A Study of Non-Medical Impact on Mitigation Policy of ASEAN Countries Against COVID-19

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Abstract

At the end of 2019, the world was shocked by the emergence of an unusual pneumonia outbreak in Wuhan-China. World Health Organization (WHO) received the first case on December 31, 2019. At the end of January 2020, the WHO officially identified the pneumonia outbreak case as Novel Coronavirus or COVID-19. Responding to the development of Coronavirus, several countries applying mitigation policies. Thus, mitigation policies are starting from issuing travel warnings, restrictions, and closure of flight routes until restrictions on importing several goods. Several countries choose different approaches to mitigate COVID-19 within their border. Some existing studies related to Emerging Infectious Disease (EID), such as COVID-19, focus on mitigation mechanisms, the impact and effectiveness of mitigation only on medical variables. Rarely studies have evaluated a country's EID mitigation policy regarding nonmedical aspects such as economics. By studying Southeast Asia Countries COVID-19 mitigation policies, this paper seeks to describe the variety of EID's mitigation policies and the country's economic performances during the period of mitigation. The researchers choose Southeast Asia (ASEAN) countries due to their diverse religion, culture, history, political system, and economic condition. This paper uses both quantitative and qualitative as sources of data. Qualitative data is mainly collected to describe various mitigation policies undertaken by ASEAN Countries, while quantitative data is used to portray economic performances. The result of this research shows that each ASEAN countries have different mitigation approaches for COVID-19. During mitigation periods, the countries' economic performance varies depending on their economic foundation and the COVID-19 Public Health Directives.
Keywords
COVID-19, EID, mitigation policy, economy, ASEAN

1. Introduction
At the end of 2019, the world was shocked by the emergence of an unusual outbreak of pneumonia in Wuhan-China. This case was first reported to the World Health Organization (WHO) on December 31, 2019. At the end of January 2020, the WHO officially identified the pneumonia outbreak case as Novel Coronavirus (www.who.int). The virus outbreak that occurred in Wuhan then spread so rapidly to various countries. In China alone until mid-February 2020, based on official data released by the Chinese Government, the number of victims killed by this virus reached 908 people (www.nytimes.com). Outside China, this virus has claimed 774 lives and infected 71,204 people. One of the countries with the highest number of victims and infections is Singapore. Based on Singapore's Ministry of Health data, up to February 16, 2020, 75 victims of the Coronavirus have been detected. The Singaporean Government also increased the Disease Outbreak Response System Condition (DORSCON) level to orange (www.moh.gov.sg). Coronavirus has spread to at least 150 countries outside Asia and have confirmed more than 50,000,000 cases (See Figure 1).

Responding to the development of Coronavirus, several countries applying mitigation policies. Thus, mitigation policies are starting from issuing travel warnings, restrictions, and closure of flight routes until restrictions on the import of goods from China. So far some existing studies related to Emerging Infectious Disease (EID) such as Coronavirus focus on mitigation mechanisms and the impact and effectiveness of mitigation only on medical variables (see Daszak, Cunningham and Hyatt, 2000; Jones et al., 2008; Sheahan et al., 2020). Rarely studies have evaluated a country's EID mitigation policy and specifically in Indonesia in terms of non-medical aspects such as economics. Therefore, it is essential to see how the non-medical impact of mitigation policies taken, especially for the economic performance of a country. It is important because the potential for EID to occur in the future is very open. It is also necessary to understand better the non-medical consequences of EID mitigation policies.

1.1 Objectives
Objective of this research are to describe the variety of EID's mitigation policies and the country's economic performances during the period of mitigation.
2. Literature Review

2.1 Globalization and Health

The discussion regarding the emergence of EID and its mitigation efforts cannot be separated from the two issues. First, it is a study of globalization and health impact on the emergence of EID. Second, is how the EID mitigation effort in the era of globalization is and the impact of its mitigation. Therefore, it is essential to understand in advance how the impact of globalization on health, especially EID. Before we can conclude how the impact of globalization on EID, it is necessary to understand what we mean by the concept of globalization in this research. The emergence of the Globalization era led to debates from various academics. The debate revolves around what the meaning of globalization is, and when does it begin. Our definition of globalization will have implications for our view of each on the impact of globalization on various other things outside of globalization, such as economic conditions, sovereignty, and political issues. However, there have been several debates relating to the impact of globalization on non-high politics issues such as the impact of globalization on the environment and health.

One of the main reasons why various debates have arisen around globalization is that something extraordinary is happening now in our lives (Held et al., 2016). For the first time in our history, we can do a variety of connections and relations across borders quickly. In general, the debate around globalization can be divided into three broad groups. First is the hyper globalists who consider that we live in an era that is entirely new and unprecedented in human history nowadays. Even according to these scholars, the era of globalization can be called as the end of the nation-state (Ohmae, 1996), or the world is flat (Friedman, 2007).

On the other hand, several scholars are skeptical of globalization and consider the era of globalization today is a condition that already happened in the past. Due to their main historical argument, they can be called as historicists. These skeptical scholars can also be categorized as transitionists. For example, Robert O. Keohane and S. Nye Jr. (2000) explained that the current globalization, especially that which emerged in the 1990s, is a term that refers to the rise of globalism. They argue that globalization has been going on for quite a long time. Based on their article "Globalization What's new? What's Not and So What", they argued that we need to shift the discussion from the birth date of globalization towards the globalism thickness issue. The two authors further explained that contemporary globalization is a matter of the thickens of globalism. It means the present globalization - referring to the term Thomas Friedman (2007) "Faster, wider, and Cheaper" globalism. The practice that occurs in today's globalization is the same as the old globalization. The differences are the intensity, volume, and space used.

