International cooperation during COVID-19: Case study vaccine cooperation and its impact in Indonesia

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Abstract
This policy review analyzes the international cooperation experienced in Indonesia during the COVID-19 pandemic, specifically concerning vaccine cooperation. It examines the policy debates of vaccine cooperation within Indonesia from the government, parliament, religious organizations, civil society, and mass media. Although some feel pessimistic about vaccine cooperation, the results found that vaccine cooperation has a positive impact on Indonesia. This is because gradually after the highest COVID-19 cases in July 2021, the government continued to increase the vaccination rate and by the end of September 2021, Indonesia finally reached the lowest case numbers. Therefore, the vaccine cooperation between Indonesia and other countries proved to be effective in reducing the COVID-19 cases in Indonesia. International cooperation is necessary in times of crisis.

Keywords
COVID-19, Indonesia, international cooperation, policy debates, vaccine cooperation
INTRODUCTION

The COVID-19 pandemic changed everything, starting from people mobility with many countries applying lockdowns, global economic downturn because of the disturbance of the trade flows, and so on. In April 2021, COVID-19 worldwide was reported to have reached 5.7 million new cases, with over 87,000 new deaths reported (World Health Organization, 2021a, 2021b, 2021c). The spread of COVID-19 and the impact of the pandemic have been affecting many sectors, unexceptional for Indonesia. According to Yulisman (2020), the first case of COVID-19 in Indonesia was first confirmed by the Indonesian government on March 2, 2020. The patients had reportedly been in contact with a Japanese citizen who tested positive for COVID-19 in Malaysia after visiting Indonesia (Yulisman, 2020). This case later became a turning point for the spread of COVID-19 cases in Indonesia. In June 2020, Indonesia became one of the countries in Southeast Asia with the most COVID-19 cases, with 56,385 cases out of a total of 150,571 cases in the region (Hospita, 2020).

After the confirmation of the first case of COVID-19 in Indonesia, the government began to create policies and regulations as ways to tackle the problems caused by the development of COVID-19 cases. There are plenty of policies and regulations that were created by the Indonesian government related to COVID-19 responses. For example, it issued a policy for medical examinations at 135 cross-border posts such as airports and ports as a way to prevent more COVID-19 cases from crossing the Indonesian border (Ministry of Foreign Affairs of the Republic of Indonesia, 2020a, 2020b). The government also issued a policy to protect Indonesian citizens, especially those who live in Wuhan, China, by giving 133 million Rupiahs as government aid and N-95 masks distributed by the Indonesian Embassy and the Indonesian Ministry of Foreign Affairs in Beijing (Ministry of Foreign Affairs of the Republic of Indonesia, 2020a, 2020b). This was also followed by the regulation to delay the flights from and to China, and also stop the import of animals from China, starting from February 2020 (Ministry of Foreign Affairs of the Republic of Indonesia, 2020a, 2020b). Following the international standard regulations, the Indonesian government also began to implement more regulations regarding health protocols, adopted from the guidelines from the World Health Organization (WHO) as an international organization focusing on health issues (Gityarko, 2020). This policy regarding health protocols also includes the implementation of Large-scale Social Restrictions or Pembatasan Sosial Berskala Besar (PSBB), which created a situation where some activities like school and work needed to be done from home (Ministry of Foreign Affairs of the Republic of Indonesia, 2020a, 2020b).

The ever-growing COVID-19 cases in Indonesia are still apparent to date. It has been reported that there have been a total of 100,474 confirmed active cases of COVID-19 cases in Indonesia as of 25 April 2021, of which 4,402 cases are new, with a total of 44,594 deaths caused by COVID-19 (Committee for Handling Covid-19 and National Economic Recovery, 2021). This shows that even with the response that has been given by the Indonesian government with the creation of regulations and policies, those are still insufficient to tackle the effect of the COVID-19 pandemic. One of the reasons is the shortage of medical supplies. As a way to create more effective responses to the development of COVID-19 cases, the Indonesian government does not only create regulations and policies that only center around domestic applications, but also policies that involve external parties, which in this case are international communities. The Foreign Minister of Indonesia, Retno LP Marsudi, on the fifth International Cooperation Group (ICG) teleconference on April 2020 said that it is important to conduct international cooperation especially during the COVID-19 pandemic, particularly in addressing medical supplies shortage in the global community (Pinandita, 2020).
During the pandemic, international cooperation has been one of the strategies that many international actors relied on as an answer to create effective regulations and policies on combating the effects of the COVID-19 pandemic. This is because, through international cooperation, the act of burden-sharing can be done, especially regarding the problem with medical supplies (Brown & Susskind, 2020). On their official website, World Health Organization states that international cooperation, especially in this case cooperation between countries, is something that matters since it can be a way that is effective for strengthening, accelerating, and sharing the health development within countries and regions. This is because, by involving themselves in cooperation, countries can have more connections with other countries which have different experiences, resources, and capabilities which they probably do not have. This can help countries create mutual benefit, as they help each other with what they are lacking.

