

Communication Network of Digital Opinion Movement in the Formation of Personal Data Protection Regulation

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Abstract

The rise of data theft in the digital space has prompted the public to call for regulations regarding data security to be implemented immediately. Opinions in the form of requests for the passing of the Personal Data Protection Law (UUPDP) via social media Twitter have become very widely discussed. UUPDP is a regulation related to personal data protection to fill the regulatory void in the digital space. The keyword UUPDP became a topic of conversation on Twitter when the UUPDP personal data protection law was passed by the government and the DPR. The aim of this research is to map the Digital Opinion Movement through communication networks and identify influential actors in communication networks using the keyword UUPDP on Twitter. This research uses the Social Media Network Analysis (SMNA) method. The theory used to answer this case is the Digital Movement of Opinion/DMO theory and communication network theory. Information collected via Twitter from 11 September 2022 – 21 September 2022. Stages in analyzing and retrieving data using the website based Netlytic.org application and Gephi software. The use of this tool is used to map influential actors involved in the communication network using UUPDP keywords, next to measure centrality using the indicators of degree centrality, betweenness centrality, closeness centrality and eigenvector centrality. The results of the research are 2 (two) main actors who influence the movement of digital opinion in communication networks with the keyword UUPDP, namely @franken_blues and @hunterjagar3.

Introduction

In recent years, the development of the internet and social media in society has grown rapidly. Especially with the presence of the Covid-19 pandemic which suddenly spread throughout the world and especially Indonesia. According to data released by We Are Social Hootsuite, there were around 204.7 million internet users and 191.4 million active social media users in Indonesia as of February 2022 (Sari, 2022).

The development of the internet and social media has certainly given rise to various digital revolutions, one of the things that interests researchers is related to data. The revolution that has occurred has created new innovations in data management, data processing that occurs begins with obtaining data, then the data is stored, then processed/manipulated and finally the data is transmitted in real time. Widespread and complex distribution of data is also a phenomenon that continues to grow rapidly, the data created is an activity carried out by humans with the aim of understanding something which in reality can engineer human life. The development of communication and information technology as well as computing means that data has added value or is commonly referred to as a data-based digital economy (Wray, 2020).

The role of the digital economy in a country's Gross Domestic Product (GDP) continues to grow. The composition of global GDP is estimated to reach 5 percent to 15 percent, and the

contribution from global employment is 3 percent to 10 percent (ID-CSO DTF, 2021). The development of the digital economy in many developing countries such as Indonesia is often not in line with the size of its economic market. This is influenced by one of the policies in each country. Therefore, one of the steps taken to accelerate the development of this sector is to develop digital economic policies, which also means developing a digital policy ecosystem in a country. Digital policy itself is all policies related to the utilization and promotion of opportunities offered by digitalization, with one important aspect related to data flow policies.

In recent years, various issues regarding security in the Indonesian digital space have become very popular on social media. As we all know, apart from the many benefits we get from the internet, the internet turns out to have a "dark side". Technology brings disadvantages, one of which is that it makes it easier for "criminals" to commit crimes or what we know as Cyber Crime. (Fuady, 2005) One of them is the threat of personal data leakage which is increasing amidst rampant technological developments.

Cyber Security Expert from CISSReC, Pratama Persadha, said that the potential for information leaks in Indonesia is still very large because understanding of cyber security is still very small. The trend of information leakage in Indonesia has emerged since the Covid-19 pandemic, because the habit of working from home (WFH) during the pandemic has increased the risk of information leakage. Referring to the records of the National Cyber and Crypto Agency (BSSN), traffic anomalies in Indonesia increased from 800 million in 2020 to 1.6 billion in 2021. (Chainarong Prasertthai, 2022).

Information leaks carried out by Bjorka as occurred recently. Bjorka is a figure who disseminates various individual information to several institutions. One of them is alleged information from SIM card registration. Not only that, Bjorka is the person who spreads messages addressed to the head of state, not only that, several public figures are also known to have had information spread by Bjorka.

Each of Bjorka's actions spreads personal information and samples through hacked hacker forums. to. Through his Twitter and telegram accounts, Bjorka has circulated information about Johnny G. Plate (Minister of Communication and Information), Puan Maharani (Leader of the DPR), Erick Thohir (Minister of BUMN), Denny Siregar, Anies Baswedan, Luhut Pandjaitan, Tito Karnavian. Not only that, Bjorka also circulated data about the mastermind behind the Munir massacre via telegraph entitled "Who Killed Munir?" and condemning the breach of MyPertamina data. This shows that the protection of a person's personal data is very weak. In fact, the security of protected data is proof of the strength of a country's sovereignty itself.

