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Daftar ISI

STRENGTHENING DATA-DRIVEN POLICY COMMUNICATION ON INDONESIA ECONOMIC RECOVERY PROGRAM OF COVID-19 IN THE DIGITAL LANDSCAPE

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ABSTRACT

To recover from Covid-19 crisis, Indonesia needs to get the supports and confidence from the society, especially millennials as the backbone of the workfoces. The support can be done by implementing the effective communication strategies towards economic recovery programs. This policy research has intended to identify the available alternatives of policy communication strategies to fill the communication gap in disseminating economic recovery program to working millennials through big data analytic. Twitter has been chosen to illustrate the communication gap in terms of content messaging and communication actors between policy communicators and netizens, who represent millenials. Content/text analysis and social network analysis have been used to identify the problems and explore the options to solve the gap. The main findings showed that there was a gap between messages disseminated by policymakers and demanded information from netizens. Moreover, policy communication actors have been dominated by public institutions and ministries within = 0.05, centering on Ministry of Finance, while the presences of other desired key players were still lower than expected. The findings lead to policy communication recommendations to strengthen collaboration among government bodies, especially Ministry of Communication and Informatics as the national communication focal point, while the more exposures of program information to public could be improved by inviting more media and communities to disseminate. In the long term, human resources capability and organization agility need to be adjusted with the technology advancement, as one of the proposed frameworks has been provided by OECD Digital Government Policy Framework.

Keywords*: economic recovery program/policies, millennials, communication gap, social media analytics, Twitter, content/text analysis, social network analysis*

Introduction

Indonesia is the biggest country in Southeast Asia and has become the country with the fourth-largest population in the world (World Bank, 2020). In early January 2021, the Central Statistics Agency (BPS) announced the ten-yearly census result, which reported that indonesia's total population in 2020 amounted to 270.2 million, or an increase of 32.56 million compared to the results of the 2010 census. BPS explained that 27.94 percent of Indonesia's total population is currently dominated by generation Z, and 25.87 percent is generation Y. Francis and Hoefel (2018) explain that generation Y was born between 1980-1994, and generation Z was for people born

between 1995-2010. Generation Y and Z have common characteristics that are close to globalization, communalism, and interconnected in social networks or the internet (Francis and Hoefel, 2018). This generation has initiated and accelerated the global transformation towards a digital lifestyle and connectivity that is no longer limited to the scope of countries or continents.

The high proportion of demographic bonuses has supported the Indonesian economy. Indonesia's Bruto National Income (GNI) per capita in 2019 was recorded at US$ 11,459 on a PPP basis in 2017 (World Bank, 2021). The crisis caused by Covid-19 in 2020 has hit indonesia's economy and caused a recession in the third quarter of 2020. BPS data (2021) showed that economic growth contracted for four consecutive quarters before finally growing positively in the second quarter of 2021 by 7.07 percent. Meanwhile, the unemployment rate in February 2021 was 6.26 percent year-on-year, which was slightly improved from the August 2020 level at 7.07 percent. This situation directly impacts the productive workforce of the millennial generation, which is 25.87 percent of the population.

Indonesia's 2020 internet penetration data shows that there are 202.6 million internet users with 170 million active social media users (WeAreSocial and Hootsuite, 2021). This situation has encouraged and accelerated digital transformation by the younger generation in almost all aspects of human activity, including how people interact, express opinions, and influence each other. In the results of its research findings, Deloitte (2019) discusses that millennials have dominated in the business sector in Indonesia for

the past few years. This illustrates the vital role of young people in the socio-economic dimension of society, including in supporting national economic growth.

The higher rate of internet use does not mean that it would eliminate the public trust gap from the community. The results of a survey from the Edelman Trust Barometer (2021) showed that there is a significant trust gap in the government in the Covid-19 period between people who have been exposed to public policy well and the mass population.

Figure 1. Indonesia Public Trust Gap During Covid-19 Crisis
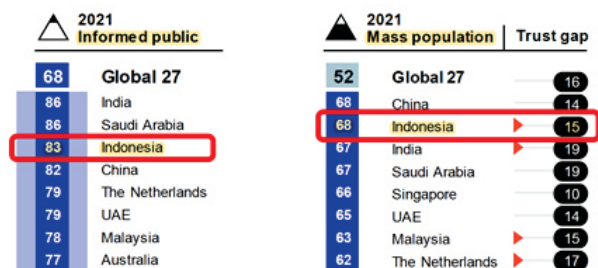
Source: Edelman Trust Barometer, 2021

The trust-index gap indicates that there is a policy communication gap between policymakers in government and society, especially millennials, over messaging strategies about economic recovery policies that affects the lower public trust and confidence level to support the policies, reducing the policy efficacy to recover the economic growth faster.

