seeks to discuss the results of the research conducted within the scope, where the study of the indicators that can be used to conduct assessment of government governance is done by the bibliometric by using Scopus indexed public data. There are a few things to cover; (1). Trend of interest in measurement of governance and publication of country has the most number of citations in Government Index studies, (2). Map visualization network and map density visualization to governance index, (3). Any key words that already have a strong relationship and a keyword that appears still not too strong emergence in the governance Index study.

2. Methodology

The data used in this research is the international agricultural publication data in Indonesia that is obtained from the Scopus website (www.scopus.com). Data collection was conducted in June 2020 by conducting a search through Scopus with the keyword "governance index" and "government index" with the category article title, abstract, keywords within the period 2005-2020. From the search results obtained publication in the form of article 386 documents. Data on the number of yearly publications, journals containing articles with the topic "Governance Index", author, origin and keywords are analyzed using Microsoft Excel 2010. As for the map of the international publication is analyzed using VOSViewer software that can be developed to construct and view bibliometrics maps. Offer a text-mining function that can be used to build and visualize a network/relationship in a quoting an article/issue. Publishing maps are displayed in a variety of ways and functions, such as zooming, scrolling and searching, so you can map more detailed articles/publications. VOSViewer can present and represent specific information about the Bibliometrics graphic map. Scholars can display a large bibliometric map in an easy way to interpret a relationship (Shah *et al.*, 2019). After that, an analysis of the tables and figures produced through focus group discussions between researchers and experts was carried out to produce agreement and conclude the analysis.

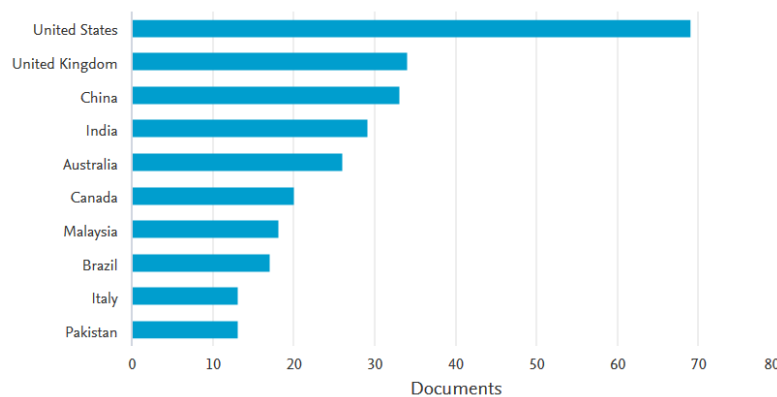
3. Result and Discussion

In this section will be discussed the development of the number of international publications with the topic of governance index in Scopus database from 2005-2020, number of documents based on the collaboration of institutions in international publications on the social, political, legal, economic and multidisciplinary fields. The development of international publications with the topic is based on the origin of the country, subject area, affiliations and development map of the publication by keyword. By the quantity of 386 documents with spreads in the fluctuating year, this data can be seen in the following tables and graphs:

Table 1. Distribution of Scopus Publication Topic About Governance Index

No	Year	Quantity	No	Year	Quantity
1	2020	25	9	2012	25
2	2019	45	10	2011	30
3	2018	38	11	2010	21
4	2017	33	12	2009	14
5	2016	33	13	2008	16
6	2015	20	14	2007	16
7	2014	28	15	2006	10
8	2013	29	16	2005	3
Total					386

From this data, it is can be observed if the trend of increasing interest in the assessment of governance measurement continues to increase significantly, this is in line with the development of discussion and research on good governance, corporate governance and the various forms of its sexing applications. Meanwhile, based on the distribution of the original country of publication is the United States (69 documents), United Kingdom (34 documents), China (33 documents), India (29 documents) and Australia (26 documents). It is can be understood because the origin of the researcher, research institution and the journal where the publication is more dominant in that countries. Interesting to take a look at Brazil (17 documents), Malaysia (18 documents) and Pakistan (13 documents) that also have a intensity of interest in the study of the topic, this can be understood considering that the country is in the phase of adoption of good governance concept so that many do the study. This review can be examined from the following figure:

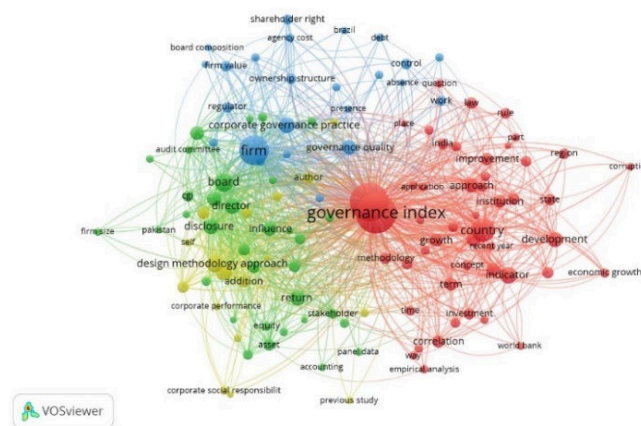
**Figures 1.** Distribution of interest in Governance Index based on Country origin

3.1 Citation Analysis

The reason a writer cited the work of the previous authors among others to strengthen a finding, told the reader about the research that had been done, explained the concept or theory, showed another different work and so on (Andriani,2002:32). This indicates that the new academic work will always refer to or refer to the previous work associated with it. One theme research for an academic work that will be compiled by researchers will always have scientific communication with the same or almost same research theme that has existed before. It is said by Ramesh (2000:171) that the dicitation is one form of scientific communication. The source of the information that is cited means that the source of information is important for authors to support the resulting academic work. The economic aspect appears to be driving the need for good governance performance (Rincón-Moreno *et al.*, 2021). This is understandable when we look at the presence of the concept of governance as one of the demands of the development of the world monetary economy, where a well-managed government presence will have an impact on the effectiveness and efficiency in the management of life sectors.

3.2 Visualization Network Map Co-word

Network visualization result map co-word Review Governance index is divided into 124 items, 9 clusters (cluster 1 consists of 113 items, cluster 2 consists of 3 items, cluster 3 consists of 2 items, clusters of 4 to 9 consist of 1 item), Links: 5132, and total link strength: 18575. The network map presented in the figure below:

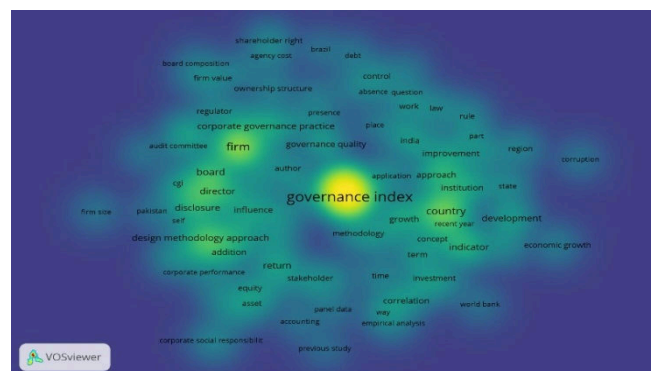


Figures 2. Mapping type Network Visualization to Governance Index

From the image it looks a large cluster that hosts the concept of governance index and then the various series of development of advanced concepts, on the right is seen the dominant aspect of the economy. This shows the background of governance index as an important instrument for the sustainability of the economic sector. At the top of the most visible keywords relating to the role of Governments and concepts in the organization, it shows an indication that the governance index will have a close association with the optimization of government roles and organizations. While on the left and bottom side appear keywords related to the concept of performance measurement. This can be understood because the governance index essentially needs to be measured in various sizes and methods of performance assessment.

3.3 Map Density Visualization Co-word

The cluster density view is an item (label) that is marked the same as the visible item. Each point item has a color that depends on the density of the item at the time. It identifies that the color of a point on the map depends on the number of items associated with another item. This section is very useful for obtaining an overview of the common structure of a bibliometrics map by noting which parts of the item are considered important to analyze. Through this worksheet, we can interpret the keywords that are most widely used in a publication. Visualization density map co-word research developments with theme Governance index can be seen in the following figure:



Figures 3. Mapping type Density Visualization to Governance Index

From the image, it appears that the keyword Governance index has considerable density and is surrounded by several other keywords that surround the position of sticking close and away from the keyword Governance index. Some of the keywords that have begun to have densities have started many studies that intersect with the topic, while being away indicates the topic is still not much studied. Various concepts that constitute the development of interdisciplinary science can become new gaps in research on governance (Martin-Sardesai *et al.*, 2017). This should be an opportunity for future governance index studies.