According to the book (Bernadette & Karunian, nd), it is important for the Digital Economy Working Group to establish a good and comprehensive governance framework for personal data protection, through ratifying the Personal Data Protection Bill. UUPDP will focus on mechanisms for collecting, storing and using personal data by public and private data controllers. In addition, it is also important for the Digital Economy Working Group to ensure the presence of an adequate governance framework, accompanied by an effective and proactive enforcement mechanism, through the establishment of an independent data protection authority, which enables cross-border cooperation, to ensure the protection of personal data Indonesian citizens.

In response to this incident, the DPR RI has passed the Personal Data Protection Bill (RUU PDP) into law on September 20 2022. IT expert, Digital Forensics Expert, Ruby Alamsyah assesses that the ratification of the UUPDP will provide benefits to society because there is a definite legal basis. regarding personal data and platforms that manage data are responsible for the security of people's data. UPPDP functions to guarantee citizens' rights to personal

protection and raise public awareness and ensure recognition and respect for the importance of protecting personal data. This law is expected to become a strong legal umbrella for the governance and protection of personal data of citizens and government administrators. UUPDP aims to create legal certainty and a sense of security for citizens. Its existence regulates in detail the duties, authority and functions of private and public institutions will provide a strong foundation for efforts to minimize the risk of fraud in the digital era. One of the social media that is widely used is Twitter. According to information from We Are Social Hootsuite as of February 2022, this social media platform has a number of users of 58.3% of all internet consumers aged 16-64 years. Twitter users can write opinions in the form of tweets which are limited to 140 characters. In 2017, Twitter launched a thread feature with the intention that Twitter users could interact via uploaded tweets.

Tweets can be opinions from users in response to an event they have experienced (Cahyono, 2017). Twitter is used to convey judgments or opinions about something. Twitter is also used in various fields and also provides information such as traffic jams, natural disasters and shares experiences with the public about events experienced (Hartanto, 2017). People can use Twitter as a place to express themselves, one of which is as a place to express opinions. This is in accordance with what is stated in article 23 paragraph (2) of Law Number 39 of 1999 concerning freedom to hold, express and disseminate opinions orally or in writing. (Rahmawati et al., 2021). Twitter users provide opinions or opinions on issues or policies by tweeting on Twitter. This behavior is a form of digital activism. Statements showing an attitude of rejecting or accepting an issue or policy, for example there is a public issue related to a policy, social media users will give a positive or negative response accompanied by keywords as the target of the problem.

Trending conversations on Twitter generally describe ongoing events and are grouped by the same topic or are often referred to as keywords (Isanta et al., 2016). The more Twitter users use the same keywords in writing opinions, it means that these keywords have a high frequency of appearance (Setya Perdana et al., 2015). Keywords can be used by Twitter users to search for specific topics, so using the right keywords is important to consider. Selecting the right keywords to include with digital content is not only related to Search Engine Optimization (SEO), but also the effectiveness of distributing content on social media (Vinet & Zhedanov, 2011). This keyword is a key character in the formation of public opinion on social media in the condition that Twitter users do not know each other, are not followers of each other, can discuss virtually the same topics, even with the same attitudes.

In digital movements or online petitions, they are generally led by a particular actor or social organization. This actor designed a campaign and then invited social media users (netizens) to get involved in the social movement campaign. Even though it was carried out digitally, this campaign had clear objectives and was led by an actor leading the Movement. Meanwhile, in this new model of digital activity, it is relatively more spontaneous. Social media users respond spontaneously to events that occur every day by writing comments on social media. Their activities are not controlled or led by an actor (account). Social movements are more natural. Keywords are used as a bridge between users who have the same interests and preferences.

