ATLANTIS
PRESS

Bibliometric Analysis and Visualization Articles on Presidential Election in Social Media Indexed in Scopus by Indonesian Authors

Rossi Maunofa Widayat[*], Achmad Nurmandi, Yeni Rosilawati, Haedar Natshir, M. Syamsurrijal, Tawakkal Baharuddin

Department Islamic Politics-Political Science, Universitas Muhammadiyah Yogyakarta, Indonesia
[*]Corresponding author. Email: widayatrossi@gmail.com

ABSTRACT

This study investigates the status of documents regarding the presidential election in social media in Scopus indexed journals by Indonesian authors. The data is taken from the Scopus database. Articles searched in June with Indonesian author's restrictions. VOSviewer analyzes keywords from 63 Scopus database documents with the search theme on the keyword presidential election in social media. In addition to using VOSviewer, analyzing search results in the Scopus database is also used to visualize the characteristics and trends of journals, authors, and topics about the presidential election on social media. The study of the presidential election in social media has increased in recent years. Articles about the presidential election in social media have been published in 35 journals, and the most popular is the Journal of Physical Conference Series. Bibliometric analysis shows that there are 15 popular journals and the journal with the most citations is the journal of big data. Then the most popular author with the most citations is Muhtadi, B. The topics that have the most accuracy in recent years are social networking and sentiment analysis. Indonesian authors' studies on the presidential election in social media have experienced a rapid increase in recent years. Journal of big data is one of the popular journals with the most citations. Meanwhile, the popular writers with the most citations are Muhtadi, B. The topic of social networking and sentiment analysis is a topic that has emerged the most in recent years and is a topic for future research perspectives.

Keywords: Bibliometric analysis, presidential election, social media, Scopus, Indonesia

1. INTRODUCTION

Social media and the presidential election are important and popular themes among researchers, especially ahead of the presidential election in Indonesia. In line with that, the presidential election issue in social media has increased the number of publications in the Scopus database by Indonesian authors. In the literature, presidential elections in social media are two different things, where social media is a political tool while the presidential election is the goal. Therefore, the existence of these two relationships makes supporters or political parties use various political strategies to win the general election. The selection of the media as a political campaign tool influences the development of increasingly modern communication technology in the world of politics and is considered effective and efficient in being used as a political campaign for general elections [1].

Social media is an effective tool for political campaigns that can influence, mobilize and determine

political choices [2], [3], [4]. The most widely used use of social media includes Facebook and Twitter, where these two social media play an important role in shaping public opinion [5], [6]. The selection of social media Facebook and Twitter is based on most of the public using social media coupled with minimal operational costs. In addition, Facebook and Twitter can also directly introduce their profile on social media, which is widely used by politicians [7].

In the last few decades, social media has become a popular communication tool in political campaigns in several countries in the world, starting with the 2011 Arab Spring events about political turmoil and the 2008 and 2012 Obama campaign models at the time of the election. These two events are considered to have sparked the interest of other researchers in the study of social media in political campaigns [8]. These two events also initiated other research to understand the relationship between the use of social media and existing socio-political issues. The trend of research results, in general, has produced several important findings in which social media is considered to be sufficient to contribute to

initiating the emergence of participatory attitudes and encouraging public awareness to be involved in developing socio-political discourses [9], [10].
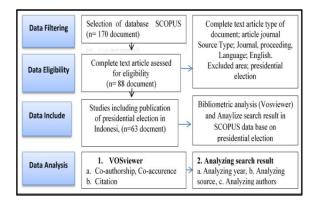
The opportunity to influence the level of public participation then impacts the emergence of a new campaign model by maximizing the use of social media. This trend brings opportunities for activists or socio-political actors to spread ideas and ideas to influence the interests and attitudes of other social media users [11]. The utilization of social media as a media campaign can be maximized by disseminating information through creative content such as narratives, photos, memes, videos, hashtags, or others to influence public awareness to engage in collective action [12], [13]. Based on this, in addition to influencing the diffusion of information and the intensity of communication, social media is also seen as a medium that influences new forms of campaigns in initiating the emergence of public participation.

