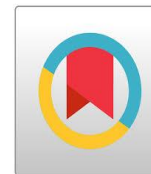**Communication Network Analysis on the Issue of #PertaminaKembaliTerbakar on Social Media X year 2023**

Analisis Jaringan Komunikasi pada Isu #PertaminaKembaliTerbakar di Media Sosial X tahun 2023

Aurelia Kartika Wangsa[1], Rismi Juliadi[2*], Nuria Astagini[3]

[123] Faculty of Communications Science, Universitas Multimedia Nusantara

[123] Scientia Boulevard, Gading Serpong, Tangerang, Indonesia

aurelia.kartika@student.umn.ac.id[1]; rismi.juliadi@umn.ac.id[2]; nuria.astagini@umn.ac.id[3*]

Coresponding Author: nuria.astagini@umn.ac.id[3*]

ARTICLE INFORMATION

ABSTRACT
The case of the Pertamina refinery that caught fire again in 2023 became a trending topic on social media platform X (formerly Twitter) shortly after the incident occurred. From this topic, researchers aimed to measure and analyze the communication network that was formed, the topics discussed, and the actors involved. Due to the limited research on social media communication networks related to the issue identification process for companies, this study also focused on analyzing the results of mapping the communication network that formed on social media platform X and its connection to the concept of reputation when a company faces a negative issue. Data collection was done using the Netlytic application, which was then processed using the Gephi application. From the data collection results, the research showed a diameter value of 9, indicating a relatively loose network of actors. The density, with a value of 0.001445, and the reciprocity, with a value of 0.0001443, indicated very low interaction density. From the actor's perspective, there were three main actors with the highest degree of centrality connecting other actors, but the topics discussed tended to be negative. These findings indicate that the actor @detikcom is dominant, with many other actors connected to the account to discuss topics related to Pertamina. The second dominant actors are @geiszchalifah and @giginpraginanto, who, upon further investigation, are active figures on social media providing information and commenting on political issues.

ABSTRAK
Kasus Kilang Pertamina yang kembali terbakar pada tahun 2023 merupakan isu yang masuk *trending topic* di media social X (dahulu Twitter) sesaat setelah peristiwa terjadi. Dari topik tersebut peneliti bertujuan untuk mengukur dan menganalisa jaringan komunikasi yang terbentuk, topik yang dibicarakan, dan siapa saja aktor yang terlibat. Minimnya penelitian jaringan komunikasi media sosial yang berkaitan dengan proses identifikasi isu perusahaan, maka penelitian ini juga berfokus menganalisa hasil pemetaan jaringan komunikasi yang terbentuk di media sosial X serta kaitannya dengan konsep reputasi ketika perusahaan mengalami suatu isu negatif. Pengumpulan data dilakukan menggunakan aplikasi Netlytic yang kemudian diolah menggunakan aplikasi Gephi. Dari hasil pengumpulan data, didapatkan hasil penelitian yang menunjukan adanya diameter bernilai 9 yang menunjukan jarak antar aktor yang tidak tidak terlalu erat. *Density* yang bernilai 0.001445 dan *reciprocity* yang bernilai 0,0001443 menunjukan kepadatan interaksi yang sangat rendah. Kemudian dari sisi aktor, terdapat tiga aktor utama yang memiliki *degree centrality* tertinggi yang menghubungkan aktor-aktor lainnya, namun topik yang dibahas cenderung ke arah negatif. Hasil temuan ini menunjukan bahwa aktor @detikcom menjadi dominan dan banyak aktor lainnya yang terhubung dengan akun tersebut untuk membahas topik mengenai Pertamina. Aktor dominan kedua berikutnya adalah @geiszchalifah dan @giginpraginanto yang dari hasil

		penelusuran lebih lanjut, merupakan tokoh yang aktif di media sosial untuk memberikan informasi dan berkomentar terkait isu-isu politik yang terjadi.
Article History Send 31th October 2023 Review 24th November 2023 Accepted 7th January 2024		

Jurnal Aristo (Social, Politic, Humaniora) Vol. 12, No.2 (2024) : July, pp. 432 - 451
Social and Political Science Faculty, Universitas Muhammadiyah Ponorogo.
p-ISSN 2338-5162 / e-ISSN 2338-5162

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Introduction

The corporate communication team has an important role in constructing a positive image in a company. This is done through the preparation and implementation of communication strategies, supervision and operational coordination with management (Cornelissen, 2020). However, various conditions of negative issues experienced by the company can potentially damage the positive image and reduce the company's reputation. Therefore, in the condition of negative issues, a communication strategy is needed from corporate communication to overcome the crisis (Smith, 2021). Several previous studies have shown that the right communication strategy can help companies recover from the crisis they are experiencing (Fitri et al., 2021). Even so, there are also companies that fail to overcome the issue until it becomes a crisis and are forced to close down their operations (Siregar & Haeirina, 2021).

One source of failure in handling crises by companies is not anticipating the rampant issues that develop about their companies on social media (Akhyar & Pratiwi, 2019; Sudiwijaya et al., 2022). Whereas technological developments and the increasing use of social media are also important aspects, because social media makes it easy for stakeholders to comment on companies freely. So that negative issues that spread on social media and are not managed properly by companies can potentially cause bigger problems, namely crises. Crises can potentially become viral information and result in threatening the company's reputation (Akhyar & Pratiwi, 2019). This can also be seen from a study conducted by (Yulianti et al., 2022). where information circulating through X's social media is one of the causes of the decline in the reputation of X company. So that handling issues and crises on social media needs to be managed quickly and precisely, one of which is by analyzing who are the stakeholders involved and paying attention to the issues being experienced by the company (Akhyar & Pratiwi, 2019). Therefore, the ability to analyze the development of issues on social media is important for corporate communication.