Furthermore, Indonesia's economic recovery confidence was unstable (see Figure 2), with the optimistic sentiment between 39 percent and 53 percent from March to September 2020 (McKinsey, 2020). On the other hand, Indonesia needs to focus on targeting an economic recovery

outlook in 2022 to regain pre-crisis economic growth. OECD (2020) has projected Indonesia's economic outlook in 2022 at five percent if the economic recovery policy runs successfully. Therefore, one of the main factors that make the program successful is that the confidence level of citizens and market to make the recovery program working quicker and successful.

Figure 2. Indonesia Confindence Level Towards Economic Recovery
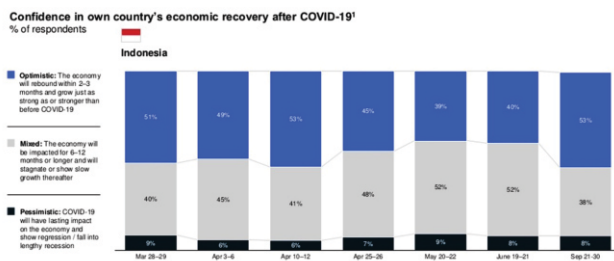
Source: McKinsey & Company, 2020

However, the policy communication gap needs to be addressed, primarily in the current economic crisis, because the wider and more prolonged gap could reduce public trust and reputation. Edelman Trust Barometer (2021) showed that the government's trust index had decreased 5 points to 70 from 2020 to 2021. This decrease has indicated that people trust to government lowered during pandemic.

Widening the communication gap could also make people feeling that their aspirations are not being heard. In the medium to long term, this accumulation of emotion could lead to more chaotic street protests. In 2021, the civil liberties index in Indonesia has indicated a decrease from 31 in 2020 to 29 in 2021 (freedomhouse.org, 2020 and 2021). One of these index components illustrates the lower individual rights that affects to

higher pressures to millennials for expressing their protests.

The more serious consequence is that the policy communication gap could potentially lag and delay the economic recovery process, which is important to bounce back into the normal economy. As one of the biggest economic growth drivers, 2020 Indonesian household consumption has lowered significantly. This decrease was because the consumer confidence index still plunged from about 120 in 2019 to 80 in 2020, indicating lower consumers spending and impacted economic growth (OECD Economic Outlook, 2020).

Figure 3. Indonesia Consumer Confidence Index
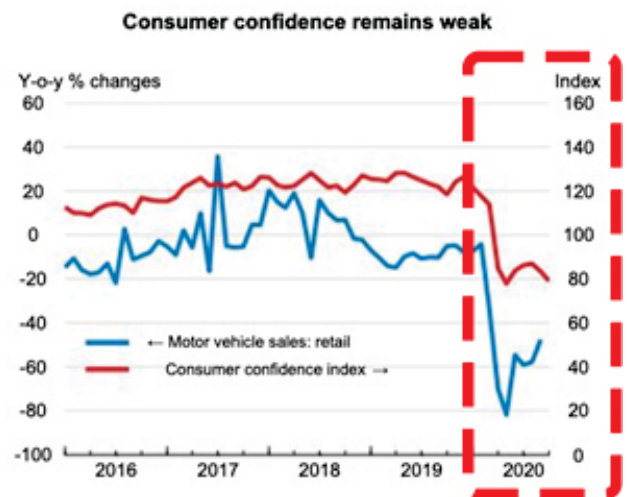
Source: OECD Economic Outlook Report, 2020

In the long term, the policy communication gap could impact into creating unstable macroeconomy, leading to the negative sentiment on stakeholders' confidence. The wider negative sentiments could negatively affect the financial market investors and the foreign direct investment decision-making, impacting to the lower job

creation and increasing on laying-off workers.

Research Objectives

This research is aimed at understanding policy communication gaps in the Covid-19 handling program and national economic recovery (PC-PEN) that will help minimize the risk of misunderstandings and optimize public support through research and filling the trust gap. To identify policy communication gaps and effective policy communication strategies in the digital landscape, the study will be drawn and analyzed using Twitter case studies between economic recovery program communicators (senders) and citizens (recipients). Research is also aimed at understanding the public perspective on economic recovery programs, as well as obtaining feedbacks to improve communication of economic recovery policies. Therefore, to identify and analyze policy communication gaps, this study is aimed at analyzing (a) What are the opinions/perceptions of the Indonesian people towards the economic recovery program from Covid-19 and is there information gap? (b) Who are the key communication actors (individual and organizational accounts) who have a great degree of influence in the communication of economic recovery policies? and (c) How insights from (a) and (b) can improve the decision-making process and the preparation of policy communication strategies that can have an effect to increase public participation and optimism towards PC-PEN policies in the public digital sphere?