The importance of cooperation, especially in the area of health during the COVID-19 pandemic can also be applied to Indonesia. As a country that has been affected by the COVID-19 pandemic, Indonesia needs huge medical and health capabilities, both in terms of experience, information, and resource. Indonesia has been creating many regulations regarding the response to COVID-19 cases, such as a health protocol, and regulations about vaccination. Yet these regulations cannot be done without international cooperation. The phenomena could be unraveled by two perspectives, namely domestic and international triggers. In coping with the domestic challenges, Indonesia is still a developing country in which its ability to produce a reliable vaccine for COVID-19 is less progressive. Sophisticated technology is the major obstacle in maximizing the research. Another challenge during the pandemic covers the social and economical issues that have risen multiple living problems, such as purchasing incapacitation, debt, and less cooperation. Such domino problems almost hamper all societal layers in which a public consensus of demands of immediate solvency is required. However, the government, even the nongovernment organizations, is limited to generating a fast-response need conveyed by the majority. This is because the government experiences a dilemma of prioritizing problem-solving toward a particular issue or sector, for instance, whether the government should continue in researching the vaccines or letting the societies suffer from multilayers of problems. This incapacitation and having less probable options became the reason why International cooperation on COVID-19 vaccines is necessary. In short, the government could handle other important sectors besides researching and inventing reliable vaccines. Second, the international spectators have been confronted with a hand-in-hand mechanism in alleviating the current vaccine problems. This could be another trigger for Indonesia to accept international cooperation on vaccines. Indonesia could certainly build strong diplomacy in terms of international vaccine distribution.

Therefore, the purpose of this review article is to explain how international cooperation in tackling COVID-19 happened in Indonesia, how Indonesia finally capable to obtain millions of doses of vaccines, and the debate along with those issues among Indonesia's stakeholders. It also proves the efficacy of the vaccination program that is capable of lowering death and BOR (BORs) in Indonesia. The article has five sections. The first section explains the forms of vaccine cooperation during the COVID-19 pandemic. In this section, the authors explore how other states conduct international cooperation, especially in relation to vaccine cooperation. Second, it provides a general overview of international cooperation held by Indonesia. The third section is a discussion of the policy debates regarding vaccine cooperation within Indonesia. These debates are focused on the points of view of the government, parliament, religious organizations, civil society, and the media. The fourth is about Indonesia's vaccine cooperation during this pandemic. The last section analyzes the impact of vaccine cooperation within Indonesia more broadly.
JUSTIFICATION OF INTERNATIONAL VACCINE COOPERATION

Sovereignty is the most considered aspect for countries to step into others. It mostly deals with any form of intervention, a classical term to refer to permeating self to other countries’ territory regardless of the objectives (e.g., economy or politics). Importantly, many interventions are undertaken to initiate further actions for other plans so that their sounds will be likely good, helpful, and meaningful for the target country. In this era, military interventions are likely to be less significant since it is acknowledged that diplomacy is a better alternative. Hence, interventions, which used to be meant negatively, are being shifted by the politicians as a vehicle of humanitarian intervention. There have been so many cases portraying the ideas of interventions that ended as a form of stepping into other countries’ sovereignty. For instance, superpowers might use such rationales to target a country and look for its weaknesses that mostly influence its people’s welfare. When both parties engage in a deal to give and accept aid, there implies a closer relationship of trust that might ease further plans or cooperation. This situation will push superpowers to explore more important resources for them from the target country, including but not limited to natural resources, human resources, and political stance for stronger international foreign affairs. This idea has been the key concept of any form of intervention.

In coping with the status quo, the COVID-19 pandemic can be a phenomenon that bridges a country to do humanitarian intervention, namely by giving vaccines for those sufferers and disadvantages. First, it is important to talk from the perspective of big powers because they are the ones that possibly do the vaccine research and initiation faster. Since the beginning of the COVID-19 pandemic, superpowers like the United States (US) tried so hard to initiate reliable vaccines and produce them in a massive amount so that they can supply lots of those in need. This situation can benefit them in three ways. By inventing vaccines for all, they can eliminate the previous bad image related to Muslim discrimination and immigrant defacements. When they can have vaccine cooperation with other countries, they open opportunities to resolve problems and rebuild their image. Another benefit is the fact that inventing vaccines and conducting international cooperation can also be viewed positively by other countries. Lastly, other countries might also ask for their assistance. Indeed, these three advantages make it a viable investment for superpowers. It is also important to talk from the perspective of nonsuperpower countries that have less attraction to be the targeted aids. Not all countries might attract and benefit the superpowers. This might be caused by fewer resources that can be exploited and be the pound of investment for the superpowers. Moreover, it can be instigated by the fact that the prospective target country does not have a strong political position contributing to the international agenda. Both possible causes might make the disadvantaged countries difficult to get reliable vaccines.

Unfortunately, not all prospective countries accept the vaccines from the activities of humanitarian intervention in a form of vaccine diplomacy. The vaccine diplomacy that Indonesia, for example, implemented as an attempt to provide its citizens with an adequate amount of COVID-19 vaccines with different varieties and types took a different approach that required Indonesia to be neutral and not aligned with any superpowers. As explained by Indonesia’s Minister of Health, Budi Gunadi Sadikin, (2021: 7) the approach that Indonesia took in terms of getting vaccine supply was considered risk-free and nonbloc as the government approached the country with big vaccine producers such as the United States and China. Similarly, Byrne (2021) argued that ASEAN’s approach as a regional institution in regard to
securing vaccine supplies for their countries is very much in line with the “ASEAN way” where the institution takes a neutral stance and follows an independent and proactive approach. Therefore, the success of international vaccine cooperation is determined by the political stance of both the target and contributor countries.

**VACCINE COOPERATION AGAINST COVID-19 AROUND THE WORLD**

There are many examples of COVID-19 vaccine cooperation around the world. India has been involved in several forms of cooperation, such as through the Quad (Quadrilateral Security Dialogue) cooperation with Australia, India, Japan, and the US. India became a vaccine producer that focused its assistance on countries in the Indo-Pacific (White House, 2021). The Philippines has carried out cooperation and received several aids, such as assistance from the US through USAID, the Department of Defense, and the Department of State with a total of more than 1 billion Pesos (22.6 million US Dollars) intended for response to COVID-19 in the Philippines. In addition, there was also some assistance from the United Nations and several NGO partners, both local and international, who aided the Philippines with as much as 6 billion Pesos. In addition, China also provided vaccine assistance of 500,000 doses of COVID-19 vaccine, and infrastructure development assistance of 500 million Yuan (Yap & Calonzo, 2021). The Philippines also received assistance from Japan in the amount of 6.4 million doses of vaccine (CNN Philippines, 2021).