The study on social media and the general election has provided a framework of thought that the presidential election in social media has comprehensively influenced public literacy in understanding political contestation in Indonesia. However, theoretically, the use of social media in political campaigns is a social reality of society in an increasingly modern technological era. In line with that, this study complements the shortcomings in the aspect of methodological approach in explaining the bibliometric characteristics and trends of articles about the presidential election in social media in the Scopus database. A comprehensive study in the form of bibliometric analysis will explore the presidential election in social media literature over the last nine years. To the author's knowledge, Indonesian writers' studies on the presidential election in social media with a bibliometric approach have not been widely carried out. Therefore, this study specifically describes the characteristics and trends of journals, authors, and topics about the presidential election and social media in Scopus indexed journals by Indonesian writers.

2. METHODS

The bibliometric research method describes the characteristics and research trends related to the presidential election in social media. This study uses two forms of analysis: analyzing search results in the Scopus database and analyzing using the Vosviewer application. Analyzing search results is one of the menus in the Scopus database used to analyze the year of publication, affiliation, author, country, sponsor, and source of the document. Meanwhile, Vosviewer is an application used to visualize the network, overlay, and density. The data is taken from the Scopus database, with 63 selected articles available in the Scopus database related to the presidential election in social media in the Scopus indexed journal by Indonesian authors.

Bibliometric analysis was conducted to map and observe the distribution of Scopus indexed journal articles about the presidential election in social media. This study uses bibliometric analysis with four stages in the research process, as shown in figure 1.

Figure 1. Application of bibliometric analysis using VOSviewer and analyzing search results

3. RESULTS

The number of documents in the Scopus database related to the presidential election and social media consists of three different types of documents; 31 (50.8%) articles, 30 (46.0%) conference papers, and 2 (3.2%) reviews. This document is verified into three parts covering trends and characteristics of journals, authors, and topics related to the presidential election in social media in the Scopus database by Indonesian authors.

3.1. Trend journal related to the presidential election and social media in Scopus

Based on analyzing search results, in the Scopus data, it was found that the trend of the number of journal articles in the Scopus database by Indonesian authors on topics related to the presidential election in social media in 2017–2020 tended to increase in article publications. However, p experienced a drastic decline in 2021, shown in figure 2.
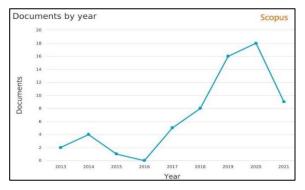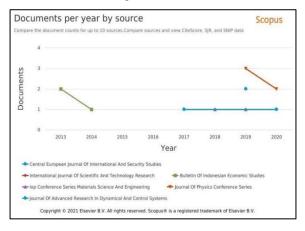

Figure 2. Analysis yearly trend article on the presidential election in social media

Based on analyzing search results in the Scopus data, it was found that the journals related to the presidential election and social media in the Scopus database by Indonesian authors consisted of 35 journals. However, if the journal is analyzed using Vosviewer, it is based on a minimum number of two documents. Thus, it was found that six popular journals have become references for authors related to presidential elections and social media in Indonesia, which are shown in figure 3.

Figure 3. Top 6 journal and their publication in Scopus by Indonesian authors

Based on Vosviewer's analysis based on a minimum frequency of one document, with a minimum number of three citations, 15 popular journals were obtained with a diverse number of citations and total link strength, as shown in table 1. Table 2 shows the number of autos with at least one document in a Scopus database based on a minimum number of six citations. Thus, 12 authors had popularity in the presidential election and social media in the Scopus indexed journal by Indonesian authors. While figure 4 shows authors who have at least two documents. Thus, four authors had the most documents related to the presidential election and social media in the Scopus indexed journal by Indonesian authors.