The first research question will be explored and answered within text and content analysis, while the second research question will be guided and deduced within social network analysis. The last research question will use the findings to explore the possibility of policy alternatives that will be proposed with the combination of the stakeholders mapping from interview results.

Conceptual framework

Big Data, Communication, and Public Policy

The term of big data is becoming commonplace today, given the modern lifestyle transformation of generation Y, Z, and post-millennials. On the other hand, the demands of the times that lead to all digital has produced data related to human activities in very large quantities. Lewis, Zamith, and Hermida (2013) explain that big data is "an illustration in which the volume of data available from information produced, whether intentionally or unintentionally, is related to human activity and by humans themselves". This is due to the development of devices and the internet that are more flexible and easier to carry everywhere, including the development of tracking devices/sensors that can monitor activity, as well as increasingly affordable computing technology.

In today's digital age, humans communicate and meet their information needs through internet-connected media. It is also what causes humans to, consciously or not, have produced information related to themselves digitally and leave the so-called digital footprints. Related to communication patterns, one of the dominating platforms for use in everyday communication is social media, including Facebook, Twitter, Instagram, Youtube, TikTok, etc. In research

related to the use of this social media, Ferrara and Yang (2015) illustrated that "the emotional value of short pieces of text" snippets, such as tweets, makes it possible to investigate the impact of these emotions and sentiments. It is poured into social media content and disseminated through social media. Therefore, the urgency to monitor and listen to the opinions and perceptions (opinion mining) of the public becomes important for policymakers, especially to formulate better public policies.

On the other hand, the capacity of the human brain to absorb a massive and fast flow of information has a limit. In this case, data analytic and big data offer an alternative to fill this gap. Data analytic is one of the disciplines that allows scientists and practitioners to collaborate in order to solve the problem in massive data. By understanding the relationship between public policy, communication, and big data, policymakers will be able to listen more carefully to what kind of information that public needs and expects. Big data can be the resource for collecting dynamic social values that are constantly evolving in digital interaction. William Dunn (2018, pp. 404) illustrated that a multidisciplinary approach in designing public policy can be done "to create, critically assess, and communicate information that is useful in understanding and improving" the effectiveness of the public policy implementation.

Furthermore, the demand for agile and adaptable government also increases as the young citizens are more well-educated. The modern public communication is not only the one-way or two-ways, but it evolves today becoming multi-ways communication as the rise of social media.

Therefore, it becomes important for the policymakers to accelerate the digital government. The OECD (2020) through its "Digital Government Index: 2019 Results" policy paper explained that "the pandemic has spurred governments to intensify the digitalization of public sectors to support the design of sustainable recovery policies and initiatives – for instance by developing new ways of engaging with communities to better understand and meet their needs". In the rapid changes of informational and technological advancements, it it is important to make a timely and responsive decisions. However, the current unoptimized use of infrastructures in supporting digital public communication makes policymakers difficult to know the constituents demands immediately towards a specific policy. Therefore, it will delay a responsive decision making directly on the digital platform.

In terms of economic recovery program, the unoptimized infrastructures to support "Digital Open Government" could lead to greater pressure from society, especially millennials, to support the program itself. The OECD (2020) reported that the digital transformation of the economy and societies could lead the pathway towards changes in the young generation's mindset and behavior to demand more openness and spaces for themselves to voice their needs. The failure of the government to fill these demands could lead to higher risks in policy implementation failures.

Besides, the intergenerational cultures and perceptions gap between the millennial generation and the previous generations widens the communication gap because the efficacy of messaging becomes less susceptible on different

values. These differences could diminish the value proposition to approach policy dissemination through millennials, reducing public trust from the generation. The dynamics of relative social values could affect public value and public perception towards the policies or programs. The failure to monitor and absorb public values by monitoring public discourses, especially in the digital landscape for millennials, could potentially risk a widening policy communication gap.

