

## Indonesian people's resilience detection method based on big data

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### ABSTRACT

The resilience condition of the Indonesian people in facing threats, disturbances, obstacles, and challenges (AGHT) can be identified through conversations on social media. The conversational data of social media users is important data for understanding the national resilience of the Indonesian people. The method developed is more explorative, descriptive, and quantitative by describing the variable: volume of social media users, user profiles, reach, conversation trends, types of issues, top tweets, emotion, sentiment, people who influence (top influencer), intermediary (bridge), and robot analysis (bot analysis). The research sample is from March 1, 2022, to May 1, 2022. Consideration of the timing is due to many public reactions to the "three periods" issue. The results of this study indicate that the three-period issue is the most dominant compared to other topics. The issue of "three periods" spread throughout Indonesia, and the most dominant was in DKI Jakarta Province. The social media users' profile shows that the issue of three periods is mostly discussed by users between the ages of 19 and 29. Men are more dominant in discussing the "three periods" issue than women. Most Indonesian people reject the three-period issue. It shows that the resilience of the Indonesian people is exceptional because they can confront negative issues.

**Keywords:** Big data; social media; Twitter; Indonesia's resilience; social network

### *Metode deteksi ketahanan masyarakat Indonesia berbasis big data*

### ABSTRAK

*Kondisi ketahanan masyarakat Indonesia dalam menghadapi ancaman, gangguan, hambatan, dan tantangan (AGHT) dapat diidentifikasi melalui percakapan di media sosial. Data percakapan pengguna media sosial merupakan data penting yang dapat digunakan untuk memahami ketahanan nasional masyarakat Indonesia. Metode yang digunakan lebih bersifat eksploratif, deskriptif kuantitatif dengan menggambarkan beberapa variabel seperti: volume pengguna media sosial, profil pengguna, jangkauan (reach), trend percakapan, jenis isu, top tweet, emotion, sentimen, orang yang berpengaruh (top influencer); perantara (bridge); dan analisis robot (bot analysis). Sampel dari penelitian ini menggunakan periode waktu dari 1 Maret 2022 sampai dengan 1 Mei 2022. Pertimbangan dari pemilihan waktu tersebut adalah karena banyaknya reaksi masyarakat terhadap isu "tiga periode". Hasil penelitian ini menunjukkan bahwa isu tiga periode merupakan isu yang paling dominan dibandingkan dengan isu lainnya. Isu "tiga periode" menyebar di seluruh wilayah Indonesia dan yang paling dominan ada di Provinsi DKI Jakarta. Jika dilihat dari profil pengguna media sosial, data menunjukkan bahwa isu tiga periode lebih banyak dibicarakan pengguna dengan usia 19 tahun sampai dengan 29 tahun. Laki-laki lebih dominan dalam membicarakan isu "tiga periode" daripada perempuan. Sebagian besar masyarakat Indonesia menolak isu tiga periode, hal ini menunjukkan bahwa ketahanan masyarakat Indonesia sangat baik karena mampu melawan isu-isu negatif.*

**Kata-kata Kunci:** Big data; media sosial; Twitter; ketahanan masyarakat Indonesia; jaringan sosial

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## INTRODUCTION

National resilience is a dynamic condition of the Indonesian nation that contains tenacity and resilience in facing and overcoming all threats, disturbances, or obstacles from within and outside the country. National resilience is the ideal condition of a country having the ability to develop national strength so that it can face all kinds of threats and disturbances for the survival of the nation concerned. These threats can be direct or indirect and seriously endanger the integrity, identity, and even the survival of the nation and state. National security is an antidote to all threats, disturbances, or obstacles to the integrity, identity, and survival of the nation and state. National security is needed not only as a political conception but also as a requirement in supporting the success of the main tasks of government, such as the enforcement of law and order (law and order), the realization of welfare and prosperity (welfare and prosperity), defense and security (defense and security), legal justice and social justice (juridical justice and social justice), and the opportunity for the people to actualize themselves (freedom of the people).

One thing that can be optimized and improved is the attitude of defending the country. Based on the 1945 Constitution, Article 27, paragraph 3 states that “every citizen has the right and obligation to participate in defense of the state”. Likewise, Article 30, paragraph 1 of the 1945 Constitution states that “every citizen has the right and obligation to participate in the defense and security of the state”. Another legal basis is the Law of the Republic of Indonesia Number 3 of 2002 concerning National Defense which affirms “every citizen has the right and is obliged to participate in efforts to defend the country which is manifested in the implementation of national defense”. Based on this legal basis, every Indonesian citizen is obliged and has the right to defend the Indonesian state with all his might and soul. For this reason, attitudes that seek to strengthen national defense must occur from an early age and then continue in the later stages of life, consistently and evenly, at all levels of society.

National defense can be developed from the attitude of the Indonesian people about love for the homeland, nation, and state. Love is a comprehensive concept covering all dimensions of human life. The process begins

with an individual's exposure to information and knowledge about his homeland, nation, and country to foster love and strengthen the attitude of defending the country. This exposure will foster a positive perception and stimulate the desire to know more about everything related to our beloved homeland. After being exposed to and getting to know his homeland, nation, and country, a person will experience a feeling of attachment, closeness, and love for everything related to the homeland where he spent years of his life. This attached feeling is the seed of love that will always influence the formation of individual behavior. Next is the formation of a tendency to behave in individuals, to prioritize and defend their homeland, nation, and state. Defending the country based on a strong attitude and love will be proven when we have to make important decisions that the homeland, nation, and state are an integral part of the individual. Something that is intrinsically attached to love that continues to grow and develop until the end of life.