The third globalization scholars can be described as transformationists. In contrast to the views of hyper globalists who view that there is something genuinely new in globalization, or also the views of transitionists scholars who consider there is nothing new in globalization, the transformationists see globalization as a transformation. For example, David Held et al., (2016) said that globalization provides several significant changes in human life. Globalization stretches the social, political, and economic conditions in various corners of the world. Globalization also increases the intensity of our interdependence globally. Also, globalization accelerates the world. Under globalization, something that happens in even the most remote area possibly influenced by what is happening in the other part of the world.

In short, globalization is about the connections between different regions of the world - from the culture to the crime, the financial to the environment - and the ways in which they change and increase over time (Held et al., 2016). It can be concluded that the views of transformationists see globalization as the increasingly more robust density of human networks in various fields. In the context of its relation to health, studies about globalization and global health have emerged. One of the things being studied later is how globalization influences the distribution of EID. The study of Fidler (2016) discusses the link between globalization and public health. In his writing, Fidler (2016) explained that the EID crisis phenomenon had made the globalization of public health a permanent feature of international relations. Howson, Fineberg, and Bloom (1998) Describes the rationale for the involvement of industrialized countries in global health and suggests a means for its coordination.

Related to how the impact of globalization on the spread of EID itself, current studies see the phenomenon of globalization as a variable that accelerates the process of EID spread. Rodriguez-Garcia (2001) for example, explains the health - development link. He argues that tourism understood as any type of travel, is one of the most critical sectors of the economy in many countries and, therefore, can contribute to the community and national development. He also stresses that travel, as a primary factor that contributes to the spread of disease, lies in the realm of public health inquiry. Another study conducted by Wu et al., (2017) explained how income growth, urbanization, and globalization resulted in increased EID in China. Other work has been done by Alirol et al., (2011) explained that the increasing urbanization in the globalization era boosted the spread of EID.

The phenomenon of the spread of EIDs later also led to a study of EID mitigation. Several studies related to EID mitigation in the Globalization era then focus on the methods and also the impact of EID mitigation undertaken (see in Krilov, 2004; Smith, 2006; Abubakar et al., 2012; McCloskey and Heymann, 2020). Some of these studies then
explain the mitigation methods that have always been carried out and their medical impact in mitigating the spread of EID. An interesting study was conducted by McCloskey and Heymann (2020) who discussed how to prepare for global EID mitigation. Interestingly, this study describes the EID mitigation strategies that have been carried out globally, from the SARS outbreak to the Coronavirus Novel had made an improvement. In their research, it was concluded that it the potential for the rapid spread of infectious disease like this Coronavirus Outbreak can bring a substantial economic impact for the affected country. One forecaster estimates that the current coronavirus outbreak’s in China likely impact will range from a 0.8% cut to real GDP of China if the epidemic is controlled within 3 months, to a 1.9% cost to GDP if the epidemic lasts 9 months (Brown, 2020). Thus, it shows that the need of stronger understanding on what are the impact of EID mitigations on a country’s economic performance. Unfortunately, there are still not many studies that focus on the impact of EID mitigation on non-medical variables such as the economic condition of a country. This study is aimed at fulfilling this theoretical gap. By doing so, it will help us to understand their effectiveness to balance costs and benefits for similar EID outbreaks in the future.

2.2 Emerging Infectious Disease (EID)

At the beginning of the 21st century, the world faced threats that cause about one-quarter of deaths worldwide, causing at least 10 million deaths per year. The most impacted mainly country is a country in the tropical regions (Dye, 2014). This threat is the Emerging Infectious Diseases (EID) and brings a significant problem to the people of the world. In this research, we defined EID as the diseases that have recently appeared in a population or have already existed but are rapidly increasing in incidence or geographic range (Morse, 1995). Several examples of EID in various parts of the world that happened in the past and the old plague are with us still include HIV/AIDS; SARS, Ebola, Zika Virus, Chikungunya Virus (Fenollar & Medianikov, 2018), classic cholera in South America and Africa; cholera due to Vibrio cholera O139; Rift Valley fever; hantavirus pulmonary syndrome; Lyme disease; and hemolytic uremic syndrome, a foodborne infection caused by certain strains of Escherichia coli (Morse, 1995). EID can come and emerges from the various transmission. Several studies show that EID mostly originated zoonoses (see in Slingenbergh et al., 2004; Jones et al., 2008). Zoonoses dominate around 60.3% of EID events. From 1940 until 2004 has been reported 335 EID events globally. Based on the same study shows that the majority of pathogens involved in EID events are bacterial or rickettsia (54.3%) (Jones et al., 2008).

