How Does the Indonesian Government Communicate Food Security during COVID-19 Pandemic: A Social Media Analysis on Indonesia Official Twitter Account

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Abstract: This study aims to determine communication about food security during the COVID-19 Pandemic by Analyzing the Indonesian Government's official Twitter account. This research method uses the NVIVO 12 plus in analyzing data with chart, cluster, and word cloud analysis. This research's data source came from the Food Security Agency Twitter accounts and the Logistics Affairs Agency. This study chose the Food Security Agency and the Logistics Affairs Agency's Twitter social media accounts because they are responsible for Indonesia's food security. The finding of this study, the Food Security Agency is more dominant in discussing communication content related to agriculture, availability of foodstuffs, food needs, and food prices compared to the Logistics Affairs Agency. Meanwhile, the Logistics Affairs Agency is superior in communicating content about rice availability during the COVID-19 pandemic. Content is related to one another, but the most vital link is between foodstuffs and rice availability. The Food Security Agency and Logistics Affairs Agency's communication narrative with the Indonesian people during the COVID-19 pandemic concerns rice, prices, food, and Indonesian farmers. The Logistics Affairs Agency has a higher communication intensity than the Food Security Agency with the Indonesian people in early 2020 to March 2021 period.

1 INTRODUCTION

The Indonesian state has two institutions related to national food security: the Food Security Agency under the Ministry of Agriculture and the Logistics Affairs Agency. This study aims to determine food security communication during the COVID-19 Pandemic by Analyzing the Food Security Agency and the Logistics Affairs Agency Twitter account. The Food Security Agency (BKP) and the Logistics Affairs Agency (Bulog) are public institutions responsible for managing Indonesia's food security.

Therefore, disclosure of the information is a must for public institutions to be provided to the public. Twitter is one of the Government's facilities because it allows communication and interaction with the community. Twitter is a Microblogging service that allows for a significant increase in exchange. Efficient cognitions can be activated through Twitter interaction (Fischer & Reuber, 2011). The Twitter community created global social networks to send or receive short messages in real-time (Latonero & Shklovski, 2011). Twitter is similar to chat rooms in that it uses the at-sign to allow users to communicate with one another. (Murthy, 2012). This research is also interesting for the world community because food security during the COVID-19 pandemic is significant. More than that, the Government's ability

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to communicate about the food situation in their country is a way to avoid public panic.

The problem during the COVID-19 pandemic was its impact on all lines of life, including the economic side of the Indonesian people, including the fulfillment of basic needs. Rice is the main food commodity for the people of Indonesia, so it plays a significant role. Rice is also used as a raw material in vermicelli, cakes, instant rice flour, and others (Mentang, Liando, & Lengkong, 2017). Therefore, through the Food Security Agency and the Logistics Affairs Agency, the Government needs to ensure adequate food stocks and explain the situation to the Indonesian people during the COVID-19 pandemic. The COVID-19 pandemic has disrupted Indonesia's economy, as evidenced by Indonesia's economic growth, which is estimated to only grow 2.5 percent from ordinary, capable of up to 5.02 percent(Fahrika & Roy, 2020). COVID-19 can have an impact on decreasing socioeconomic behavior and decreasing people's income. There is a strong link between the pandemic that has tested positive for COVID-19, the death rate, and socioeconomic conditions(Prawoto, Purnomo, & Zahra, 2020).

In some countries that are still developing, the COVID-19 pandemic tends to cause food insecurity. The impact of the COVID-19 pandemic in 2020 has severely limited food supply and access. This will affect economic slowdown and increase poverty(Udmale, Pal, Szabo, Pramanik, & Large, 2020). The COVID-19 pandemic has caused widespread disruptions, placing billions of people's food security in danger. Food supply disruptions caused by the pandemic could double global hunger, especially in Africa and developing countries (Zurayk, 2020; Purnomo et al., 2021).

Therefore, this research focuses on the communication carried out by state institutions in charge of food security to the public during the COVID-19 pandemic via Twitter. This research will answer how the Food Security Agency and the Logistics Affairs Agency communicate about food security on Twitter during the Covid-19 pandemic. The limitation of this study is that it only uses one type of Twitter.