Every Indonesian citizen has the potential to contribute to national defense. This potential, among others, relates to defending the country to face every threat, disturbance, obstacle, and challenge (AGHT), which is increasingly complex and appears in line with global changes in all aspects of dynamic human life. AGHT must be faced with trust and firm adherence to the Pancasila State Foundation, the 1945 Constitution of the Republic of Indonesia, and all applicable laws and regulations in the territory of the Republic of Indonesia. However, this potential to defend the country cannot be manifested without a solid and growing foundation of love for Indonesia's homeland, nation, and state. The potential for defending the country can be found in every Indonesian citizen who has experienced the formation of attitudes and character to defend the country.

National defense is at stake when the world enters the 5.0 (5.0 Era) society stage. Society 5.0 is an era of information technology used to improve a better life and is directed to individual needs. It is possible because the information technology that developed in the Industrial Revolution 4.0, ranging from big data, the internet of things (IoT), and artificial intelligence (AI) to robots, allows humans to connect and provide solutions quickly to meet specific individuals' needs. The era of industry

4.0 has caused many changes in people's lives today. Media convergence in the new media era is more than a technological shift. Convergence will change the relationship between existing technologies, industries, markets, genres, and human relationships. Media convergence is how society will play to determine the balance of power in the new media era (Michael & Agur, 2018). The presence of social media today has changed the role of internet users. Initially, the internet only functioned to find sources of information. Now, the internet has developed its function as a source of information and a means of communication. The community is no longer passive as a recipient of information but has also been active as an information maker (Merriam-Webster Dictionary, 2018).

The development of information technology must be an opportunity for countries, communities, and citizens because the world is already interconnected (there are no barriers and boundaries). Globalism and regionalism are increasing strong linkages and dependencies between countries or regions. The mobility of people, goods, capital, ideas, and popular culture, which is so easy, fast, and broad, makes national boundaries even more questionable. The convenience obtained from technological developments in society 5.0, in the context of state life or defending the state, needs to be an opportunity for the state to cooperate with the power of smart people in protecting public security, the business world, and its national security.

In the development of a country, society 5.0, with its technological advances, must be used as an opportunity to increase awareness as citizens as well as strengthen its identity as a nation based on the values of divinity, humanity, unity, justice, and deliberation (National Resilience Council RI, 2021). This opportunity is related to the increasing number of internet and social media users in Indonesian society today. It can be seen in the Indonesian Internet Service Providers Association (APJII) survey results for 2021-2022, which reported that the number of internet users in Indonesia reached 210.03 million. This number increased by 6.78% compared to the previous period of 196.7 million people. The highest internet penetration rate is found in the age group of 13-18 years at 99.16%, ages 19-34% at 98.64%, ages 35-54 at 87.30%, and penetration in ages 55 years and

over at 62.3%. The social media platforms often used are Facebook at 68.36% and Youtube at 63.02%. The chat media that are often used are Whatsapp at 98.07% and Facebook Messenger at 47.12%. The most widely used meeting platforms are WhatsApp video conferencing at 69.55% and Zoom at 42.02%. Most internet users are on the island of Java at 60%, Sumatra at 22.31%, Sulawesi at 6.92%, Bali at 6.15%, Nusa Tenggara at 1.54%, Kalimantan 1.54%, Papua Island at 0.77% and Maluku by 0.77%.

The development of communication information technology, such as social media, is a double-edged sword. If people can use social media properly, it will provide benefits. On the other hand, if people cannot use it wisely, it will cause divisions in people's lives. Social media not only plays a role in making friends and promotions, but it is also very effective in developing terrorism, radicalism, and spreading hoaxes that can disrupt the stability of national defense. Therefore, spiritual and religious resilience is needed as a character and strong cultural roots as a nation as part of defending the country.

One way to see or detect the attitude of defending the state of the Indonesian people is to understand the resilience of the Indonesian people in facing new ideas or issues that are contrary to existing values, norms, culture, and regulations. A person's resilience can be measured when the Indonesian people are exposed to a new ideology or news that can threaten the unity of the Indonesian nation. Strong self-defense can be seen from the community's ability to manage well when facing new understandings or issues contrary to existing norms, values, regulations, or legislation. On the other hand, community defense is considered weak if the community is easily exposed or influenced by new ideologies or issues contrary to existing values, norms, culture, regulations, or legislation. To find out the condition of the resilience of the Indonesian people in facing threats, disturbances, obstacles, and challenges (AGHT) in social media, such as new ideologies, radicalism, terrorism, and fake news on social media, research based on digital data is needed. So far, research on the defense of the Indonesian people in dealing with threats, disturbances, obstacles, and challenges in social media is mostly done using survey methods. Survey-based research has not been able to balance the big data characteristics of social

media, such as volume, velocity, and variety.

The three main dimensions of Big Data referred to as the three Vs. Big Data is the volume (amount of data), variety (data variation), and velocity (the speed of data flow), which displays the consensus reached among big data experts. Laney originally described Big Data through the three V's: volume, variation, and velocity (M. A. U. D. Khan et al., 2014). The thing that corresponds to the volume indicates the size or amount of data. What is worth noting, however, is that state-of-the-art highlights the different dimensions of the characterization of these data and their application, emphasizing the added value they provide. Volume represents the scale of the resulting data exceeding terabytes to reach petabytes and even exabytes (Newman et al., 2016). Data is constantly generated from a variety of sources, such as social media, cloud-based services (Amazon), enterprise-related data, and those related to the Internet of Things (IoT) (N. Khan et al., 2014). An estimate by Radicati and Hoang (2011) states that the number of email accounts created worldwide will increase from 3.3 billion, in 2012, to more than 4.3 billion by the end of 2016. A survey conducted by IBM in mid-2012 revealed that the amount of data exceeded one terabyte (Philip Chen & Zhang, 2014). The number of these thresholds is relative because the quantification of data volume also depends on other factors, such as time and data type.