One method to analyze the development of issues circulating on social media is the social media network analysis method. Social media network analysis is a method that can be used to find out the communication networks that are formed and who are the actors who become intermediaries and main actors who discuss the topic (Eriyanto, 2021). Social media network analysis can be used on various social media platforms, one of which is X (formerly known as Twitter). Discussions of various topics and issues on social media X, often become trending topics, or viral among its users (Knoke & Yang, 2019). So that X is a social media that is able to display social networks that form big data (Azmi et al., 2021).

The trending topic that has become a busy conversation on social media X is the fire incident at the depot, fuel transportation ship, and oil refinery owned by PT Pertamina (Persero) which occurred several times in 2023 (Alfarizi, 2023). The fire incident experienced by this company in 2023 began on Friday, March 3, 2023 at the Plumpang Depot in North Jakarta, which claimed 17 lives. Then there was a fire on a fuel transport ship owned by Pertamina on Sunday, March 26, 2023 in West Nusa Tenggara. A fire incident also occurred in Dumai, Riau on Saturday, April 01, 2023 in the early morning. The series of fires were then discussed by X users so that the word "Pertamina" then trended on X social media on Sunday, April 02, 2023.

Pertamina as a company that is positively recognized by stakeholders needs to maintain the company's reputation. As the use of social media grows and it becomes easier for individuals to express opinions and on social media, the company needs to monitor the issues being discussed on social media. Based on the conditions of the emergence of trending topics related to the fire issue at Pertamina, it has led to increasingly widespread discussions on social media X which could potentially become a crisis if not handled by the company. This becomes a communication event, especially on social media, regarding the communication network on social media X which requires research using the social network analysis method.

The study of social media network analysis regarding events experienced by PT Pertamina (Persero) is a significant research because PT Pertamina (Persero) is a company whose operations have a great influence on society. In addition, when the fire incident at Pertamina's refinery occurred three times in a row in one year, negative issues emerged and were discussed on social media. In addition, PT Pertamina (Persero) is one of the companies that is often in crisis situations that threaten the reputation and positive image of PT Pertamina (Persero) among the public (Susilo, 2022, Norton Hutasoit et al., 2023). From the fire cases experienced by PT Pertamina (Persero) in several regions, creating discussions and communication networks on social media X is considered necessary to be studied to identify issues that have the potential to become a crisis.

The topic of PT Pertamina (Persero) which is trending again on social media X will be studied further to see who is the main actor in the topic of conversation, the ability and power of the actors in shaping the distribution and communication network. In addition, this research will examine the various messages written on social media X, both negative and positive messages. There are several previous studies that use social media network analysis methods The study conducted by (Al Majid & Nugroho, 2022). Shows who the actors are and how the communication network is formed on social media X on the topic of "Dr. Terawan's dismissal".

This study also measured the extent to which the actor's credibility level in disseminating information through the social network analysis method. Other research conducted by (Akbar et al., 2022) who examined the topic #SEAGames2022 described the network structure formed and saw which actor was the most dominant of the topic. Research with the communication network analysis method was also conducted by Priambodo & Arianto (2022), by discussing the topic #KPKEndGame on X social media. The research mapped the communication network in government agencies that were widely discussed by social media users. The results of his research show the existence of a social media account @kpk_endgame as the main actor whose role is to convey and control the distribution of information on social media X so that the issue does not develop in a negative direction. Based on the objectives and results of the three studies, it has not examined how the actor network is formed in a topic related to the negative issue of a state-owned company that clearly experienced an incident that harmed the public. So this research will discuss the communication network on social media that is formed over an issue that is being experienced by the company when experiencing an issue circulating on social media X, this research will look at the communication network associated with the concept of issue management and which leads to corporate reputation.

Corporate communication is part of a company that has a strategic function. According to Cornelissen (2020) the function of corporate communication is a management function to develop and implement communication strategies, and is responsible for supervising and coordinating operations carried out by corporate communication practitioners, such as media relations, public affairs, and internal communication. In carrying out its functions and responsibilities, a corporate communication practitioner has the task of managing the company's reputation. As explained by (Doorley & Garcia, 2020), that corporate communication plays a central role in the company's role in shaping the company's reputation, so that to create excellence from the company, productivity, and the company's financial success, the role of public relations is needed in shaping a positive reputation (Abbas et al., 2021a). Reputation can be defined as a combination of predictable behavior through relationships and two-way communication carried out by the organization, giving rise to affective and cognitive assessments by company stakeholders within a certain period of time (Ott & Theunissen, 2015). So the company's reputation is an important aspect that must be managed by management and all internal companies. One part that plays an important role in managing the company's reputation is public relations practitioners. To shape the company's reputation, it takes a long time with a strategic communication approach to each stakehold stakeholder (Kim & Hastak, 2018).