2 LITERATURE REVIEW

2.1 Social Media in Government

Social media is a virtual environment where people can exchange knowledge and ideas and collaborate to form new notions(Malawani, Nurmandi, Purnomo, & Rahman, 2020). According to Costa (2018), as a medium for public communication with a practical monitoring framework, social media is becoming increasingly popular(Purnomo et al., 2021). In recent years, government agencies have embraced various Web 2.0 tools, like blogs, wikis, social networking, microblogging, visualization apps, multimedia sharing, tagging, crowdsourcing, and virtual worlds. The increasing use of social media in Government is now aimed at transforming how government bureaucracies function internally and interact with the public outside of their walls(Criado, Sandoval-Almazan, & Gil-Garcia, 2013). Fostering social media in Government has aimed to enhance citizen experiences in near-real-time, transform government attitudes and behaviors in knowledge exchange and service provision, alter government decision-making habits, and force policy changes based on common citizen feedback(Chun & Luna Reyes, 2012). The development of social media tools has changed modes of communication between governments and citizens in discussing daily issues. Those communications also opened up opportunities for greater political participation, leading to a new social dynamic(Nurmandi et al., 2018). Social media tools can exchange information with the public and reach into the public's collective ingenuity to support the Government in achieving its goals. While social media can help a government agency save cash, its true strength is in increasing audience engagement, which helps that agency's mission(Dadashzadeh, 2010).

Government science agencies use social media to disseminate information produced by the agencies, suggesting a dedication to deficit-model thinking and little need for dialogic strategies(Lee & VanDyke, 2015). Governments turn to social media to provide new channels for information dissemination, communication, and participation, enabling citizens to interact with government officials and make excellent decisions(Song & Lee, 2016). In Government, social media provides a quick and transparent method of disseminating information that can be customized to offer programs that include public participation(Budiana, H. R., Sjoraida, D. F., Mariana, D., & Priyatna, 2016). Technology competence, top management support, citizen readiness, and perceived benefits all play a role in government agencies' social media usage (Hui Zhang, 2017).

2.2 Food Security in Pandemic Covid-19

The term "food security" was coined in the early 1970s as a concept of food supply in reaction to concerns that a global food shortage would endanger political stability (Jones, Ngure, Pelto, & Young, 2013). Food security means that all people have access at any time to get sufficient food and the conditions necessary for a population to be healthy and well-nourished (Coleman-Jensen, Rabbitt, Gregory, & Singh, 2019). Two broad perspectives on food security have been identified. One that focused on growing product as the critical approach to under-consumption and hunger. The other is a new social and ecological perspective that recognizes the need to address various issues, not just production (Lang & Barling, 2012)—as per some, ensuring food security is an integrated task that involves agriculture, political will, and product delivery logistics (Prosekov & Ivanova, 2018).

COVID-19 is causing havoc on food supply chains at all levels, from local to global, in a way that our global society has never seen before. Chronic food insecurity and a food crisis result from the cascading effects of Covid-19 (Udmale et al., 2020; Setiawana et al., 2021). A significant indirect consequence of the COVID-19 pandemic spreading across the Global South is a dramatic rise in hunger and food insecurity. The FAO (Food and Agriculture Organization) United Nations' (2020) has marked the food security consequences a crisis within a crisis, while the World Food Program has labeled it a hunger pandemic, warning that 30 million people could die of starvation (Crush & Si, 2020). More than half of respondents in Kenya during the COVID-19 period were concerned about food shortages, and we're unable to eat safe and nutritious food, ate smaller portions, and ate a limited variety of foods. Similarly, compared to the usual time, the number of Ugandans who decreased their food consumption could not eat safe and nutritious food, ate less varied diets or were concerned about running out of food increased significantly during the COVID-19 era (Kansiime et al., 2021; Ramdani et al., 2021).