Regarding the time factor, the increased storage capacity will allow for the management of larger data sets. Regarding the data type factor, it is clear that one terabyte of the textual data type does not have to be equal to one terabyte of the date of the video type. Therefore, Big Data is not only about volume but includes other dimensions that begin with the initial V culminating in the "Vs." of Big Data (Gandomi & Haider, 2015).

Variety describes a variety of sources and data types. Different formats characterize streaming data from different sources. For example, one can distinguish structured data that refers to the often-managed Structured Query Language (SQL), a programming language created to manage and query data in a Relational Database Management System (RDBMS) (Hashem et al., 2015). Structured data is easy to enter, query, and store. There is also data generated in semi-structured formats,

such as Extensible Markup Language (XML) and JavaScript Object Notation (JSON) data (Philip Chen & Zhang, 2014). However, the main formats that characterize Big Data relate to unstructured data, such as multimedia-related data (video, photos, and audio) that do not take a fixed format. It makes its management a serious challenge facing data scientists (Tang & Chen, 2015).

Velocity refers to the velocity that characterizes incoming and outgoing data (Bohlouli et al., 2015). The speed of marking the resulting data is evaluated in batch scale, near real-time, and real-time to achieve streaming. According to Yaqoob et al. (2016), data rates are highly dependent on the proliferation of mobile devices and sensors of other devices connected to the Internet (N. Khan et al., 2014). In addition, providing reasonable response times and updates turned out to be a requirement and reference by which the efficiency of the application can be assessed, as also confirmed by Fan and Bifet's research in 2013 (Fan & Bifet, 2013). In addition, managing and analyzing streaming data is an extra challenge, requiring the application of relevant techniques and technologies to be addressed (Bello-Organ et al., 2016).

To answer the challenges of research on the resilience of the Indonesian people in the digital era, the researchers developed research methods using social media data. Research based on social media data must be based on controversial issues and have a major impact on the resilience of the Indonesian people. One of the controversial issues that invite vulnerability to the resilience of the Indonesian people includes the issue of extending the position of the President of the Republic of Indonesia to three times or known as the "three periods" issue. The "three periods" issue became viral on social media and threatened the Indonesian state's unity and integrity.

The purpose of this study is to understand the resilience of the Indonesian people in facing threats, disturbances, obstacles, and challenges (AGHT) based on Twitter social media data. Several aspects will be understood by understanding the conversation about the "three-period" issue on social media. Including the volume of social media users who talk about the issue, the range of the issue, the community leaders involved, the sentiment of the issue, and



the groups that support or reject the three-period issue. These aspects can be used as a basis for measuring the resilience of Indonesian people when facing issues contrary to the constitution.

Research that tries to optimize social media big data is interesting and new, especially in the collection, analysis, and presentation methods. The development of big data research was initially more focused on developing methods such as that of Batrinca and Treleaven (2014) for processing and analyzing social media data as well as efforts to highlight social media modeling and related analytical techniques (Batrinca & Treleaven, 2014). Other experts describe various useful tools, methods, and techniques for analyzing Big Data, treating social media messages with “advanced technical analysis methods” related to social media data analysis (Imran et al., 2015). Other interesting studies include the work of Orgaz et al. (2016) and Stieglitz et al. (2018) on big data methodology. This research focuses on reviewing the methodology, especially the framework that implements research concepts (Bello-Organ et al., 2016).

Another thing is related to social media analytic methods and algorithms (e.g., community detection, text analysis, etc.) designed to handle Big Social Data flows with social data analysis applications (Stieglitz & Dang-Xuan, 2013a). These studies include the methodology and their categorization review in terms of functions relevant to each step of social data processing. They also provide an application that describes the various steps involved in the process through the application of big data technologies (Stieglitz & Dang-Xuan, 2013b) (Stieglitz et al., 2014).

## RESEARCH METHOD

Big data-based community resilience monitoring research is exploratory research aiming to explore a topic or phenomenon that has never been studied before. Because it is exploratory, these studies are generally not deep. The significance of exploratory studies is measured by the novelty of methods and topics that have not previously been carried out (Neuman, 2011). This study uses a positivistic paradigm in which social reality is empirical or real and can be observed (Denzin & Lincoln,

2000). In big data research, reality has been built in social media, and researchers are trying to describe that reality based on existing concepts and theories of communication networks. The measurement of resilience of the Indonesian people is not only measured by the public's response to controversial issues. However, it is also directed at analyzing social media users' communication networks in discussing controversial issues. Several research concepts related to the resilience of Indonesian society were carried out by analyzing several variables, including 1) Degree centrality, that is, the centrality of actors, which is seen from the number of connections that a Twitter user has in talking about controversial issues. 2) Closeness centrality is the average distance between a user and all social media users when talking about controversial issues. 3) Betweenness centrality is the centrality of the betweenness that shows the position of a person or actor as an intermediary (betweenness) of one's relationship with another actor in a communication network between social media users. 4) Eigenvector centrality is a measure that shows how important it is for people who have a network with actors to talk about controversial issues. 5) The clustering coefficient calculates the proportion of connectedness between social media users who form a group to discuss controversial issues. To measure these variables, researchers have used the help of software to download data, map data, and analyze research variables (Hansen et al., 2011).

The unit of analysis of this research is the relationship between social media users, which is formed due to discussing controversial issues. In this study, the researcher took the issue of “three periods” as the object of study. The consideration of the selection of the issue is based on the controversial issue of “tiga periode” (three periods) because it is considered contrary to the constitution in Indonesia, where the office of the President is a maximum of only two terms. This issue triggered the simultaneous demonstration of Indonesian students on April 11, 2022. Thus, the issue of “three periods” is very interesting as a trigger for research analysis in understanding the issue of resilience of the Indonesian people in the face of controversial issues.