This research examines how public opinion moves on Twitter social media through communication networks and actors in responding to digital space security issues to the ratification of personal data protection laws in discussions on Twitter social media with the keyword UUPDP within the 11 September 2022 - 21 September 2022 deadline. At that time, the keyword UUPDP became a topic of discussion among netizens when the personal data protection law (UUPDP) was passed by the government and the DPR. Previous research related to personal data protection laws was limited to the substance of the expected content in the

draft law, the urgency of establishing personal data protection regulations and a study of the formation of personal data protection laws. Previous research has not examined the movement of digital opinion through communication networks and actors regarding the implementation of personal data protection laws on social media, especially Twitter. The aim of this research is to analyze digital opinion movements through communication networks and identify influential actors in the network using the keyword UUPDP on the social media Twitter.

Methods

To answer the problems previously stated, the method used in this research is *Social Media Network Analysis* (SMNA). This method will basically describe the network structure and relationships of actors, in this case social media users (Eriyanto, 2021), actors (nodes) and relationships (edges) will be depicted in the social media network (Twitter) regarding the digital opinion movement regarding personal data protection laws. The *Social Media Network Analysis* (SMNA) method uses a quantitative approach with a positivistic paradigm. This approach describes data on the surface so it does not explore meaning in depth, so it is more in the form of a quantitative percentage of reality (Kriyantono, 2020).

The theory used is the Digital Movement of Opinion/DMO theory. Barisione and his colleagues developed an interesting concept of digital activism, which was named the Digital Movement of Opinion (DMO). This activism can be called different from the concept of using digital media for social movements (online petitions, electronic advocacy, or digital campaigns). This concept mediates two important debates related to citizen participation (Barisione & Ceron, 2017). First, the majority of citizens generally express their opinions secretly (opinions are generally known through public opinion surveys). Second, social movements are characterized by the activities of small groups of people with clear organizations, issues and leaders. Social media creates an activity that cannot be combined into these two forms of participation. When an issue arises, social media users can spontaneously express their opinions (support or criticism) through social media posts. This post occurred spontaneously, was not ordered or led by social movement leadership actors. Through these posts the public's voice can also be seen clearly.

This research also wants to know the structure of actor networks and their relationships; therefore, this research uses communication network theory. This theory is a simple analysis that can map and explain a network structure and social network. (Eriyanto, 2014) This can map the connections or relations between actors in a particular social structure. Communication networks have advantages, namely: (1) Can describe the process of a communication event occurring; (2) Mapping the position and power of actors in the social structure; (3) Compare relationships in similar or different networks.

The data collected in this research was in the period 11 September 2022 – 21 September 2022. The total information in this research amounted to 1,607 tweets. The analysis and data collection procedures on Twitter utilize the website-based application Netlytic.org and map actor interactions on the communication network using *Gephi software*. Using Netlytic and Gephi can automatically create network links based on Twitter account names and create information that can be used for analysis at the relationship and actor level.

The data collection techniques in this research are: (1) Collecting content data about UUPDP through the *Social Network Analysis application* in the form of Netlytic which is connected to Twitter. Netlytic is used to find communication networks between community members, especially those connected to the network; (2) The data is imaged via the Gephi application to search for actors and nodes; (3) Processing information; (4) After processing, the researcher will visually explain the data obtained using *social network analysis*.

Results and Discussion

News about the ratification of the personal data protection law has become widely discussed, one of which is on the social media Twitter. The drama of various negative news regarding incidents of personal data leakage, the absence of a party responsible for data security in the digital realm and various pressures regarding the lack of regulation in the digital space, has resulted in this personal data protection law being introduced, this regulation has been ratified and agreed to by the government and the DPR on September 20 2022. Various opinions are created in any social media space, one of which is Twitter. This is an interesting thing to study in this research by looking at it from the communication network side. This research collects data from the Twitter social network in the period 11 September 2022 - 21 September 2022, the data that has been taken is used as a dataset. The data collection period was chosen, because in that time period the personal data protection law was passed, opinions in the digital space about the lack of regulations related to personal data protection have become a polemic discussed on Twitter social media.

