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# Saving Lives and Livelihoods in the COVID-19 Pandemic: What Have We Learned, Particularly from Asia?

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## Abstract

The key practices in successful government responses to the COVID-19 pandemic are (1) early border controls to contain the initial spread of the virus from abroad; (2) rapidly increasing the capacity of national health systems in terms of mobilizing staff, securing supplies (e.g., protective equipment and respiratory devices), and optimizing space (e.g., ensuring adequate numbers of acute and intensive care beds) to scale up testing-tracing-treating infrastructure; (3) promoting individual hygienic behavior such as social distancing and face mask use, which requires, respectively, active government enforcement of regulations against holding spreader events, and strong government intervention in the market to ensure adequate supplies; (4) fiscal measures to extend disaster relief to workers, businesses, and vulnerable populations; and (5) clear, concise, and consistent communications from leaders and authorities.

International cooperation must have a key role in the fight against the pandemic. So far, a global response to the crisis has been glaringly absent. Although it is understandable that countries prioritize their own needs, it must be understood that no country is safe until every other country is also safe. Global access to future vaccines, supplies, tests, and treatments is the only way to ensure the virus is truly eradicated within a country. The richer countries should establish a global fund to provide the poor countries with the needed vaccine, and to enhance their efforts in testing, tracing, and treating COVID-19 cases.

## I. The need for economic resilience to health shocks

The world first woke up to the seriousness of COVID-19 in January 2020; the disease is still marching relentlessly and getting deadlier across the world in February 2021 when this paper is sent for publication. The total number of deaths worldwide soared from 1 million in September 2020 to 2.5 million in February 2021. The number is expected to increase because large European countries like France, Italy, Spain, and Germany are bracing for another wave (the third wave) of infections, with the appearance of more easily transmitted variants of COVID-19.<sup>1</sup>

But COVID-19 is much more than a health crisis. The virus has unleashed socioeconomic effects that have devastated lives and livelihoods beyond just health, undoing decades of global progress in fighting poverty, disease, and violence in one year. The unprecedented extent of socioeconomic damage inflicted during peace time by COVID-19 is captured in Table 1, which compares the growth outcomes in the largest economies in North America, South America, Europe, Asia, and Africa during the global financial crisis (GFC) in 2008–09 and the COVID-19 pandemic in 2020. The GDP growth rates (in percent) in 2009 and 2020 were, respectively, –2.5 and –3.4 in the United States; –0.1 and –4.5 in Brazil; –2.9 and –9.0 in France; –5.4 and –9.2 in Japan; and –1.5 and –7.5 in South Africa.

Of these nine large economies in the five regions, there is only one case (Germany) where the GFC inflicted more material damage than COVID-19, and even then only marginally so, –5.7 percent in 2009 versus –5.4 percent in 2020. More tellingly, only one country (China) reported positive growth in 2020. As China is the only country that had the pandemic under control by July 2020, we can see the clear lesson that successful control of COVID-19 is necessary for production and investment to resume their normal courses.

Given the fundamental nature of the COVID-19 threat to life and to livelihoods, the Asian Economic Panel (AEP) mobilized its membership to study this negative public health shock and come up with recommendations on policy suggestions to strengthen economic resilience to future occurrences of this type of shock. This mobilization follows the AEP tradition of publishing special issues of the *Asian Economic Papers* (ASEP) devoted to understanding important economic developments and large negative shocks, for example, the Spring/Summer 2003 issue of ASEP analyzed the implications of China's full integration into the world economy upon its accession to the WTO in 2001; the Winter 2004 issue explored the impact of the SARS pandemic of 2002–03; the Winter 2009 issue on the GFC sparked by the collapse of Lehman Brothers in September 2008; the

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1 In the proof stage of this article, France announced a month-long lockdown of Paris on 18 March 2021.

**Table 1. Comparing the Output Consequences of the GFC and the COVID-19 pandemic**

	GFC started in September 2008			COVID-19 pandemic started in December 2019	
	2007	2008	2009	2019	2020 (estimate)
USA	1.9	-0.1	-2.5	2.2	-3.4
Argentina	9.0	4.1	-5.9	-2.1	-10.4
Brazil	6.1	2.1	-0.1	1.4	-4.5
France	2.4	0.3	-2.9	1.5	-9.0
Germany	3.0	1.0	-5.7	0.8	-5.4
China	14.3	9.7	9.4	6.0	2.3
Japan	1.7	-1.1	-5.4	0.3	-9.2
Nigeria	7.3	7.2	8.3	2.2	-3.2
South Africa	5.4	3.2	-1.5	0.2	-7.5

*Source:* 2007–2009 data are from International Monetary Fund, IMF (2020).

2019–2020 data are from International Monetary Fund, IMF (2021).

Winter/Spring 2012 issue on the middle-income trap phenomenon; and the Fall 2019 issue on the U.S.–China trade war.

This time, ASEP is devoting two issues, released simultaneously, to examine the COVID-19 phenomenon. These two issues of ASEP place special emphasis on the experiences of the Asian economies because the death rates in East and Southeast Asia pale in comparison with those in the largest European economies and in the United States. To this end, this special edition has convened two groups of papers.

The first group of papers are analyses conducted at the global level to enable us to examine the pandemic's impact on Asian economies vis-à-vis other economies, such as an East–West comparison of policy responses (Sachs); an evaluation of the global economic costs of COVID-19 under different scenarios (McKibbin and Fernando); the pandemic's effects on international trade (Hayakawa and Mukunoki) and financial markets (Azis, Virananda, and Estiko); and changes to our lifestyle and work behaviors (Okubo, Inoue, and Sekijima).