Operationally, what we mean as EID in this research is the new outbreak of Coronavirus in Wuhan-China. Officially, WHO named this new EID event as Coronavirus Diseases or COVID-19. This EID caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Technically, viruses are named based on their genetic structure. Naming the viruses helps researchers facilitating the development of the cure, diagnostic tests, and vaccines. Viruses are named by several researchers or virologists in the International Committee on Taxonomy of Viruses (ICTV) (www.who.int). On the contrary, diseases are officially named by WHO in the International Classification of Diseases (ICD). On 11 February 2020, ICTV announced “severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)” as the official name of the Coronavirus that caused the disease outbreak. ICTV choose this name because the virus is genetically linked to the Coronavirus responsible for the SARS outbreak in 2003. While related, the two viruses are different. On the same day, the ICD of WHO named the disease as COVID-19 (www.who.int). This COVID-19 originated from Wuhan Province in China and spread around the world and causing 87.137 people infected. Several countries outside China including Singapore, South Korea, Japan, Malaysia, Thailand, United States, several Europeans Countries, Algeria, Nigeria, Iran, Iraq, Afghanistan, Egypt, India, Nepal, Sri Lanka, Vietnam, Cambodia, Australia, and Indonesia are confirmed the COVID-19 within their countries (www.who.int).

2.3 EID Mitigation

In this study, the EID mitigation normatively referred to to the Guidelines for Infection prevention and control (IPC) during health care when a coronavirus (SARS-CoV-2) infection is suspected released by WHO (WHO, 2020). Based on these documents, it was found that the IPC strategies to prevent or limit transmission in healthcare settings includes ensuring triage, early recognition, and source control (isolating patients with suspected nCoV infection); applying standard precautions for all patients; implementing additional empiric precautions (droplets and contacts and, whenever applicable, airborne precautions) for suspected cases of nCoV infection; implementing administrative controls; and using environmental and engineering controls.

In the context of the Government of Indonesia, the EID mitigation referred to in this study refers to the Law of the Republic of Indonesia No. 36 of 2009 about Health. The Act explained that the Central Government, Regional Governments, and the community are parties that responsible for efforts to prevent, control and eradicate infectious diseases and their consequences. Thus, the EID mitigation efforts referred to in this study are all efforts that have been made by the Government of Indonesia, both at the central and regional levels related to COVID-19 disease prevention efforts. At the ASEAN countries, we look at the mitigation policy such as Stay at home order; Public gathering

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restrictions; School closings; Public event cancellations; Testing policy; Emergency healthcare investments/capita; Travel restrictions; Tests/1,000 people; and Contact tracing.

2.4 Non-Medical Variable
In this research, non-medical variables that we the proposed are economic variables such as Economic Growth; Gross Regional Domestic Product; and Inflation Rate.

3. Methods
The research is categorized as descriptive research, which aims to describe the EID Mitigation and non-Medical variable comprehensively in ASEAN Countries. This paper uses both quantitative and qualitative as sources of data. Qualitative data is mainly collected to describe various mitigation policies undertaken by ASEAN Countries, while quantitative data is used to portray economic performances.

4. Data Collection
Because the process of compiling this research is still in the period of the COVID-19 Pandemic, the data collection techniques in this study rely heavily on secondary data sources from the official COVID-19 mitigation website in each country. Other sources in the form of reputable news agency pages in each country were also the source of this research. Some data were also obtained through published data sources from the Government of each country. In addition, data from WHO, especially data related to the COVID-19 Pandemic in each country, is also a reference in this research.

5. Results and Discussion
In this study, a discussion related to how COVID-19 mitigation options impact non-medical aspects, the researchers started with a discussion regarding how each ASEAN country made COVID-19 mitigation options. From the analysis of the mitigation options taken by the 11 ASEAN countries, the researcher then categorizes the degree of mitigation taken into three categories. First, there are ASEAN countries that carry out a very strict COVID-19 mitigation policy, or researchers categorize it as a strict policy. Second, some countries have responded to the COVID-19 Pandemic by issuing mitigation policies on a moderate scale. Third, even though it is not too dominant, several Southeast Asia countries have adopted a loose COVID-19 mitigation policy. In addition, in sub-chapter 5, the researcher also discusses how ASEAN countries' economic performance during the initial period of the COVID-19 Pandemic or during the COVID-19 disaster mitigation period in each country.

5.1 Singapore
Singapore is one of the countries with stringent regulations on handling the Covid-19 Pandemic. Since January 2020, Singapore has implemented a stay at home policy and limits regular public activities. Singapore impose a fine of $10,000 and imprisonment for 6 months for people who do not comply with government regulations during the Covid-19 Pandemic (See Figure 1). In detail, the Singapore government states that every citizen of its country is obliged to remain at home under any circumstances. Even the Singapore government also regulates marriage, religious activities, and people in one house. The Government calls on each residence to always obey gathering restrictions in doing activities. The Government also requires a maximum of 10 people as guests for its citizens who are getting married during this Pandemic. Meanwhile, in terms of religious activities, the Singapore government only allows a maximum of 50 people in one activity (www.moh.gov.sg).

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<th>Table 1. GDP, GNI, and COVID-19 Comparison in Singapore</th>
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<td>65,233</td>
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Sources: worldbank.org; hdr.undp.org; covid19.who.int

In the education sector, the Singapore government provides regulations according to the age classification, whereby 18-year-old students can be enrolled in the university's online education system. Meanwhile, for those under 18 years of age, they are required to take online education in accordance with the direction of the local office. TraceTogether high adoption rate for fast and effective contact tracing. As of December 13, around 65% of Singaporeans are on the TraceTogether Program, and we are well on our way to reaching our target of around 70%
by the end of the year. The Singapore government has implemented a Covid-19 testing policy with a total of 33,000 people in one week. Until January 18, 2021, as many as 6,067,147 people have carried out the swab test held by the Government (www.moh.gov.sg).