In terms of vaccines, Colombia’s cooperation with China resulted in 76.6% of all vaccines received by Colombia came from the Chinese vaccine company, Sinovac (Castrillon, 2021). Apart from China, Colombia also received 912,000 doses of the COVAX vaccine in April 2021 (United Nations Children’s Fund, 2021a, 2021b, 2021c, 2021d). Peru is also cooperating with China on vaccine procurement, with the delivery of 300,000 doses of the Sinovac vaccine to Peru in February 2021 (ANDINA, 2021). Apart from China, Peru also received 117,000 doses of vaccine from the COVAX mechanism, and other assistance in the form of an ultra-cold freezer with a capacity of 200,000 doses from WHO, 1100 solar freezers from UNICEF, and 10,000 additional cold chain units from UNICEF (United Nations Children’s Fund, 2021a, 2021b, 2021c, 2021d).

Chile is also one of the countries that received vaccine supplies from the COVAX mechanism, where Chile received 818,400 doses of AstraZeneca vaccine out of a total target of 7 million vaccine doses that will periodically arrive in the country throughout 2021 (United Nations Children’s Fund, 2021a, 2021b, 2021c, 2021d). Although initially, Chile became one of the countries that were called successful in the availability of vaccines, they had a drastic increase in COVID-19 cases. The importance of international cooperation during pandemic COVID-19 is critical to help states in dealing with COVID-19, it is shown by the fact that many countries, such as India, the Philippines, Colombia, and Chile conducted international cooperation to obtain COVID-19 vaccines. The next section explains the impact of vaccine cooperation in other countries such as the UK, Canada, Italy, and Singapore.

Looking at the case studies about the benefits that can come from COVID-19 vaccination, Wise (2021) explained how in the United Kingdom, people, especially, those in the elderly age group who are vaccinated, even only with the first dose, can decrease the infection number and mortality rate which are caused by the COVID-19 virus due to the immunity that comes 3 weeks after the vaccination. According to the data from Public Health England (PHE), the
vaccine can help reduce the number of patients in hospitals who come from the elderly group (Wise, 2021). In Canada, according to Rocha and Pelley (2021), the mortality rate is declining after the enforcement of the vaccination program, especially in the elderly group.

This also happened in Tennessee in the US. Even if there is a general decrease in the number of patients in the hospital and the mortality rate caused by COVID-19, the elderly group shows a big number of decreasing hospitalization and mortality rate, with a 95% reduced mortality rate from December 2020 to March 2021, and decreased hospitalization rate about 80% for the group age of 80 and above (Roghani, 2021). In Italy, the vaccination program has also become one of the keys to reducing the number of COVID-19 cases and the mortality rate. According to the report from the Italian Health Institute (IIS), 35 days after the vaccination program began, the number of COVID-19 infections was reduced by 85%, the hospitalization rate by 90%, and the mortality rate by 95% even just only after the first dose of vaccination.

The vaccine does not only help people by protecting them from the risks of COVID-19 infection, but it also can help affect the quality of the health system in a country. Wise (2021) explained how in the UK, the vaccination program can help reduce the number of hospital admissions caused by COVID-19, especially among elderly people. This also happened in India in April 2021, because of the increasing number of COVID-19 cases during that month (Pandey et al., 2021). This crisis or shortage will not happen if there is a balance between the supply of medical personnel and supplies with the number of patients who require those facilities.

In Singapore, with the high number of vaccinated citizens, which is about 75%, the appearance of cases, whether with no threatening symptoms or more severe cases that need admission has decreased, which caused a reduction of oxygen need and intensive care for people who are infected by COVID-19 (Tan et al., 2021). Pelley (2021) explains how COVID-19 cases in Canada that can happen even after vaccination are not heavily threatening cases, which means there are no serious threats to the health system.

While talking about the effectiveness of vaccination which has been done to prevent the spread of the COVID-19 virus, Pelley (2021) mentioned how according to many experts, there are no vaccines that can fully make someone immune to viruses. Evans and Jewell (2021), while referring to the result of a study from PHE, mentioned how after the development of the COVID-19 virus from variant Alpha to Delta, the vaccine's effectiveness has been declining about 12%–19% in the first dose of vaccine if it is being faced with the COVID-19 Delta variant, and about 6% until 8% in the second dose of vaccine if it is being faced with the COVID-19 Delta variant. Even so, this does not mean that the vaccine does not have any effect in reducing the spread of COVID-19. The effectiveness of the vaccine, especially BNT162b2 (Pfizer-BioNTech) after two doses, still is about 94% toward the Alpha variant and 88% toward the Delta variant (Evans & Jewell, 2021). According to the studies based on the result of PCR tests, people who have completed COVID-19 vaccination have a smaller chance to spread the virus compared with people who have not been vaccinated (Alford, 2021). This is because people who have been vaccinated have smaller amounts of the virus, which makes them less prone to spreading COVID-19 disease.

Apart from having smaller chances of spreading COVID-19, people who have been fully vaccinated also have smaller chances of getting infected with COVID-19, three times smaller compared to people who have not been vaccinated (Alford, 2021). The advanced study also mentioned how people who have been fully vaccinated have a chance to decrease the risk of infection by about 50%–60%, which also includes asymptomatic risks (Alford, 2021). This means people who have been vaccinated, especially those who have been fully vaccinated, can
have more immunity when being faced with COVID-19 with the chance of getting infected as low as 3.48%, even when they have interacted with infected people. This is much better, especially when compared with people who have not been vaccinated, with the chance of getting infected as big as 7.23% (Alford, 2021). Thus, it can be concluded that the effectiveness of the vaccine is not being measured by how the vaccine can fully make people not infected, but how it can reduce the risk of getting infected, and the risk caused by COVID-19.