To download data related to the “three periods” issue, researchers used the keyword

“tiga periode”. By using the keyword “tiga periode” researchers do the data download on social media, Twitter, and online media from March 1, 2022, to May 1, 2022. The selection of this time span with the consideration that the emergence of the issue of “three periods” was first raised by the Association of Village Governments throughout Indonesia (APDESI) on March 29, 2022, against the support of the President of the Republic of Indonesia Jokowi to lead again in the period 2024 - 2029. At the same time span, APDESI’s support caused a strong reaction from the public, especially Indonesian students who conducted a demonstration to reject the “three periods” on April 11, 2022. The selection of Twitter social media as the object of research is due to Facebook and Instagram policies that have closed data access for the public since the Facebook and Cambridge Analytica scandals in 2017. To prevent similar problems, Facebook changed its services, including the public closure of Facebook and Instagram data. The only social media data that is still accessible is Twitter and online media,

The Indonesian people’s resilience analysis method uses three analysis levels: a) Media analysis. Social media analysis consists of three main aspects of analysis: reach, engagement, and virality on the issue of “three periods”. b). Conversation Analysis (conversation analysis), the analysis at this stage seeks to understand the words most often used by social media users when attempting to communicate with other users. Furthermore, this study also measures public opinion sentiment, namely positive, neutral, and negative, towards the “three-period” issue. c). Analysis of a network (network analysis) is a way to find out who is talking to whom, what is being talked about, and who are the people who have high influence (influencers) in a network of “three periods” issues. In addition, this analysis will also map the number of groups (clusters) and the cohesiveness of members of the Twitter user network in shaping public opinion. The research analysis method will combine the analysis of quantitative and qualitative data provided by the software.

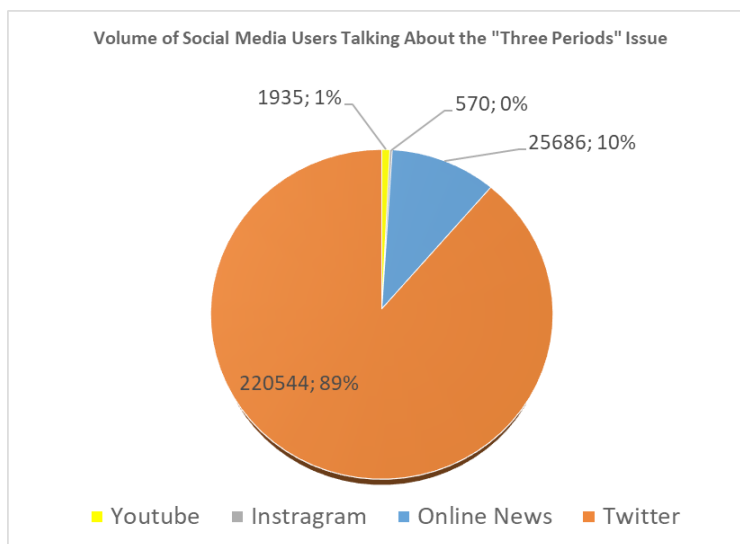
This study uses a critical paradigm. Critical paradigm is a critical process in social science by exploring reality to dismantle the real structure in the material world to help people change their conditions and build a better world

for themselves (Neuman, 2011). The type of critical research approach used is explanatory critique. Explanatory critique is a study to think about and understand social life, which has practical, moral, and political implications for social conditions to help enlighten and emancipate society (Griffin, 2008). The data collection technique used is documentation. Documentation is a collection of documents consisting of words and images that have been recorded, available in the form of writing, notes, sound, images, or digitally (Sikos & Meirmanova, 2020). The data analysis technique used thematic analysis. Thematic analysis is an interpretation based on the conception of the actual communication episode.

## RESULTS AND DISCUSSION

Analysis of the resilience of Indonesian society based on social media big data was carried out through three levels of analysis. The first stage is carried out social media analysis which is seen from the volume, reach, and profiles of social media users. b). Analysis of skills (conversation analysis) looks at conversation trends, the most popular tweets (top tweets), and the sentiments of the conversations. c) The last stage of the study is to understand the network (network analysis) to find the top influencers and clusters.

The community’s resilience in facing the threats or disturbances can be seen from the number or volume of community reactions to controversial issues such as the “tiga periode” (three periods) issue. The variable of social media users’ volume is an “early detection or early warning” of the resilience of the Indonesian people. If the reaction of the Indonesian people is large, the government must start to be vigilant about the issue. If in the media, Twitter can be detected through virality issues or trending topics. If the issue becomes a trending topic, regulators such as the Indonesian National Security Council, which monitors the resilience of the Indonesian people, must begin to be alert. Suppose it does not become a trending topic on social media. In that case, vigilance must still be exercised because the issue of “three periods” is contrary to the constitution and prone to conflict. The study results show that the volume of social media users talking about the “three periods”



