

# The Indonesian Government Strategy of Herd Immunity in Handling of Pandemic COVID 19

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## ABSTRACT

The health protocol in the PSBB policy has become less effective in preventing the spread of the COVID 19 virus because human transactions and activities (as a medium for the spread of the COVID 19 virus) in public spaces still occur, with various spreads through various transmissions, either by direct contact, droplet or airborne. The 3 M health protocol (Wearing a mask, maintaining distance and washing hands), cannot guarantee that the health protocol can run within 24 hours perfectly, as a result the spread of the COVID virus is getting more massive, both in offices, schools / pesantren, markets / spending centers even within the family environment there are clusters of the spread of the COVID virus. This can be seen from the large number of mass gatherings that have occurred, both religious activities, election processes etc, even according to the COVID 19 task force Doni Monardo explained that from March to December 2020 tens of thousands who came from various countries to Indonesia, 2,800 confirmed positive people for COVID 19. The correct handling of COVID 19 should be the Karantina area (Lockdown) as mandated by Law No. 6 of 2018 concerning Health Quarantine, because there is no social interaction or community activity in public spaces, and the government guarantees the basic needs of the community for free, but why does the government not adopt a regional quarantine policy.

**Keywords:** Corona Virus Pandemic 19, PSBB

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## INTRODUCTION

Since the beginning of the handling of the COVID 19 pandemic in Indonesia, many have doubted and considered the Government to be slow to respond and act in handling the COVID 19 pandemic, not only because the government is too "confident" that Indonesia does not have the Corona virus because tropical areas and people like to eat rice cats, but also do not have the courage and ability to carry out a regional quarantine (Lockdown) despite Law No. 6 of 2018 concerning Health Quarantine already exists. The government has just taken a compromise between national economic problems and public health issues, by implementing a Large-Scale Social Restriction (PSBB) policy on the grounds that it is necessary to balance the safety of the COVID-19 pandemic and the economic activities of the community. The government also changed its strategy in handling COVID 19, from a fight against and common enemies to a movement to make peace with the Corona virus.

The government looked "panicked" when the first case of suspected COVID 19 viruses was found in Depok City on March 2, 2020, for the first time the government announced two positive cases of COVID 19 in Indonesia which were officially announced by President Joko Widodo. Since then, all of us are like a wildfire, that in fact the COVID 19 virus has also reached Indonesia. In fact, according to the Epidemiology expert at the University of Indonesia (UI) Pandu Riono, the spread of the SARS-Cov-2 Corona virus has entered Indonesia since early January 2020 and the identification of the first case of COVID 19 suspect was local transmission and not transmission of imported cases because of the gateway in several Indonesian territory is very open so that people in and out of Indonesia are very large (Kompas, 2020). The Indonesian government did not immediately close flight access to and from Wuhan China as the first source of this COVID 19 virus, as a result the spread of the COVID 19

virus was not only in the Jabodetabek area, but it also quickly spread to almost all parts of Indonesia, found cases of COVID 19. Until December 28, 2020 the number COVID 19 cases in Indonesia increased by 5,584 cases to reach 719,219 positive cases and 215 fatalities so that the total number of 21,452 people died positive for COVID 19 and this figure will still continue to increase, but surprisingly the news of the arrival of Chinese foreign workers continues to arrive to Indonesia, even more massive even though everyone knows that the source of the COVID 19 virus comes from this bamboo curtain country, again the government argues that Indonesia still needs investment to increase national economic growth in this pandemic era.

According to Purwanto (2020); Riza (2020), Fatoni (2020) The COVID 19 pandemic in Indonesia has not shown a sloping spread. Ironically, to find out the possibility of being infected with COVID 19, the government then imported a large number of antibody test kits (rapid tests) so a diagnosis from China, even though many disagreed with this government policy because it was deemed ineffective in identifying someone with the COVID 19 virus or not. Experts argue that this Rapid test results are less accurate (false negatives), meaning that someone who does a rapid test is only to test a person's immunity. If a person's results are suspected, then a rapid test cannot guarantee that someone has the COVID virus or not ... often the results are false negatives as a result people are happy and can be tricked into continuing their activities even though they have the potential to spread the virus to other people.