Vaccination can also reduce the mortality rate and the hospital admission rate. Moghades et al. (2021) in their study which uses hospitals in the United States as their sample, mentioned that without the vaccination, the mortality rate was projected as much as 2, 3 deaths per 10,000 population on the 300th day from the first testing day. If a vaccination program exists, there will be a reduction in mortality rate and hospital admission rate, with the reduction of about 63.5% for nonintensive hospital care, 65.6% for intensive hospital care, and 69.3% for mortality rate after 300 days from the first vaccination day (Moghades et al., 2021). This showed that there is a significant effect of the vaccination program on reducing the growing case of COVID-19, as the vaccination program can reduce the number of hospital admissions with the projection number of more than 60%, especially ones with severe infections can even cause death.

There are many international collaborations carried out by Indonesia. Some of those are the cooperation between the US and Indonesia. The US is one of the countries that offered a lot of assistance and cooperation with Indonesia. In March 2020, the US government-assisted 37.6 billion rupiahs to Indonesia as a way to cope and deal with COVID-19, which is aimed at improving laboratory systems, case finding and surveillance capabilities, and supporting response and preparedness capacities (CNN Indonesia, 2020a, 2020b). Other forms of cooperation also come from Australia, which has made many efforts to cooperate with Indonesia, such as by providing support worth of Rp. 61 billion to the Indonesian government through WHO, which is aimed at increasing the capacity and capability of laboratories in Indonesia, increasing the ability to obtain and utilize health data related to the Covid-19 pandemic, as well as improving the quality of health care protection in health facilities in Indonesia (World Health Organization, 2020). Assistance is also provided by Australia in the form of medical equipment such as ventilators as well as other medical and laboratory equipment (Committee for Handling Covid-19 and National Economic Recovery, 2020).

East Asian countries, such as China, Japan, and South Korea also do a lot of cooperation with Indonesia, either bilaterally or through forums such as ASEAN + 3. China provides several forms of cooperation, such as aid in the form of 100,000 PCR test machines, 70,000 personal protective equipment, 70,000 N95 masks, and 1.3 million surgery masks, which is aimed at the effort to increase the availability of medical supplies to increase the readiness of the Indonesian Government to handle COVID-19 (Hermawan, 2020). Cooperation is also carried out in the form of conferences and discussions, such as in the COVID-19 mitigation conference held by ASEAN with China, which is intended as a medium of knowledge exchange in dealing with Covid-19 and a commitment to strengthen cooperation in handling COVID-19 in Southeast Asia (Association of Southeast Asian Nations, 2020).

China is also Indonesia’s cooperation partner when it comes to vaccines. In August 2020, the Indonesian Minister of State-Owned Enterprises and the Indonesian Ministry of Foreign Affairs met with the Chinese Foreign Minister and representatives of several Chinese pharmaceutical companies, such as Sinovac Biotech to discuss Indonesia’s acquisition of vaccines from China, which demonstrates the commitment of the government and Chinese pharmaceutical companies to provide Indonesia with COVID-19 medicines and vaccines.
The governments of South Korea and Japan have also been providing a lot of assistance, both financially and in the form of medical supplies. There are also many other forms of cooperation, such as conferences to share knowledge in international and regional forums such as ASEAN + 3.

As one of ASEAN’s members, Indonesia’s vaccine diplomacy approach would always follow ASEAN guidelines as it was also one of Indonesia’s main foreign policy principles. In his interview for the ASEAN bulletin, Minister Sadikin (2021: 8–9) further explains Indonesia’s approach in gathering vaccines through WHO’s global procurement program while also maintaining the other effort to control preventable diseases that could potentially threaten if left unattended. He also explains the potential of Indonesia among other countries in Southeast Asia and ASEAN collaborating on developing an improved public health emergency response based on their evaluation of ASEAN’s response to the COVID-19 emergency. This collaboration could also improve Indonesia’s input toward ASEAN’s health diplomacy that also includes the currently implemented vaccine diplomacy. However, as there are still challenges that Indonesia must face to further improve its implementation of vaccine diplomacy, there are several ways that the authors could suggest to further extend the vaccine diplomacy implemented by Indonesia. First, to maintain WHO’s trust and effectively secured the vaccine needed, Indonesia must always follow WHO’s guidelines in the distribution of vaccines to its citizen without any further requirements that could cause the citizen to have any issues while trying to be vaccinated. Second, as Indonesia is currently among the highest country that receives donations of vaccine supply while also sitting precariously on the edge of having the third outbreak wave, the government must assure the international forum that they can get the situation under control and prevent Indonesia from falling into the third wave of COVID-19 case insurgence. This suggestion is rooted in the fact that if Indonesia failed to prevent the third wave, the bigger chance is that Indonesia could still need to rule COVID-19 still as a pandemic rather than an endemic as some countries around the world have declared. Third, as there are still some issues within Indonesia’s vaccine diplomacy itself, the government should fix its bureaucracy and give the vaccine stakeholders a bigger chance to help the government in supplying, distributing, and giving vaccines to people so that every citizen of Indonesia could have a chance on getting vaccinated.

POLICY DEBATES ON VACCINE COOPERATION IN INDONESIA

Vaccine cooperation between Indonesia and international organizations or other countries has indeed received a lot of support and positive responses. However, some feel pessimistic and gave negative sentiments about the cooperation. This eventually sparked the emergence of debates about the pros and cons in Indonesia’s regions. We discuss the debates into five parts dependent on the point of view of the government, parliament, religious organizations—especially Islam as the largest religion in Indonesia, civil society, and the media.