Figure 4. The Pathway Towards Improved Citizen Well-being Under Digital Open Government
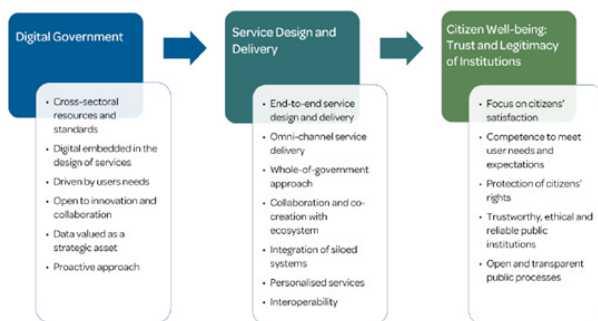
Source: OECD Digital Government Index, 2020

Research Methodology

The research methodology is based on big data analytic by collecting primary data through Twitter data mining techniques, conducting text analysis and social network analysis, and interviews with public relations officials who are subject matter experts in this field as well as decision makers in the field of public communication in PC-PEN policy. With reference to the economic recovery program, Twitter's dataset has been collected from February to March 2021. There are 117,056 tweets that have been selected and grouped into four groups, as shown in Figure 5. The first and second clusters are specifically for monitoring

economic recovery policies, while the third and fourth clusters are intended to monitor key communication actors of policy makers in communicating economic recovery programs. However, in the result findings, we found some interchangebly data among these groups. Text/content analysis will be used to analyze and answer the first research objective question, while the social network analysis will be used to analyze and answer the second research objective question. The insights from findings will be used as the data to exercise policy analysis approach to result recommendation for policy communication strategies.

Text analysis aims to understand the requested information related to economic recovery policies. To find out the effectiveness of message diffusion, text analysis has used topic modeling to build two types of messages generated in the form of corpus (datasets of keywords). Karimi and Futuhi (2020) define topic modeling as "a type of statistical modeling to find abstract topics that occur in a collection of documents". In this corpus, Twitter's dataset has been extracted into its keyword snippets. The first corpus was created based on key messages obtained from Twitter datamining results. The second corpus is built manually based on the keyword in Figure 5. The first corpus represents key messages of PC-PEN policy information that public needs because it is being currently discussed in the digital public discourse space. The second corpus is key message from the economic recovery policy cluster that is expected to be conveyed well to the community by policymakers. By comparing the first and second corpus, the study is able to gain insights into what

is most often discussed in digital public space through keywords on Twitter and how far PC-PEN policymakers, including policy communicators, respond proportionately. The 35-40 most key messages selected from the comparative analysis of the two corpuses can be seen in Appendix A (Figure 1, 3, 5, 7).

Stokman (2001, pp. 10509-10514) defines social network analysis as "the general study of individual behavior at the micro level, relationship patterns (network structures) at the macro level, and the interaction between the two". In this study, the findings in social network analysis will focus on understanding key communications actors associated with PC-PEN policy. Theoretically, a social network is built from nodes that represent people and edge links that

represent connections or relationships between nodes. More detailed communication patterns can be seen from the subcluster graph of each cluster (see Figures 1 - 8 in Appendix B) and by comparing the indegree and outdegree values of those potential communication actors (see Tables 1 - 4 in Appendix B). Indegree values indicate the advantage of popularity of users because they are frequently mentioned or talked by others about specific issues, while outdegree values indicate influential actors or active communicators, as they usually speak more and mention others.

Findings And Analysis

Content and Text Analysis

Gandomi and Haider (2015) explain that to be

Figure 5. Cluster Dataset Twitter

Cluster	Keywords (Bahasa)	Keywords (English)	Number of Selected Tweets
1	Program Pemulihan Ekonomi; PEN	Economic Recovery Program; ERP	7,852
2	UMKM; Subsidi; Insentif Pajak; Belanja Negara; Penyertaan Modal Negara; #belanjauangkita; #uangkita; bansos; Bantuan Sosial; policy; kebijakan; komunikasi kebijakan; Normal Baru; New Normal; pasca Covid; Covid-19; Anggaran Penanganan; PSBB; Pembatasan Sosial Berskala Besar; Perekonomian; BUMN; Stimulus; Bantuan Langsung Tunai; BLT; Omnibus Law; UU Cipta Kerja; Anggaran Vaksin; Vaksin; APBN; Dana Transfer; Dana Desa	Small and Medium Enterprises; Subsidy; Tax Incentives; State Expenditures; State Equity Participation; #SpendingOurMoney; #OurMoney; Social Aid; policy; policy communication; New Normal; post-covid; Covid-19; Recovery Budget; Wide Scale Social Distancing; Economy; BUMN; Stimulus; Unconditional Cash Transfer; Omnibus Law; Job Creation Law; Vaccine Budget; Vaccine; State Budget; Transfer Fund Village Fund	3,646
3	@KemenkeuRI; @jokowi; @PerekonomianRI; @KemenBUMN; @KemenkopUKM; @bank_indonesia; @ojkindonesia; @lps_idic; @kemendespdtt; @kemenkesri	@KemenkeuRI (Ministry of Finance); @jokowi (President of RI); @PerekonomianRI (Coordinating Ministry of Economic Affair); @KemenBUMN (Ministry of State-Owned Enterprises); @KemenkopUKM (Ministry of Cooperation and Small and Medium Enterprises); @bank_indonesia (Central Bank); @ojkindonesia (Financial Regulatory Authority); @lps_idic (Indonesia Deposit Insurance Corporation); @kemendespdtt (Ministry of Village, Development of Disadvantaged Regions and Transmigration); @kemenkesri (Health Ministry)	100,000
4	Kementerian Keuangan; Kemenkeu; Bank Indonesia; Joko Widodo; Jokowi; Sri Mulyani	Ministry of Finance; Central Bank; Joko Widodo	5,558
	Total Data		117,056