Global hunger is another tragedy that comes with the COVID-19 pandemic. The director of the World Food Program warned in April 2020 that the coronavirus could bring another 130 million people to the brink of starvation by the end of the year. This number will increase the number of food-insecure people globally, which currently reaches 821 million people (Moseley & Battersby, 2020; The Phan et al., 2021). The COVID-19 pandemic is unprecedented, with social and economic consequences. As a result of the COVID-19 pandemic, there have been school closures, appeals to stay at home, business closures, many people have lost their jobs, and so on. This phenomenon has an impact on the potential for a significant increase in food insecurity. Food insecurity appears to be rapidly rising above pre-epidemic levels, according to preliminary evidence. Food insecurity among households increased from 11% in 2018 to 38% in March 2020; 35% of families with children aged 18 and under were food insecure in April 2020 (Wolfson & Leung, 2020).

3 METHODS

This research method uses NVIVO 12 plus analyzing data with chart, cluster, and word cloud analysis. NVIVO 12 plus is a Computer Assisted Qualitative Data Analysis Software. NVIVO 12 plus aims to facilitate qualitative research to be more effective and efficient in analyzing data. Using the NVIVO 12 plus method is N-capture the Twitter account of the food security agency and the logistics affairs agency. Then the download is inputted into the NVIVO 12 plus. Next, enter the downloaded results into the chart, cluster, and word cloud features on the NVIVO 12 plus, which aims to analyze and display data.

This research's data source came from the Twitter accounts of the Food Security Agency and the Logistics Affairs Agency. This study chose the Food Security Agency and the Logistics Affairs Agency's Twitter accounts because these two institutions are responsible for food security in Indonesia. The data collection period on the Food Security Agency and Logistics Affairs Agency Twitter accounts ranges from January 2020 to March 2021. During that period, Indonesia was hit by the Covid-19 pandemic, which disrupted the economic side of the community. Data is taken from the Twitter accounts of the Food Security Agency and the Logistics Affairs Agency in the form of followers, following, tweets, retweets, followers, following communication content, communication narratives, and communication intensity.

The number of tweets on the Food Security Agency Twitter account reached 971. Furthermore, the number of retweets on the Food Security Agency social media accounts was 2211 Figure 1.

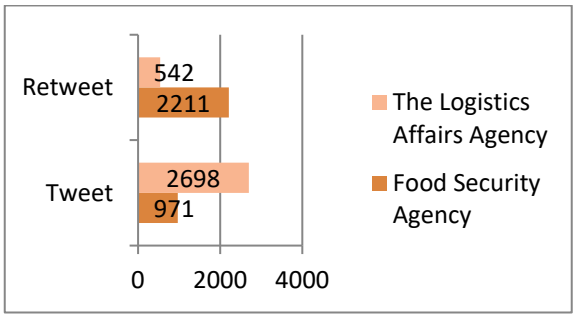

Figure 1: Tweet and retweet the Food Security Agency and the Logistics Affairs Agency Twitter Account.

Meanwhile, the number of tweets of the Logistics Affairs Agency Twitter accounts was 2698. Furthermore, there were only 542 retweets of the Logistics Affairs Agency Twitter accounts Figure 1. The Food Security Agency Twitter account has 4,391 followers and 80 following. Meanwhile, the Twitter Logistics Affairs Agency social media account has 7,386 followers and 312 following. The number of tweets, retweets, followers, and following the Twitter accounts of the Food Security Agency Twitter and the Logistics Affairs Agency shows that the Twitter account is active.

4 FINDING AND DISCUSSION

4.1 The Communication Content on Twitter

The Food Security Agency and Logistics Affairs Agency use Twitter to communicate with the Indonesian public regarding food security content. The chart analysis Figure 2 shows the Food Security Agency's communication content and the Logistics Affairs Agency on Twitter. Chart analysis of Figure 2 helps to understand how the Food Security Agency's communication content and the Logistics Affairs Agency related to food security during the COVID-19 period. The chart analysis results in figure 2 are processed by auto-code files captured by the Twitter accounts of the food security agency and the logistics affairs agency using NVIVO 12 plus. after that, sort out the content discussed on the Twitter account. Then the content is entered into the chart analysis feature on the NVIVO 12 plus to process and display the data.

