COMMUNICATING DEMOCRATIC WILL ONLINE: THE CASE OF MASS REJECTION TO FUEL PRICE ADJUSTMENT POLICY IN INDONESIA

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ABSTRACT

The advance of communication technologies has evolved civic engagement in democratic countries. Social media platforms such as Twitter, Facebook, and Instagram allow citizens to express their views freely and publicly. Citizens can easily communicate their views about the democratic process through social media. This study aims to assess online democratic engagement on Twitter in Indonesia regarding the policy to increase fuel prices in 2022. Computerized social network analysis is employed. NodeXL Pro is an open-source web scraping and visualization tool used to collect, process, and analyze Twitter data. The study finds that online civic engagement tends to be polarised in the network structure. Secondly, this study indicates that general public are important figure in the network. Meanwhile, the primary source of information discussed in the network is news media. Finally, this study demonstrates a link between online political discourse and traditional media coverage.

INTRODUCTION

The media plays an important role in political communication, although the extent of this impact is debatable. The political system, including parties and legislators, communicates with citizens primarily through mass media. (Castells, 2019). Furthermore, media has significant impact of the health of democratic citizen (Cushion, 2019). In this regard, the important work that Habermas did on the "public sphere" provides conceptual values on how the media plays a key role in the spread of political ideas. For Habermas, the public sphere is a space where individuals of any social status can convene to talk about any topic related to politics in order to challenge or criticize the political system. Political systems are impacted by this political debate's outcome. The media has a big part to play in ensuring that the results of political debate get to the government and the public in order to have an impact on the political system. Because of this, Habermas views the media, such as newspapers, magazines, television, and radio, as medium of public sphere (Habermas, 1989). Accordingly, The media has a substantial impact on the political system because of its function as a source of information regarding politics, as a forum for political debate, and as a 'watch dog' that influences political decisions. (Davis, 2014). On the other hand, media can also function as a channel of political communication from politician to citizen (Andika et al., 2021).

Civic involvement in democratic nations has evolved with the development of communication technologies. With the use of communication
technology, citizens may freely and publicly express their opinions on social networking sites like Twitter, Facebook, and Instagram. A number of scholars contend that social networking sites serve a significant function in democratic engagement while also allowing individual autonomy, simultaneously (Castells, 2019; Kes-Erkul & Erkul, 2009; Shirky, 2011; Steinfield et al., 2008). Social media plays an important role in influencing people's mindset in believing in specific information such as about Covid-19 disease and vaccination (Diego et al., 2022). Unlike mass media or traditional media that restrict the communication to a one-way form of communication (Schudson, 1978), social networking sites allow citizens to communicate interactively.

A number of studies explore the role of social media platforms in democratic engagement. The availability of internet technologies and social network sites or social media causes new forms of civic society in Russia. Russian civil society become more expressive and has escalation of interest on political engagement due to the development of social network sites (Sokolov & Verevkin, 2016). Furthermore, Bimber and Copeland (2013) explore the relationship between online civic engagement on social media and offline political action in the United States between 1996 and 2008. They found that social media use was highly associated with offline acts of political participation. Meaning that social media is fostering a better civic engagement. In addition, Warren, Sulaiman, and Jaafar (2014) the use of Facebook, a social media platform, shapes the landscape of traditional civic engagement in an online realm. According to them, the use of Facebook led to a better political engagement. Furthermore, online political discussion tends to be polarized in social network structure (Arceneaux et al., 2012; Beaufort, 2018; Boutyline & Willer, 2017; Bruns & Burgess, n.d.; Heltzel & Laurin, 2020; Riski & Budiarsa, 2020; Yang et al., 2021; Yegen et al., 2022).

The majority of studies, however, are likely focused on political communication in relation to election campaign and election process such as voting, rallies, and influencing others to vote. Earlier studies about political participation before the development of social networking sites have been focused upon two types of problems. The first problem is historical process of decision-making process that led to election process. Meanwhile, the second problem is public political reactions upon election process (Rokkan, 2009) Even though election campaign-related civic engagement is important, civic engagement is not only limited to those form of political communication online. Citizens engage in political activities in a number of ways including contacting government, commenting current policy, discussing public movements, talking politics in general and volunteering in community (Boulianne, 2022).

A few studies have been conducted in addressing online political engagement in response to public policy. In response to mitigation strategies to the bushfires in Australia, citizen tend to be polarized. The polarization causes lack of action on mitigating bushfires (Zheng & Bhatt, 2022). Moreover, political polarization such happening in social media causes numerous impacts on public policy. Such impacts including the higher risk on policy gaps, obstruction on the implementation of public policy, and obstruction of governance (Weber et al., 2021). Furthermore, on a study on Muslim’s response to government policies in overcoming Covid-19 pandemic in Indonesia, it is concluded that Indonesian Muslim community are polarized (Sarnoto & Hayatina, 2021).