Source: Derived from Fiscal Policy Agency Media Briefing of

Economic Recovery Program, 2020

able to optimize the potential of big data in decisionmaking process, big data needs to be extracted into meaningful information. After extracting the key message into the corpus, a deeper content analysis is performed. Insights from the results of the analysis of the content and text are summed up as follows. Firstly, all key message clusters have shown that general policies (see Table 1 - 4 in Appendix A), such as national economic recovery programs, vaccination programs, handling the Covid-19 pandemic, social aid, large-scale social restrictions, small and medium enterprise assistance, labor-intensive policies, unconditional cash transfers, internet data quota subsidies, village funds, the participation of state capital, and tax incentives, have been conveyed in Twitter's digital public space. However, some of the other key messages delivered by policymakers that have low wordclouds level could be further disseminated to improve the effectiveness of policy delivery, such as stimulus, state revenue and spending budgets (APBN), economic recovery allocations, vaccine budgets, and other strategic fiscal information.

These findings also answer the first research objective question that there is a gap between key messages that were already discussed in digital public space as representing public perceptions (indicated as Auto Generated Corpus in Appendix A Figure 1-8) and key messages of policymakers (indicated as Expected Corpus in Appendix A Figure 1, 3, 5, 7) about economic recovery program information. In addition, it has been found that campaign taglines #UangKita need to be improved to support communication strategies being consistent with previous campaigns of economic policies.

Secondly, the reflected topic of all clusters has shown that there are good collaborations in promoting economic recovery policies between (a) the Ministry of Finance and the Ministry of Tourism and Creative Economy on the promotion of local tourism that supports the recovery of the local economy, (b) the Ministry of Finance and the Ministry of Villages, Development, and Disadvantaged Areas in promoting village funds to wincing. an economy in the village, and (c) the Ministry of Finance and Ministry of Education to encourage subsidies of internet data quotas in support of online education.

Lastly, the highest number of key messages is about 4-6 percent of the total word clouds dataset (see Figures 2, 4, 6, and 8 in Appendix A). While there is no standard for thresholds, the growing number of primary message diffusions can indicate a higher level of awareness and an increasingly better level of understanding in PC-PEN policies.

Social Network Analysis

The results showed that some influential actors had been active in communicating (high outdegree) and had also become important influential key actors (high indegree). The important key communicator is determined by = 0.05, which is the threshold between the outdegree and indegree values for each node. The value for each node is calculated by dividing the lower indegree/outdegree level by the total indegree/outdegree number to indicate that the node has a minimum power of influence. Positive

indicates that there is the potential to receive 5 percent more feedback when communicating with the receiving node, while negative indicates that there is potential to respond 5 percent more to the sending node. The value of alpha () determines the potential effectiveness of two-way communication between the sending node and the receiving node. The alpha value of 5 percent is obtained from the approach of the smallest reciprocity index.

The results show that potential key actors in PC-PEN communications are dominated by public institutions and ministries (see Table 5 in Appendix B). Furthermore, the findings also show there is a small percentage (below the threshold) of some key actors who are expected to be key communicators of stakeholders, such as the Ministry of Communication and Informatics, the Indonesian Chamber of Commerce and Industry (KADIN) as part of the Economic Recovery Task Force, and a member of the Financial System Stability Committee, including Bank Indonesia (BI), the Financial Services Authority (OJK), and the Deposit Guarantee Agency (LPS). In addition, there are small contributions from the role of the media (Tempo and BUMN Newspapers) and some journalists (@budisetyarso). The social network graph in Appendix B also finds paid buzzers or influencers, who had been excluded from the study. Finally, there are also some discourse contributions from the academic community on some issues that are not closely related to PC-PEN policy and are excluded in the study.

