

The Polemic of Coronavirus Open-up Versus Lockdown

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Abstract

The pandemic Covid-19 has fueled a crisis democracy around the world as well as Indonesia. The condition of democracy and public/politician/human rights has growth worse. Government of Indonesia has responded that polemic by reducing pandemic cases and give support to the poor one. The number of confirmed Covid-19 positive cases as per July 19, 2021, has risen by 34,257 from the previous day and the total becomes 2,911,733. In the same period, the number of deaths increase 1,338 to 74,920. It has become the government and politicians/public/human right dilemma between controlling the virus and boosting the economy. The fight against pandemic Covid-19 is often framed as a trade-off between public health and the economy. Government aware that implementing a lockdown would require a huge budget, creating a budget deficit that could well exceed the ceiling must be approved by parliament. Government is currently battling the second wave of Covid-19 infections. The delta variants from India have been a major contribution to this second wave as they are more infections. Hospital has shortage of oxygen and beds, and the new patients must place in corridors or tents. Medical workers are tired, and some have become casualties. Lives have been upended and economic activities disrupted, especially to the informal business/workers. Unemployment rate, August 31, 2020, 7,07% while February 28, 2021 is 6,26%. The government of Indonesia has done a lot of effort to handle the Coronavirus, nevertheless public criticism has grown louder in recent months as the dire consequences for health, society, and economy. Some of them are honest but others may have hidden agenda. The game theory is not the only one to measure the optimal solution open-up versus lockdown form Covid-19 polemic. The cost-effectiveness analysis, Bayesian game setting, the strackelberg model are also other tools to measure the optimalization of open-up and lockdown.

Keywords

Pandemic, Open-Up, Lockdown, Economy

Introduction

A global pandemic has grown very fast since the appearing of covid-19 in Wuhan-China in the late 2019 as per may 2021, there have been 100 million confirmed cases with over than 2 million deaths in more than 175 countries. We have been complying to a new normal whilst anticipating the next normal. Global economy had suffered the biggest collapse, including indonesia. Several countries give help and facilities to the company, especially to the small medium business enterprise (UMKM), like tax relief, loan, etc. United states passed a usd 1.9 t to stimulate its economy pandemic covid-19 become politic issues between government and politicians/public/human right (open up versus lockdown) for survival , there must be a balancing between economic and health. Thats pandemi covid-19 as a glance.

Table 1. The Corona Virus Update

NO	COUNTRY	CASES	RECOVERED	DEATHS
1	WORLD	194,552,936	179,329	4,171,338
2	ASIA	60,402,240	131,189	868,855
3	EUROPE	50,669,530	26,855	1,126,718
4	INDONESIA (25/07/2021)	3,130,000	2,470,000	82,013

The impact of pandemi covid-19 from the economic point of view (selected countries)

Table 2. Percentage of selected countries that impact from Covid-19

NO	COUNTRIES	2020 (%)	2021 (%)
1	ARGENTINA	-9,9	3,9
2	AUSTRALIA	-4,5	4
3	BRAZIL	-9,1	3,6
4	CHINA	1	8,2
5	EGYP	2	2
6	GERMANY	-7,8	5,4
7	NETHERLAND	-7,7	5
8	USA	-8	4,5
9	INDONESIA	-2,07	6,1
10	GLOBAL GROWTH	-4,9	5

Figure 2.