Using the netlytic.org application by researchers, they succeeded in collecting a dataset of 3,194 data. The dataset that has been collected is divided into several types of data, namely tweet data, retweet data and mention data. All of this data contains UUPDP keywords contained in the message. An overview of the distribution of UUPDP tweets in communication networks is as follows:

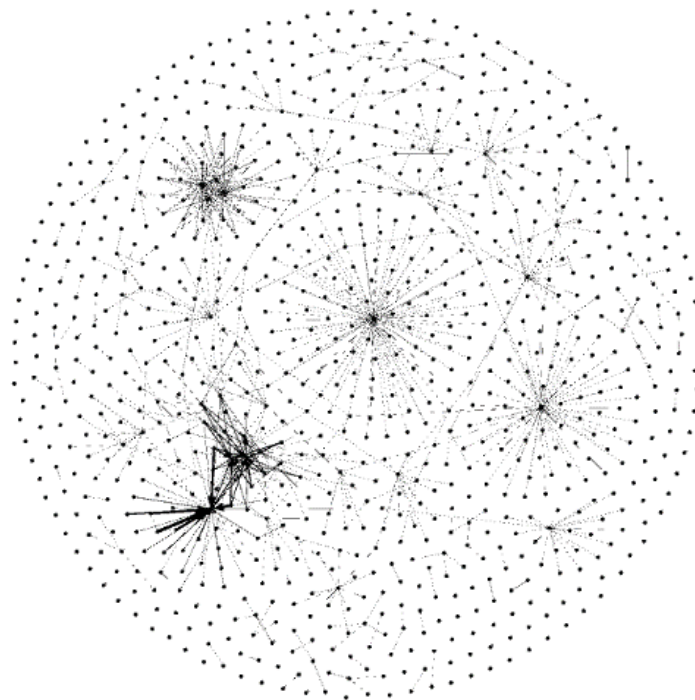


Figure 1. UUPDP Communication Network

Figure 2 is the distribution of UUPDP tweets visualized in the communications network via the Gephi application in the Fruchterman Reingold Layout format. The UUPDP keyword is a word that appears in every tweet posted by an actor as a topic of discussion for their opinions on Twitter social media. The opinion of each actor is a form of digital opinion movement regarding the urgency of making regulations for the Personal Data Protection Law. The level of effectiveness and dissemination of opinions/messages conveyed via Twitter can be mapped in the network structure, as follows:

Table 1. Network Structure

Type	Data
Size	Nodes: 918 Edges: 893
Diameter	28
Density	0.001590
Reciprocity	0.023530
Centralization	0.071440
Modularity	0.793300

The network structure that has been mapped in Table 1, maps several things such as those found in the size analysis, actor data/nodes contained in the communication network as many as 918, and edges as many as 893. The positions of the actors depicted in a network are called Nodes and the connections or relations between The actors created are called edges (Hanneman & Riddle, 2005; Bratawisnu & Alamsyah, 2018)Based on the terms previously explained, it can be concluded that in the UUPDP discussion on Twitter there are 918 nodes or accounts with a total of 893 relationships between actors who tweet UUPDP in the network.

Next is the network structure in the form of diameter. Diameter is the distance between one node and another node with the furthest distance in the network (Gruzd, 2009; Gruzd et. al., 2016; Eriyanto, 2020)). The parameter used to measure this distance is that the larger the diameter number in the network, the further the distance, so that it will be more difficult for each node to communicate and vice versa (Nurshafa & Alamsyah, 2016). As seen in the previous table, in the UUPDP discussion, the resulting diameter value is 28, meaning that the furthest distance from this network structure is 28 steps which shows minimal interaction between one user and another user.

The next network structure is density and reciprocity. Density is a density relationship that shows the intensity of actors interacting in the network. The larger the value, the denser the interaction. Reciprocity describes the interaction that occurs as a one-way interaction or two-way interaction that occurs between actors. Data obtained on the Twitter communication network with the keyword UUPDP. The resulting density value is 0.001590 and the reciprocity value is 0.023530. This can illustrate that there is no interaction density in the network so it can be said that the interaction intensity is not dense. Meanwhile, the direction of interaction within this network produces a picture of one-way interaction, this is based on a reciprocity value that is much smaller than one.

Next, the network structure that is mapped is centralization, that is, this network structure will describe whether there is a dominant actor seen from the degree of centralization or how centralized the network being studied is. By looking at the distribution of opinions with the keyword UUPDP, it shows a centralization value of 0.071440, this value is quite low. This indicates that the interactions carried out with the UUPDP keyword are not centered on one actor. The final network structure that is mapped is modularity, this network structure groups nodes or social media accounts in the communication network (Gruzd, 2009; Gruzd et. al., 2016; Eriyanto, 2020). The modularity number formed will map the groups formed in the network. Value resulting from the UUPDP network is 0.793300, which illustrates that there are other groups in the network or clusters with other nodes that have dominant characteristics in them.