Interview Results and Key Stakeholder Mapping

The key players of the stakeholders have been determined in communicating the substance of key messages and managing responsibilities in public communication regarding economic recovery policies. Based on Presidential Regulation Number 108 Year 2020 about The Changes to Presidential Regulation Number 82 Year 2020 about The Committee on Handling Corona Virus Disease 2019 (Covid-19) and National Economic Recovery, the Special Task Force for Economic Recovery consists of the Deputy Minister of State-Owned Enterprises as The Chairman of the Task Force, and the Deputy Minister of Finance and the Head of the Chamber of Commerce and Industry as the Vice Chairman Task Force. In addition, there is a Financial System Stability Committee that has responsibility in managing Indonesia's economy in terms of fiscal, monetary, and financial sectors, consisting of the Ministry of Finance as coordinator, and the Central Bank of Indonesia, the Financial Services Authority, and the Deposit Guarantee Agency as members. Regarding economic recovery policy and interview result, key communication players (see quadrant 1 in Figure 6) should be led by the Ministry of Communications and Informatics, while the Special Task Force should be able to be a source of substance from the key message of communication of economic recovery policy by collaborating with members of the Financial System Stability Committee. The Minister of Finance has also been appointed as Vice Chairman of the National Committee for Covid-19 Response and National Economic Recovery. Meanwhile, media, economic journalists, and academics have a high exposure to public communication, so these

groups need to be involved in promoting economic recovery programs as well.

Some stakeholders need to remain active to coordinate with key decision makers as seen in quadrant 2 in Figure 6, particularly to President Joko Widodo. In Presidential Regulation Number 108 of 2020, other agencies also need to be coordinated to conduct integrated collaboration and coordination, among others with the Coordinating Ministry for Economic Affairs, Coordinating Ministry for Maritime Affairs and Investment, Coordinating Ministry for Political, Legal, and Security Affairs, Coordinating Ministry for Human Development and Culture, Ministry of Home Affairs, and Ministry of Health. In addition, other stakeholders who need further coordination are Commission XI in the House of Representatives, the Corruption Eradication Commission, and social media companies that can support social media campaigns and manage the tools to remove existing misinformation.

In the third quadrant (see Figure 6), some stakeholders need to remain provided with information relevant to their needs, such as citizens as representatives of the public in the digital landscape, the Indonesia Stock Exchange as a stock market facilitator, the Employers Association in Indonesia (APINDO), the IMF, the World Bank, the OECD, Local Governments as responsible authorities at the local level, and Indonesia Corruption Watch. The final quadrant in Figure 6 is for stakeholders who need to be monitored according to national interest, including the public community. TNI and Polri have a mandate in supporting the implementation of the strategy of the Covid-19 Task Force Committee

and National Economic Recovery. The highest group getting impact of the economic crisis caused by Covid-19 is working millennials since most of them have been laid off and need to shift onto the informal employment sector.

Recommendation for Policy Communication Strategies

To address the communication gap comprehensively, alternative policy communication strategies are formulated based on the findings of content/text analysis and social networks. The findings data become the driver of exercising recommendation for policy communication strategies. The findings of the social network analysis showed that some of the key players expected to actively influence public discourse related to PC-PEN policies. Based on the results of interviews and stakeholder mapping in PC-PEN policy (see Figure 6), there are findings that indicate the Ministry of Communication and Informatics should take an important role in leading the national campaign communication strategy of PC-PEN, but this does not show significantly in social network analysis. Social network analysis indicates the role of media, journalists, and supporters in diversifying a niche of followers based on their interests. This situation can help disseminate PC-PEN policies to working millennials who are not interested in following ministries/public institutions and public officials.

Therefore, in the short term, it is recommended to increase collaboration and synergy together with other ministries/public institutions, including leading figures, as well as