3.4 Primary keyword mapping in the Governance Index topic

In this section is done analysis of relevant keywords, conducted filters based on the significance of the keyword with substance governance index so that the data obtained as follows:

Table 2. Analysis of Keywords relevant to the concept of Governance Index

No	Label	No	Label
1	Compliance	19	Management
2	Regulator	20	policy maker
4	financial performance	21	corporate governance mechanism
5	annual report	22	Transparency
6	link	23	Need
7	development	24	Asset
8	insight	25	Improvement
9	economy	26	Ownership
10	effectiveness	27	Governance
11	stakeholder	28	Attention
12	regulation	29	Determinant
13	application	30	Cost
14	importance	31	empirical evidence
15	work	32	Dimension
16	practical implication	33	governance practice
17	board structure	34	Growth
18	interest	35	Endogeneity

From the table there are 35 keywords relevant to the concept of governance index, where each keyword has a relevant conceptual meaning. However, in some keywords it appears to be known as a keyword that already has a strong relationship with the concept and on some keywords it is still not too relevant to the concept. Therefore, it is necessary to be more specific categorizing related to that keyword spread. The categoricity of these keywords can be examined from the table below:

Table 3. Keyword categorization based on concepts relevance

Organization	Management	Roles
effectiveness	financial performance	Regulator
annual report	Link	Development
stakeholder	compliance	Economy
application	Insight	Regulation
importance	Work	policy maker
board structure	practical implication	Governance
governance mechanism	Interest	
Need	management	
Asset	transparency	
ownership	improvement	
Cost	Attention	
empirical evidence	determinant	
growth	Dimension	
endogeneity	governance practice	

According to the table above, it can be mentioned that in indexing government governance can refer to several conceptual keywords that include organizational aspects, management and roles. The largest portion is in the organizing aspect of local government work where the structure, performance and relation indicators are the main coverage. This aspect is then easily used by the public in assessing government performance (James and Van Ryzin, 2017). Furthermore, it is a management aspect, which not only includes practical indicators but also includes normative indicators such as insight and interest. In its development this concept can become important concepts such as responsiveness and transparency (Bearfield and Bowman, 2017). In other categories that cover the role aspects are seen some indicators that are macro-nature and have a substance content that many dimensions. This keyword is the identification of concepts that can be used in the preparation of governance index, where there are several concepts that have been used and there is a concept that has not been widely used for that purpose. These keywords also have the power of the concept to be elaborated as an indicator of performance appraisal of government management.

4. Conclusion

There are a number of conclusions that resulted from the previous discussion, namely: Trend increased interest in the analysis of governance measurement is significantly from 2005 to 2020 where the development is in line with the development of discussion and research on good governance, corporate governance and the form of the sexing application. Meanwhile, in the origin aspect of the country that conducts the publication dominated by developed countries such as the United States, United Kingdom and China, then there is interest in developing countries such as Brazil, Malaysia and Pakistan, this is understandable considering that the country is in the phase of adoption of good governance concept so that many do the study. Based on the Map Network visualization is seen a large cluster that hosts the concept of governance index known that the dominant economic aspect as the background of its presence, then there are also keywords related to the role of government and concepts in the organization. Meanwhile, based on the visualization of density seen some keywords that started to have a density shows already started a lot of studies that intersect with the topic, while being away indicates the topic is still not much studied. Based on the keyword analysis there are 35 keywords relevant to the concept of governance index, which is known to some keywords that already have a strong relation with the concept and on some keywords it is still not too relevant to the concept. Indexing government governance can refer to several conceptual keywords that include organizational aspects, management and roles.

The largest portion is in the organizing aspect of local government work where the structure, performance and relation indicators are the main coverage. Furthermore, it is a management aspect, which not only includes practical indicators but also includes normative indicators such as insight and interest. In other categories that cover the role aspects are seen some indicators that are macro-nature and have a substance content that many dimensions. These identified indicators can be elaborated again for the purpose of assessing the performance of government management. In addition, for research purposes it can be developed into a government assessment index. The development of governance is driven by discussions on governance and its need to improve the world economy, where its impact will extend to various sectors of life. In its development, government performance measurement is still dominated by studies from developed countries, developing countries are still discussing the format of governance policies and their implementation. However, the wave of scholar that examines the knowledge of developed countries can encourage the spread of governance index studies to developing countries, so that studies on government performance measurement can be more diverse.

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