Source: Research Results, 2022

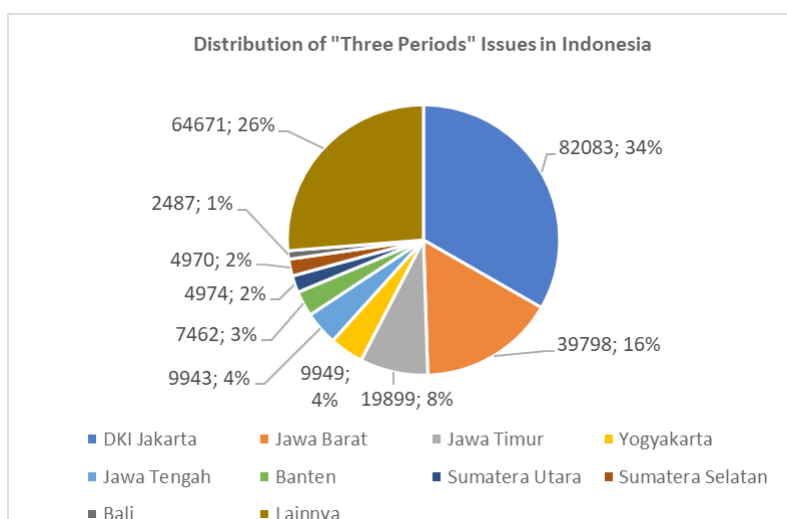
**Figure 1** Volume of Social Media Users Talking about the “three-period” issue

issue was 248,735 in two months, from March 1 to May 1, 2022. Social media’s favorite means to talk about the “three-periods” issue is Twitter, at 220,544 or 89%. Users prefer Twitter’s more open and simple social media character to talk about political issues “three periods”. It can be seen in figure 1.

In addition to Twitter, Indonesians discuss the issue of “three periods” through online news (10%), YouTube 1%, and Instagram (0.22%). The number of 248,735 talking about the “three periods” issue is significant and should immediately become the government’s foothold to follow up. If the government allows the

issue, it will become a wild ball and can be used by certain parties to undermine the Indonesian nation’s unity.

In addition to the number of volumes, monitoring the resilience of the Indonesian people based on social media big data can also be seen from the reach of the “three periods” issue in Indonesia. The “three periods” issue spread throughout Indonesia or only collected in some areas of Indonesia. The distribution of issues is important to see which areas are dominant in reacting to the “three-period” issue. The distribution of the “three periods” issue can be seen in figure 2.



Source: Research Results, 2022

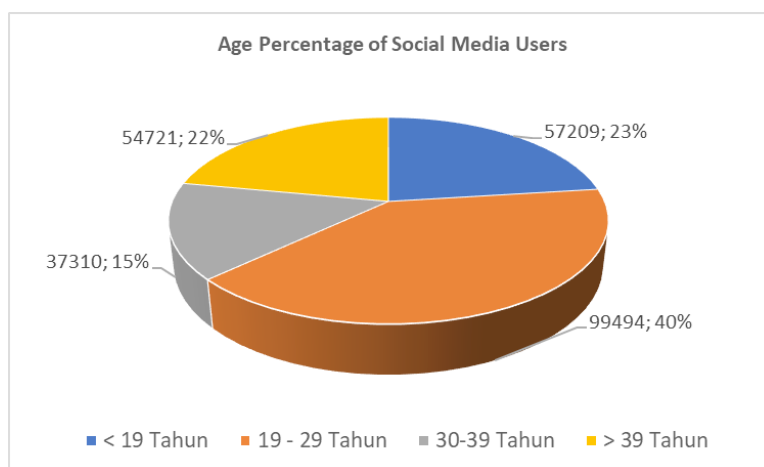
**Figure 2** Distribution of three periods issue in Indonesia

Based on the results of the study, it shows that the reaction of the Indonesian people to the issue of “three periods” came more from the provinces of DKI Jakarta (33 %), West Java (16 %), East Java (8 %), Yogyakarta (4 %), Central Java (4 %), Banten (3 %), North Sumatra (2 %), South Sumatra (2 %), South Sulawesi (2 %), Bali (1 %) and other provinces (26 %). The concentration of community reactions to the issue of “three periods” located on the island of Java, especially in DKI Jakarta, West Java, and East Java. It needs to be understood because Java Island is the center of power. Although cyberspace is not limited in time and space, the proximity of the center of power turns out to greatly influence the movement of people on an issue of “three periods”. Psychologically, accounts at the center of power can pressure power holders to pay attention to the “three periods” issue. If the channeling of aspirations through social media and online has not shaken the rulers, then the movement down can be easily carried out. The function of social media is essentially a means of communicating between users interested in talking about the issue of “three periods”.

In addition to the distribution of territories, monitoring the security defense of the Indonesian people is also seen based on social media user profiles such as age and gender. Mapping the “three periods” issue based on age is very important to understand, whether moved by adolescent or adult groups. Most 40% of the total social media users who reacted to the “three periods” issue were driven by the

youth group aged 19-29 years, the age under 19 years by 23 %. If we look at this competition, it shows that the millennial generation is more dominant, or 63% who talk about the issue of “three periods”. In real terms, the issue of “ three periods “ is more widely discussed in the group of teenagers, especially students. Millennial groups have a big role in providing political change and can even fortify national defense from issues that violate the constitution. The year 2022 is a political momentum that requires the role of millennials who are capable of media, responsive, and creative in dealing with political disturbances from various parties. The millennial generation’s strategic steps in maintaining the Indonesian people’s resilience in various ways, for example, encouraging a movement to reject the position of President of the Republic of Indonesia through hashtags such as hashtag #tolak3periode. The composition of the comparison between the millennial generation and the adult generation can be seen in figure 3.