Table 1. Top 15 journals and their publication in Scopus

Journal	Document	Citation	Link strength
Copenhagen Journal of Asian studies	1	3	1
IOP conference series material science and engineering	2	3	1
Journal of big data	1	48	1
Southeast Asian studies	1	3	1
2018 international conference on advanced computer	1	4	0
Asian affair	1	3	0
Bijdragen tot de taal – land –en volkenkuntde	1	3	0
Bulletin of Indonesian economic studies	3	27	0

Journal	Document	Citation	Link strength
Contemporary southeast asia	1	8	0
Geme online journal of language studies	1	3	0
Iberian conference on information system	1	3	0
International journal of scientific and technology	2	9	0
Journal of physics conference series	5	5	0
Procedia computer science	1	5	0
Proceeding of 2019 5th international conference on new media	1	8	0

Table 2. Top 12 authors and their publication in Scopus

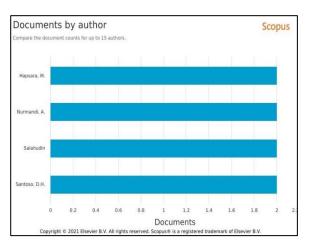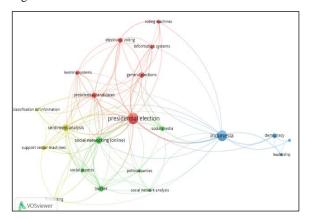| Authors	Document	Citation
Allford, J.	1	9
Anas, T.	1	10
Aswicahyono H	1	8
Budiharto W.	1	48
Cornwell K.	1	10
Hill H.	1	8
Kristiyanti D.A.	1	8
Meliana M,	1	48
Mietzer M.	1	8
Muhtadi, B	1	8
Normah, Umam M. P	1	8
Soejachmoen M.P.	1	9

Figure 4. Top 4 authors with the most documents on the presidential election in social media

3.2. Topic article journal on the presidential election in social media by Indonesian authors

Based on the VOSviewer analysis, in the analysis number of occurrences of keywords menu, 401 keywords were found. After being filtered using a minimum frequency of 3, 27 keywords were obtained that had met the threshold. Then from the 27 keywords, we filtered and selected 21 keywords that have a relationship between

one node and another; the closer the distance between one node and another, the higher the level of the node relationship. VOSviewer is used for bibliometric mapping of the presidential election in social media in the Scopus database by Indonesian authors. The filtered keywords are then grouped into four clusters, as shown in Figure 5.

Figure 5. Network visualization of the presidential election in social media in Indonesia.

The grouping of keywords into four clusters has different colors. First, the red cluster with six keywords items includes; electronic voting, general election, information system, learning system, presidential candidate, presidential election, voting machines.

Second, the green cluster, with five keywords items covering political parties, social aspects, social media, social network analysis, Twitter. Third, the blue cluster with three keywords items includes democracy, electoral geography, Indonesia, leadership.
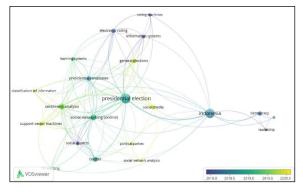

Figure 6. Overlay visualization of the presidential election in social media

The four yellow clusters include forecasting, sentiment analysis, and support vector machine classification (of information). Figure 6 shows the research conducted by Indonesian authors related to presidential elections and social media every year. Then Figure 7 shows the trend of research that Indonesian authors and maps have carried out opportunities for further research.

Figure 7. Density visualization of the presidential election in social media

4. DISCUSSION

This study visualizes the characteristics and trends of journals, authors, and topics to be analyzed using Vosviewer and search results in the Scopus database. The analysis focuses on three components of the analysis, including the journals that have the most published documents, the most productive authors, and the topics that focus on the presidential election in social media by Indonesian writers. This study indicates that the journal with the most documents is the journal of physics conference series with 5 documents and 5 citations (see table 1). However, when viewed from the number of citations, big data journals are much more popular

because they have 48 citations with only one document. This indicates that the number of documents in a journal cannot be used as a basic reference for the number of citations.