The majority of studies addressing civic response to public policy focus on offline polarization. Meanwhile online platforms such as social network sites were proven to cause political polarization (see (Arceneaux et al., 2012; Beaufort, 2018; Boutyline & Willer, 2017; Bruns & Burgess, n.d.; Riski & Budiarsa, 2020; Yegen et al., 2022). With this in mind, present study aims to explore the use of social media, specifically Twitter, on civic engagement regarding citizens reaction to public policy in Indonesia. Using the recent policy to increase the fuel price as a case, this study employs a social network analysis to answer the following research questions:

RQ. 1: What is the structure of the network on the fuel price adjustment discussion?
RQ. 2: Who are key figures in the network?

In addition to those questions, present study is also exploring the relationship between online civic engagement and traditional media coverage by addressing following question.

RQ. 3: What are relationships between online civic engagement and mass media coverage about public policy?

Having briefly introduce the current study by discussing the relevant studies on the use of social media on civic engagement, and concluded with research questions, the following section explains research method employed to answer the research questions.

METHOD

This study uses keyword-based social network analysis to determine network structure and important actors in Twitter-based civic involvement. The following subsection describes data and how it was acquired before explaining how this is used to meet research goals.

Data

Indonesian government decide to raise the price of fuel in country owned fuel vendor, Pertamina, by issuing a fuel price adjustment policy on 2022. As the price was increased, Indonesian government also encourage other fuel vendors to adjust their selling price according to the policy. The significant raise of price leads to diverse response from citizens. Some people react by tweeting and form public discussion both offline and online. Offline reaction from can be seen from traditional media coverage where people hit the road and did demonstration in a few government offices. Meanwhile, online political debate regarding the fuel price raising can be found in Twitter and other social media platforms. A number of reaction hashtags were popular on Twitter, including #DukungSeptemberBergerak, which is a collection of tweets or tweeter texts related to demonstration of rejection to the new fuel price policy, #DramaTangisPolitikBBM, and other keywords related to the rejection.

Due of Twitter's many responses, there may be cross-cutting political conversation across different groups, but this is an empirical matter that needs further study. These hashtags encapsulate some of the most relevant political discourse on Twitter about rejecting current fuel price policies. The data lets us measure political debate, social network structure, and traditional media coverage.

To collect data, 7 days data collection were conducted on October 2022. NodeXL, a social media scraping tool, was used to scrape Twitter datasets.

The scarping was using the keyword Tolak Kenaikan Harga BBM. Some experiments were made on the utilization of keywords. Hashtag #DramaTangisPolitikBBM and #DukungSeptemberBergerak were tried to be employed to capture the Twitter discussion. However, those keywords were returned excessive number of unrelated tweets while tweets related to fuel price policy seems to be measly. Then it was decided to use general keywords that returns more relevant data. No keywords were changed throughout data collection to guarantee consistency.

To ensure the consistency of the data collection, no variations of keywords were used over the timeframe of data collection. NodeXL was used to get a limit of 2000 recent Twitter messages from the keyword due to the massive user network.

Network analysis

The retrieved data was sorted and cleaned to ensure the daily data confirms the day it was posted. NodeXL was used to classify and tally the data based on its group, including original tweets, reply, mention, and share activities. Furthermore, NodeXL was used to identify hashtag clusters to analyze the user network. Caluset Newman Moore algorithm was used. This algorithm clusters Twitter users based on
their connectedness pattern. (Wakita & Tsurumi, 2007). Then, the several kinds of social networks that may be found on social media, as described by Mark A. Smith: polarized crowds, tight crowds, brand clusters, community clusters, broadcast networks, and support networks. (Smith, 2014). These classifications were used to identify the network of users in the dataset. During this time, multiple social network types were utilized to determine which networks were present in each hashtag that was analyzed. Figure 1 depicts the various types of social networks that can be found in social media.

Each network type has distinct characteristics. Polarised masses are networks comprised of at least two large and concentrated groups. However, interconnection between factions in a polarized population is typically restricted. As a result, those who participate in polarized meetings are likely to be unaware of one another. Furthermore, polarized crowds do not form as a result of the passionate character of the conversation and dispute that takes place. Instead, the most prevalent reason for their existence is because others in the network are interested in the same thing, which leads to connections being formed between them. A tight crowd, on the other hand, forms as a result of network interconnection. This interconnection is expected to keep the network from polarization, which separates network users into groups.