The case of the Pertamina refinery fire that occurred 3 times in close proximity in 2023 has caused negative issues that can adversely affect the company's reputation. An issue is a problem related to the company so that there needs to be a quick response and action from the company to deal with the issue. With issues that have a negative effect on the company, it is necessary for companies to plan appropriate issue management, especially in the midst of developing issues circulating on social media (Regester & Larkin, 2010). In dealing with and managing issues related to the company, the ability to plan issue management is needed, Coombs and Holladay (2010 in Smith, 2017). explain issue management steps that begin with identifying emerging issues, prioritizing issues, making company policies, to communicating to stakeholders appropriately and quickly and ending with evaluation. In this regard, in previous research conducted by Carlina & Paramita (2017) shows the role of social media in responding to issues circulating in society, one of which is to identify negative issues. With the right use of social media, the company's positive image can be maintained or, on the contrary, it can make the company's image negative. For this reason, it is important for public relations practitioners to take advantage of the use of social media to detect potential negative company issues (Theaker, 2021). One of them is through social media network analysis to measure and find out what topics and actors have the potential to cause negative issues for the company.

Previous research on issue management has focused more on the company's strategy in managing the issues faced. (Juliadi & Saraswati, 2023). However, there are not many previous studies with quantitative methods to identify issues in companies by first identifying the communication networks formed and the actors who play a role in social media. So to complement research from the study of management issues, this study aims to find out how the topic of the Pertamina fire is discussed on social media X so that it can be identified which actors have the potential to discuss negative issues about the company. The PT Pertamina (Persero/) fire incident is an interesting issue to study because of the company's position as a State-Owned Enterprise that is often in the spotlight of the media and the public at large.

The social network analysis method is currently being chosen by many researchers with the aim of describing and analyzing the communication networks formed on social media on a particular topic (Knoke & Yang, 2019). As explained in the background of this research, the study of issue management can be carried out with the identification process first (Abbas et al., 2021). So this research is one of the research studies with quantitative methods as an initial identification stage to measure the extent of the communication network that occurs on social media X on the topic of Pertamina burning again in 2023. This research will use the social

network analysis method to determine the communication network formed on X social media in 2023 related to the topic of the Pertamina fire, which is a negative issue that has the potential to create a bad image for the company.

In this study, a literature review of similar research with the SNA method was conducted. In research conducted by Hapsari (2016) the SNA method was used to analyze the communication network in the Samin Indigenous Community of Dukuh Bombong related to the plan to establish a cement factory. The results showed that there was a low communication intensity and the communication actor was only centered on one person so that the dissemination of information was uneven. Therefore, this sensitive issue did not really spread and was only fragmented in a group of networks. In addition to this research, other similar studies have also been conducted by Fikri et al., (2020) which discusses the polemic issue of auditioning an association of one of the badminton associations in Indonesia. The polemic discussed on X social media in 2019 gave rise to a communication network whose results can be measured to find out how interactions and information dissemination on the topic are formed among X social media users. Unlike the previous research, the research centered the communication network on the @PBDjarum account as the account that disseminated the main information about the activities carried out by the badminton union. Then research with a focus on communication networks was also conducted on the topic of environmental social movements. From the results of this research, it was found that there is a communication network that plays a role in gathering strength across communication actors in social media to encourage an effective social movement.

Some of these similar studies show the contribution of social media network analysis research that is useful for measuring the conversation of communication actors on a particular issue (Hapsari, 2016). Based on a literature study of previous research using similar methods, researchers found a research gap that focuses on using the Social Network Analysis (SNA) method to identify issues in the news about state-owned companies that were widely discussed on social media X until they became trending topics. Research studies on issue management in the issue identification stage can be carried out through data collection from social media. The use of the SNA method in this study aims to analyze the communication network in social media related to an issue that occurs in the company. Previous research has not discussed how communication network analysis can be used by companies to identify the main actors who can influence issues circulating about the company. So this research aims to complement research with similar methods, but from a

different perspective, namely the process of identifying communication actors in social media to manage issues that arise in social media over talks about the company.

Method

The research methodology used is the SNA (Social Network Analysis) method Social Network Analysis (SNA) is a method that can be used for the purpose of mapping and describing a communication network structure formed in conversations on social media (Eriyanto, 2021). The concept of actors in social media networks refers to accounts involved in social media, while the concept of relationships is the relationship between these accounts; relationships can be in the form of mentions, replies, or retweets (RT), while the type of relationship is the relationship between actors associated with issues or topics being discussed on social media (Knoke & Yang, 2019). Social media networks involve thousands or even millions of actors and the types of relationships in social media will be very numerous because the issues and conversations that arise every time are very diverse, thus creating different relationships between actors (Eriyanto, 2021). This method will also produce a framework for understanding how actors are connected to each other and how information flows in the context/topic being discussed. The SNA method can also identify central actors or groups, sub-communities, and important features in communication networks that influence the dissemination of information in social media (Eriyanto, 2021).

The SNA method is considered appropriate because it can produce an overview of the communication networks formed on social media. With the issue topic of the Pertamina fire case in the period 2023, data can be collected on who are the communication actors on social media X who comment and disseminate information on the topic. As the first step of the issue identification process in issue management, the communication network analysis method can be used as a fast and accurate data collection method to find out who are the actors and communication networks formed on the issue (Reuter et al., 2018).