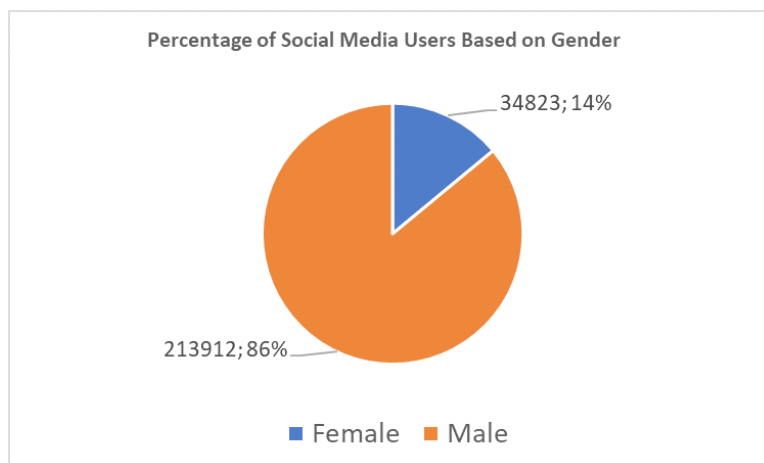
The issue of “three periods” is one of the political issues, and usually, political talk is synonymous with men’s talk. When viewed from the gender aspect, the discussion of “three periods” in cyberspace is dominated by men (86%) and women (14%). Although the number is small, this is very meaningful to encourage women to contribute to participating in maintaining Indonesia’s national defense. Based on The Muted Group Theory, women tend to experience difficulty conveying political issues in the public sphere, including social



Source: Research Results, 2022

Figure 3 Age Percentage of Social Media Users in Talking about the “three periods” issue





Source: Research Results, 2022

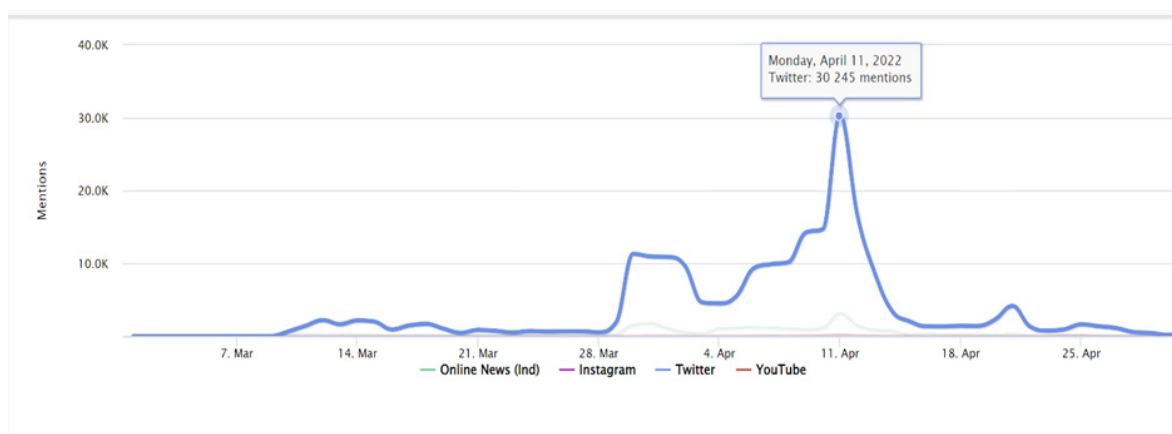
**Figure 4 Percentage of Social Media Users Talking about the issue of “three periods” based on gender**

media (Littlejohn, 2009).

Analysis of social media conversations is important in monitoring the defenses of the Indonesian people. Issue analysis “three periods” can be observed based on the trend of issue talks ranging from the emergence of issues, the response of issues, the originator of issues, and the handling of issues from the government. The “three-period” issue talk trend can be seen in the development from March 1, 2022, to May 1, 2022. The results of social media monitoring show that the trend of talking about the “three periods” issue emerged when there was a grand meeting of the Association of Village Governments throughout Indonesia (APDESI) on March 28, 2021. At the village officials’ meeting, most village heads made declarations to support Joko Widodo to become the President of the Republic of Indonesia

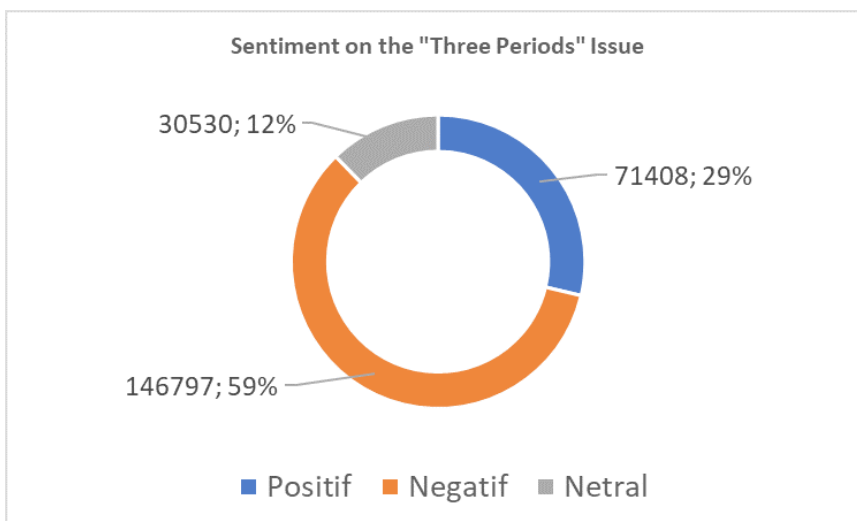
for the 2024-2029 period, even though this is contrary to the constitution. The declaration, in turn, triggered a strong reaction from various elements of Indonesian society. The highest reaction from social media users occurred on April 11, 2022, when there was a student protest against the “three-periods” issue.