Based on data mapping from the communication network structure described previously, it resulted in a conclusion that the digital opinion movement within the UUPDP keyword network runs in one direction, the resulting interactions are also extensive with relations between actors

not interacting with each other. The large number of actors involved illustrates that providing digital opinions regarding the UUPDP is massive and provides information for social media users about this topic to a greater extent.

Discussion

Measuring the centrality network structure can map the nodes that participate in the communication network with the keyword UUPDP on Twitter. There are 4 indicators to determine key or influential actors in the communication network, these indicators are: (1) Degree Centrality indicator, (2) Closeness indicator Centrality, (3) Betweenness Centrality indicator, and (4) Eigenvector Centrality indicator.

A topic discussed on a communication network includes actors who have high popularity or are the main actors in disseminating the topic (Tomasoa et al., 2019). The formation of groups in a UUPDP communication network is carried out by actors who have essential roles. In mapping actors who have high influence or popularity in the UUPDP keyword network, it can be seen by looking at degree centrality. The resulting value refers to the degree centrality value, that is, the greater the resulting value, the more the actor can influence other accounts and have more relationships (Bratawisnu & Alamsyah, 2018). The next indicator can also see influential actors by looking at the indegree value which is higher than the outdegree value. The identified nodes have a large indegree centrality value, indicating that these nodes are objects for mentioning, retweeting, or replying to their tweets. However, if the outdegree centrality value for the nodes is greater, it indicates that the nodes more often carry out actions of mentioning, retweeting, or responding to other Twitter users' tweet posts. Another thing is that the large outdegree centrality value shows that the actor is an active user of Twitter social media, even though the nodes do not necessarily upload their own tweets.

Table 2. Actor Degree

No	Actor	Indegree	Outdegree	Degree
1	Catchmeupid	110	1	111
2	Matanajwa	74	0	74
3	Hunterjagar3	34	7	41
4	Franken_blues	36	5	41
5	Hyang_wisnu	35	4	39
6	Qaisrafif	31	4	35
7	Sanggarkutipan	31	1	32
8	Kemkominfo	29	1	30
9	Damarjuniarto	24	2	26
10	Platejohnny	24	0	24

In Table 2, the results of the highest degree centrality values were obtained by actors sequentially from rank one to ten. As can be seen visually in Figure 2, dark green is the symbol for the most dominating actor, second is symbolized by brown, and third is purple. Nodes with the highest value in this degree of centrality are identified as media sources of information for other accounts.

The node that dominates the most is the @catchmeupid account, which can be seen from the total degree centrality value obtained as 111 and the indegree centrality value of 110. This shows the relationship with actors between the @catchmeupid account and 111 other social media accounts. @catchmeupid account as an object to be mentioned, or retweeted and replied to his tweets 110 times. Furthermore, the outdegree centrality value of the @catchmeupid account is 1, meaning that the @catchmeupid account only mentioned, replied to, or retweeted

other accounts' tweets once. The data described in table 2 also shows that accounts that have high degree centrality values include @matanjwa, @hunterjagar3, @franken_blues, @hyang_wisnu, @qaisrafif, @sanggarkutipan, @kemkominfo, @damarjuniarto, and @platejohnny. It is known that most of these accounts are information media accounts about politics, social matters, and ministry accounts that have responsibilities in the fields of communications and informatics. The indegree centrality value of these accounts gets the highest score compared to others who have a role in the communication network with the keyword UUPDP, these accounts become objects for mention, or their digital opinion movements are most often retweeted or replied to.