The study of the presidential election in social media has influenced researchers' response in Indonesia, especially in the study of social media with the presidential election. Several related research documents have been indexed in the Scopus database, where there are several types of publication documents, including documents in the form of research articles, conference articles, and review articles. The number of documents in the 2016–2020 period was found as many as 63 publication documents. These documents have initiated and influenced the trend of research developments in Indonesia on the same topic regarding the study of the presidential election in social media. The results of this study provide opportunities for further researchers, especially on research topics, namely learning systems, electronic voting, social aspects, and other topics (see Figure 7). As for the data, it is also known that published documents mostly utilize certain social media platforms such as Twitter. This trend be the dominance of Twitter among researchers and a gap for researchers in Indonesia to maximize other social media platforms.

This study proves that the most popular writers in the field of the presidential election and social media in Indonesia consist of four authors who have 2 documents each (see Figure 4). Interestingly, when viewed from the number of citations, the four popular document authors are below the author who has document one, namely Budiharto, W, and Meliana (Table 2), which has 48 citations each. The number of documents in the publication of the Scopus journal is not a measure for researchers in conducting citations. Researchers in conducting publications often collaborate with other authors. The collaboration is intended to obtain writing results that can make a major contribution to the presidential election and social media in Indonesia. This is evidenced by the citation level obtained by Budiharto, W, and Meliana, who collaborated with several authors.

The trend of publication is also very dependent on the momentum at the time of the general election, and this is evidenced by the decrease in the number of documents in 2021, during which the presidential election was not held. It appears that Indonesian researchers in building their analysis are based on events before and before the election, while post-election in a long period makes the interest of researchers lower. This trend has influenced the distribution of the limited number of published documents in the Scopus database. Despite the longstanding interest in this study, Indonesian researchers, through their published documents, have slowly influenced the interest of other researchers in Indonesia, and this can be proven by the number of citations in each document. In addition, Indonesian researchers also need a form of collaboration, either individually or as an institution that inclusively forms collaborative relationships with other global researchers.

Based on trends in previous data, this study assesses that the number of documents currently available has a great opportunity to initiate the emergence of the same research interest, as well as the opportunity to form a position of contributing to increasing the number of documents in the Scopus database in the future. This is based on the condition of democratization in Indonesia, which every 5 years organize a presidential election system, which has quite an impact on the interest of researchers or writers in developing their analysis. In addition, the development of digital-based technology and communication that utilizes Internet networks, including the use of social media, has also greatly changed the socio-political life in Indonesia [14]. This be a potentially lucrative opportunity for researchers in Indonesia to add publications, shape contribution positions, and influence future research gaps.

This study has some limitations on using the Scopus database as the only source of data retrieval, with the exclusion of sources from other publications indexed by Google Scholar, Sinta, Crossref, and Web of Science. In searching the data, the authors may miss some areas of study that are not published in the Scopus database. The selection of keywords may not be accurate for the presidential election and social media areas in Indonesia, so the author only found 61 article documents. Although this study uses two standard tools (analyzing search results and VOS viewer), subjective judgments by the authors still exist, which may lead to errors. Thus, a larger sample should be used by expanding the keywords in the database that is accessed, such as the use of Harzing's Publish or Perish, recommended as one of the sources in data search.

5. CONCLUSION

The number of articles related to the presidential election and social media published by the Scopus indexed journal is increasing and has the potential to increase in line with the implementation of general elections held every five years. At the same time, Indonesian authors also began to participate in the development of global research as evidenced by the results of bibliometric analysis through search results on the number of published documents, authors, and document citations which slowly influenced the development of publication topics. The approach with bibliometric analysis in this study assesses opportunities where research interest and publications can be better in the future. In addition, the popularity of using social media is also getting higher in Indonesia. This trend is an opportunity in shaping the position of contributions to research and publications in the future.

