LENTERA: JURNAL ILMU DAKWAH DAN KOMUNIKASI
Vol. VIII, No. 02, Desember 2024
doi: https://doi.org/10.21093/lentera.v8i2.8837
https://journal.uinsi.ac.id/index.php/lentera/
P-ISSN: 2549-7391, E-ISSN: 2549-578X

Received: 08-07-2024	Accepted: 28-12-2024	Published: 31-12-2024

Political Issues of Presidential Candidates General Election 2024 in Indonesia Based on Social Media Research by Nodexl of Big Data from Twitter

Bayu Aulia Priyantomo
Universitas Wijaya Putra, Indonesia
bayuaulia@uwp.ac.id

Abstrak

Penelitian ini dilakukan pada tahun 2022 yaitu dua tahun menjelang pemilihan umum calon presiden 2024 di Indonesia. Banyak sekali calon-calon presiden yang diperbincangkan oleh netizen melalui media sosial Twitter. Riset ini menggunakan dua kata kunci yaitu PILPRES 2024 dan CAPRES 2024. Penelitian ini menggunakan Analisis Big Data Riset media sosial untuk mencoba dan memahami siapa-siapa calon presiden pada pemilihan umum tahun 2024 yang di bicarakan oleh netizen yang di dalamnya membentuk opini, perilaku dan permasalahan melalui media sosial yaitu Twitter dengan menggunakan software NodeXL. Berdasarkan hasil penelitian menunjukkan bahwa calon presiden yang sering dibicarakan oleh netizen atau pengguna Twitter terdapat 7 klaster besar atau kelompok berpeluang menjadi calon presiden yaitu Anis Baswedan, Puan Maharani, Ganjar Pranowo, Prabowo Subianto, Erick Thohir sedangkan klaster Gus Aos adalah ulama yang mendukung Anis Baswedan untuk menjadi CAPRES 2024. Sementara ada pembicaraan yang lain mengenai calon presiden yaitu Muhaimin Iskandar, Mahfud MD, dan Susi Pudjiastuti namun sangat sedikit yang membicarakan hal tersebut dan terdapat isu kader partai PPP mendukung Anis Baswedan.

Kata Kunci: Jaringan Komunikasi, NodeXL, Opini Publik, Pemilihan Presiden, Politik

Abstract

This research was conducted in 2022, two years before the 2024 presidential election in Indonesia. Netizens are discussing many presidential candidates via social media and Twitter. This research uses two keywords, namely PILPRES 2024 and CAPRES 2024. This research uses Big Data Analysis of Social Media Research to try to understand who the presidential candidates are in the 2024 general election that

netizens are talking about, which forms opinions, behaviors, and problems via social media, namely Twitter, using NodeXL software. Based on the results of the study It shows that the presidential candidates whom netizens or Twitter users often discuss are seven large clusters or groups with the potential to become presidential candidates, namely Anis Baswedan, Puan Maharani, Ganjar Pranowo, Prabowo Subianto, Erick Thohir. In contrast, Gus Aos Clusters is a cleric who supports Anis Baswedan in becoming a 2024 presidential candidate. Meanwhile, there is another discussion about the presidential candidates, namely Muhaimin Iskandar, Mahfud MD, and Susi Pudjiastuti. However, very few people talk about it, and there is an issue of PPP party cadres supporting Anis Baswedan.

Keywords: *political, public opinion, NodeXL, communication network, presidential election.*

A. Introduction

Two years before the 2024 presidential election, netizens or social media users on Twitter discuss many presidential candidates. Social media is a place that is known to devote everything to all people. One of the media known to the public is Twitter, which the public uses to share what its users feel. Through posts on Twitter, people can share and get information about anything (Fitriana et al., 2021). Social media content is often popularized by viral and trending content. The same thing happened with political content on social media. Political media can influence political orientation. (Kafka et al., 2022) Social media, especially Twitter, can help people express their opinions and feelings. People from different backgrounds often give opinions that can have pros and cons. (Pangestu et al., 2019).

Social media platforms such as Facebook and Twitter can shape political participation and, most importantly, protest. Whether true or not, analyzing "Big Data" generated by social media usage offers an unprecedented opportunity to observe complex and dynamic effects related to collective action and large-scale social movements. (Jost et al., 2018).