In the context of economic performances, Singapore faces a strong impact due to the COVID-19 Pandemic and its strict mitigation policy. Based on a statement made by the Ministry of Trade and Industry of Singapore, this country faced the worst economic recession ever in 2020. Comparing to the year 2019, in 2020, Singapore GDP advance was estimated at -5.8%. As a country that relies on trade and services, the COVID-19 Pandemic and strict mitigation policies such as lock down the whole city shocked Singapore. Two of the most impacted economic sectors are the construction and services-providing industries. The construction sector recorded its fourth-straight quarter of contraction, but the 28.5% year-on-year contraction was better than the 3rd quarter’s. Moreover, Services-producing industries continued to shrink for the fourth-straight quarter in 2020, recording a 6.8% year-on-year contraction (www.cnbc.com 03/01/2021).

5.2 Malaysia
The Malaysian Government can be quite alert in responding to the Covid-19 Pandemic. This Government applies a strict COVID-19 mitigation Policy. Since March 18, 2020, the Malaysian Government has implemented a lockdown policy and restrictions on transportation both from Malaysia and entering the territory of Malaysia (See Figure 2). The Malaysian Government also released the #stayathome hashtags campaign. In addition, the Malaysian Government has also dared to impose prison sentences for government and non-government organizations that dare to violate this policy. In the education sector, the Malaysian Government has just closed all learning activities since November 9 2020 and will reopen on January 2021. During the closing of the learning process from elementary school to university level, the Malaysian Government only controls and monitors learning from home through its Ministry of Education.

Moreover, the Malaysian education ministry also appealed to all parents to bring home their children who lived in dormitories so that they could be easily controlled and avoid the spread of the Covid-19 virus in the education sector. Besides, Malaysian people are obliged to follow health protocols and contribute to the Covid-19 screening by the Malaysian Government through mass swab test activities. The Government has also determined that the local health office will supervise the vulnerable people. Meanwhile, for those who are confirmed positive but in good health, several directions will be given from the central Government. As of December 202, the Malaysian Government has increased the number of Covid-19 testing, from 70,000 people a day to 150,000 people a day. Based on several mitigation policies above, the researcher categorized Malaysia as a country with strict COVID-19 mitigation policy.

In the economic sector, during the COVID-19 Pandemic, Malaysia also faced worsen economic performance. Based on World Bank’s Malaysia Economic Monitor, released on June 2020, Malaysia’s economy is projected to contract by 3.1 percent in 2020. Malaysia also recorded the largest export of good and services decline since Global Financial Crisis in 2009. In Q1 2020, Malaysia’ export was declined by 7.1% (www.worldbank.org 24/06/2020).

5.3 Philippines
For the Philippine Government, handling the Covid -19 pandemic is still quite difficult to socialize. Some lower classes think that stay at home policy or even restrictions on public activities hinder their economy. Many Filipinos think that government policies related to the Covid-19 Pandemic are only a formality. Since the beginning of 2020, the Philippine Government has implemented a stay at home policy and a lockdown. This policy has an impact on the closure of several business sectors and industries. Due to the closing of business sectors, many people in the Metro Manila area become beggars on the street (www.npr.org). In line with the lockdown policy, the Philippine Government has also issued a policy of closing schools from primary to university levels. However, the Philippine Government did not implement an online school system at all but only closed the entire education sector until 2021. Through the Philippine education ministry, the Government has launched a distance school program that will be supported by the Philippine Education Department and a flexible education program that will be sponsored by the higher education commission. However, these two programs have not been implemented at all (thephilippinepost.com). Meanwhile, in the transportation sector, the Philippine Government issued a policy restricting entry visas for foreign nationals. Also, the Philippine Government closed all flights to Manila. The Government has also established the General Community

![Table 2. GDP, GNI, and COVID-19 Comparison in Malaysia](https://example.com/table2.png)

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<td>11.414</td>
<td>219.173</td>
<td>791</td>
<td>33,877</td>
<td>Strict</td>
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Sources: worldbank.org; hdr.undp.org; covid19.who.int
Quarantine as an official agency to deal with select quarantine for foreign nationals in the Philippines. Unfortunately, until January 2021, the Philippine Government has only conducted a swab test screening of 1,793 people from the entire population (www.voanews.com). Due to its non-strict mitigation policy, we categorized the Philippines as a moderate COVID-19 mitigation policy. The Philippines Government has made several mitigation policies, yet there is still no vigorous enforcement of those policies (See Figure 3).

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<tr>
<td>3,485</td>
<td>527.270</td>
<td>10.874</td>
<td>11,694</td>
<td>Moderate</td>
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Sources: worldbank.org; hdr.undp.org; covid19.who.int

Although applying moderate COVID-19 mitigation policies, the Philippines economy sinks into recession due to the worse quarterly economic contraction in Q3 2020. The Philippines GDP also dropped 16.5 % in the second quarter comparing to the year 2019. Thus, this country also booked the worst recession ever since 1981 during the Ferdinand Marcos dictatorship. It is the Philippine's first recession in three decades (www.thejakartapost.com 06/08/2020).