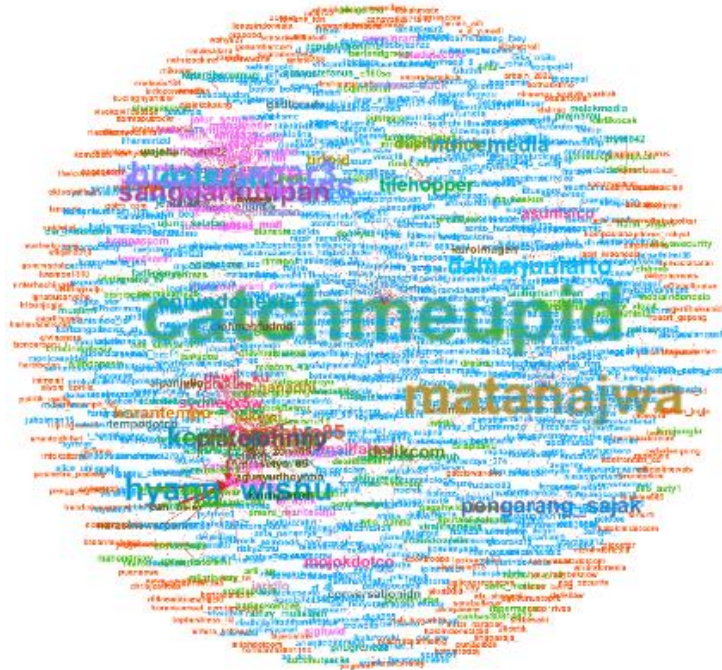


Figure 2. Degrees

According to the data mapped in table 2, there is also an account belonging to the Minister of Communication and Information of the Republic of Indonesia, Johnny G. Plate, this illustrates that Twitter social media users who express opinions about UUPDP write their opinions accompanied by the Minister's account. As the resulting degree centrality value is 24 with a division of the indegree centrality value of 24 and the outdegree centrality value of 0. It can be concluded that the @platejohnny account has a relationship with 24 other nodes, so it can be said that the @platejohnny account is a target for retweeting, being mentioned, or replied 24 times. but this account does not retweet, reply, or mention in the communication network on Twitter with the keyword UUPDP.

Next, it is still about determining influential actors using closeness centrality analysis. This analysis is to see the average distance between actors in the network by measuring their closeness. The closeness centrality coefficient value used has a range of 0 to 1, this value is to identify the closeness of nodes so that it has the effect of faster information dissemination. Regarding closeness centrality in communication networks with the UUPDP keyword, it can be described as follows:

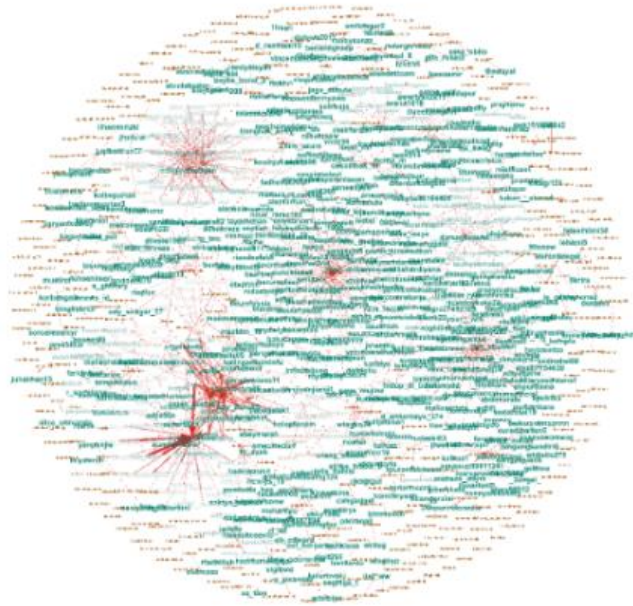


Figure 3. Closeness Centrality

In Figure 4, it is known that the communication network with the keyword UUPDP shows the closeness between various nodes. The results of the closeness centrality in the mapping depicted above, explain that the light brown nodes have the furthest proximity, then the light green color which is a bit faded is a little closer and the last is the dark green color which has the highest closeness centrality value, this value indicates the node. the distance is getting closer.

In the communications network with the UUPDP keyword, there are 462 nodes that get a closeness centrality value of 1.0, meaning that these nodes and other nodes are identified as having closeness. This is in accordance with the reference coefficient value, that the closer the closeness centrality number is to 1, the closer the nodes are between one node and another node. So, there is a tendency that when these nodes tweet or express opinions, the tweets will spread quickly.