The role of social media in the current era is vital and popular today, including Facebook, YouTube, Twitter, Whatsapp, Instagram, etc. It also affects the results of general elections (elections) in Indonesia and worldwide. In key moments such as elections or referendums, social media is transformed into a new arena of fighting that previously only took place offline or through mainstream print media. Several studies have shown that social media is a key space that can explain Trump's election over Hillary Clinton in America. (Enli, 2017). The more candidates used broadcast their thoughts, the more people retweeted them spreading their messages(Buccoliero et al., 2020)

With the advancement of technology and information, the emergence of social media also has formed a trend of political participation, especially among youth. Both public and private spaces are greatly affected by social media because political discussions are not only limited to physical space and time. The internet

and media, such as Twitter, influence people to engage and participate in collective actions or political campaigns (Anggraheni et al., 2021)

Social media in the era of Industrial Revolution 4.0 is further described as an ideal means and information base for determining public opinion about policies and political positions and building community support campaigning actors. (Barniat, 2019). Social media plays a supporting role in mediating political communication between members of the public, politicians, and political parties. Along with traditional media, social media provides alternative avenues for political communication, making it more direct and interactive. Using social media, ideas and criticism of political issues and agendas. (Hayat et al., 2021).

Social media has become progressively pertinent in decision campaigns as lawmakers and citizens have coordinated them into their communication collections. In any case, little is known about which sorts of citizens utilize these devices to talk about legislative issues and remain educated about current undertakings and how they coordinate the substance and associations they experience online with their offline collections of political activity. To address these questions, we formulated an inventive online overview including an arbitrary test agent of Italians who communicated approximately the 2013 joint decision on Twitter. It appears that Twitter political clients in Italy are excessively male, more youthful, way better taught, more inquisitive about legislative issues, and ideologically more left-wing than the population as an entirety. Additionally, there is a solid relationship between online and offline political communication. Twitter users often hand off the political substance they experience on the net in face-to-face discussions. Although the political clients of social media are not agents of the populace, their more noteworthy affinity to lock in in political discussions both online and offline makes them critical channels of individual communication and permits the substance that circulates on the internet to diffuse among populaces that are much broader than those that lock in with social media. The appointive noteworthiness of these advanced stages comes well past the quick gatherings of people who are uncovered to the political substance through them. (Cristian Vaccari et al., 2013).

In research, Conover et al. said that social networks form public spaces and facilitate communication between communities with different political orientations. They examined two political communication networks on Twitter, consisting of more than 250,000 tweets from the six weeks leading up to the 2010 US congressional midterm elections. Using a combination of network clustering algorithms and manually annotated data, they showed that political retweet networks exhibit a partisan structure, which is very segregated, with minimal connectivity between left-leaning and right-leaning users. Surprisingly, this is not the case in user-to-user mention networks, dominated by a politically heterogeneous group of users, where ideologically opposed individuals interact much more than retweet networks. To explain the differences in retweeting and

mention network topologies, they hypothesize that politically motivated individuals provoke interactions by inserting partisan content into an information stream whose primary audience consists of ideologically opposing users. They conclude with statistical evidence supporting this hypothesis (Conover et al., 2021)

In the realm of political communication, big data can be used to predict election results. Budiharto & Meiliana (2018) Research has proven that big data processing can correctly predict the results of the 2019 presidential election: President Jokowi emerged as president-elect, defeating Prabowo with sentiment analysis methods on Twitter.

Looking at the research results from Suratnoadji et al (2018) Regarding the issue of the 2019 presidential election, there were many responses from social media users, namely Twitter, in the form of tweets, replies, mentions, and retweets to form a communication network model among Twitter users. Some Twitter social network users are actively discussing the issue of the 2019 presidential election, but the relationship between other social network users is not very close. Interestingly, Twitter users often mention the four major groups: the Jokowi group, the Gus Mus group, the Mas Piyu group, and finally, the Prabowo group. However, there are two groups, the 2019 presidential candidate group and the Gus Mus and Mas Piyu groups, which are user opinion-based groups. The communication network pattern in Prabowo's is much denser than that of Jokowi's group. Prabowo's team is more of an opinion leader, while Jokowi is the main tweeter about the 2018 Asian Games in Indonesia.