**Figure 1.**  
Social media social network type (Smith, 2014)

In contrast, brand cluster is primarily characterized by a high level of fragmentation between network participants. In contrast to polarized and dense audiences, brand cluster participants typically have no ties to other network members despite discussing the same subject (or object). Therefore, the preponderance of a brand cluster's network map consists of isolated nodes, known as isolates in network theory (Smith, 2014) Community clusters are comprised of a few small groups and resemble bazaars where a particular popular topic is discussed. This type of network appears to be a mixture of polarized crowds and brand clusters. In a sense, community clusters contain a greater number of smaller groups than polarized masses. Additionally, it has fewer isolates than the brand cluster. In addition, the discussion formed in small groups creates a dense network among community cluster participants.

The broadcast network looks to be a link between conventional media and its audience. At the same time, broadcast network users tend to connect just to the source of broadcast or information rather than connecting with other network participants. In contrast to the broadcast network, the support network is distinguished by the connection of a hub account to a large number of unconnected members. The flow of information becomes a major element in this network, since information providers are often fewer in number than their audience. In certain circumstances, only one or two members of the support network exchange information with several audiences. (For a more in-depth examination of each network type, see (Smith, 2014; Smith et al., 2014; Smith & Shneiderman, 2014)

Proceed to identifying significant figures in the network. Degree centrality data was used to identify the key figures. NodeXL was used to do this study automatically. Degree centrality in network analysis refers to the total number of edges (connections) in the network that are
related to a vertex (user) (Hansen et al., 2011). Simply said, degree centrality is a popularity metric. According to (Hansen et al., 2011), degree centrality comprises of betweenness centrality, proximity centrality, and eigenvector centrality. The current study solely looks at betweenness centrality, which is a method of measuring centrality based on shortest pathways (connections between people). In other words, betweenness centrality quantifies the number of network connections a person has. The greater the betweenness centrality value appears, the more connections a user has. As a result, in this study, a user with a high degree of centrality is regarded as a crucial person. Furthermore, to identify significant figures, NodeXL was used to sort the top 10 people ordered by betweenness centrality during a 30-day interval from both hashtags. In addition, to establish prominent persons’ social backgrounds, a thorough search of their Twitter profiles was conducted.

This section has provided an overview of the data and methodologies utilized in this study. Using NodeXL Pro, approximately 396,200 Twitter records were collected over the course of seven days. To answer the research questions, the data were analyzed using social network analysis. The following chapter describes significant research findings.

RESULTS AND DISCUSSION

As indicated in the methods section, social network analysis was utilized in this study to investigate online political participation in relation to the petroleum price increase policy in Indonesia. This section provides an overview of the four most significant findings of the study. Initially, the observed terms’ social network structure tends to be polarized. Second, the network’s most influential individuals originate from a diversity of social backgrounds. Thirdly, the discussion is of generally high quality, with numerous well-supported claims and assertions made throughout. Finally, it was discovered that there is a substantial connection between online political discourse and mass media coverage.

1. Polarisation tendency
For the first research query, NodeXL was used to automatically analyze the Twitter text retrieved from the keyword. This aim of this process is to perform social network analysis. Using Caluset Newman Moore algorithm, the graph of network of civic engagement related to fuel price policy was generated. The network graph then analysed based on six kinds of Twitter social media network introduced by Smith (2014) accordingly. The first important finding from the network analysis is that the network of civic engagement on the response to public policy is polarized as can be seen on figure 2.

Figure 2.
Network Structure of Public Policy Response on Twitter.
As indicated on the figure 2, the participants of online civic engagement surrounding the fuel price policy tend to form a few large and dense groups. Although there is a larger group, labeled G1, smaller dens groups appear to be existed on G2 to G11. However, intergroup connection is far lower than intragroup connectivity. The number of edges between groupings demonstrates this. Edges between users within a group are denser than those between groups. Users connect around specific subjects, according to social network maps.

Earlier studies confirm that online political engagement that is specifically related to election campaigning or election tend to be polarized. Beaufort (2018) suggests that the evolvement of digital media and massive use of online social network sites such as Twitter leads to political polarization in Europe. The resulting polarization, according to her, can challenge democracy. On different country Boutyline and Willer (2017) reported that both conservatives and liberals people share homophilic social structure in online network. But they note that conservative people tend to be more homophilious than liberal people. It indicates that homophilous social structure can lead to the formation of polarized crowd in the network structure. Riski and Budiarsa (2020) also reported a formation of political polarization on Twitter during the 2019 presidential election campaign in Indonesia.