First, the Indonesian government strongly supports vaccine cooperation with international organizations and other countries. This is by Presidential Regulations Number 99 of 2020 concerning Vaccine Procurement and Vaccination Implementation in the context of Combating the COVID-19 pandemic which was signed on October 5, 2020. The government seeks to establish bilateral cooperation with several countries that have produced vaccines. In addition, the government also cooperates with international organizations/allies to seek...
additional vaccine sources, such as the Coalition for Epidemic Preparedness Innovations (CEPI) and the Global Alliance for Vaccine and Immunization (GAVI) (Ministry of Health of the Republic of Indonesia, 2020). This is because vaccine cooperation is seen as an important step in curbing the spread of COVID-19 in Indonesia (Ministry of Communication and Information Technology of the Republic of Indonesia, 2020).

Second, the Indonesian parliament or the House of Representatives of the Republic of Indonesia (DPR RI) initially tended to be pessimistic about the implementation of vaccine cooperation. In November 2020, the member of Commission IX of the DPR RI—a commission that focuses on health and employment, Saleh Daulay, stated that the government should not rush in implementing mass vaccinations for the public (CNN Indonesia, 2020a, 2020b). But the DPR RI has fully supported the vaccine cooperation program carried out by the Indonesian government. On September 8, 2021, the Chairman of the DPR RI, Puan Maharani, even held a meeting with the Chairman of the South Korean National Council, Park Byeong-Seung. This meeting also discussed the intensification of cooperation in the development of a COVID-19 vaccine between Indonesia and South Korea (Antara News, 2021).

Third, as the two largest Islamic organizations in Indonesia, Nahdlatul Ulama (NU) and Muhammadiyah strongly supported the vaccination efforts in Indonesia. This is certainly a positive signal for the government in establishing vaccine cooperation in the international arena. NU and Muhammadiyah perceive that community participation in the vaccination program is one form of effort to avoid the transmission of COVID-19 (Muhammadiyah, 2021). Nevertheless, the two organizations warned the government that the vaccines given to the public must be halal, safe, and effective (Iskana, 2021).

Fourth, there are still many Indonesians who have negative thoughts about vaccine cooperation with other countries, especially China and Western countries. This thinking was usually found in ordinary people or rural communities who have not pursued higher education. They often viewed COVID-19 as a conspiracy, so vaccination is not necessary because it is not effective in preventing the transmission of the virus (Nugroho, 2021). Therefore, vaccine cooperation is considered to only drain the state budget and benefit capitalist countries such as the West and communist countries such as China—because there are Indonesian people who are still traumatized by the Communist Party of Indonesia (PKI).

Fifth, the media played an important role in shaping public opinion on vaccine cooperation. So far, the media has spread a lot of positive news about the vaccine cooperation carried out by the Indonesian government. This is because the Minister of Communication and Information Technology, Johnny G. Plate, always invites the media crews to be hoax fact-checkers fact-checkers (Ministry of Communication and Information Technology of the Republic of Indonesia, 2021). Therefore, the media is required to be a hoax examiner and then the results of the examination are disseminated to the wider community.

A change of attitude among all stakeholders regarding Indonesia’s vaccine diplomacy was seen during the peak of the second wave of COVID-19 cases in early 2021. During the second wave of COVID-19 cases in early 2021, citizens of Indonesia were beginning to demand the government to provide its citizen with proper medication including the vaccine for all citizens in Indonesia. According to news released by World Health Organization (2021a, 2021b, 2021c), the first batch of vaccines arrived in early March 2021 following the launch of a mass vaccination program by the Indonesian government two months prior. The program itself was part of the plan for when the COVID-19 cases rose beyond the government’s prediction as was seen in late 2020 and early 2021. All stakeholders in the vaccination policy in Indonesia agreed on the urgency for all citizens to be vaccinated as one of the ways to achieve herd immunity by
early 2022. The only problem that arose from the early implementation of the vaccine policy was mostly coming from the radical-nationalist group that questions the legitimacy and effectiveness of the vaccine that was imported from China. Doubts also linger in most citizens’ minds as the massive spread of hoaxes regarding Covid vaccines begins appearing during the first few months of the implementation of the mass vaccination program by the Indonesian government. But as the vaccination was implemented followed by improvement in the government’s approach to help people get vaccines and control mass media’s reports to avoid more hoaxes, all stakeholders that once doubted the efficiency and probability of mass vaccination programs begins to pull their best effort and joined together to help the government in making them achieve their goals in the vaccine program. With over 96 million people fully vaccinated by December 2021 and a proactive approach from the government and independent organizations to get more people vaccinated, all of the vaccine stakeholders are viewing a great improvement in Indonesia’s vaccination program and thus inviting more stakeholders to provide more variation of COVID-19 vaccines to Indonesia with the sole purpose of helping the government to achieve herd immunity in 2022 (Muyhiddin & Nugroho, 2021:7–9). The only problem that the vaccine stakeholders faced after tackling hoax regarding the vaccine’s efficiency and the post-vaccine effect is the accusation of stakeholders hoarding vaccines and preventing vulnerable people and the lower-class people from getting one. This problem first appeared before the first batch of Covid vaccines arrive in Indonesia in early 2021. During that period, Kimia Farma, a pharmacy institution, released an announcement that stated that those who wished to be vaccinated will have to pay in an attempt to get people vaccinated without having to wait on the government’s vaccination program and causing controversy among citizens as it was seen as unethical and using people’s desperation to be safe for their benefit. As Andriyanto and Lumanauw (2021) stated, the plan was quickly squashed by President Joko Widodo as Indonesia receives warning from WHO on the paid vaccination program and encouraged the government to continue giving out vaccines for free as “the vaccines that Indonesia receives were given for free by WHO under the UN-approved global procurement program Covax.”