Instantaneous communication on Twitter can occasionally create a hub of controversy and misinformation, especially surrounding political issues. About 60 percent of users discuss political issues on sites like Twitter, making social media a popular place that people rely on for political updates. (Le et al., 2019). One of the characteristics of social media is the freedom of users to upload content without a filter. (Alvin, 2019). In the realm of political communication, this is immediately utilized to the fullest. Practical political communicators, such as the government and politicians, are present on various social media platforms; for example, President Joko Widodo is present on Facebook with 10 million followers and on Instagram with 50.7 million followers. Ganjar Pranowo, via Instagram, has 5.5 million followers and 1.7 million Facebook followers.

The National Survey Institute (LSN) released the results of the electability survey of presidential candidates (capres) ahead of the 2024 Presidential Election. The LSN survey was conducted from 29 October to 2 November 2022 in 34 provinces throughout Indonesia, and the results showed that 30.2% of respondents voted for Prabowo Subianto 30.2%, Ganjar Pranowo 22.5%, Anies Baswedan 20.8%, Do not know/do not answer 26.5 % (Medistiara, 2022)

Twitter is a popular social networking and microblogging site where users can post 140-character messages or tweets. In addition to broadcasting tweets to an audience of followers, Twitter users can interact with one another in two primary

public ways: retweets and mentions. Retweets act as an endorsement, allowing individuals to rebroadcast content generated by other users, thereby raising the content's visibility. (Boyd et al., 2010).

Ceron et al (2018) Social media data is created from individual actions on social media and how they interact with others. Starting from the content uploaded, what kind of content is often viewed or responded to (like, subscribe, comment, or share)? Meanwhile, on Twitter, there are @replies, @mentions, #hashtags, and retweets (Arianto, 2019)Twitter is widely used in digital political campaigns. It is a social media platform for building networks and connecting political participants with the community. Twitter is known for its fast tweets. (Aprilia Hastuti et al., 2023)

This study aims to determine how communication networks are formed, understand who the presidential candidates are, and the political issues formed among netizens or users through social media, such as Twitter. In this research, two keywords are used, namely CAPRES 2024 and PILPRES 2024. This study uses a software tool, NodeXL, which started from 3 October 2022 to 9 November 2022. NodeXL Pro software enables the collection of tweets from Twitter (Ahmed & Lugovic, 2019). Microsoft Excel 2019 was employed to retrieve data from NodeXL. NodeXL uses Twitter's search network interface, and URLs were automatically expanded within NodeXL. (Kusuma & Suherman, 2024).

B. Methods

This research describes how communication networks are formed between social media users via Twitter. This social media user discusses which political parties will choose the presidential candidates in 2024 before officially establishing presidential candidates.

Researchers used three-level analysis actors, cluster groups, and the entire network. The researcher uses the application NodeXL Pro, which is used to map actors, clusters, conversational content, and the Twitter user communication network system that discusses the issue of who the presidential candidate is in 2024. This research is exploratory.

Communication network research of an explorative type is intended to explore a topic or phenomenon that has not been studied. Because the study's exploratory nature is generally not profound, the significance of exploratory studies is measured by the novelty of topics that have not previously been studied or can answer assumptions and conjectures that develop in society. In network studies, exploratory research types exploit specific network patterns that have never been studied. (Eriyanto, 2014). This used keywords CAPRES 2024 and PILPRES 2024. Data was obtained with a time range from 3 October 2022 to 9 November 2022.

Table 1: Process Big Data Research

C. Results and Discussion

Social Network Analysis Methods Using Big Data

Measuring and forecasting opinion trends from real-time social media is a long-standing goal of big-data analytics. (Bovet et al., 2018). Madya et al (2021) The book Big Data in Social Sciences, between Research Methods and Social Reality says that more and more people are connected through various platforms. The number of social media interactions, online news circulation, online trade transactions, and work activities carried out through various applications is experiencing an increasing trend. (Kemp, 2019)This trend can be read as a symptom of the arrival of a new era, namely that social interaction increasingly relies on the role of digital technology. Intense interaction processes, instant and mediated, form increasingly complex communication networks between humans. Communication technology supports the complexity of interactions and influences many aspects of social life, forming a new condition of an interconnected society, which Castells (2019) calls a network society.

Networking is an important element in today's informational society. However, before communication and information technology dominated people's lives, networks were considered to have a social influence that shaped the beliefs, values , and ways of thinking held by individuals. Social networks can influence individuals in making decisions.