Based on Figure 2, the Food Security Agency's communication content in discussing agriculture is 96.51%, while the Logistics Affairs Agency communicates content about agriculture only at

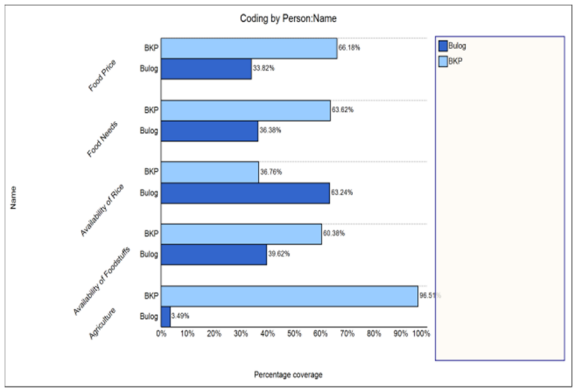

Figure 2: Communication Content of Food Security Agency and Logistics Affairs Agency based on Twitter.

3.49%. The Food Security Agency looks significant in communicating about agriculture compared to the Logistics Affairs Agency because it is under the Ministry of Agriculture, which incidentally deals with Indonesia's agricultural issues. Furthermore, the Food Security Agency's communication content on the availability of foodstuffs was 60.38%, compared to the Logistics Affairs Agency, which also discussed content on the availability of foodstuffs of 39.62%. The Food Security Agency appears to be more dominant in communicating content about foodstuffs' availability on Twitter than the Logistics Agency. This is inseparable from the duties and functions of the Food Security Agency, one of which is responsible for coordination, assessment, policy formulation, monitoring, and consolidation in the field of foodstuffs availability (Bkp.pertanian, 2021).

The Food Security Agency's communication content regarding rice availability was only 36.76%, and the Logistics Affairs Agency communicated content about the availability of rice on Twitter at 63.24%. This is in line with the Logistics Affairs Agency's primary duties, responsible for rice management in Indonesia. The Food Security Agency also communicates content about food needs of 63.62%, while the Logistics Affairs Agency talks about it on Twitter at 36.38%. Finally, talking about the content of food prices, the Food Security Agency communicated on Twitter at 66.18% compared to the Logistics Affairs Agency at 33.82%.

The Food Security Agency and Logistics Affairs Agency's communication content on Twitter is agriculture, availability of foodstuffs, availability of rice, food needs, and food prices. Communication content has a relationship with each other. Figure 3 results from the Cluster

Analysis, which shows the connectivity between the communication content.

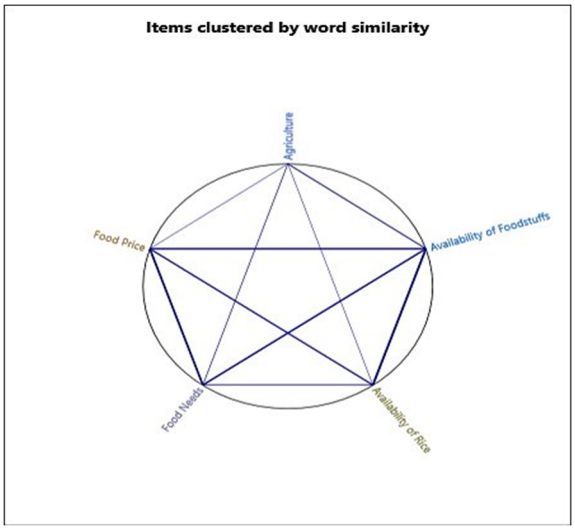

Figure 3: The relationship between Communication Content Food Security Agency and Logistics Affairs Agency based on Twitter.

Based on Figure 3, the relationship between rice availability and the availability of foodstuffs has the highest connectivity. This is followed by a linkage of communication content about food prices and food needs, in the third position the relationship between food prices and availability of foodstuffs. The fourth is the relationship between food needs and the availability of foodstuffs, and the fifth is the relationship between food prices and rice availability—Furthermore, the relationship between the availability of foodstuffs and agriculture. The seventh relationship is between the communication content of food needs and the availability of rice. Eight relationships between food needs and agriculture, followed by the relationship between rice and agriculture availability. Finally, the weakest link in the content of food price communication with agriculture.