5.4 Brunei Darussalam

In the health policy issued by the Brunei Darussalam Ministry of Health in an effort to tackle the global Covid-19 Pandemic, there are several essential points that are the focus of the Government. The main thing that is emphasized by the Government is the stay at home policy and travel restrictions. In addition, the Brunei government also continues to focus its attention on the education sector. Since January 2020, the Brunei government has specifically closed all China flights. Even in February 2020, the Brunei government also restricted flights from Hong Kong and Beijing. As a further policy effort, in March 2020, the Brunei government officially issued a fine and imprisonment policy for every Bruneian who does not self-isolate for two weeks after traveling or foreign tourists who have just arrived in Brunei. The amount of the fine set by the Government is around $ 10,000 or the equivalent of a prison sentence of 6 months. This is also in line with the stay at home policy for all Brunei people (See Figure 4).

Whereas in education policy, the Brunei government prefers to close schools, from elementary education to university level. Through the Brunei Ministry of Education, the education system policy during a pandemic is in the form of online learning and weekly modules. Teachers are expected to be able to provide instruction to students online (headfoundation.org). The Government also prohibits all public activities, both activities related to education and religious activities. Moreover, to facilitate Covid-19 screening, the Government also provides free swab test services through the Raja - Wife Anak Saleha Hospital (RIPAS) or an independent swab test service through the health center at the cost of around $ 200 (thediplomat.com).

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<td>31,087</td>
<td>180</td>
<td>3</td>
<td>72,835</td>
<td>Strict</td>
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Sources: worldbank.org; hdr.undp.org; covid19.who.int

Brunei Darussalam can be categorized as a success story of COVID-19 mitigation policy in ASEAN Countries. This success story was due to its low impacted COVID-19 victims and cases in Brunei and the steady economic performances during the Pandemic. Until February 2021, only 181 confirmed COVID-19 cases and three confirmed deaths in Brunei. This low viral COVID-19 case resulted from the Brunei Government mitigation policies and Brunei's low population density. Moreover, the Brunei absolute monarchy political system also provides a broader control for Sultan to establish mitigation policy and strictly force their population to comply with the “Whole of Government” mitigation approach (www.eastasiaforum.org 28/01/2021). As a result of the low case of COVID-19 in Brunei, comparing to the other countries, Brunei able to restart its economy faster than ASEAN countries. Throughout 2020, Brunei citizens remained banned from international travel. But in July 2020, public economy activities, including restaurants, markets, and gyms, were permitted fully to operate, further public exhibitions also being allowed (www.eastasiaforum.org 28/01/2021). This situation caused Brunei to have a steadier economy than other ASEAN Countries during the COVID-19 Pandemic. In Q2 2020, Brunei’s GDP recorded a growth of 2.8 % year-on-year. In
Q3 2020, Brunei's economy grew slower at the rate of 0.5% year-on-year. Therefore, the Oil and Gas sector decreased by 1.3% due to the global oil price decrease during the Pandemic. (www.deps.gov.bn).

5.5 Laos
Several policies implemented in Laos relating to the handling of the Covid-19 Pandemic include, from 1-19 April 2020, everyone other than essential workers must stay at home. People are not allowed to travel between provinces (www.mpwt.gov.la, n.d.). Gatherings of more than 10 people are prohibited. Authorities have closed entertainment venues, such as karaoke bars and nightclubs, and suspended public New Year celebrations. Wedding ceremonies can occur if organizers comply with precautions, such as requiring wearing of facemasks and temperature registers for participants (www.rajahtannasia.com). As of March 2020, all schools and educational institutions - some 14,000, were closed in Laos as part of the Government's response to contain the outbreak. The Lao Government canceled the usual celebrations and ceremonies around Pi Mai which was a tough decision to make (www.globalpartnership.org). The Lao Government has set up seven quarantine centers, which are located within the province where official border points are located. Under the system, Local Governments will have the responsibility and accountability to ensure that these centers are functioning and provide adequate services to ensure returning workers remain in quarantine before returning home (See Figure 5).

Table 5. GDP, GNI, and COVID-19 Comparison in Laos

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<td>2,535</td>
<td>44</td>
<td>0</td>
<td>9,013</td>
<td>Strict</td>
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Sources: worldbank.org; hdr.undp.org; covid19.who.int

The World Bank has approved US $ 18 million in aid to Laos in response to the COVID-19 Pandemic. The Laos COVID-19 Response Project supports emergency preparedness and response activities including infection prevention and control, case detection and contact tracing, case management and risk communication. Laos has suspended issuance of visas on arrival, and no visas have been issued for the purpose of travel. Anyone arriving in Laos must be quarantined for 14 days at the designated location. Laos has conducted 91,181 COVID-19 tests since January 2020, with 41 of them positive. The Laos Ministry of Post and Telecommunications (MPT) announced, on April 29, 2020, the launch of a website and mobile application to prevent the spread and control of the COVID-19 Pandemic (www.worldbank.org). The economic impact of covid-19 resulted in an economic downturn affecting multiple channels including tourism, trade and investment, commodity prices, exchange rates and lower remittances. Laos economic growth in 2020 is projected to be between negative 1.8 and 1 percent (www.worldbank.org).