In the era of Big Data, social networks are taking on complex and diverse forms. Social network analysis is one of the most frequently used palliative methods in research using big data because it analyzes complex social interactions. Reviewing several kinds of literature that discuss social network analysis from perspective and summarizing previous studies that apply social network analysis methods in considerable data research. What is social network analysis? What are the types? As previous studies have shown, how is Big Data used for social network analysis? How is it used in the field of social sciences?

Definition of Social Networks and Social Network Analysis

Social network analysis is a methodology concerned with the importance of relationships among interacting units (Scott, 2017). The definition of a social network has two elements, namely actors and relationships (Wellman, 1983). Actors in social networks can range from cognitive units, such as ideas, to broader units, such as individuals, communities, organizations, countries, and so on. Likewise, relationships consist of various forms, such as contact, collaboration, communication, command, and other interactions. The scope and scale of social networks is vast. Human and non-human networks, such as ideas, conversations,

semantics, and so on, can be seen as a form of social networking. Network analysis focuses on the relational relationships between actors within a network structure.

Stages of Social Network Analysis

Social network analysis using big data is carried out in four main stages: crawling, filtering, analysis, and visualization. Crawling is retrieving data stored or recorded in memory or digital storage. The data retrieval process has various terms in considerable data research, such as data mining, data importing, data extraction, data harvesting, data downloading, and so on. This data collection was carried out using the data collection technique. The crawling technique produces an extensive collection of data, which is processed using software. The filtering stage in considerable data research can be done according to data needs or data analysis.

It should be noted that filtering in significant data research can be part of the data collection process. For example, collecting digital data based on keywords or hashtags automatically filters downloaded content. This technique shows that filtering is also a sampling process in data collection. Apart from that, filtering can also be done as a data mining process. Through filtering, a researcher can select the data to be analyzed. The two initial stages, crawling and filtering, are the data collection stages in considerable data research.

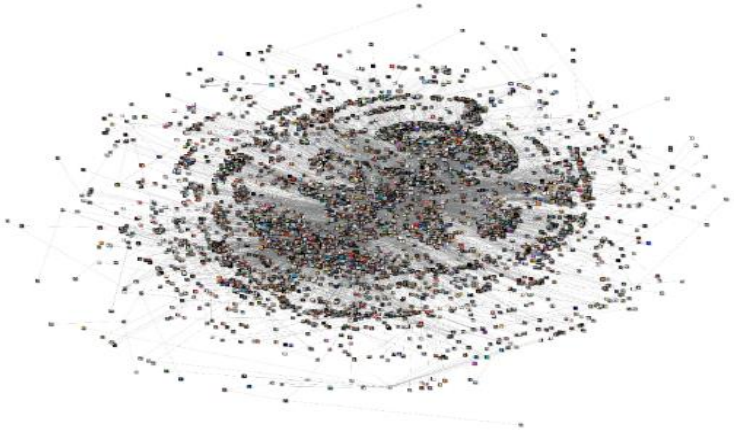
The next stage is data analysis, which is a computational process in the context of big data. Using social network analysis methods, big data analysis can reveal the network structure of interactions between actors. The network analysis process uses social matrix measurements. The extensive data size underlies social matrix computations by software or tools specifically designed for social network analysis. (Madya et al., 2021)Researchers have identified several social networking applications, including NodeXL, NoLimit, Brand24, Gephi, and others. In this research, researchers used NodeXL as software assistance. NodeXL is an easy-to-use tool for collecting, analyzing, visualizing, and reporting the patterns found in collections of connections in social media streams. (Ahmed & Lugovic, 2019)

Structure Communication Network

The results of the communication network structure on Twitter have been formed between social media users or netizens with comments, tweets, and retweets from messages with the keywords CAPRES 2024 and PILPRES 2024. This form of communication network as a whole can be seen in Picture 1 and Picture 2

Picture 1.
The Communication network structure keyword PILPRES 2024

(Data processed by researchers, NodeXL)



Picture 2.
The Communication network structure keyword CAPRES 2024

(Data processed by researchers, NodeXL)

This communication network keyword PILRES 2024 includes 7402 users and forms 12633 unique communication links between Twitter network users, and CAPRES 2024 includes 8604 users and forms 14938 unique communication links between Twitter network users.

Carolan (2014) said that the massive size of the communication network can cause the communication network pattern between users to become less congested. The size of the communication network pattern in a group is related to the number

of members in the network. Small communication networks are more cohesive than large ones, while the structure of relationships with actors can differ between small and extensive communication network patterns.