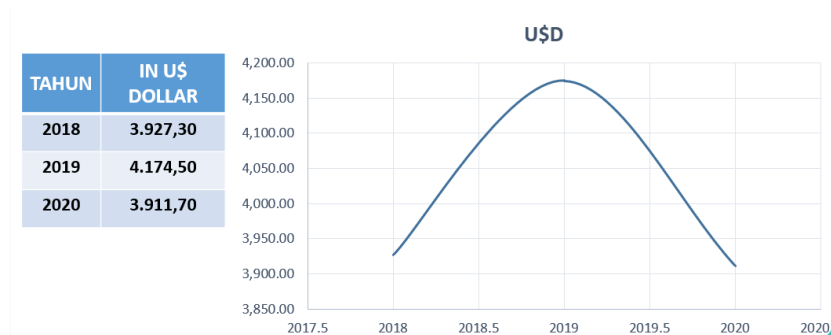


Figure 3. Income per capita of Indonesia

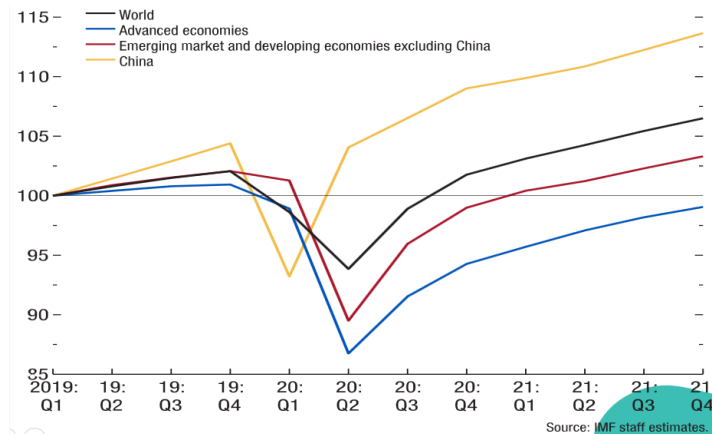


Figure 4. Quarterly World DGP

Table 3. The selected economic growth of the Indonesian's trading partner

NO	COUNTRIES	Q4/2019	Q3/2020	Q4/2020
1	AMERICA	2,3%	-2,8%	-2,5%
2	SINGAPORE	1%	-5,6%	-3,8%
3	SOUTH KOREA	2,3%	-1,1%	-1,4%
4	VIETNAM	6,8%	2,7%	4,5%
5	HONGKONG	-3%	-3,6%	-3%
6	EUROPEAN UNION	1,3%	-4,2%	4,8%

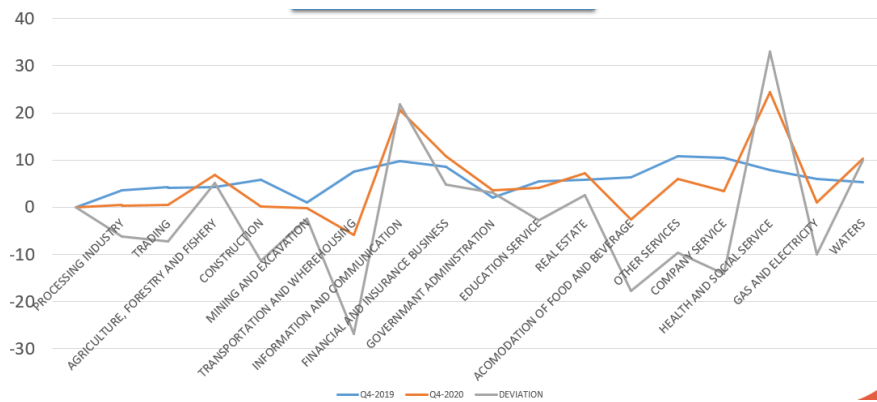


Figure 6. Economic Growth Q-4 2019 and Q-4 2020

Literratur Review

The objective condition of Indonesia in the era of covid-19 pandemic are

1. The pandemic covid-19 has fueled a crisis democracy around the world as well as indonesia.
2. The condition of democracy and public/politician/ human rights has grown worse.
3. Government of Indonesia has responded that polemic by reducing pandemic cases and give social support to the poor one.
4. The latest update of indonesia pandemic covid-19;
 - a. The number of confirmed covid-19 positif cases as per july 19, 2021 has risen by 34,257 from the previous day 2,911,733
 - b. In the same period the number of deaths rose by 1,338 to 74,920 while the number of recovered patients rose by 32,217 to 2,293,875
 - c. The Indonesian economy is expected to rebound by 4,4% in 2021
 - d. Assuming a faster vaccine rollout, growth in 2022 is expected to increase to 5%