Understanding the trend of talking about the “three periods” issue is important in understanding the defense of the Indonesian people. The trend of conversation is the basis for taking action to make decisions. If there is a trend of talks in a negative direction, this should be an early warning for the government. In the case of the “three periods” issue, it showed a negative reaction before April 11, 2022. Unfortunately, the government was slow in responding and, in the end, triggered a large-scale student demonstration on April 11, 2022, in



Source: Research Results, 2022

**Figure 5 Trend of “three periods” issue on social media**



Source: Research Results, 2022

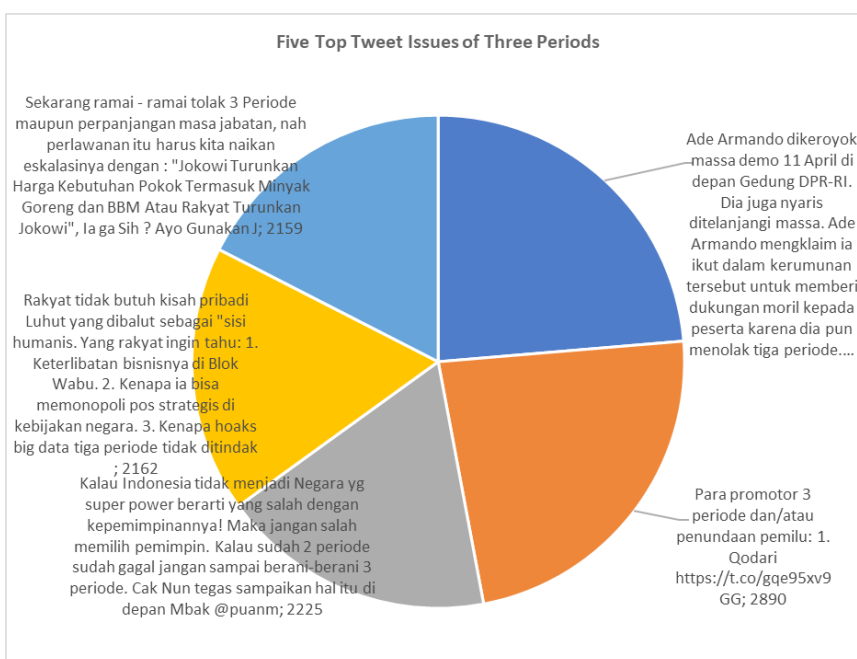
Figure 6 Sentiment Talking about the “three periods” issue on social media

Jakarta. The “ three periods” discussion mostly (59%) leads to negative sentiment or rejects the post of three-periods President of the Republic of Indonesia, as much as 29% and neutral 12%. Had Jokowi given the assertion that the general elections will be held in 2024 and he had categorically refused three periods, there would have been no demonstrations on April 11, 2022. Jokowi gave the firmness to reject three periods after a large-scale demonstration occurred.

In understanding the Indonesian people’s defense, it is also necessary to look at the content of the talks and what makes objections to the issue. Figure 7 shows a conversation with one of the social media users who got the most responses from other users.

The tweets that received the most responses from Twitter users were:

*Ade Armando dikeroyok massa demo 11 April di depan Gedung DPR-RI. Dia juga*



Source: Research Results, 2022

Figure 7 Top Tweets of “Three Periods” Issues on social media

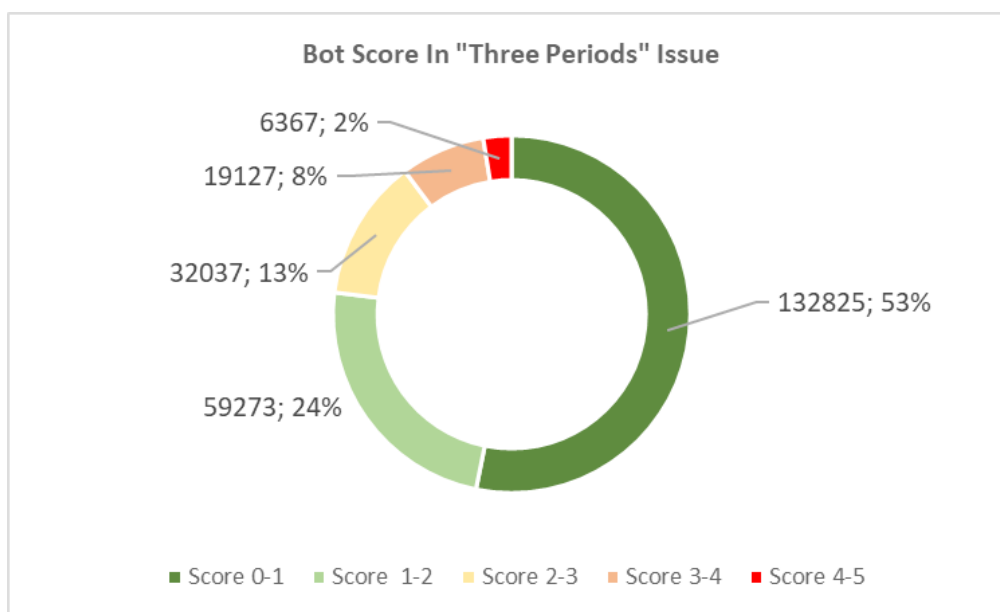
*nyaris ditelanjangi massa. Ade Armando mengklaim ia ikut dalam kerumunan tersebut untuk memberi dukungan moril kepada peserta karena dia pun menolak tiga periode. (<https://t.co/2FLwTfOYjZ>)*

This tweet was uploaded by the account: @mazzini\_gsp, who reported about Ade Armando's beating at a student demo on the issue of "three periods". The mobbing action against Ade Armando occurred when he was in the middle of a crowd of actions demonstrating in front of the Indonesian Parliament Building, Central Jakarta, on April 11, 2022. This tweet has a "neutral" sentiment because it only reports on the reality of Ade Armando's scraping and does not give an assessment of the event. However, most of the other top tweets have a negative sentiment on the "three-periods" issue. Suppose most of the top tweets lead to negative sentiments. In that case, the government should take steps to not interfere with the stability and resilience of the Indonesian people. Unfortunately, the government took less action to dampen the public's response to the "three periods" issue. As a result, the crystallized public opinion on social media turned into a street movement to reject the three periods. After a student demonstration on the three-period issue, the President of the Republic of Indonesia responded. He provides certainty

about the presidential election's determination to continue in 2024. In addition, Joko Widodo (President of the Republic of Indonesia 2019-2024) gave assurance that he no longer wants to be nominated for the President of the Republic of Indonesia 2024 - 2029 for the third time.