Figure 6. Stakeholder Matrix
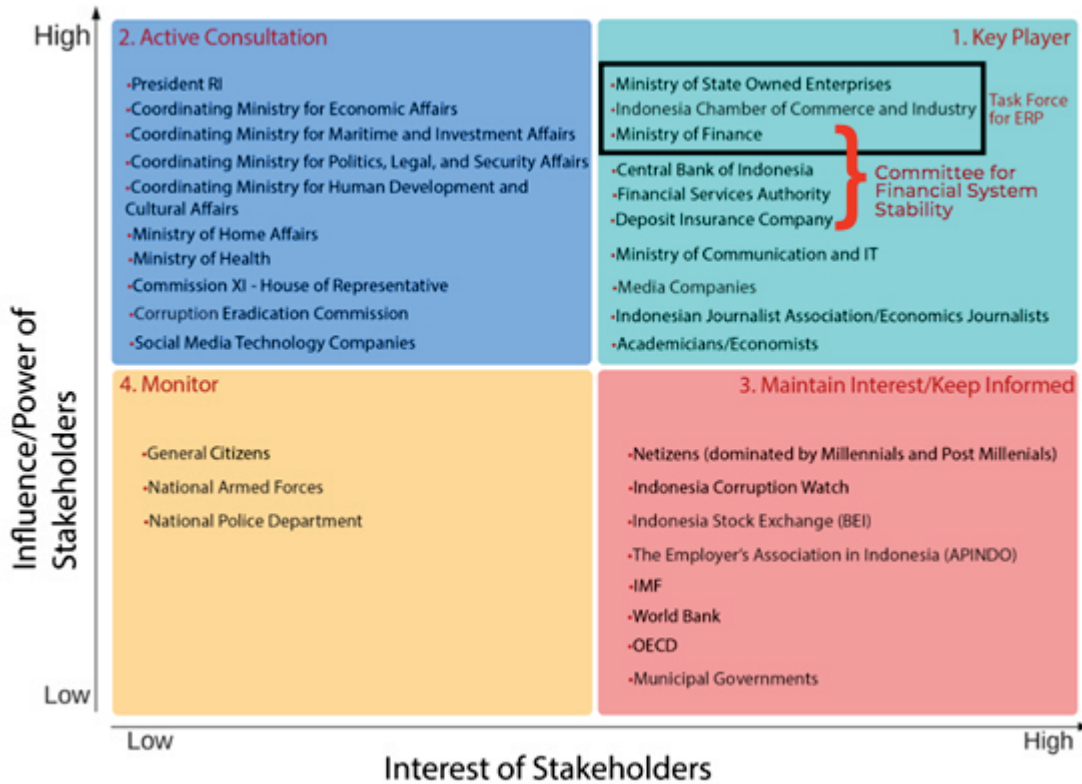
Sources: analyzed from media and interviews

media/journalists to get the highest exposure in disseminating PC-PEN policies, such as conducting joint seminars/webinars with KSSK members about financial literacy, and then connecting the topic with PC-PEN. It will be beneficial if the prominent representatives or public figures in Task Force for Economic Recovery Program and Committee for Financial System Stability can conduct roadshows or live educative dialogue/seminar to disseminate the policies. The leaders can create and use their social media accounts to share information and interact with one another, while official institutional accounts can amplify the virality of the messages, getting more exposure in the digital landscape. However, there are some risks that millennials who are opposed or not interested in the heavy topics to join the discourse. This challenge can be tackled by inviting more media and influencers to join the main events of PC-PEN seminars.

The implementation of this recommendation will be feasible to initiate, but there will be challenges in siloes and bureaucratic barriers to maintain public institutional interests. There are also overlapping jurisdictions among key players and stakeholders. Therefore, it is needed a firm commitment from high-stakes decision makers to implement the proposed recommendation. If high-level coordination has been settled, the proposed recommendation can be enabled in the short initial time to make the recovery program meet the projected objectives.

Meanwhile, information that contains key messages, that are widely sought after by netizens but are not yet available in key messages from policy makers, can be included as substances for policy communicators to improve new relevant narratives of policy communication strategies. Conversely, key messages from policy makers, but not widely discussed in public discourse, can be used as input for policy communicators to increase the frequency of message delivery through content and dissemination channels.

In the medium term, it is recommended to facilitate the establishment of physical and online communities related to the state budget and economic policy in general. This is aimed to be able to reach out young people who are interested in the topic early on, or who have not been interested, to be able to build their awareness and understanding of the importance of community participation to achieve vision of Indonesia – more prosperous and equitable nation. In addition, community development can build bridges and strengthen the relationship between policy makers and the community, especially the younger generation. In the medium-long term scheme, policy makers can also work with established communities in order to increase exposure to policy dissemination and increase support for Indonesia's economic recovery program. This community development and facilitation can create a better situation of mutual understanding between communities and policymakers that leads to more inclusive policy communication in the future, as well as increasing public trust derived from grassroots. Civil society that is more aware and understanding about the

policy-making process can help in the diffusion of policies in the future, even they can be expected to be able to be the part of policy advocates. In the long run, this positive narrative will help manage the level of trust of markets, domestic institutions, overseas stakeholders, and general citizens, especially working millennials, as the most affected generation group.

In the long term, it is recommended to improve human resource capabilities in policy-making agencies. Public servants in the digital age must be able to understand the public information sought by the public. The ability to monitor, evaluate, and improve digital inclusivity in policy making will depend on the ability to perform data analysis and infer data into useful information. The analysis of text and content shows that the ability to monitor citizen conversations can provide meaningful feedbacks to improve content message strategies for future policies. Since this recommendation is to improve human resources, this recommendation will impact as a long-term investment in human asset. Moreover, data analytic skills can also be used in the future campaigns to improve general policy communication.