The data collection technique was carried out by collecting data on social media X where the data was taken on March 27 - April 02, 2023 to be used as a dataset. The keyword used in this research is "Pertamina" which became the top 20 trending on Sunday, April 02, 2023, 13:00 Pk, after the news about the Pertamina Depot fire in Dumai occurred the night before. The data collection on social media X was carried out using Netlytic.org software and continued with analysis using Gephi 0.9.7 software. The social media network analysis (SMNA) process is carried out by collecting conversations on social media using software such as Netlytic and Gephi. The use of Netlytic software was chosen

because researchers can facilitate the process of collecting data from X social media in large enough quantities and this software can automatically describe the communication networks formed on social media. After data is collected from Netlytic, this research also uses Gephi software to process data at the actor level. The next step is to analyze the data that has been collected. There are three levels in analyzing network data. First, the network structure level, there are 4 (four) network structure data on social media, namely; 1) diameter which shows the farthest distance between actors, a network with a low diameter indicates easy reach between actors, 2) density which refers to the relationship between actors in the network, a network with a high level of density is a network whose members interact with each other, the number used is between 0 - 1 where the greater the value indicates the higher the level of network density, 3) reciprocity which describes the two-way relationship between actor members (nodes), can be measured by a value of 1 to indicate the existence of a reciprocal relationship, while a value of 0 means that communication takes place in one direction, and 4) centralization (centralization) refers to the level of concentration of certain actors on the network, the value of centrality is measured by 0 to 1, the lower the centrality measure, the more information flows freely between actors (Eriyanto, 2021).

Second, at the cluster level, the aspect assessed is modularity. Eriyanto, (2021) explains that "modularity helps determine whether the clusters found represent different communities in the network. Modularity is measured by a value of 0 to 1. The more the data value approaches 1, the more diverse the conversations between the communities are, while the smaller the value, the more the conversations within the group focus on the same topic.

Third, the actor level, the data is used to identify who are the most dominant actors (nodes) in topics on social media. Thus, it can be identified who are the actors who have influence/central to certain issues/topics. To conduct network analysis at the actor level, Eriyanto, (2021) explains 4 types of analysis at the actor level, namely 1) degree centrality which shows the number of relationships between one actor and another actor, the higher the degree value of the actor, the more relationships they have, such as replies, mentions, retweets, etc. In degree centrality, we can see the shape of the social media network. In degree centrality, we can see the shape of the network whether it is directed or indirected. 2) closeness centrality describes whether there is closeness between actors in the network, by measuring how many steps an actor takes to connect with other actors. 3) betweenness centrality shows how actors in the network have an intermediary role. A higher actor value indicates that he plays a role in connecting between actors in the network. 4) eigenvector centrality, describes the quality of actors in the network, this aspect does not

prioritize actors who have the most relationships, but is concerned with who actors have the quality to reach more actors in the network.

Result and Discussion

From the results of data collection with the keyword Pertamina crawled on Sunday, April 02, 2023 at 13:35 WIB, the number of tweets was 2,548 messages.
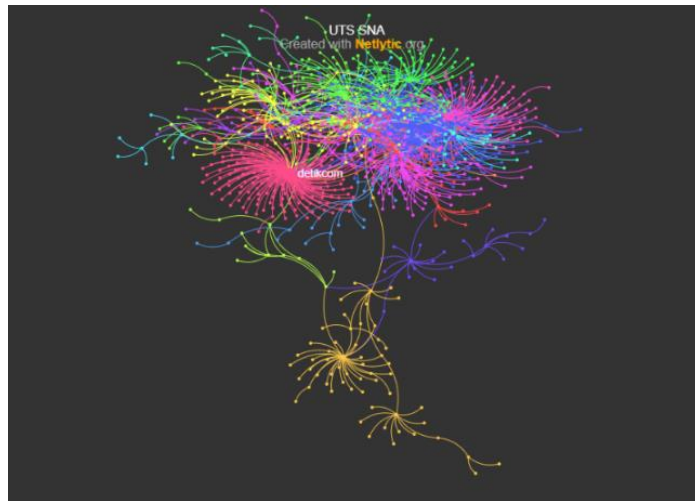
"Pertamina" keyword network visualization

Figure 1 shows an illustration of the communication network formed from the keyword Pertamina using Netlytic.org software. The figure shows a social media communication network formed between many actors with similar topics, namely the topic of Pertamina. With the keyword "Pertamina" then the Netlytic software is used to show the topics that are widely discussed in the tweets of each actor (node).

Topics (Words Used) in the keyword "Pertamina"

From the image above, it can be seen that the word Dumai is the most written word in the actor's tweets. Then there are the words refinery and explode that also appear. Interestingly,

there are words that tend to be negative, namely resign, dirut, damaged which are quite a lot written by the actors. This word or topic needs to be a special concern for corporate public relations practitioners to ensure that the issue of this explosion does not become an issue that then leads to public protests to ask company officials to resign from their duties and responsibilities.
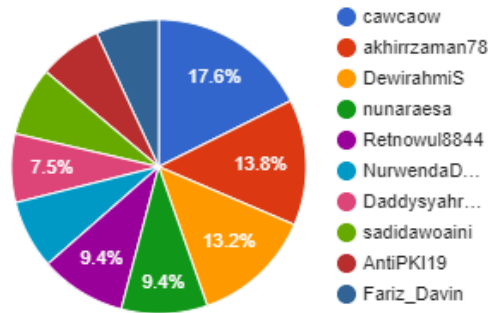

Figure 3. Top Ten Posters keyword "Pertamina"

Based on the results of the X media communication network data collection through Netlytic.org, 1598 nodes and 1937 edges were found. There is data on 10 dominant actors who actively discuss the topic/keyword "Pertamina". Regarding the issue of Pertamina, it then needs to be further investigated whether all of these actors then play an active role in herding public opinion. This dominant actor shows the large number of actor posts related to Pertamina keywords, but not necessarily the most dominant user then becomes a wider disseminator of information. This will be discussed further in the actor network analysis section.