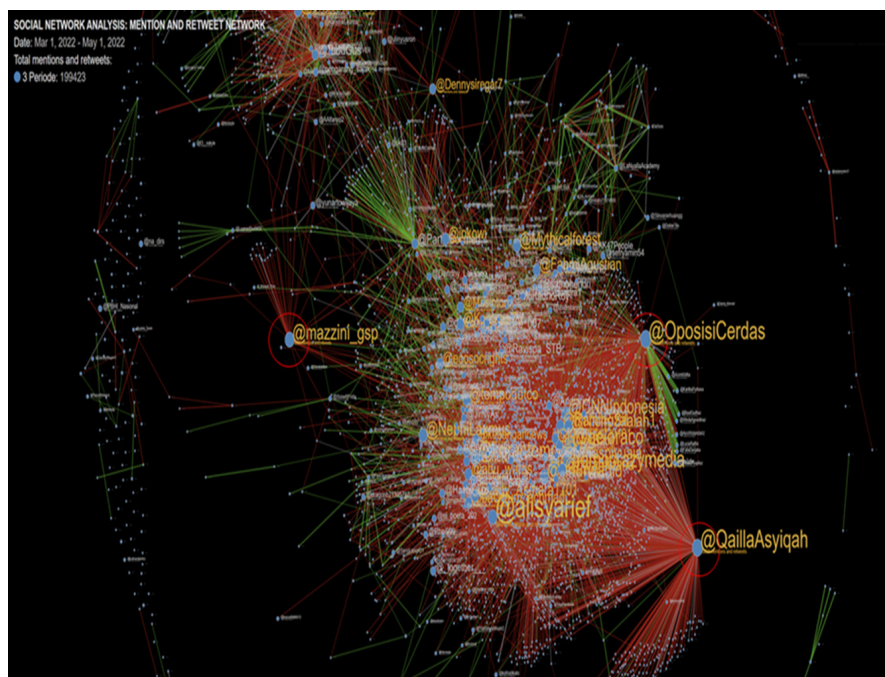
Bot analysis is needed in national defense research based on social media big data. Bot analysis is used to find out whether the messages conveyed by social media users come from robots or humans. National defense in Indonesia is often threatened by hoax news or containing threats originating from unknown users. Social media users do not always use real profiles but can also use fake ones so that no one easily tracks them. Based on bot analysis, 76.8% were sourced from humans, and 2.56% were identified from robots. It shows that the "three periods" issue comes from social media users who can be accounted for or verified. The issue of the "three periods" is not the creation of machines but humans. It shows that the issue of "three periods" is an important issue that concerns the needs of many people. To see the size of bots in the case of the "three-period" issue, see figure 8.

Big data-based analysis of the resilience of Indonesian society also provides information on communication networks between Twitter media users. This network shows Twitter accounts communicating with each other in



Source: Research Results, 2022

Figure 8 Bot score In three-period issue



Source: Research Results, 2022

**Figure 9** Communication network between social media users in discussing the issue of “three periods

talking about the issue of “three periods”, as shown in figure 9.

The figure of the communication network shows the presence of a communication network that has red color. It shows a communication network that rejects the “three-period” issue. Meanwhile, the green-colored communication network shows social media users who support the “three periods” issue. The red communication network is very dominant than the green one. The image, which is dominated by red, is information that the government should consider in monitoring the defense of the Indonesian people. If the red color is already dominant, the government should take action so that the opinions that develop on social media do not turn into street movements like the student demonstration on April 11, 2022. In addition, Twitter users’ communication network information provides account information on who is the most dominant in the “three-period” issue. The picture of the communication network shows that accounts such as @mazzini\_gsp, @QaillaAsyiqah, and @OposisiCerdas have received the most responses from other users. The accounts responded negatively or rejected three periods. In monitoring the resilience of the Indonesian people, the information on these profiles is important as a basis for supporting

the profiles of top influencers. If the profile were already known, the government could conduct an interactive dialogue face-to-face or direct message through social media so that the resilience of the Indonesian people remains normal again.

## CONCLUSION

The “three periods” discussion on social media was the most discussed from March 1, 2022, to May 1, 2022. This issue rapidly developed when there was support from the All-Indonesian Village Government Association (APDESI) for Joko Widodo to lead again as President of the Republic of Indonesia for 2024-2029. The three periods issue was discussed throughout Indonesia, mostly on Java Island, especially in the Province of DKI Jakarta, Java. West and East Java. The discussion on the issues of the three periods is mostly dominated by young people or the millennial generation, especially student groups. Students have a big role in voicing the movement to reject the idea of a three-term presidential power contrary to the constitution. Most of the public’s response on social media rejects the presidential power



of three terms, and only a small part accepts three terms.

Regarding gender, men are more dominant in discussing the three periods. However, groups of men and women have the same attitude toward rejecting the issue of three periods. The demonstration action movement to reject the issue of three periods on April 11, 2022, is a form of the Indonesian government's weakness in dealing with the resilience of the Indonesian people. The trend of discussing the issue of three terms has developed since March 30, 2022, and most Indonesians reject President Joko Widodo to lead three terms. However, this issue was ignored by the Indonesian government and eventually triggered a student-led street movement on April 11, 2022.

Due to the delay by the Indonesian government in dealing with the "three periods" issue on social media, the government should have an independent team to monitor the resilience of the Indonesian people. The team is tasked with mining data, processing it, and providing recommendations to the Indonesian government on the steps to be taken

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