Public consensus also played a role in reversing the paid vaccination plan while also giving suggestions to the government regarding the Covid situation and how to put them under control. Public opinion was strongly favored by the government as it was deemed important to hear the public’s feedback, especially on Covid policy. As described by Suratnoaji et al. (2020:397–403), during the implementation of Large-Scale Social Restriction policy or PSBB, a mixed reaction that comes from the citizen across the internet were used by the Indonesian government as an evaluation toward the policy and taking the suggestions submitted by their citizen as a way to improve the implementation of the policy. One of the other examples of how public opinion could further improve the government’s COVID-19 policy is when the government first announced the travel restriction along with the large-scale social limitation or PSBB. As described by Novaldi & Hidayat (2020:42–43), the mixed response with mostly negative opinions toward the government’s half-baked policy regarding social restriction pushed the government to reinforce an improved social restriction policy in Indonesia. Regarding the importance of having social consensus to improve international trade on the vaccine, Van der Eng (2020) explained that while Indonesia’s public perception of the government’s COVID-19 policy varied, most of the citizens seems to achieve a consensus that while the government may seem rushed and panicked while implementing policies during the first phase of the pandemic, generally speaking, the current situation and the current handling of the pandemic by the government are improving than the first few months of the pandemic.
This argument was also supported by Pepinsky (2021) that explained about while it may cause long-term damage to the administration’s image, the consensus on the government’s COVID-19 policy is satisfactory and as adequate as possible. However, some doubted the public consensus and argued that the positive consensus was only an illusion created by the government-controlled media to paint Indonesia in a better way after controversies surrounding its COVID-19 approach that were deemed nonsensical. As argued by Hermawan (2021), while the COVID-19 case descended steadily, the pandemic exposed just how broken Indonesia’s hierocracy system is and the public agreed that the current administration needs to improve its policy-making process, especially during the pandemic as it was deemed unethical and failed to address the main issue that is preventing COVID-19 cases from climbing and convincing people to be fully vaccinated. From the arguments above, the writer then pulled a general assumption that it was indeed important to have the public agree on the government’s approach to further prevent the spread of COVID-19 including doing international cooperation to provide vaccines and essential kits to help the COVID-19 victims such as medication, hospital beds, and medical assistance.

**INDONESIA VACCINE COOPERATION**

In terms of vaccination, Indonesia has been cooperating with China, from the trial stage until the production supply (Yeremia & Raditio, 2021). Indonesia has also been doing cooperation with Australia regarding the creation of Development Response Plan 2021, as a way to combat the impact of the COVID-19 pandemic for both countries (Australian Government, 2020). This cooperation happens because the Indonesian Government lacks some capabilities, that can be helped by creating cooperation with other actors. In some countries, this lack can be the reason why cooperation matters, and in this case, Indonesia is also not an exception. As the government of Indonesia lacks some capabilities on fulfilling the medical and health needs during the COVID-19 pandemic, doing cooperation with other countries and any other international bodies can help Indonesia’s health system. This paper will discuss how international cooperation during the COVID-19 pandemic in Indonesia can help create better conditions for tackling COVID-19 in Indonesia and mapping out the international cooperation profile that has been done in Indonesia until April 2021.

Amidst increasing positive cases of COVID-19 in Indonesia, it is generally recognized that the country has also been receiving many vaccine doses from many countries around the world. According to the data provided by Indonesia’s Ministry of Health (2020), Indonesia independently purchased its first 3 million Sinovac vaccine doses in December 2020. This action was taken by the government to start Indonesia’s vaccination process as early as possible. The Indonesian government under President Joko Widodo’s administration also continued to purchase 30 million Sinovac vaccines from February to early March 2021. As of March 8, 2021, Indonesia received its first vaccine aid funded by COVAX Facility which consists of 1,113,600 million doses of AstraZeneca vaccine. This aid is generally a part of The COVAX Facility commitment to help countries combat COVID-19 globally through massive vaccination which essentially contributed to opening the door to many more vaccine aid distributions to Indonesia.

On May 1, 2021, United Arab Emirates sent 500,000 doses of Sinopharm vaccine doses to Indonesia. COVAX Facility has also repeatedly sent vaccination aid to Indonesia which consists of 1,389,600 AstraZeneca doses on May 8, 2021; 313,100 AstraZeneca doses on June 5, 2021; and 1,504,800 AstraZeneca doses on the June 10, 2021. Throughout July and August, Indonesia saw
a massive increase in vaccine assistance from many countries around the world, such as Japan, the US, United Kingdom, the Netherlands, and Australia—of which each had sent Indonesia various vaccine brands, ranging from AstraZeneca, Moderna, and Pfizer. However, Indonesia received the highest vaccine assistance in September 2021 as most countries massively showed their global solidarity to help Indonesia accelerate its vaccination rate.

As of January 2021, 493,133 individuals have received their first vaccine shot, which rapidly increased to 1,691,724 people who have been vaccinated with the first dose in February 2021. There was also a massive increase from February to March 2021 with the additional 6 million people vaccinated. The Indonesian government pushed its best effort to accelerate vaccine distribution in Indonesia as shown by Indonesia's government commitment to vaccinate 1 million people a day. Furthermore, from May to September 2021, it is shown that Indonesia's monthly vaccination rate has reached a number above 12 million. This accelerated vaccination rate is also likely to occur due to global vaccine assistance which Indonesia had been receiving from several countries, be it through direct vaccine assistance, as well as obtained through COVAX Facility, partnership, and bilateral relations. Essentially, this has shown the significance of intensive global vaccine assistance to Indonesia which also consequently established Indonesia as the fifth country with the most vaccinated population as of October 7, 2021 (Indonesia's Ministry of Health, 2021).