Initially, this policy of rapid antibody testing was also required for people who want to travel outside the city using sea transportation. Land and Air. Even the Rapid Antibody Test is a requirement for the issuance of a warning letter because the antigen swabs are still quite expensive, or the polymerase chain reaction (PCR) test

results are long out. But then, the policy of this Rapid Antibody Test, the government is no longer carried out and replaced with an antigen Rapid Test, as a result of this rapid test policy the country has even lost many times, not only is it a waste of state money (the Government assumes that Rapid tests are cheap) but instead the results people feel not sick even though they have the potential to transmit the COVID 19 virus everywhere. Likewise, the rapid antigen test can still give false negative results when the antigen (protein on the surface of the virus) contained in the swab sample is too low. According to clinical pathologist Dr. Muhammad Irhamsyah, SpPK, MKes, from Primaya Hospital East Bekasi, a negative antigen rapid test does not 100 percent rule out the possibility of being infected with COVID-19. The reason is because the sensitivity of the antigen rapid test tool is around 80 percent and the specificity is around 97 percent (Detik, 2019)

## METHOD

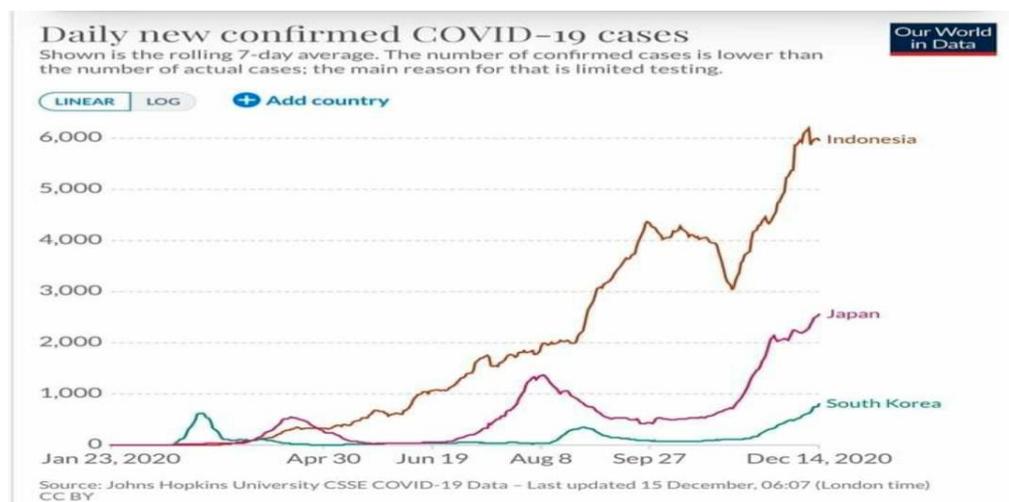
The research design used was a literature review. The use of this method is related to the COVID-19 pandemic situation which limits researchers in data collection. According to Purwanto (2020); Riza (2020), Fatoni (2020), Supriyadi (2020); Fadila (2020); Suheni (2020); Suryaman (2020) Literature Study (literature review) is a research conducted by researchers by collecting a number of books, magazines relating to the problem and research objectives. This technique is carried out with the aim of expressing various theoretical theories that are relevant to the problem being faced / being researched as reference material in the discussion of research results Literature review done can come from several kinds of sources such as national and international journals. This study uses the literature review method. Literature review is a systematic, explicit and reproducible method to identify, evaluate and synthesize research results and thoughts that

have been produced by researchers and practitioners. (Okoli & Schabram, 2010)

Literature review is a description of the theory, findings, and other research materials obtained from reference materials to serve as the basis for research activities to formulate a clear frame of mind from the formulation of the problem to be investigated. In another source, it is said that literature review is an analysis in the form of criticism (building or dropping) of research that is being carried out on a specific topic or a question about a part of science. Literature review is a scientific story about a particular problem. Literature reviews contain reviews, summaries, and writers' thoughts on several sources of literature (articles, books, slides, information from the internet, etc.) on the topics discussed. A good literature review must be relevant, current and adequate. Theoretical basis, theory review, and literature review are several ways to conduct a literature review.