4.2 The Communication Narrative on Twitter

Communication narrative Food Security Agency and Logistics Affairs Agency is obtained from word cloud analysis in NVIVO on the word frequency feature. The results of word cloud analysis in figure 4 from Food Security Agency and Logistics Affairs Agency Twitter accounts, the two institutions often discuss narrative around food during the COVID-19 pandemic. Figure 4 shows the narrative of the conversation on the Food Security Agency and Logistics Affairs Agency Twitter accounts during the COVID-19 pandemic. "beras (rice)", "pangan (food)", "harga (price)", @kementan, "Indonesia", #ketahananpangan(#foodsecurity),#kedaulatanpangan(#foodsovereignty), #petanisejahtera(#prosperousfarmer), #sobatpangan(#foodbuddy), #hargapangan(#foodprice), #lumbungpangandunia(#worldfoodbarn), #sobattani(#farmerfriend), "pertanian(agriculture)", "stok(stock)", "pasar(market)" are some of the words that are often discussed in the narrative of the conversation on the Twitter accounts of the Food Security Agency and Logistics Affairs Agency.

Figure 4: Food Security Agency and Logistics Affairs Agency Communication Narrative based on Twitter.

Based on figure 7, the Food Security Agency and Logistics Affairs Agency has consistently discussed narratives about food needs, as evidenced by the emergence of "beras" and "pangan." The Food Security Agency and Logistics Affairs Agency also discussed the issue of "harga," "pasar," #hargapangan, and "stok" as an effort to communicate price stability and food availability during the COVID-19 pandemic. The Food Security Agency and Logistics Affairs Agency emphasizes Indonesia's food security through #ketahananpangan, #lumbungpangandunia, #sobatpangan, "pertanian" and #kedaulatanpangan. Interestingly, the Food Security Agency and Logistics Affairs Agency also invite attention to the fate of Indonesian farmers #petanisejahtera, #sobattani, and #bkppetani. The food security agency with the logistics affairs agency also cooperates with other food institutions, as seen in @kementan. @kementan is the Twitter account of the Ministry of Agriculture of the Republic of Indonesia.

4.3 The Communication Intensity on Twitter

The Food Security Agency responds to food security during the COVID-19 pandemic in January-March 2020, decreasing in April-June. It increased again in July-September 2020 but decreased again in October-December 2020 and January-March 2021. Figure 8 shows the complete results, the intensity of the Food Security Agency's communication on Twitter for January 2020-March 2021 is relatively low compared to 2018 and 2019.

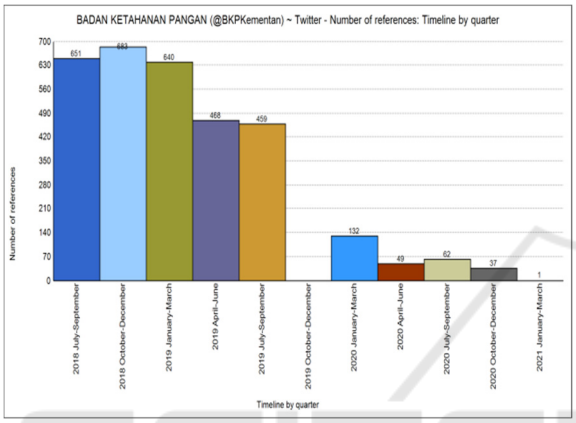

Figure 5: Food Security Agency Communication Intensity based on Twitter.

Even so, the communication intensity of the Food Security Agency in the July-September 2020 period increased slightly. This is inseparable from President Joko Widodo's appeal to his subordinates to continue to monitor the stock and price stability of necessities. After the Food and Agriculture Organization (FAO) warned that the world would experience a food crisis at the end of August 2020 due to the spread of COVID-19, which is uncertain when it will end (Amalia, 2020). Food security agency communication intensity is very low on Twitter. Therefore, food security agencies should focus on intensifying communication through Twitter amidst the COVID-19 pandemic. This is useful for the Indonesian people in obtaining information related to the state of food. So that panic about the shortage of staple foods does not occur in the community.