IMPACT OF COVID-19 VACCINES IN INDONESIA

Indeed, there are several methods to determine states' capacity against a pandemic. During the COVID-19 pandemic, the measure of states' capacity that is relevant will be the measure of the states' health system capacity. One such method to measure states' health system capacity has been issued by the WHO. The method of measurement is part of the WHO's COVID-19 interim guidance which is used to guide state policy during the COVID-19 pandemic. Health system capacity is measured by analyzing actual capacity and health service performance (World Health Organization, 2021a, 2021b, 2021c). The primary indicators to determine health system capacity during the COVID-19 pandemic are mentioned in Table 1. States need to keep their capacity within the acceptable parameters of the indicators mentioned below. The Critical Preparedness, Readiness, and Response Actions guidance published by WHO (2021a, 2021b, 2021c) mentions that these indicators represent states' ability to cope with the COVID-19 pandemic. As mentioned before, in an increasingly interconnected world, international cooperation in the mobilization of medical resources to increase health system capacity is needed to deal with the COVID-19 pandemic (Keohane & Nye, 2000; Vermondt et al., 2020).

Referring to the data from Toharudin et al. (2021), there has been a significant drop in COVID-19 cases in Jakarta after the start of the vaccination program, especially from January to March 2021. As Jakarta is one of the busiest areas with the most positive cases in Indonesia and the fact that there is a reduction of cases, this can mean that the vaccination program is one of the most effective ways to reduce the development of COVID-19 cases (Figure 1).

Sari (2021) reported the results of the studies that have been conducted by the National Institute of Health Research and Development (Balitbangkes) toward 71,455 health workers in Jakarta, which show that 5% of the fully vaccinated health workers got infected by COVID-19 during April–June 2021, and 0.98% of the fully vaccinated health workers during January–March 2021. Even so, the number of health workers who are fully vaccinated and need to be hospitalized because of COVID-19 is smaller than in the case of those who are not vaccinated yet, with only 0.17% of fully vaccinated people compared to 0.35% of those who are
TABLE 1  The primary indicators to determine health system capacity during COVID-19.

| Domain                  | Indicator                                      | Description                                                                 | Major limitations                                                                 | Capacity to respond |
|-------------------------|------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------|
| Clinical care capacity  | Bed occupancy rate                              | High mortality will occur if hospital capacity is insufficient to treat severe cases. | May be influenced by hospitalization policy (such as hospitalizing all cases) which does not indicate true saturation of hospital capacity | <75% 75%--<90% >90% |
| Clinical Performance    | Case fatality rate of resolved hospitalized cases | Indicates impact of adequate Covid-19 care                                  | Highly dependent on age and various biases. Must take into account detection or testing strategy | Decreasing trend  Stable trend  Increasing trend |
not vaccinated (Sari, 2021). There are also reportedly higher mortality rates in the group of health workers who are not vaccinated compared to those who are already fully vaccinated. This shows how vaccines still can be an effective way to tackle the risk of COVID-19 infection, especially for health workers.

The number of people who need hospital admission, especially in this case for the health worker group is getting lower after the vaccination program was conducted. The Ministry of Health Republic of Indonesia (2021) mentioned how the people who are infected by COVID-19 and in need of intensive care in ICU are mostly those who have not yet been vaccinated or those who are not yet fully vaccinated. The number of health workers who have been fully vaccinated and need hospitalization has decreased from 18% to 3.3% (Ministry of Health Republic of Indonesia, 2021). This shows that people who have been fully vaccinated have lighter side effects when getting infected by COVID-19 compared to those who have not been vaccinated. The decreasing number of the need for hospitalization because of the vaccination program can also be a good parameter on how vaccination can reduce the need for hospitalization, which makes the demand for health supplies and personnel smaller, thus reducing the probability of health supplies and personnel shortage.

The vaccine has generally been claimed as the best and only alternative to overcome the COVID-19 pandemic. According to GAVI (The Vaccine Alliance) that is co-leading COVAX Facility, vaccines offer life-saving protection to avoid getting severe impact from COVID-19 disease that has killed millions (Global Alliance for Vaccine and Immunization, 2021). Many conducted research also shows that the efficacy of vaccines tested since December 2020 has reached 90% against the development of COVID-19 symptoms (Shretta et al., 2020). There are four types of vaccines, such as Whole Virus, Protein Subunit, Viral Vector, and Nucleic Acid (RNA and DNA), all of which are trying to achieve immunity to the coronavirus (GAVI, 2021). Vaccines from different types and manufacturers have been distributed globally, including to Indonesia. Moreover, the WHO has claimed to facilitate 16.2 million vaccine doses supply through COVAX Facility and had been helping Indonesia in the process of vaccine dissemination considering that Indonesia is formed as an archipelago which made it quite complex for the vaccine distribution to arrive in each region and province (Hikmal, 2021).
The chart shows data on COVID-19 response capacity indicators that have been outlined by the WHO interim guide which includes BOR and fatality rates. During the months of May, June, and July, BOR and fatality rates of COVID-19 in Indonesia were on an increasing trend. According to the WHO interim guide, an increasing trend in COVID-19 fatality rate indicates a weaker health system response capacity. In the case of national BOR, the average monthly number peaked in July with a number of 68%. During and after the month of July, the number of fatality and BOR was inversely proportional to the number of first and second dose vaccination. In the months of August and September, higher vaccination numbers corresponded to lower fatality and BORs.