## RESULT AND DISCUSSION

According to Supriyadi (2020); Fadila (2020); Suheni (2020); Suryaman (2020) The spread of the virus and the COVID 19 case continues to increase in March-April 2020, especially in Jabotabek, the central government rejects the application of the DKI Jakarta provincial government to carry out a regional quarantine (lockdown) in Jakarta and the central government decides to implement the PSPB policy in handling the pandemic COVID 19 in Indonesia in April 2020. In this PSBB policy, there are activities that are prohibited, restricted, and there are also activities that are well regulated. The PSPB policy is intended as a government effort to control the spread of the COVID 19 virus to become more widespread so that it can reduce the addition of new cases and reduce the death rate. Data from March to September 2020 when the PSPB policy was implemented, the spread of the COVID pandemic in Indonesia continued to increase as shown in the chart below:



According to Fatoni (2020), Supriyadi (2020); Fadila (2020); Suheni (2020); Suryaman (2020) The PSPB policy was initially carried out strictly in all areas that have been approved to implement the PSBB, namely having to carry out the technical regulations to the maximum, limiting community activities, closing places of worship, tourism and entertainment and activities in schools switching to distance learning. Likewise, when traveling outside the city, you must obtain an exit and entry permit (SIKM),

conduct massive checkpoints for those who wish, more active tracing and strict isolation and tighter care. Likewise, for people who live outside Jabodetabek, on their way into or out of Jakarta, they must have a one-time SIKM and fill in the Corona Likelihood Metric (CLM). CLM is an application to check symptoms of COVID-19 independently. The provisions of CLM as a condition for applying for SIKM are regulated in Governor Regulation Number 60 of 2020 concerning Control of Travel Activities in DKI Jakarta Province in Efforts to Prevent the Spread of

COVID-19. When filling out the CLM, the applicant must answer several questions honestly. At the end of the test when filling in the CLM, the system will provide a score based on the answers; status of person under surveillance (ODP) or patient under surveillance (PDP) based on COVID-19 case data from the DKI Jakarta Health Office.

According to Fadila (2020); Suheni (2020); Suryaman. Unless they are active in 11 specific industrial sectors operating during large-scale social restrictions (PSBB) such as the health, financial and strategic industries sector. Then the food sector, logistics, energy, hospitality, construction, communications and IT, fulfillment of daily needs, and vital objects. There are also exceptions to the leaders of high state institutions, the corps of representatives of foreign countries / international organizations, the army and police, toll road officers, COVID-19 officers and medical personnel, firefighters, ambulance and hearse officers, passengerless cargo car drivers, car drivers' medical devices, and emergency patients and their companions.

According to Supriyadi (2020); Fadila (2020); Suheni (2020); Suryaman (2020) The implementation of this strict PSBB policy cannot be consistently applied by the government because of its socio-economic impact on society. Public powerlessness in living their lives due to this PSBB policy is not followed by the government's ability to provide socio-economic security for people who are directly affected by this PSBB policy. The government then carried out easing (relaxation) under the name PSBB Transition to provide wider space for the community to be able to interact and have activities. However, according to Epidemiology expert Iwan Ariawand from the Faculty of Public Health, University of Indonesia (FKM UI), he actually thinks that the relaxation of Large-Scale Social Restrictions (PSBB) by the government is too early. "We are loosening the speed, actually too fast, but I also know that there are economic problems and all kinds (Kompas, 2020)

According to Riza (2020), Fatoni (2020), Supriyadi (2020) National scale COVID-19 transmission data in Indonesia in June 2020 shows that it has not been controlled (still increasing). Meanwhile, the government has changed the policy to Transitional PSPB (relaxation) while the Rt data (effective reproduction number) in Indonesia is in the range of 1.1 or 1.2. Rt is the number of additional cases that occur after a number of interventions. If Rt is above 1, it means the transmission is still ongoing, even though the World Health Organization (WHO) still requires that PSBB be relaxed, namely epidemiology, public health, and health facilities. From an epidemiological perspective, the transmission of the COVID-19 pandemic in Indonesia is still in the uncontrolled category. Likewise, the public health aspect, massive examinations and contact tracing are still low so that the rate of new case detection is still low. Another thing is that health facilities from hospitals to clinics must be ready to handle COVID-19 patients.

Victims of the ferocious COVID 19 viruses come from various circles of society, both religious leaders, officials and government officials, including even medical personnel. According to the Mitigation Team for the Executive Board of the Indonesian Doctors Association, Dr. Adib Khumaidi, stated that the handling of the COVID-19 pandemic in the country is currently out of control. This is evidenced by the high increase in COVID patients every day and the increasing mortality rate for medical personnel and health workers. Based on IDI records as of December 15, there were 369 health workers who died due to being infected with COVID-19, consisting of 202 doctors and 15 dentists. and 142 nurses. The doctors who died consisted of 107 general practitioners (4 professors), and 92 specialist doctors (7 professors), as well as 2 residents, and 1 in the verification, all of whom came from 24 Regional IDIs (provinces) and 92 IDI Branch (City / Regency) (second, 2020), as shown in the table below:



#### SOCIAL ECONOMIC IMPACT OF THE IMPLEMENTATION OF PSBB

Since the beginning of the outbreak of the COVID 19 pandemic, not only health problems have emerged but also anxiety and concern about the shadowy socio-economic impact of society. The implementation of the

PSBB policy in Indonesia in controlling the spread of the COVID 19 virus, on the other hand, has actually hit the economy of the community due to restrictions on community activities, restrictions on working hours and employees coming to work and restrictions on hours and places of business. For people who violate this provision,

will be subject to sanctions ranging from verbal and written warnings to the dissolution of activities or closure of business premises. As a result, many companies cut off work relations (layoffs) with their employees because production decreased, even hitting the industrial, tourism and trade sectors because of a very sharp decline in income.

According to Riza (2020), Suheni (2020); Suryaman (2020) In addition to the problem of the COVID 19 pandemic that has not been resolved, the current socio-economic impacts of society are also increasingly real and become a national problem. With all the limitations of the 2020 State Budget (a deficit of 682.1 trillion or 4.16 percent of Gross Domestic Product (GDP), the government is preparing a social security program and BLT in 2021 in the era of the COVID 19 pandemic amounting to Rp. 110 trillion and a free electricity program for actors, businesses and small industries that subscribe to B1 450 VA and I1 450 VA and direct cash assistance (BLT) for business capital of IDR 2.4 million in the first phase of IDR 22 trillion to target 9.1 million MSMEs. However, the problem is still confusion. The distribution process of social assistance and BLK is due to differences in data on social assistance and BLT recipients between the Ministry of Social Affairs, Ministry of Villages, Ministry of Home Affairs and the Regional Government. Social assistance Rp. 17 Billion.

The government's policy in handling the COVID pandemic is trying to balance the problem of the COVID 19 pandemic with this national economic problem by relaxing the PSBB with the health protocol set by the government. The government argued that if the COVID-19 pandemic was prolonged, the problems that would arise would be even greater. As the number of layoffs increases, more and more MSMEs are closed, the poverty rate increases and the emergence of various social problems. The government then compromised the handling of the COVID 19 epidemic as the main problem simultaneously in handling economic problems as the real face of the people who were affected. These two impacts are certainly felt directly in people's daily lives. All sectors were hit and shaken as well as a measure of how heavy the contraction faced by the national economy.

The business world is one of the parties affected by this pandemic. As a driver of the country's economy, it must be admitted that sometimes there is a dilemma in the choice between economy or health. Options for the economy but haunted by concerns that more victims will fall due to exposure to the corona virus. As for the choice of health, it is feared that the economy could be threatened by a recession. The middle path taken by many countries, including the Indonesian government, over this dilemma choice is the implementation of a disciplined health protocol. The implementation of the PSBB starting from the first until the Transitional PSBB has been implemented, but the data on the spread of the COVID 19 virus is still increasing and is worrying.

The impact was very heavy due to the aftermath of the corona virus when the first Large-Scale Social Restrictions (PSBB) were implemented in Jakarta starting April 10, 2020, many public activities stopped and were stopped, either voluntarily or coerced. Economic activity resumed when the Transitional PSBB began in mid-June 2020 although there were still restrictions, but the easing had an impact on increasing positive cases so that the Governor of DKI Jakarta Anies Baswedan reintroduced the PSBB starting September 14, 2020, but after that the Transitional PSBB was reintroduced by relaxing public

activities. The impact is that the economic recovery in Jakarta as the center of the national economy still has much longer to go. Moreover, no one can confirm how long this PSBB will last. PSBB policy in handling the COVID 19 pandemic in Indonesia has failed (less effectively) in preventing the transmission of the COVID 19 virus in Indonesia. The government has not been able to prevent the decline in the spread rate, while the number of victims who have died in cases of viruses and COVID 19 continues to increase. Ironically, the government will still implement the regional election policy simultaneously on December 9, 2020, even though in the era of the pandemic which is still increasing. The 2020 regional election policy was held during the COVID-19 pandemic according to the agreement of the government, DPR and KPU.