The next aspect to be discussed is the network structure formed from the trending Pertamina words for the periods previously mentioned. previously mentioned.

Table 1 Network structure with keywords "Pertamina"

Analysis	Data
Diameter	9
Density	0,001445
Reciprocity	0,001443
Centralization	0,092110
Modularity	0,684200

(Source: netlytic.com, processed by researchers, 2023)

The network structure of the keyword "Pertamina" shows 5 structures, namely first, the diameter which shows the distance between one actor and the farthest actor, the findings show a diameter of 9 which means the farthest distance is 9 steps to reach all actors. Second, density which shows the degree of interaction between members of the findings produced data density level of 0.001445 tends to be close to zero. Third, reciprocity which shows the relationship between network members whether it is unidirectional or bidirectional, if the reciprocity number is close to 0 (zero) then the network is more unidirectional. The findings show that the relationship created is 0.001443. Fourth, centralization is a measure that refers to the concentration of actors, if centralization is close to 1 (one), it means that network members are centered on several actors. The findings show a figure of 0.092110. Fifth, modularity which shows that there is a grouping of network members in a network, if the result is close to 1 (one), it means that the network consists of a large number of groups where there are overlapping communities. The findings show a number of 0.684200, or close to 1. The findings in this study further focus the actor level analysis data on the degree centrality aspect on this topic and who are the actors who become intermediaries in disseminating information about "Pertamina".

Table 2 Actor Network - Degree Centrality

Label	Degree	Indegree	Outdagree
detikcom	183	183	0
geizchalifah	120	120	0
giginpraginanto	105	105	0
migrant_tv_7777	68	67	1
geloraco	68	58	0

(Source: netlytic.com, processed by researchers, 2023)

The results of data findings obtained through the Gephi application show degree centrality data with visuals in Figure 4.
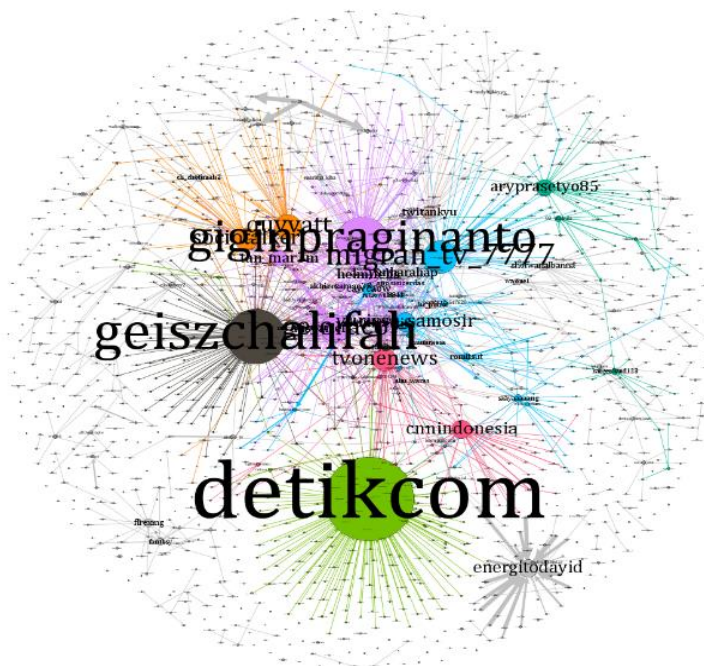
Figure 4 Degree Centrality Visualization

As for the visual results, there are 5 main actors that have the highest degree centrality, namely @detikcom, @geiszchalifah, @giginpraginanto, @migran_tv_7777, and @geloraco. Of these actors, @detikcom has the highest degree centrality level which shows that there are 183 retweets/mentions addressed to the account related to the topic of Pertamina. The value of these five dominant actors tends to show that these actors have a high degree of centrality, meaning that many other accounts are connected to these actors by re-tweeting or mentioning them.

The next analysis explains how the content of the topic of conversation of the central actors who have the highest degree centrality, namely: 1) @detikcom whose posts are retweeted the most, namely 3,141 times with a total of 8,486 likes. The content of posts from @detikcom is neutral information because it contains news links that inform the chronology of the fire incident that occurred and the number of victims. 2) @GeiszChalifah which is the second dominant actor, Geisz Chalifah is a volunteer and loyalist of Anies Baswedan. From his post on the Pertamina issue, he received 4,513 likes and was commented on by 508 comments and retweeted by 1,456. The tweets written by Geisz Chalifah tend to be negative because they bring up the issue of the IMB issue that was previously disputed in the Plumpang Depot fire. 3) @giginpraginanto. The 3rd dominant actor, Gigin Praginanto, is a public policy observer (based on the description on his X account). Based on posts related to the Pertamina Dumai Refinery fire, it received 10 retweets, 13 likes. The account did not get

too many responses but based on the content of the written posts, it was negative because it mentioned the words Managing Director and Managing Director related to Pertamina's management. From the posts of the three main actors who have the highest degree centrality, it shows that the topic of conversation about Pertamina is indeed focused on the topic of the fire case that occurred at the Dumai Refinery.