The next indicator is betweenness centrality. This indicator maps the position of nodes as a link between one node and other nodes regarding the information being tweeted. The calculation of the betweenness centrality number is between 0 and 1. The highest betweenness centrality value obtained by actors/nodes indicates that the actor occupies an important position in the communication network because it has a role between different groups in the network as a liaison and can manipulate and control information that is disseminated, this makes these nodes key actors (Eriyanto, 2014; Tomaso et al., 2019). The following are the data nodes that obtained the greatest betweenness centrality values:

Table 3. Betweenness Centrality

No	Actor	Between essentiality
1	Hunterjagar3	0.000207
2	Hyang_wisnu	0.000159
3	Aryprasetyo85	0.000113
4	Johanadhi	0.000094
5	Ismailfahmi	0.000076

As can be seen in Table 3, the highest value of betweenness centrality was obtained by actor @hunterjagar3 with a value of 0.000207, among other actors, the actor who has the highest value in this indicator can be called a key actor or actor who has influence in disseminating information and being a liaison between actors who use the UUPDP keyword, so they will go through the @hunterjagar3 account first. Apart from the @hunterjagar3 account, there are also accounts @hyang_wisnu and @aryprasetyo85 which obtained the second and third largest betweenness centrality values with values of 0.000159 and 0.000113 respectively. These two accounts can also be a link for other accounts in the communication network with the UUPDP keyword. Actors with the accounts @hunterjagar3, @hyang_wisnu, and @aryprasetyo85 are considered to have knowledge regarding important information about UUPDP,

The final indicator has the function of identifying the actors driving network formation and information dissemination. namely the eigenvector centrality indicator, through this indicator the most important nodes in the communication network can be identified by looking at the connections the nodes have. The coefficient calculation for eigenvector centrality assessment has a range of 0 to 1. Nodes that have higher eigenvector centrality values have relationships with other nodes with high centrality values.

Table 4. Eigencentality of UUPDP keywords

No	Actor	Between essentiality
1	Franken_blues	1
2	Hunterjagar3	0.992944
3	Sanggarkutipan	0.982359
4	Qaisrafif	0.982359

Based on the data in table 4, the actor @franken_blues obtained the highest eigenvector centrality value, namely 1, this explains that the @franken_blues account has relationships with many important nodes in the communication network with the keyword UUPDP. In other words, the @franken_blues account is a key actor in establishing a communication network with the keyword UUPDP.

Sequentially, it is known that the nodes @hunterjagar3, @sanggarkutipan and @qaisrafif get quite high eigenvector centrality values, close to the highest value. These nodes are also indicated to have relationships with other influential nodes and can have an important role in starting a communication network with the keyword UUPDP, although their influence is not as big as the actor @franken_blues. Based on the analysis of degree centrality, closeness centrality, betweenness centrality, and eigenvector centrality which has been explained previously in connection with the digital movement of opinion theory, it can be concluded about the most influential actors in the communication network in the movement of public opinion with the keyword UUPDP, namely actors @franken_blues and @hunterjagar3. These two actors/nodes obtained the highest score on the centrality indicator measurement compared to other actors in this communication network, so these two nodes are categorized as main actors and have quite high influence.

Conclusion

The digital opinion movement on Twitter social media has created a mapping of communication networks. The Personal Data Protection Law (UUPDP) which has been passed provides legal certainty regarding the protection of personal data in Indonesia. Although there are still shortcomings, such as bodies that will be formed in accordance with the mandate of this law, implementing regulations that will affect society as users of social media and the digital public, as well as law enforcement that is sometimes less than optimal when

implemented. Through Twitter, the public can provide opinions as a form of freedom of expression and opinion in accordance with applicable regulations.

The results of research carried out using the social media network analysis (SNMA) method, produced communication network structure data with the keyword UUPDP based on several categories, namely the first in the size category, 918 nodes and 893 edges were produced in the communication network with the keyword UUPDP, the second is a diameter value of 28, the third is the density category of 0.001590, the fourth is reciprocity with a value of 0.023530, and the last is a centralization value of 0.071440. All of these things show that the network is spread among several actors. Communication network data with the keyword UUPDP has illustrated that Twitter social media users are encouraged to express opinions regarding the Personal Data Protection Law and the actors who play a role in it interact with other users so that the topic can spread more widely. In order to provide an overview of the mapping of the actors involved and influential in this communication network, centrality was measured using several indicators such as the degree centrality indicator, the closeness centrality indicator, the betweenness centrality indicator, and the eigenvector centrality indicator. The results of these indicators and connected with the theory of digital opinion movements in communication networks, it is known that nodes @franken_blues and @hunterjagar3 are categorized as the most influential actors and are the main actors, this is based on centrality calculations and results in the fact that both of them have the top score compared to other actors in the communications network with the keyword UUPDP.

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