This Pilkada policy is still implemented by implementing a number of health protocols, one of which is that KPPS officers are required to undergo a rapid test a week before voting day and if reactive, KPPS will be retested or undergo a swab. Although previously several parties had warned the government of the dangers of new clusters the 2020 elections. The recommendation from the Indonesian Ulema Council (MUI), the Indonesian Doctors Association (IDI), the largest Islamic organizations in Indonesia such as Nahdlatul Ulama (NU) and Muhammadiyah to postpone the implementation of the simultaneous regional elections on 9 December 2020 because of the potential for the occurrence of the COVID 19 virus and the spread of the virus, the government did not pay attention. Even the Australian Griffith University epidemiologist, Dicky Budiman, has also predicted that daily COVID-19 cases will still increase due to the Simultaneous Regional Election on December 9, 2020, plus the not yet massive testing and tracing (journalislam.com, 2020).

The impact of the risk of COVID 19 after the 2020 simultaneous regional elections, cannot be avoided, 2020 election clusters appear. Data from the General Election Commission (KPU) records that as many as 79 thousand officers of the COVID-19 reactive Voting Organizing Group (KPPS) approaching the election day Simultaneously 2020. As stated by KPU Commissioner Ilham Saputra said, there were 79,241 reactive KPPS officers after undergoing a rapid test. Independent isolation 10,087 people, continued swab 19,897 people, rapid repeated 5,115, "and a total of 4,824 people have been replaced ahead of the vote because positive for COVID 19. (cnnindonesia.com,020).

Banten Province, for example, where South Tangerang City, Serang Regency, and Pandeglang Regency are the three regions in Banten that will participate in holding a five-year democratic party with a total of 270 other city districts in 2020. According to the spokesperson for the Banten COVID-19 Task Force Team, Ati Pramudji Hastuti stated that the 2020 Regional Head Election (Pilkada) has become a new cluster of the spread of the corona virus, especially in the three regions of Banten Province, namely, South Tangerang City, Serang Regency, and Pandeglang Regency. The three of them are regions that are participating in holding the 2020 Pilkada. "Serang Regency is a red zone, this is the impact of the dominance of positive cases from the pilkada cluster. Thus, the total red zone in Banten has now become three regions, apart from Tangsel City and Tangerang City. The addition of positive cases. It was quite significant on Monday (14/12), in the three Banten areas it had increased to 15,601. Of these, 2,245 were still under treatment, 12,893 were declared cured, and 463 died. Even the head of the South Tangerang KPUD was declared positive for COVID 19 after the simultaneous

regional elections 2020 in South Tangerang City (cnn, 2020)  
 According to Purwanto (2020); Riza (2020), Fatoni (2020), Supriyadi (2020); Fadila (2020); Suheni (2020); Suryaman (2020) Until the last quarter of December 2020, the spread of the COVID 19 virus in Indonesia continues to increase, again showing no signs of sloping, let alone decreasing. But the handling of COVID 19 is still around the 3 M (Wearing a mask, washing hands and maintaining distance) with the PSBB again being tightened after the relaxation has passed. The government still cannot prevent the spread of the COVID 19 virus, the impact is not only that the number of infected with the COVID virus has reached more than 700 thousand cases, also the death rate due to COVID 19 has reached more than twenty-one thousand and this number will continue to increase. The

phenomenon of handling COVID 19 in Indonesia is showing symptoms of Herd Immunity COVID 19. Herd Immunity is a situation where enough people are immune to infection to effectively stop the spread of the disease. There are two ways of Herd Immunity, namely first with a vaccine with high effectiveness and currently the vaccine is still in the process of clinical trials and no vaccine has been proven to have 100% effectiveness or the second way is by letting 70% of the population be infected with the virus so that it will naturally get antibody immunity, so the possibility is to survive because they are immune to disease or die for those who have low physical or immunity. This means that humans who are strong with a good lifestyle and lifestyle and good limbs will become immune to this COVID 19 disease, on the other hand that humans who do not have a good immune system with risk factors for comorbidities will be eliminated (die).