The issue of the Pertamina fire, which occurred 3 times in one year, then created a public discussion on social media X. This public discussion also created a social media communication network as illustrated in Figure 1. This public discussion also created a social media communication network as illustrated by the visual in Figure 1. The conversations that occurred between actors showed an interconnectedness to discuss the same topic. By using the keyword "Pertamina", the words that appear the most include, Dumai, refinery, exploded, and there are even words that are quite prominent, namely, resign and commissioner. From the words used displayed in Figure 2, it shows that the topics discussed by actors (nodes) on social media X are indeed related to topics around the fire issue that is happening. Thus, the words used by the actors show that the actors pay attention to the fire issue that occurred, especially the Dumai refinery fire that occurred just one day earlier. In this case, public relations or company management need to ensure that the issue does not then spread widely with negative connotations on social media X. To avoid a bad image that ends up damaging the company's reputation, this topic on social media needs to be managed appropriately by Pertamina, in addition to being responsible to the people affected by the fire, but it also needs to be communicated and clarified through social media, one of which is X.

The following findings are depicted in Table 1, which shows the network structure formed. The first is diameter, which is 9. This shows the distance between actors who are quite far in interacting in discussing Pertamina topics. Second is density, which is 0.001445 and reciprocity, which is 0.0001443. This value shows that the actual density of interaction is very low because the results show data close to 0 (zero), besides the nature of the interaction flow tends to be one-way. This finding shows that actors/nodes in this network tend not to interact but only post information without much discussion and two-way communication. The third is centralization with a value of 0.092110. The number is close to 0, thus showing the distribution of pertamina keywords that are not too centered on the main actors. This can be possible because of the very large number of actors and posts generated, so the center of the network is spread more widely on more actors. The fourth is modularity which is worth 0.684200. This result is close to 1, indicating that there are dominant clusters in the "Pertamina" communication network, these dominant clusters indicate that the groups are strongly and

interconnectedly discussing Pertamina topics/keywords. From these findings, the structure of the communication network formed tends to show that the communication network on the topic of "Pertamina" tends to spread, from the low values of density, reciprocity, and centralization, it shows that there are no actors in X that are too dominant and the nature of communication is more of a one-way spread.

The next finding discusses the network of actors who are involved and become the most dominant actors and have with the topic of "Pertamina" on social media X. From the results of data processing using Gephi software, 5 actors were found to be the most dominant in discussing the topic of Pertamina, especially related to the fire case, namely @detikcom, @geiszchalifah, @giginpraginanto, @migran_tv_7777, and @geloraco. The @detikcom actor as a news portal is the actor that has the highest indegree centrality. This finding shows that the @detikcom actor is dominant and many other actors are connected to the account to discuss topics about Pertamina. The next two dominant actors are @geiszchalifah and @giginpraginanto who, from the results of further searches, are active figures on social media to provide information and comment on political issues that occur. These two actors then also need to be stakeholders who need attention from Pertamina. Because many other actors are connected and disseminate information to these dominant actors. Regarding the Pertamina fire case which is trending again on Social Media X, it shows that there are many actors involved in this topic. Although the nature of communication is more towards a one-way nature, Pertamina's public relations practitioners also need to ensure that the discussions created do not lead to a negative tone of conversation that tends to reduce the company's reputation.

Conclusion

Topics on social media X with the keyword Pertamina collected and processed using the Netlytic and Gephi applications show the existence of a communication network and a network of interrelated actors in discussing this topic. Many of the words that appear from the results of the actors' posts are words related to the recent oil refinery fire case in Dumai. The results of the conversation do not yet point to a negative topic trend. However, in terms of the company's reputational risk, this needs to be a concern for public relations because words such as; retreat, fire, commissioner have begun to appear. This needs to be managed by the company so that it does not become a topic of wider issues. From the results of the analysis of the network structure formed, it was found that there were quite strong and many clusters on the topic of "Pertamina", but in the communication cluster, communication between actors is one-way, so that the messages conveyed by between actors are limited to disseminating information that is

not reciprocated. There is no actor who is too dominant from the findings obtained. The next analysis shows that the actor network that is formed dominantly has 5 main actors who are used as references related to Pertamina topics. The dominant main actor is @detikcom as a news media that actively disseminates the latest information. In maintaining the company's reputation, one of the media that the company needs to pay attention to is social media X. From the results of data processing on social media, Pertamina's reputation could be in danger of decreasing due to some negative word choices. So it is necessary to consider the company to ensure that there are no negative issues spread by dominant actors who are widely referred to by other actors. The steps that the company can take, one of which is by providing fast and complete information through Pertamina's official social media, so that information from other actors does not become biased. So that Pertamina's reputation can still be maintained positively in front of stakeholders.