5.6 Cambodia
The Cambodian Government has several policies in dealing with covid-19, including during the Khmer New Year festival, from April 13 to 16, 2020, travel restrictions between provinces were imposed to limit the spread of Covid-19. Workers who miss workdays during holidays are ordered to stay at home and self-isolate for 14 days, starting April 20, 2020. The Cambodian Government began a series of actions on December 4, 2019 following the first community outbreak of Covid-19, canceling all unnecessary gatherings and gatherings, including weddings, religious events, parties, sports, and group exercises. Each meeting deemed important is limited to 20 people. All universities and schools, public and private, have closed. Businesses including karaoke, cinemas, clubs, bars, spas, massage facilities and gyms / gyms have closed. The malls and skyscrapers where the outbreak occurred have also closed before they were deemed fit to reopen (See Figure 6).

Table 6. GDP, GNI, and COVID-19 Comparison in Cambodia

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<td>1,643</td>
<td>466</td>
<td>0</td>
<td>4,822</td>
<td>Strict</td>
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</table>

Sources: worldbank.org; hdr.undp.org; covid19.who.int

The Cambodian Government is setting up a Provincial Rapid Response Team (PRC) who will receive refresher training to build their surveillance and contact tracing capacity. The Training of Trainers is led by MOH CDC with support from technical partners, including WHO. The training will be forwarded to the district PRC and puskesmas. The Cambodian Government has built strong partnerships with development partners in the health sector, namely the
World Bank. This partnership plan includes building and upgrading laboratories, isolation and care centers; provide essential medical and communication equipment; and ensuring the continuity of essential services, such as case management, and infection prevention and control (www.who.int). The Cambodian Government has also imposed travel restrictions and has tested more than 11,000 people for the latest outbreak, with 32 positive results. Cell phones have become useful tools for the contact tracing task force because their interrogation of the phones reveals where the patient has been or has gone based on the location of the app on the phone (www.nc.edc.gov). COVID-19 poses an economic threat to various aspects of Cambodia's development, with tourism, manufacturing for export and construction considered the sectors most affected. Overall, these sectors accounted for more than 70% of Cambodia's economic growth and around 39.5% of total employment in 2019 (opendevelopmentcambodia.net).

5.6 Thailand
Some of the policy steps that have been taken by the Government of Thailand in dealing with Covid-19 include the Thai government campaigning for people to stay at home to help reduce the spread of Covid-19. The Thai Government has also imposed enhanced national restrictions to curb the spread of the coronavirus disease (COVID-19) from 29 December 2020. The national Government has assigned color-coded risk classifications based on local disease activity in each province starting 29 December 2020. The system consists of four classifications. from "green" to "red" to increase the risk of infection, with high-risk zones subject to the most stringent restrictions (www.bangkokpost.com). The Covid-19 infection has forced many schools in Thailand to return to distance learning once again - whether they are ready or not. All schools in the 28 worst-affected provinces across the country have been ordered by the ministry to close until January 31, 2021 and switch to online learning due to the recent spike in Covid-19 cases. All events involving the public were also canceled (www.bangkokpost.com).

So far, 90% of the people who have tested positive are asymptomatic. Authorities plan to test 40,000 people, with efforts focused on migrant workers. Anyone entering Thailand must be quarantined at designated facilities for 14 days, and undergo multiple Covid-19 tests. The Thai Government has a long-term strategy to improve public health functions and has invested in field epidemiologists since 1980. During the epidemic, the laboratory capacity for RTPCR was increased and, as of 27 July 2020, 10,282 tests per million population were carried out. All international travelers are categorized as PUI and, regardless of nationality, are required to undergo an RT-PCR test on days 7 and 14 (www.theguardian.com). The Thai Government launched two mobile apps, ThaiChana and MorChana, designed to increase the authorities' efforts to control the highly contagious disease by tracking the movements of users (www.thaipbsworld.com). In March 2020, the Government approved an additional budget of THB 6302 million (US $ 203.3 million) to respond to the COVID19 outbreak. Subsequently, the budgets for fiscal 2020 (October 2019 - September 2020) for all government ministries were revised, with unspent budgets -, in particular, those allocated for meetings and other activities - being withdrawn, aggregated, re-prioritized and allocated, with priority given for activities related to COVID-19 (See Figure 1).

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<tr>
<td>7,807</td>
<td>20,454</td>
<td>79</td>
<td>19,737</td>
<td>Moderate</td>
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Table 7. GDP, GNI, and COVID-19 Comparison in Thailand

The economic impact of covid-19, among others, hit the automotive sector, which experienced a decline in the manufacturing performance index (MPI) in April 2020, by around 82% year on year, showing the lowest production since 1987. The other four main sectors that were negatively affected include petroleum products and petroleum, malt and malt beverages, air conditioning systems, and sugar. On the other hand, sectors that experienced an increase in MPI included concrete and cement, pharmaceuticals, electronic circuit boards, frozen seafood, and animal feed, where MPI increased from 10% to nearly 40% year on year. In September 2020, the World Bank predicts Thailand's economy will contract by 8.9% by the end of the year (www.worldbank.org).