The efforts and policies of Indonesian government to handle covid-19 pandemic

1. Government of Indonesia had imposed emergency restriction (PPKM darurat) since july 3 to july 20, 2021 and it has been extended from july 20 to july 25, 2021, and again extended to august 2, 2021.
2. It is hard lockdown for Indonesia's populous islands of Jawa and Bali to cope a new wave of covid infections.
3. Government has tried to do the best one to handle coronavirus with several efforts;
 - a. Ask to all provincial and district/city health offices to increase preparedness.
 - b. Installing more than 150 thermal scanners in major airports
 - c. Providing health alert cards and communication, information to all passengers entering indonesia.
 - d. Preparing more than 125 referral hospitals

- e. Build emergency hospital in some provincial/district and city
- f. Doing rapid mass vaccination, effective pandemic control.
- g. UNICEF said that more than half of the poorest households (70 per cent) received cash and/or in-kind from the government.
- h. Establishing hotline communication with regard to coronavirus at +62 215210411 and +62 81212123119

Polemic open-up versus lockdown

1. It has become the government and politicians/public/human right dilemma between controlling the virus and boosting the economy.
2. The fight against pandemic covid-19 is often framed as a trade-off between public health and the economy.
3. Government awares that implementing a lockdown would require a huge budged, creating a budged deficit that could well exceed the ceiling must be approved by dpr/parliament
4. Government is currently battling the second wafe of covid-19 insfections:
 - a. The delta variants from india have been a mojour contribution to this second wave as they are more infenctions.
 - b. Hospitals have shortage of oxygen and beds and the new patients have to place in corridors or tents.
 - c. Medical workers are tired and some have become casualties.
 - d. Lives have been upended and economic activities disrupted, especially to the informal business/workers
 - e. Unemployment rate, august 31, 2020 7,07% while february 28, 2021 is 6,26%

The issues of the polemic

1. Government (president) has policies and strategies to handle the spread of coronavirus, while some politicians/public/human right have their own policies and strategies.
2. Nobody knows the motives behind these difference and how this conflict end.
3. The difference is likely due to the 2024 presidential and parlementary election.
4. The hot issue is no work, no money, and how self isolation due to coronavirus punishes the marginal people

Result

Assumption polemic solution open-up versus lockdown that the game theory is one of the alternatives to solve the polemic between open-up versus lockdown are :

1. There two player, government and politician/public/human right
2. Each player has two strategies, open-up or lockdown
3. The aim is to control the virus and minimizing the mortality
4. These strategies are time sensitive (open-up and lockdown)
5. The players have different utilities (u) corresponding to each strategy pair
6. Using 1 to denote the open-up and 0 to denote lockdown

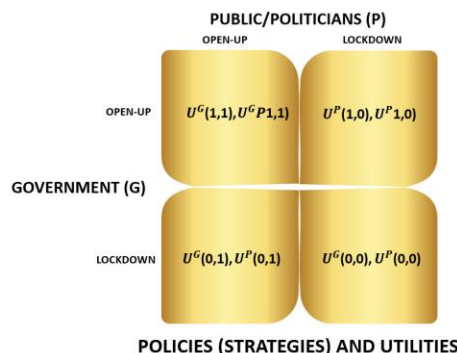


Figure 7. Policies (Strategies) and Utilities

		PUBLIC/POLITICIANS (P)	
		OPEN-UP	LOCKDOWN
GOVERNMENT (G)	OPEN-UP	(3, 1)	(2, 2)*
	LOCKDOWN	(2, 2)	(1, 2)

Figure 8. Demonstrative utility levels

From this situation, since open-up is dominant strategy for government (g), and lockdown is a dominant strategy for public/politician (p), the nash equilibrium (*) is at (open-up, lockdown) with utilities at (2,2)*

Conclusion

1. The government of Indonesia has done a lot of effort to handle coronavirus, nevertheless public criticism has grown louder in recent months as the dire consequences for health, society and the economy.
2. Some of them are honest but others may have hidden agenda.
3. The game theory is not the only one to measure the optimal solution open-up versus lockdown for covid-19's polemic.
4. The cost-effectiveness analysis, bayesian game setting, the stackelberg model are also other tools to measure the optimalization of open-up and lockdown