Meanwhile, the Logistics Affairs Agency responds to food security during the COVID-19 pandemic with high communication intensity. Figure 6 shows the intensity of the Logistics Affairs Agency's communication on Twitter in the last ten years. The highest communication intensity of the Logistics Affairs Agency on Twitter occurred in the period January-March 2020. It slightly decreased in April-June 2020, then stabilized in the period July-September 2020 and October-December 2020. January-March 2021 was the agency's lowest communication intensity, Logistics Affairs Agency, during the COVID-19 pandemic.

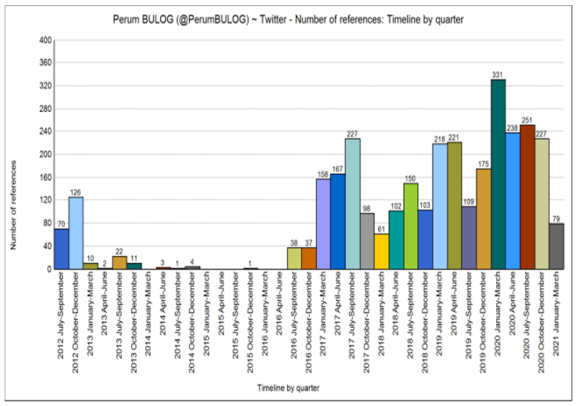

Figure 6: Logistics Affairs Agency Communication Intensity based on Twitter.

Figure 6 shows that the January-March 2020 period was the highest intensity of Logistics Affairs Agency communication. At that time, the lockdown issue was hotly discussed by the public and the Indonesian Government as one of the policies to prevent the spread of Covid-19. As a result, many questioned whether or not the supply of necessities, including rice stocks from the Logistics Affairs Agency, was sufficient. The Logistics Affairs Agency Director of Operations and Public Services, Tri Wahyudi Saleh, emphasized that the rice stock in the Logistics Affairs Agency warehouse was still relatively safe and could be sufficient for routine distribution needs and market operations until the end of 2020 (Idris, 2020). Even so, in the April-June period, it experienced a slight decrease from the previous one, but the intensity was still relatively high.

Meanwhile, the July-September and October-December periods experienced stability in terms of communication intensity. During this period, the Logistics Affair Agency was busy with rice production, which had decreased compared to the previous two years. This is due to the dry season experienced by 30 percent of agricultural areas. Moreover, changes in rice fields' function, which impact threats to food security, poverty of farmers, and ecological damage in rural areas, are also supporting factors. Therefore, the Logistics Affairs Agency and the Government pay special attention to rice production to fulfill rice needs until the beginning of 2021 until entering the next harvest season (Mursid, 2020).

5 CONCLUSION

This study's conclusions are; The Food Security Agency is more dominant in discussing communication content related to agriculture, availability of foodstuffs, food needs, and food prices compared to the Logistics Affairs Agency. Meanwhile, the Logistics Affairs Agency is superior in communicating rice availability to the Indonesian people during the COVID-19 pandemic. Communication content is related to one another, but the most vital link is between the availability of foodstuffs and rice availability. The Food Security Agency and the Logistics Affairs Agency's communication narrative with the Indonesian people during the COVID-19 pandemic is rice, prices, food, and Indonesian farmers. The Logistics Affairs Agency has a higher communication intensity than the Food Security Agency with the Indonesian people in early 2020 to March 2021 period. The food security agency and the logistics affairs agency have used Twitter to communicate about Indonesian food security during the pandemic. This shows the success of the two organizations in using social media technology facilities as a transmitter of food security information during the COVID-19 pandemic. This also has implications for the responsibilities and duties of the two organizations to the community in managing food in Indonesia

A limitation in this study is that the data source used only comes from the Food Security Agency and Logistics Affairs Agency's Twitter social media accounts. Therefore, the recommendation for further research is to take data sources from two social media accounts, such as Facebook and Twitter, so that the data obtained is more complete.

Advice for netizens is that more intensive interaction with the Government's Twitter is needed. There is reciprocity between the information provided and the response for those who receive it. Meanwhile, the message for the Government is further to increase the intensity of its use of Twitter so that it can be maximized in conveying information.

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