5.7 Indonesia
During the COVID-19 Pandemic in Indonesia, there were several policies to reduce the spread. Some of these policies are stay at home order through the PSBBB policy. The guidelines for implementing the policy include dismissing schools and workplaces, restrictions on religious activities, restrictions on activities in public facilities, restrictions on socio-cultural activities, restrictions on transportation (www.kemlu.go.id). Currently, the PSSB policy has shifted to PPKM, which is autonomously regulated by the respective regional governments (www.kemenkopmk.go.id). On March 31, 2020, the President of the Republic of Indonesia issued Government Regulation in lieu of Law No.1 of
2020 (PERPPU 01/2020) concerning State Financial Policy and Financial System Stability for Handling the Corona Virus Disease 2019 (Covid-19) Pandemic and / or in the Context of Facing a Threat Endangering the National Economy and / or financial System Stability. The total budget for this is IDR 405.1 trillion (www.cnbcindonesia.com). Indonesia’s relatively weak score is due to a relatively small financial stimulus. The Government’s offering of income support is unlikely to help the nearly 60% of Indonesians who work in the informal sector (www.globalresponseindex.foreignpolicy.com)

Referring to the Government of Indonesia's policies above, we categorized Indonesia’s COVID-19 mitigation policy as a moderate category. This category is because the Indonesian Government is very concerned about the development of the spread of COVID-19. One of them is the fast response through the PSBB (Large-scale social restrictions) policy. The Government has formulated several policy stages in line with the PSBB. For example, PPKM (Enforcement of Restrictions on Community Activities), to PPKM on a micro-scale. However, Indonesian Government still cannot jeopardize economic sector. Economic growth is still one of the Government's considerations in imposing territorial restrictions. Some of the last policies, focus more on the implementation of health protocols in carrying out daily activities. The result is still the high spike of COVID-19 in Indonesia. In the context of economy, Indonesia Economic performance during the Pandemic recorded the worst economic growth since economic crisis in 1998. In the third quarter of 2020, Indonesia's economy was minus 3.49 percent, continuing the economic rate in the second quarter of 2020 which was recorded at minus 5.32 percent. In the fourth quarter, Indonesia's economic growth was still experiencing a recession. Economic growth in the Q4 was recorded at -2.19 percent year on year. Meanwhile, growth in the fourth quarter on a Q to Q basis contracted -0.42 percent (See Figure 8). Based on Badan Pusat Statistik (The Central Statistics Agency) of Indonesia, Indonesia's economic growth throughout 2020 was contracted 2.07 percent year on year.

5.8 Vietnam
Vietnam is among the countries that swiftly imposed strict travel restrictions in response to the Pandemic. Despite hammering the tourism industry, the travel restrictions have shown effectiveness in preventing travel-related infection cases and local spread of the disease. the capital of Vietnam still remained on lockdown until May 14 (www.ncbi.nlm.nih.gov). Vietnam has taken further concrete steps to combat the COVID-19. Specifically, the mandates set out in the Directive include: Everyone is required to stay at home, except for essential trips such as buying food, medicine, for emergency circumstances, going to work at factories and businesses that do not close or suspend their operations (www.lexology.com).

Vietnam has managed to contain the COVID-19 outbreak so far; its economy has been hurt in recent months. The country’s GDP was still growing at a 0.4 percent in the second quarter of 2020 (an exceptional rate during the Pandemic), but it was the worst performance recorded over the past 35 years (See Figure 9). The magnitude of the economic slowdown, a drop of almost seven percentage points, was equivalent to the one observed in most affected countries – except that Vietnam’s economy, like a healthier body, was in a better initial position to resist the Pandemic. Referring to the policies issued by the Vietnam government, the mitigation policy is in a strict category. This is due to the Government's stringent zoning policy. Apart from tracing contacts, Vietnam also carried out mass quarantine at suspected hotspots based on epidemiological evidence from time to time. This has been very successful in reducing the spread of COVID-19 in this country.
5.9 Myanmar
Myanmar has extended measures to stem the spread of coronavirus disease (COVID-19) through Jan. 31, 2021. Gatherings remain limited to less than 30 people nationwide, except for public servants, government-related meetings, food establishments, and essential businesses, among others. Officials continue to advise people to wear facemasks, practice personal hygiene, and maintain a physical distance of 2 meters (6.5 feet) in public. Additionally, a 0001-0400 curfew is ongoing in parts of the country, though officials may implement stricter curfews in some areas. Domestic commercial passenger flights resumed Dec. 16; passengers must undergo health screenings at airports before boarding. Authorities continue to impose stay-home orders in some localities as of Dec. 30. Exceptions to the movement controls are allowed for persons with emergency needs and individuals working in certain professions, such as in the medical, food, manufacturing, banking, and financial services fields. Government employees in affected areas must rotate between working on-site and at home every two weeks. Movement in the designated areas is restricted, with exemptions for people performing official duties or facing emergencies; people leaving the areas for other reasons must seek official permission. Vehicles cannot operate in or pass through the areas except if transporting people to and from work, among other exceptions.