Country	Population	Total Pandemic Deaths	Deaths Per Population
United States	331.0 million	331,732	1 per 1,000
India	1,380 million	147,343	1 per 9,365
Indonesia	273.5 million	20,994	1 per 13,027
Japan	126.5 million	3,052	1 per 41,448
Vietnam	97.4 million	35	1 per 2,782,857
Thailand	66.6 million	60	1 per 1,110,000
Germany	83.8 million	29,666	1 per 2,824
South Korea	51.3 million	793	1 per 64,691
Kenya	53.7 million	1,655	1 per 324,471
Canada	37.7 million	14,769	1 per 2,552
Malaysia	32.7 million	451	1 per 72,505
Australia	25.5 million	908	1 per 28,803
Taiwan	23.8 million	7	1 per 3,400,000

Country	Population	Total Pandemic Deaths	Deaths Per Population
United States	331.0 million	331,732	1 per 1,000
United Kingdom	66.8 million	70,513	1 per 947
Italy	60.3 million	71,620	1 per 841
Spain	47.1 million	49,824	1 per 945
Peru	32.5 million	37,368	1 per 869

@pandemictalks

1 dari 4 orang Indonesia yang dites Swab/PCR akan Positif COVID-19

**INDONESIA**  
NEW POSITIF RATE RECORD

**27,6%**

Kasus Harian 21 Desember 2020: **6.848**  
 Tests People 21 Desember 2020: **24.752**  
 Standar WHO: 38.500 per day

sumber : Kemenkes, KawalCOVID19 (21 Desember 2020)

@pandemictalks #CORONAMASIHADA

Dalam Sepekan 2 Kali Rekor Kematian Harian

**INDONESIA**  
NEW DEATH DAILY RECORD

**258**

Setiap 1 jam ada 11 orang meninggal akibat COVID-19 di Indonesia

Kematian terkonfirmasi Covid-19 harian di Indonesia

Top 3 penyumbang kematian harian per 25 Desember 2020:

1. Jawa Tengah (91)
2. Jawa Timur (78)
3. DKI Jakarta (21)

Sumber : KawalCOVID19, Kemenkes 25 Desember 2020

According to WHO, the Herd Immunity for Coronavirus is a "Dangerous Concept" WHO emphasizes that the decision to implement the concept of herd immunity in the midst of the corona virus is very dangerous and emphasizes "no

one survives until everyone is saved". According to Dr. Mike Ryan, executive director of the UN organization's health emergencies program says humans are not herds of cattle. "This is a serious disease. He said no one survived

until the entire population survived, and said he was worried if any country would implement this concept. Of course, we cannot imagine if there was a country that" miraculously "could overcome the epidemic with herd immunity methods. (Herd Immunity). ([Http://kmp.im/AFzyVW](http://kmp.im/AFzyVW)).

Meanwhile, data on the spread of the COVID virus in Indonesia shows that every hour nine people die. One in four Indonesians tested for the PCR swab antigen will be positive for COVID 19. This means that Indonesia is in a new position with a positive New Rate Record of 27.6% (data dated December 21, 2020, source: Ministry of Health, COVID.go.id). Likewise, the number of children Indonesia aged 0-18 years who were confirmed positive for COVID 19 have reached 72,677 cases with the school and Islamic boarding school clusters, or around 11.8% of the total COVID cases in Indonesia, even this number is more than the number of cases aged > 60 years of 65,762 cases. While the number of children aged 0-18 who died positive for COVID 19 was 530 cases or 0.73%, almost the same as the mortality rate for ages 19-30 years of 0.77%. (data dated 18 December 2020, source: Ministry of Health, COVID.go.id),

According to the Australian Griffith University epidemiologist (2020), Dicky Budiman, indicators of the worsening condition of the COVID-19 pandemic in Indonesia are starting to appear. The first reason is the hospital occupancy rate which is starting to fill up (85%) and the increasing number of deaths. Second, until now, Indonesia is still experiencing the first wave in dealing with the COVID 19 pandemic and has not been able to pass it well. Under these conditions, Indonesia has not succeeded in closing the curve (controlling the pandemic). This means that Indonesia has been conceded so far in detecting cases early, finding cases and preventing their spread. This condition is exacerbated by the discovery of the first mutation of the new COVID 19 virus, namely the D614G virus in the UK and has spread in several countries such as South Africa, Germany, Israel. Australia, Philipina, Singapore, Malaysia Nyanmar including Indonesia. This new mutated virus is estimated to have 10 times faster rate of transmission (infecting cells). However, the government has imported 1.2 million doses of the first stage on December 6, 2020 and the second stage of imports at the end of December 2020 amounting to 1.8 million doses of Sinovac vaccine from China, even the