The criticisms and limitations of this research are related to the time span of data collection. The data obtained is limited to around 2,500 tweets recorded during the past 7 days. In addition, the selection of X social media also needs to be complemented by data from other social media such as Instagram or Youtube to see how Pertamina issues are generally portrayed and discussed on various social media platforms. With a thorough social media analysis, it will be useful for the company to map out which stakeholders are influential in supporting or hindering the company when there is an issue that threatens the company's reputation. The results of this study have shown the actor network and communication network formed on social media on the topic of Pertamina fire in 2023. In future research, a sentiment analysis of the communication network on social media X related to the topic of the Pertamina fire can be carried out. Through sentiment analysis of the communication network, we can see the opinions and discussions of stakeholders on social media, whether they lead to negative, neutral or positive comments. This can be one of the company's identification steps in managing issues circulating on social media.

References

Abbas, J., Wang, D., Su, Z., & Ziapour, A. (2021). The Role of Social Media in the Advent of COVID-19 Pandemic: Crisis Management, Mental Health Challenges and Implications. *Risk Management and Healthcare Policy*, *Volume 14*, 1917–1932. https://doi.org/10.2147/RMHP.S284313

Akbar, M. A., Masniarara Aziza Balfas Amril, Raiza Syahira, Fahrein Rachel Latisha, & Noor Jihan. (2022). Analisis Struktur Jaringan Komunikasi #Seagames2022 Di Twitter Menggunakan Pendekatan Social Network Analysis (SNA). *Jurnal Studi Komunikasi Dan Media*, *26*(1), 1–16. https://doi.org/10.17933/jskm.2022.4780

Akhyar, D., & Pratiwi, A. S. (2019). Media Sosial dan Komunikasi Krisis. *Ultimacomm: Jurnal Ilmu Komunikasi*, *11*(1), 35–52. https://doi.org/10.31937/ultimacomm.v11i1.1112

Al Majid, A. R., & Nugroho, W. (2022). Analisis Jaringan Komunikasi Opini Publik Pada Fenomena "Pemecatan Dr Terawan" Di Twitter. *Wacana: Jurnal Ilmiah Ilmu Komunikasi*, *21*(2), 336–345. https://doi.org/10.32509/wacana.v21i2.2192

Alfarizi, Moh. K. (2023, April 2). *Rentetan Kebakaran Pertamina 2023: Depo Plumpang, Kapal Pengangkut BBM, hingga Kilang Minyak Dumai*. Https://Bisnis.Tempo.Co/Read/1710132/Rentetan-Kebakaran-Pertamina-2023-Depo-Plumpang-Kapal-Pengangkut-Bbm-Hingga-Kilang-Minyak-Dumai.

Andriani, M., Wulan Ramadhani, R., & Rahma Utami, S. (2019). *Analysis of "Mixue" Communication Network as Electronic Word of Mouth (E-WoM) Using Social Network Analysis*.

Azmi, N. A., Fathani, A. T., Sadayi, D. P., Fitriani, I., & Adiyaksa, M. R. (2021). Social Media Network Analysis (SNA): Identifikasi Komunikasi dan Penyebaran Informasi Melalui Media Sosial Twitter. Jurnal Media Informatika Budidarma, *5*(4), 1422. https://doi.org/10.30865/mib.v5i4.3257

Berto, A. R., & Murwani, E. (2022). Sociocultural Information Gap in the Dive Tourism Industry: Evidence from Komodo National Park. *Jurnal Ilmu Komunikasi*, *20*(1), 1. https://doi.org/10.31315/jik.v20i1.5062

Carlina, G., & Paramita, S. (2017). PR Crisis Melalui Media Sosial. *Jurnal Komunikasi*, *9*(1), 81. https://doi.org/10.24912/jk.v9i1.211

Coombs, W. T., Holladay, S. J., & Tachkova, E. (2019). Crisis communication, risk communication, and issues management. Public relations theory: Application and understanding, 31-48.

Cornelissen, J. P. (2020). *Corporate Communication - A Guide to Theory & Practice*. SAGE Publications Ltd.

Doorley, J., & Garcia, H. F. (2020). *Reputation Management*. Routledge. https://doi.org/10.4324/9781351235020

Eriyanto. (2021). *Analisis Jaringan Media Sosial: Dasar-dasar dan Aplikasi Metode Jaringan Sosial untuk Membedah Percakapan di Media Sosial*.

Eriyanto, E. (2020). Hashtags and Digital Movement of Opinion Mobilization: A Social Network Analysis/SNA Study on #BubarkanKPAI vs #KamiBersamaKPAI Hashtags. *Jurnal Komunikasi Indonesia*, *8*(3). https://doi.org/10.7454/jki.v8i3.11591

Fitri, A. N., Fitri, Karim, A., & Rachmawati, F. (2021). Strategi Komunikasi Krisis Maskapai Penerbangan di Indonesia. In *Jurnal IMPRESI* (Vol. 1, Issue 2).

Fitri, V. A., Andreswari, R., & Hasibuan, M. A. (2019). Sentiment analysis of social media Twitter with case of Anti-LGBT campaign in Indonesia using Naïve Bayes, decision tree, and random forest algorithm. *Procedia Computer Science*, *161*, 765–772. https://doi.org/10.1016/j.procs.2019.11.181

Hapsari, D. R. (2016). Peran Jaringan Komunikasi Dalam Gerakan Sosial Untuk Pelestarian Lingkungan Hidup. *Jurnal Komunikasi*, *01*, 25–36.