On the other hand, modern and collaborative data-driven infrastructure to monitor, evaluate, and improve digital participatory communication is required in the digital landscape. The OECD (2020) illustrates that the mature digital governments need six digital-based government policy frameworks consisting of digital by design, data-driven, government as platform, open by default, user-driven, and proactive. This integrated data-driven infrastructure can be built

by collaborating with experts in their fields to support the open government ecosystem in order to achieve six OECD frameworks.

OECD described the data-driven framework as "when values data as a strategic asset and establishes the governance, access, sharing and re-use mechanisms for improved decision-making and service delivery", while the user-driven framework is "when accords a central role to people's needs and convenience in the shaping of processes, services and policies; and by adopting inclusive mechanisms that enable this to happen". These frameworks can be connected within government as platform framework, which is defined as "to provide clear and transparent guidelines, tools, data and software that equip teams to deliver user-driven, consistent, seamless, integrated proactive and cross-sectoral service delivery" (OECD, 2020). The proposed integrated platform can use the research methodology in this paper as the baseline framework to monitor the demanded information or feedbacks on the digital landscape, analyze the findings, and prepare the policy responses. Furthermore, the platform can also drive policy communications that are not only data-driven, but also user-driven. However, this policy implementation might face many challenges because of collaborative requirements across disciplines/fields, including multi-decision makers across departments and the long-term project building schema's challenges.

Figure 7. OECD Six Digital Government Policy Framework
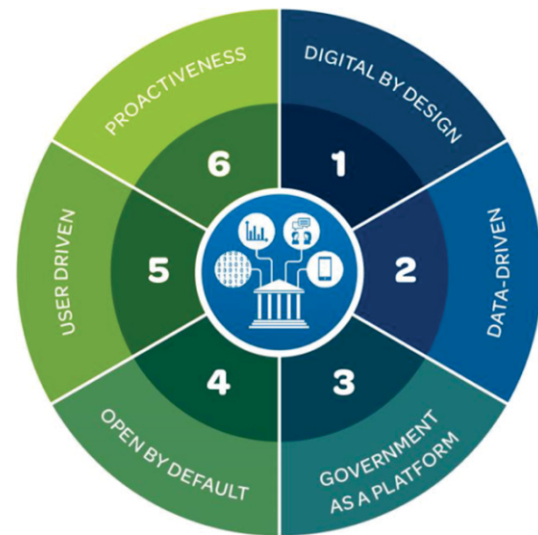
Source: OECD, 2020

Conclusion And Discussion

The Covid-19 pandemic is continuing to mutate until today. Thus, the Covid-19 policy and the economic recovery plan need to continue to adapt in responding the dynamic of pandemic developments. In this context, the public communication of policy makers and the citizens need to be responsive and adaptive as well. Twitter data can provide insights and illustrations to understand public values or the perception of today's growing citizens to economic recovery policies. Outside of Twitter, digital media has a wide scope, such as Facebook, Instagram, and YouTube. This data-driven policy communication approach can be used as a framework with the necessary adjustments to conduct the same research in other social media platforms.

The data resulted from preprocessing and processing stages need to be analyzed further to

result information. The information can be usefull and meaningful if it is interpreted and analyzed together with the subject matter experts (SMEs). Therefore, the collaboration and teamwork are important to conduct big data analytic. This study used big data analytic technique to extract and analyze the data and used SMEs' interviews to infer the recommendation for policy communication, especially in PC-PEN policy. The findings of this study provide knowledges and insights that refer to recommendations for PC-PEN policy communication strategies in the short, medium, and long term. In the immediate period, it is recommended to increase collaboration and synergy among ministries/public institutions, including national prominent figures, as well as media/journalists to get the highest exposure in disseminating PC-PEN policies, while in the intermediate period, it is recommended to involve and/or establish the physical and online communities related to the state budget and economic policy in general. In the long run, it is recommended to improve human resource capabilities and digital infrastructure to adopt digital government to go after with the rapid advancement in communication technology. The policymakers or policy communicators can use these recommendations to improve their public communication to increase efficacy of policy implementation.

Furthermore, Indonesia has been dominated by young generation, and this generation is eager to communicate and interact one another in digital public sphere, leaving their digital footprints as the public data. Today, data have become an important and invaluable asset.

However, the use of public data requires ethical code and social norms that mandate transparency and accountability to protect the privacy of public users. The regulation of the use of technology and big data analytic needs to be improved as the part of the effort to support the achievement of digital governance in the future as proposed by the OECD (2020). Therefore, a multidisciplinary approach must be taken to overcome the various challenges that exist in the public policy communication, or in other fields to provide an alternative solution that is more comprehensive to support the economic recovery progress and further development in Indonesia.

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