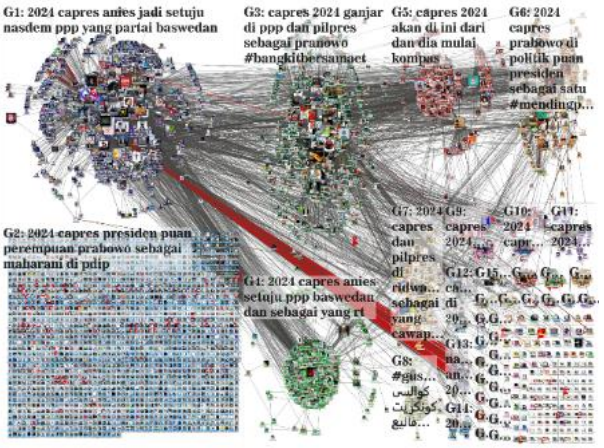
Eriyanto (2014) Communication network research can identify "density" in the communication network among social media users, namely Twitter. Case density is the ratio of the number of connections between relationships in a network to the number of other networks that may appear in the study. Density can also indicate the strength of the relationship between Twitter and social media users during communication. A lack of interaction between Twitter users can characterize a sparse communication network.

Seeing the density level means that all users of this communication network are connected. Overall, the density of the communication network of Twitter social media users in this study is 0,000248858 (CAPRES 2024) and 0,000203296 (PILPRES 2024). This figure shows that the communication network formed between Twitter users is classified as weak and illustrates that relatively few relationships are established within this communication network. Group analysis with the keywords CAPRES 2024 and PILPRES 2024 shows that network density from Anis Baswedan's group is Stronger than Ganjar Pranowo, Erick Thohir, Prabowo Subianto, and Puan Maharani. A survey of data conducted by The National Survey Institute (LSN) shows that Prabowo Subianto is stronger to become a presidential candidate in 2024.

Cluster

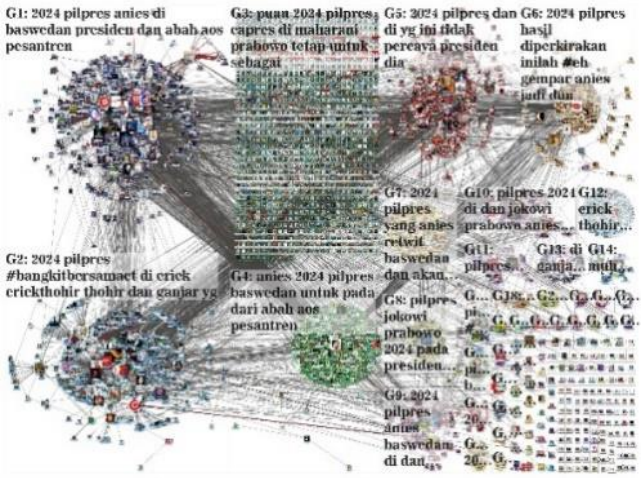
Capres 2024 and Pilpres 2024

Picture 3. Keywords: CAPRES 2024



(Data processed by researchers, NodeXL)

Picture 4. Keywords: PILPRES 2024



(Data processed by researchers, NodeXL)

NodeXL uses mentions to categorize people into distinct groups. A community cluster indicates that many people communicate with one another across several groups. Listening to influential users (shown by a larger circle) dispersed around the network is also intriguing in the image above, demonstrating that the topic attracts a variety of influential actors. (Ahmed et al., 2020). Researchers analyze integration among Twitter users through a cluster approach or clicks. This indicates that the network has formed a cluster of 187 groups with the CAPRES 2024 keyword and 189 with the PILPRES keyword.

Looking at the two images, there are seven major groups: Anis Baswedan clusters, Abah Aos clusters, Puan Maharani clusters, Ganjar Pranowo clusters, Erick Thohir clusters, Prabowo Subianto clusters, Muhaimin Iskandar clusters. Sheikh Muhammad Abdul Gaos Saefulloh Maslul, often called Abah Aos, comes from Suryalaya Islamic Boarding School and is a cleric supporting Anis Baswedan to become president in 2024. However, he has not met in person. From the 7cluster groups, 2 cluster groups support the pair of presidential and vice-presidential candidates, Puan Maharani with Prabowo Subianto or Prabowo Subianto with Puan Maharani, and the other cluster group Erick Thohir with Ganjar Pranowo or Ganjar Pranowo with Erick Thohir.