REFERENCES

[1] L. et al Stier, "Election Campaigning on Social Media : Politicians , Audiences , and the Mediation of Political Communication on Facebook and Twitter Election Campaigning on Social Media : Politicians , Audiences , and the Mediation of Political," *Polit. Commun.*, vol. 35, no. 1, pp. 50–74, 2018.

[2] A. I. Mujab, "Komunikasi Politik Identitas K.H. Ma'ruf Amin sebagai Strategi Depolarisasi Agama pada Kontestasi Demokrasi Pilpres 2019," *Ikat. Sarj. Komun. Indones.*, vol. 3, no. 01, pp. 54–66, 2020.

[3] Hastomo & Aras, "Analisis Strategi Komunikasi Pemasaran Politik Hary Tanoesoedibjo (Studi Kasus Program UMKM sebagai Political Branding Partai Persatuan Indonesia (Perindo)) Arnoldus," *Prosiding Konferensi Nasional Komunikasi*, vol. 01, no. 01. pp. 552–558, 2017.

[4] H. Jubba, T. Baharuddin, M. Pabbajah, and Z. Qodir, "Dominasi Internet di Ruang Publik : Studi Terhadap Penyebaran Wacana Gerakan Bela Islam 212 di Indonesia," *Al Izzah J. Hasil-Hasil Penelit.*, vol. 15, no. 1, pp. 1–13, 2020.

[5] S. C. McGregor, "Social media as public opinion: How journalists use social media to represent public opinion," *Journalism*, vol. 20, no. 8, pp. 1070–1086, 2019.

[6] S. McGregor, "Technology Firms Shape Political Communication: The Work of Microsoft, Facebook, Twitter, and Google With," *Polit. Commun.*, pp. 1–23, 2017.

[7] A. O. Larsson and B. Kalsnes, "' Of course we are on Facebook ': Use and non-use of social media among Swedish and Norwegian politicians," *Eur. J. Commun.*, vol. 29, no. 6, pp. 653–667, 2014.

[8] S. Boulianne, "Social media use and participation: a meta-analysis of current research," *Inf. Commun. Soc.*, vol. 18, no. 5, pp. 524–538, 2015.

[9] F. J. Jennings, V. P. Suzuki, and A. Hubbard, "Social Media and Democracy: Fostering Political Deliberation and Participation," *West. J. Commun.*, vol. 85, no. 2, pp. 147–167, 2021.

[10] I. Literat and N. Kligler-Vilenchik, "How Popular Culture Prompts Youth Collective Political Expression and Cross-Cutting Political Talk on Social Media: A Cross-Platform Analysis," *Soc. Media Soc.*, vol. 7, no. 2, pp. 1–14, 2021.

[11] A. Sahly, C. Shao, and K. H. Kwon, "Social Media for Political Campaigns: An Examination of Trump's and Clinton's Frame Building and Its Effect on Audience Engagement," *Soc. Media + Soc.*, vol. 5, no. 2, p. 205630511985514, 2019.

[12] T. Ahmad, A. Alvi, and M. Ittefaq, "The Use of Social Media on Political Participation Among University Students: An Analysis of Survey Results From Rural Pakistan," *SAGE Open*, vol. 9, no. 3, pp. 1–9, 2019.

[13] T. Baharuddin, S. Salahudin, S. Sairin, Z. Qodir, and H. Jubba, "Kampanye Antikorupsi Kaum Muda melalui Media Sosial Twitter," *J. Ilmu Komun.*, vol. 19, no. 1, pp. 58–77, 2021.

[14] W. Budiharto and M. Meiliana, "Prediction and analysis of Indonesia Presidential election from Twitter using sentiment analysis," *J. Big Data*, vol. 5, no. 1, pp. 1–10, 2018.