Surprisingly, current studies on civic engagement related to public policy response in Indonesia share a similar network structure to those election-related studies. This finding seeds a new light to the fact that online civic engagement can also be polarized even though the topic of discussion is not directly related to election campaign. Whether it is caused by political orientation or homophily requires further investigation using different approach.

2. Diverse participants

Moving on to the second research question, NodeXL was once again utilized to analyze the debate’s key figures based on betweenness centrality data. To further investigate the social context of these important participants, their Twitter profiles were manually evaluated. Then, important participants were categorized as (1) politicians (if it was determined from their Twitter profiles that they were politicians), (2) journalists (if their Twitter profiles indicated that they were journalists), and (3) ordinary citizens (if they were neither politicians nor journalists). In this manner, it was discovered that Twitter political discussion participants are diverse. Table 4 ranks the top five users by betweenness centrality on the network graph of Indonesia's fuel price adjustment policy.

Table 1.
Key figures on online networks

<table>
<thead>
<tr>
<th>No</th>
<th>User name</th>
<th>Social Background</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>@jokowi</td>
<td>Politician</td>
</tr>
<tr>
<td>2</td>
<td>@cnnindonesia</td>
<td>Journalist</td>
</tr>
<tr>
<td>3</td>
<td>@detikcom</td>
<td>Journalist</td>
</tr>
<tr>
<td>4</td>
<td>@awemani</td>
<td>Ordinary citizen</td>
</tr>
<tr>
<td>5</td>
<td>@say_ulva</td>
<td>Ordinary citizen</td>
</tr>
</tbody>
</table>

CNN Indonesia, which is a news outlet’s Twitter account, is the key figure in the network with the higher betweenness centrality. Betwennness centrality is the degree to which a Twitter user is connected to other accounts in the network. The higher the number the more it is connected to other user. Picture 3 show the position of CNN Indonesia in the network. Please note that red line indicates the connection between users in the network. Detikcom which is another news outlet account in the network has less connection on the network in compare to CNN Indonesia.
Surprisingly, ordinary citizens are quite influential in the network. Two out of five top key figures on the network are ordinary citizens. It can be seen in Picture 4 that @awenamy and @say_ulva have a high betweennes centrality with dense connection to other users in the network.

These results are similar to those reported by Riski and Budiarsa (2020). Riski and Budiarsa reported that the key figures on online political debate about presidential election in Indonesia is heterogenous with the domination of politician. Present study, however, finds that ordinary citizens are more dominant in the network in compare to politician. One explanation to this might be because public policy response discussion online is a domain for citizens to express their democratic will freely. This finding is consistent with that of (Anindya et al., 2021) who conclude that social media is an ideal platform where people can access actual information. It should be different to election campaign discussion where politician has their stage to reach and influence citizens to vote.

3. Highly media-dependent
Because of the key figure in the network is both citizen and journalist, the vast majority of tweets and discussion is related to either traditional media coverage or offline events somewhere. This section summarizes study findings. First, gasoline price adjustment strategy tends to polarize civic involvement social networks. Second, this study shows that journalists, legislators, and regular individuals were major characters in online civic involvement. This study concludes that online political conversation is heavily influenced by mass media coverage, as seen by tweeting activity.

CONCLUSIONS
This study examines online civic engagement on Twitter in response to fuel price adjustment policy in Indonesia on 2022. The most noteworthy conclusion of this study is that the pattern of social network in online civic involvement in response to gasoline price adjustment legislation is polarized. Dense crowds were existed with little connection to each other outside of the crowd. Second, this study found that journalists, politicians, and ordinary citizens played important roles in online civic engagement. This study shows that mass media coverage has a significant effect on online political debate.

Taken together, the findings of this study give fresh insight on the influence of social media platforms, notably Twitter, on changing civic involvement in Indonesia and Asia in general. Despite the fact that the structure of network on civic engagement on responding public policy share a number of key features to those of election campaign, further studies is required to confirm consistency of result.

Of course, this study has significant drawbacks. One important disadvantage of this study is that
data collection was only done for 7 days, but civic involvement on the subject has been developing over time. A longer-term research might provide better coverage and knowledge of the entire pattern of civic activity online. Comparisons to other nations may provide a better understanding of the similarities and contrasts between online political conversation in Indonesia and other countries. Despite its limitations, the study contributes to our understanding of how Twitter is used for political goals in Indonesia. A cross-national study incorporating other Asian nations is now required to acquire a better understanding of the influence of social media on politics. Simultaneously, additional works on Asian nations might help to balance the corpus of literatures that is now focused on Western countries.

REFERENCES