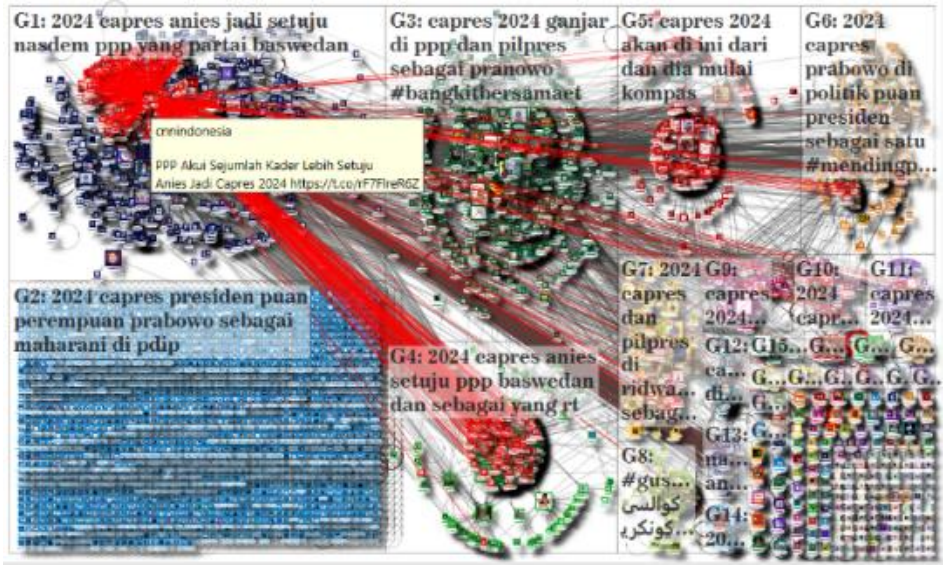
Actor Analysis

Looking at the communication network structure of social media users on Twitter, several people have public figures on the Twitter network, such as Anis Baswedan, Ganjar Pranowo, Prabowo Subianto, Puan Maharani, Eric Thohir, Abah Aos, Muhaimin Iskandar (keyword CAPRES 2024). These people are contacted more often by other Twitter users than others. In NodeXL application analysis, Erick Thohir became one of the highest-ranked social media celebrities with a score of

1024 degrees, while Anis Baswedan became the second most popular social media person with a score of 909. While in from keyword PILPRES 2024.

In the communication network structure of Twitter users, several Twitter network personalities, such as Erick Thohir, Ganjar Pranowo, Anis Baswedan, Ridwan Kamil, Mahfud MD, and Susi Pudjiastuti. Of the seven, they are often talked about more often than others by other Twitter users. Using the NodeXL application, Erick Thohir became one of the people often talked about on Twitter, with the highest rating at 3276 degrees. In contrast, Ganjar Pranowo became the second person often talked about by Twitter users, with a value of 947.

Picture 5. User Communication Networks Based on Tweet (Keywords CAPRES 2024)



(Data processed by researchers, Node XL)

Looking at the image's results above, four clusters or groups strongly discuss the issue. The first cluster of PPP party cadres agrees that Anis Baswedan will be the 2024 Presidential Candidate. The second cluster discusses the presidential candidates Puan Maharani, a female candidate, and Prabowo Subianto. The third cluster discusses the presidential candidate Ganjar Pranowo. The fourth cluster discusses Anis Baswedan and the issue of the PPP party agreeing with Anis Baswedan as a presidential candidate.

D. Conclusion

Based on the results of the study, it shows that the issue of presidential candidates that is often discussed by Twitter users or netizens, seven large clusters have the opportunity to become 2024 presidential candidates Anis Baswedan, Puan Maharani, Ganjar Pranowo, Prabowo Subianto, Erick Thohir, and Gus Aos (Ulama who support Anis Baswedan to become the CAPRES 2024).

Meanwhile, Muhaimin Iskandar, Ridwan Kamil, Mahfud MD, and Susi Pudjiastuti are less often talked about by social media users or netizens. Abah Aos is

a cleric who endorsed Anis Baswedan as the 2024 presidential candidate. Then, the cadres from the PPP support Anis Baswedan to become the 2024 presidential candidate, and there is a possibility that the PPP will cooperate with NASDEM to support Anis Baswedan to become the 2024 CAPRES considering the role of social media in the current era is very important in influencing the election process, positive and negative issues, and election results.

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