Himelboim, I. (2017). Social Network Analysis (Social Media). In *The International Encyclopedia of Communication Research Methods* (pp. 1–15). Wiley. https://doi.org/10.1002/9781118901731.iecrm0236

Himelboim, I., Smith, M. A., Rainie, L., Shneiderman, B., & Espina, C. (2017). Classifying Twitter Topic-Networks Using Social Network Analysis. *Social Media + Society*, *3*(1), 205630511769154. https://doi.org/10.1177/2056305117691545

Juliadi, R., & Saraswati, N. A. (2023). Public Relations Strategy In Issue Management Customer Service At Ibox Indonesia Outlets. *Jurnal Komunikasi Dan Binsis*, 23–38. https://doi.org/10.46806/jkb.v11i1.986

Kim, J., & Hastak, M. (2018). Social network analysis: Characteristics of online social networks after a disaster. *International Journal of Information Management*, *38*(1), 86–96. https://doi.org/10.1016/j.ijinfomgt.2017.08.003

Knoke, D., & Yang, S. (2019). *Social Network Analysis Quantitative Applications in the Social Sciences*. SAGE Publications.

Lee, Y., & Kim, J. (2021). *Internal Public Segmentation for Effective Internal Issue Management* (pp. 39–55). https://doi.org/10.1007/978-3-030-78213-9_3

Milani, E., Weitkamp, E., & Webb, P. (2020). The visual vaccine debate on twitter: A social network analysis. *Media and Communication*, *8*(2), 364–375. https://doi.org/10.17645/mac.v8i2.2847

Norton Hutasoit, K., Setyawan, A., Mutiah, T., Muharam, F., Rahmi, M., Raharjo, A., Nurdiansyah, C., & Rafiq, A. (2023). *Respon Krisis Kebakaran Depo Pertamina Plumpang Dalam Analisa Situational Crisis Communication Theory*. *4*(1).

Ott, L., & Theunissen, P. (2015). Reputations at risk: Engagement during social media crises. *Public Relations Review*, *41*(1), 97–102. https://doi.org/10.1016/j.pubrev.2014.10.015

Prahl, A., Duffy, A., & Min, C. L. H. (2023). Commentary is free: Issue management and gaining capital with thought leadership. *Public Relations Review*, *49*(1), 102277. https://doi.org/10.1016/j.pubrev.2022.102277

Priambodo, A. I., & Arianto, I. D. (2022). Analisis Jaringan Komunikasi pada Tagar #KPKEndGame di Media Sosial Twitter. *Warta ISKI*, *5*(1), 22–34. https://doi.org/10.25008/wartaiski.v5i1.156

Recuero, R., Zago, G., & Soares, F. (2019). Using Social Network Analysis and Social Capital to Identify User Roles on Polarized Political Conversations on Twitter. *Social Media and Society*, *5*(2). https://doi.org/10.1177/2056305119848745

Regester, M., & Larkin, J. (2010). *Risk Issue and Crisis Management Public*. Kogan Page.

Reuter, C., Hughes, A. L., & Kaufhold, M.-A. (2018). Social Media in Crisis Management: An Evaluation and Analysis of Crisis Informatics Research. *International Journal of Human–Computer Interaction*, *34*(4), 280–294. https://doi.org/10.1080/10447318.2018.1427832

Siregar, I. K., & Haeirina, K. P. (2021). Komunikasi Krisis Pt. Jouska Finansial Indonesia Dalam Pemulihan Citra Perusahaan. *Jurnal Pustaka Komunikasi*, *4*(1), 1–10.

Smith, R. D. (2017). *Strategic Planning for Public Relations*. Routledge. https://doi.org/10.4324/9781315270876

Stroud, N. J., & Muddiman, A. (2019). Social Media Engagement With Strategy- and Issue-Framed Political News. *Journal of Communication*, *69*(5), 443–466. https://doi.org/10.1093/joc/jqz029

Sudiwijaya, E., Sofyan, N., & Kunci, K. (2022). Pengelolaan Konten Instagram untuk Berinteraksi selama Pandemi Covid 19 Instagram Content Management for Interaction During the Covid 19 Pandemic. *Jurnal Aristo (Social, Politic, Humaniora)*, *10*(1), 167–187.

Suratnoaji, C., Nurhadi, & Arianto, I. D. (2020). Public opinion on lockdown (PSBB) policy in overcoming covid-19 pandemic in indonesia: Analysis based on big data twitter. *Asian Journal for Public Opinion Research*, *8*(3), 393–406. https://doi.org/10.15206/ajpor.2020.8.3.393

Theaker, A. (2021). *The Public Relations Handbook* (A. Theaker, Ed.; 6th ed.). Routledge.

Yulianti, W., Boer, M., Yunia, A., & Pinariya, J. M. (2022). Respon Krisis Twitter PLN saat Listrik Mati Massal Tahun 2019 untuk Mempertahankan Reputasi Perusahaan. *Warta ISKI*, *5*(1), 10–21. https://doi.org/10.25008/wartaiski.v5i1.149

Zempi, C. N., & Rahayu, R. (2019). Part of the Gender, Race, Sexuality, and Ethnicity in Communication Commons, International and Intercultural Communication Commons, and the Social Influence and Political Communication Commons Recommended Citation Recommended Citation Zempi. *Jurnal Komunikasi Indonesia*, *8*(2). https://doi.org/10.7454/jki.v8i2.11195

Zhou, A., & Rita Men, L. (2023). Theoretical Models for Corporate Social Media Use. In *Public Relations Theory III* (pp. 503–519). Routledge. https://doi.org/10.4324/9781003141396-33