Table 10. GDP, GNI, and COVID-19 Comparison in Myanmar

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<tr>
<td>1,408</td>
<td>140,664</td>
<td>3,160</td>
<td>6,881</td>
<td>Moderate</td>
</tr>
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Sources: worldbank.org; hdr.undp.org; covid19.who.int

Local governments in some areas may implement additional controls in addition to the nationwide measures. The central and local governments could expand quarantine requirements at short notice for other areas with COVID-19 outbreaks. Additionally, locals in some regions of Myanmar have opposed the Government's COVID-19 protocols; localized demonstrations against restrictions are possible. Myanmar's economy continues to suffer from the COVID-19 Pandemic, with growth expected to have slowed sharply to 1.7 percent in FY19 / 20, down from 6.8 percent in the previous year. As a result of COVID-19, the poverty rate could increase from 22.4 percent to 27 percent and return to pre-crisis levels at the earliest (See Figure 10). The first wave has forced many low households to adopt risky and unsustainable mechanisms to withstand shocks, including reducing daily food consumption (www.worldbank.org).

Referring to the policies issued by the Government, the mitigation policy falls into the moderate category. This is due to the policy of implementing the COVID-19 emergency in reducing the spread rate. However, the ongoing conflict between the Myanmar Military and Ethnic Minority Groups of Rohingya is one of the main concerns about the Government's seriousness in handling the Pandemic equally.

5.10 Timor-Leste
The COVID-19 policy in Timor Leste includes a work from home system for civil servants. Public and private activities and government services are closed, Social restrictions such as mass gathering are not allowed, All people return to their hometowns and stay temporarily, Social restrictions such as prohibiting mass gathering of more than 5 people, stopping public transportation, and closing schools to the limit undetermined time (www.antaranews.com).

The World Bank has approved a US $ 1 Million emergency project for Timor Leste to support Timor Leste in fighting COVID-19. This US $ 1 million money was used, among others, to Increase the capacity of government supervision in training health workers, Facilitate equitable distribution of medical equipment supplies and commodities, Financing safe transportation costs such as ambulances for COVID-19 patients in need, meanwhile the National Parliament has approved US $ 250 Million to fight COVID-19 (www.worldbank.org).

Table 11. GDP, GNI, and COVID-19 Comparison in Timor-Leste

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<tr>
<td>1,561</td>
<td>75</td>
<td>0</td>
<td>4,395</td>
<td>Strict</td>
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Sources: worldbank.org; hdr.undp.org; covid19.who.int

On 10 October 2020, the Ministry of Health (MoH) confirmed a new case of COVID-19. The total number of COVID-19 cases in the country now stands at 29. The patient was in quarantine upon arrival from Kuala Lumpur and admitted to the isolation and treatment facility at Vera Cruz. Investigation and contact tracing are being done by the
surveillance team as per the national guideline (www.uhcpartnership.net). Referring to the policies issued by the government, the mitigation policy is in the strict category. Timor Leste is one of the few countries in the world that has managed to contain COVID-19, responded quickly and effectively in dealing with the Pandemic from the start. This can be seen in the absence of cases of death until the end of December 2020, and the lowest number of active positive cases in ASEAN. In the past 21 years ago, Timor Leste has gone to great lengths to rebuild its economic sectors. However, after leaving Indonesia, the economy of Timor Leste is still a cause for concern. Timor Leste's economic growth has slumped further, and massive unemployment threatens this country. Based on a report from the United Nations Development Program (UNDP), Timor Leste is ranked 152 countries as the poorest country in the world out of 162 countries. Timor Leste's GDP per capita is estimated to reach US $ 2,356 by December 2020 (See Figure 11). Several sectors of the Timor Leste economy are still very dependent on Australia and Indonesia, mainly imported goods. It means during the Pandemic, Timor Leste still faced the peril of their economic ailment.

6. Conclusion
Based on the description of ASEAN countries' COVID-19 mitigation described above, the authors raise several conclusions in this study. First, the existence of the COVID-19 Pandemic turns out to be in general, all ASEAN countries are mitigating COVID-19 with the same policies. The policy refers to the Health protocol and the COVID-19 response protocol issued by WHO. Second, however, there are variations from the implementation side, especially in the government's assertiveness in each ASEAN countries to implement the COVID-19 mitigation protocol. This research categorized some countries as implementing strict COVID-19 mitigation, such as Singapore, Malaysia, Timor Leste, Brunei Darussalam, Vietnam, Cambodia, and Laos. In comparison, countries including Thailand, Indonesia, the Philippines, and Myanmar can be categorized as countries that implement moderate mitigation of COVID-19. Third, from this categorization, if we observed further, it is likely that the political system and the level of freedom that the country has very much influenced the degree of government assertiveness. Apart from Myanmar, most countries with a more open level of democracy tended to adopt looser mitigation policies. In the case of Myanmar, the researcher categorized it into the moderate category due to its uneven mitigation policy for COVID-19, especially related to the existence of the Rohingya ethnicity. Fourth, as for each country's economic performance during the Pandemic, almost all of them experienced an economic contraction. The economic contraction condition can be seen in countries that initially had relatively stable economic foundations, but after the COVID-19 Pandemic began to experience an economic downturn. There are also countries that have experienced poor economic performance before the COVID-19 Pandemic. So that the COVID-19 Pandemic did not automatically cause the economic contraction experienced during the COVID-19 Pandemic. In the future, further research is needed, quantitatively or qualitatively, to dissect further how the mitigation options taken in an EID are related to the economic performance experienced by a country.

References


Biographies

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