As of December 6, 2020, Indonesia is known to have purchased 1,200,000 doses of Sinovac vaccine and continued to purchase 1,800,000 doses of Sinovac vaccine on December 31, 2020. Noted from March onwards, Indonesia has been known to have received many vaccine distributions from other countries, including Uni Arab Emirates (UEA), Japan, France, Australia, and the United States of America (US) some of which are distributed through COVAX sharing mechanism (UNICEF Indonesia, 2021). All of this vaccine assistance has significantly impacted Indonesia's recovery from COVID-19 pandemic, as it helped increase and accelerate the vaccination rate which in turn decreased the number of BOR and fatality rate. In late July and early August 2021, Indonesia's BOR was seen to have a huge increase to over 60% and 70% occupancy. However, in mid and late August 2021, hospitals' BOR is noted to be constantly decreasing until September 2021 where Indonesia's hospitals' BOR had reached 19%. In line with Indonesia's decreasing BOR notably in late August and September, Indonesia is also noted to have received more than 50 million doses vaccine assistance at the same period of time (June-July) in types of AstraZeneca, Moderna, and Pfizer from Australia, US, France, and many other countries as well as vaccines that were obtained from bilateral relations and COVAX facility.

During August and September 2021, vaccine assistance in Indonesia has not only impacted the BOR but also consequently decreased the fatality rate. Indonesia is known to have received over 50 million doses of vaccine assistance from the Netherlands, US, England, Australia, and France which came from several vaccine brands, such as; AstraZeneca, Pfizer, Moderna, Sinovac, and CoronaVac. This number of vaccine distribution has been noted as one of the highest vaccine assistance Indonesia has received throughout the occurring pandemic. High vaccine assistance has in turn contributed to the decreasing number of Indonesia's COVID-19 fatality rate which decreased from around 14,000 cases in August 2021 and over 700 fatality rate in September 2021. It can be concluded that vaccine assistance to Indonesia which is obtained through state-to-state assistance, COVAX facility, and dose-sharing mechanism as well as bilateral agreements, has contributed significantly to Indonesia's recovery from the COVID-19 pandemic. It also shows that global solidarity is essential in ending the threats of the COVID-19 pandemic by coordinating hand-in-hand in the form of assisting vaccines whose highly positive impact is evident in Indonesia.

CONCLUSION AND RECOMMENDATIONS

It is already known that the COVID-19 pandemic is a global crisis that the world must overcome together. The risks and impact on many sectors including economy, mobility, health, and many more across the globe including in Indonesia mean that international cooperation to tackle the pandemic became more urgent. Indonesia, as one of the countries in the world that
face difficulties due to the development of COVID-19 cases, also tries to interact and take part in international cooperation to manage the pandemic crisis. As a country that has been affected by COVID-19 in many sectors, Indonesia requires huge medical and health capabilities, both in terms of experience, information, and resources. To obtain those, Indonesia has received aid from various countries and international organizations.

The international cooperation regarding vaccines has triggered debates among Indonesian people. There are parties who are pros and cons about the implementation of vaccine cooperation. These debates can be seen through five-point of views, namely the government, parliament, religious organizations, civil society, and the media. In this context, the government and media strongly support the vaccine cooperation to combat the COVID-19 pandemic. The Indonesia parliament also fully support the cooperation, although, at the beginning, the Commission IX of the Parliament tended to be pessimistic about that. Indeed, as the two largest Islamic organizations in Indonesia, NU and Muhammadiyah also give support to vaccine cooperation. But, these two organizations warn the government that the vaccines must be halal, safe, and effective for the people. Unfortunately, there are still Indonesian people who feel pessimistic about the vaccine cooperation. This is because they thought that COVID-19 is the result of conspiracy so the vaccine is not effective to combat those viruses.

However, in the crisis of the COVID-19 pandemic, international cooperation has been conducted worldwide. This cooperation includes medical and health aid, information and research collaboration, and financial and economic support. Through international cooperation and relations, Indonesia has received a variety of aid to help the country face the COVID-19 pandemic. One of the many important type of assistance included a vast amount of vaccine doses from many different countries and international organizations. This has helped Indonesia to increase the number of vaccinated citizens and lower the risks of COVID-19 infection. Due to the international assistance in providing vaccines for Indonesia, it was recorded that by early October 2021 Indonesia was the fifth country with the most vaccinated population.

After the execution of vaccination programs throughout the globe, it has been proven that vaccination can lower the risks of COVID-19 infection. Research has shown that a higher vaccination rate is relevant to lower bed occupancy and fatality rate. In the event of the pandemic, the measure of a country's capacity to manage the crisis is relevant to the measure of its health system capacity. When there is less bed occupancy, then there is room to improve the health care system and give more attention to patients, thus increasing the possibility to be cured. In Indonesia, the trend in vaccination rates and hospitalization shows the same results. Although there was a rise in hospitalization and fatality rate due to Indonesia's low health capacity, after a massive vaccination program through August and September, the number of fatalities and BORs has gone down. The results achieved through vaccination cannot be obtained without the help and assistance received from international cooperation. In the case of providing Indonesia with vaccine doses, international cooperation is an important factor and plays a huge role in helping Indonesia manage and face the COVID-19 pandemic.

There are at least three recommendations for the policymakers in Indonesia regarding this matter. First, there should be consensus between stakeholders on the vaccine efficacy in order COVID-19 vaccination program could run smoothly. Second, the government should have better cooperation with the scientist or international organizations and other nonstate actors to enhance the transfer of knowledge and technology in order there will be no misunderstanding about the vaccine efficacy and this could lead the government to have better knowledge for themselves and also capable to educate the public. Because at the beginning the public has lower trust on vaccines, resulted lack of socialization and education especially at the grassroots
level. The third recommendation, it is crucial for the policymakers to guide and check all of the information on vaccines, because there numerous misinformation and disinformation about the vaccines and it made the public reluctant to have COVID-19 vaccination. This work should be done not only by the government but also by the mainstream media to combat hoax about the vaccines.

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