Indonesian government has signed an agreement to import 50 million doses of the COVID-19 vaccine candidate from Sinovac, China. This agreement was signed by the Minister of BUMN as well as the Chief Executive of the Committee for Handling COVID-19 and National Economic Recovery (KPEN), Erick Thohir. Even though the Sinovac vaccine import policy has drawn criticism and doubts its effectiveness. The Sinovac vaccine is still waiting for permission to use from the BPOM and the halal vaccine certification from the MUI, but the government has imported the Sinovac vaccine from China. Meanwhile, the Chinese government itself will buy the vaccine from German company BioNTech, which was developed with US company Pfizer Inc. Quoting Reuters, Shanghai Fosun Pharmaceutical Group Co Ltd admitted that it would bring in at least 100 million doses of the COVID-19 vaccine for use in mainland China. Reuters also reported that the World Health Organization (WHO), of the 10 types of vaccines ready for distribution, it turns out that the Sinovac vaccine has the effect of the lowest (low) body immunity. According to CNN (2020) Indonesia is one of the countries that imports the COVID 19 vaccine as in the table below i.

However, it is unfortunate that the Sinovac vaccine from China has not yet completed the third stage of clinical trials and has not received WHO recommendations as an official vaccine and has an effectiveness in accordance with WHO standards. According to dr. Taufiq Muhibbuddin Waly, Sp.PD that there is no vaccine that really handles the Corona Virus (COVID-19), based on the results of his investigations into international journals, the 10 WHO flagship vaccines that have entered phase 3 are still below WHO standards, including a vaccine from China, Sinovac. The article explained that Sinovac's neutralizing antibody titer, along with CanSinoBio, is the lowest of any other vaccines. The IgG antibody titre to the SARS COV 2 spike protein, along with the Sinopharm vaccine, is the lowest among vaccines. Cytotoxic T lymphocytes were not examined in the Sinovac vaccine study. Vaccination trials in the elderly ( $\geq 60$  years), they did not do. Phase 3 clinical trials of the Sinovac vaccine, currently underway, do not change the degree of effectiveness of the vaccine. Because the effectiveness of the vaccine is mainly assessed in phases 1-2. Meanwhile, phase 3 primarily assesses the safety or side effects of the vaccine.

### KEY COVID-19 VACCINES COMPARED

	 <b>moderna</b>	 <b>Pfizer</b> BIONTECH	 <b>sinovac</b>
<b>How it works</b>	<b>Messenger RNA (mRNA)</b> vaccines teach human cells to make "spike protein", found on the virus that causes COVID-19  Our bodies learn to recognise that the protein doesn't belong there and make antibodies against future infection		<b>Inactivated virus</b> vaccines use a weakened form of a live virus, stimulating our bodies to produce an immune response  Similar to flu, hepatitis A, MMR, chickenpox vaccines
<b>Storage</b>	<b>30</b> days with refrigeration; <b>6</b> months at <b>-20°C</b>	Freezer storage only at <b>-70°C</b>	Standard refrigeration at <b>2°C</b> to <b>8°C</b> . Stable for up to <b>3</b> years
<b>Dosage</b>	<b>2</b> doses, <b>28</b> days apart	<b>2</b> doses, <b>21</b> days apart	<b>2</b> doses, <b>14</b> days apart
<b>Efficacy</b>	<b>94.5%</b>	<b>95%</b>	Not yet known

Infographic by Rafa Estrada Sources: Reuters, US Centers for Disease Control and Prevention



## CONCLUSION

If from the beginning of January 2020, the Government was more vigilant and anticipatory about the COVID 19 pandemic that had occurred in China at the end of 2019. Surely the spread of the corona virus in Indonesia would not be as massive as this. Then our question is, why is it that the government is "making trouble", shouldn't the government be present to solve problems and be able to provide solutions and provide guarantees for the safety and health of its people? People need concrete solutions, not just an appeal to wear masks. Wash your hands or keep your distance, until when will this end?

The government should have commitment and seriousness in handling the COVID-19 pandemic so that the government can control and suppress the transmission of COVID-19 more quickly and will certainly recover the economy more quickly. Even though the government has announced the economic growth projection for the third-fourth quarter of 2020 experiencing a contraction of minus 2.9 percent to minus 1.2 percent, which indicates that Indonesia will enter a recession, but businessmen and investors will be worried if the pandemic continues, because if this pandemic is soon ends then with various economic activities and business will return to normal. Government policies in handling COVID 19 in Indonesia, which have so far been considered by many to be less effective in reducing the spread of COVID-19 in Indonesia, are hopeful that the discovery of the COVID vaccine can be a concrete and effective solution in protecting and preventing the COVID 19 virus pandemic.

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