The second group of papers are in-depth analyses of select economies: China (Tian; and Li, Lu, and Zheng), Japan (Konishi, Saito, Ishikawa, Kanai, and Igei), Malaysia (Khalid), the Philippines (Monsod and Gochoco-Bautista), South Korea (Lim, Hong, Mou, and Cheong), Taiwan (Kuo), and Thailand (Tangkitvanich). We have the largely successful stories of China, Japan, Taiwan, Thailand, and South Korea; and accounts of policy miscalculations, missteps, and mistakes in other economies in the continent like the Philippines and Malaysia.

## 2. False prophets, and naïve linear projection of recent history

Any discussion over government responses to the pandemic almost always involves debate over whether lockdowns are the appropriate response to combating and containing

the virus. Critics of lockdowns hold that stay-at-home orders wield more devastating consequences than the COVID-19 virus itself. The Great Barrington Declaration typified this line of thought.<sup>2</sup> This proposal argued that lockdown policies would lower childhood vaccination rates, reduce screening for diseases like cancer, and hurt mental health—leading to greater excess mortality than without a lockdown. If government action is needed at all, it should be limited to those most at risk of death from COVID-19, for example, the elderly and people who are immunologically impaired. The uncompromising recommendation is that those with “minimal risk of death”—the majority of the population—should be encouraged to go about their lives normally and build herd immunity to the virus through natural infection.

The best example of this attitude among public health officers is that of Sweden’s chief epidemiologist, Anders Tegnell. Sweden refrained from imposing a lockdown and instead chose to provide its citizens with voluntary social distancing guidelines at its bars, restaurants, parks, public transportation, and schools; and even kept its national borders unconditionally open. This Swedish public health response was starkly different from the other Nordic countries (Denmark,<sup>3</sup> Norway, and Finland), as well as different from the overwhelmingly majority of Western European economies. When it was pointed out to Tegnell in March 2020 that keeping schools open would risk children infecting the 10 percent of Swedish population that is aged, his e-mailed response was, “10 percent might be worth it?” (Bjorklund 2020).

Sentiments like that of Tegnell and the Great Barrington Declaration were met with strong responses by most members of the medical community. For example, Alwan et al. (2020), in a letter to the leading medical journal, *Lancet*, called the herd immunity proposal “a dangerous fallacy unsupported by the scientific evidence.” If put into practice, the letter warned, the approach would not end the COVID-19 pandemic but would instead result in recurrent epidemics and impose even greater burdens on the economy and health care system. Furthermore, they argued, although lockdowns were disruptive on mental and physical health, and the economy, they were essential to buy time to reduce mortality and establish pandemic response systems. “The evidence is very clear: controlling community spread of COVID-19 is the best way to protect our societies and economies until safe and effective vaccines and therapeutics arrive within the coming months. We cannot afford distractions that undermine an effective response; it is essential that we act urgently based on the evidence.”<sup>4</sup>

2 The Great Barrington Declaration. 4 October 2020; Available at <https://gbdeclaration.org>.

3 Denmark even violated the terms of its Schengen membership by banning entry of non-resident foreigners for a month, starting 14 March 2020 (Nikel 2020).

4 Tedros Adhanom, the Director-General of the World Health Organization, pointed out that “never in the history of public health has herd immunity been used as a strategy for responding to an outbreak, let alone a pandemic” (BBC 2020b). And Anthony Fauci, head of the White House

It is interesting to note that the herd immunity option was also the preferred response of UK Prime Minister Boris Johnson and U.S. President Donald Trump to the outbreak of COVID-19.<sup>5</sup> We can rule out that the reason that they did so was because it was the politically expedient position to take. If political expediency is the primary determinant of a leader's policy choice, then the fact that the overwhelming majority of democratically elected leaders in Western Europe chose lockdowns instead would mean that lockdowns, not herd immunity (i.e., "look busy" not "be passive"), are the more politically expedient choice.<sup>6</sup>

The likely explanation for why Johnson, Trump, and the signatories of the Great Barrington Declaration rejected the need for compulsory mask wearing, social distancing, school closing, and border controls is that they were gambling on the COVID-19 pandemic to be in line with recent experiences with other pandemics, the naive projection of which would suggest that COVID-19 was unlikely to have much impact on the richest countries.

Table 2 summarizes the health impact of four past pandemics in the 1918–2018 period: Spanish flu, February 1918 to April 1920; severely acute respiratory syndrome (SARS), November 2002 to July 2003; swine flu, January 2009 to August 2010; and Middle East respiratory syndrome (MERS), April 2012 to present. These four pandemics could be put into two groups according to the type of virus that them: the Spanish flu and swine flu were caused by an influenza virus, while SARS and MERS were caused by a coronavirus.<sup>7</sup>

A key feature revealed in Table 2 is that the influenza virus had been much more deadly than the coronavirus. The number of global deaths and U.S. deaths were, respectively, 50 million and 675,000 for the Spanish flu; and 284,000 and 12,649 for the swine flu. The U.S. share of deaths in these two virus groups were 1.35 percent and 4.45 percent, respectively. For the two previous coronaviruses (SARS and MERS), the number of U.S. deaths was zero in both cases; and the global number of deaths did not exceed 1,000 in either case. And because it has been known since January 2020 that this latest respiratory disease is caused

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Coronavirus Task Force, called the Declaration "ridiculous," "total nonsense," and "very dangerous," saying that it would lead to a larger number of hospitalizations and avoidable deaths (Higgins-Dunn 2020).

- 5 Johnson had told the Italian Prime Minister in March 2020 that the UK was going for the herd immunity solution (Payne 2020). And Trump had predicted in early February 2020 that the COVID-19 disease would be gone in April 2020 (Bump 2020).
- 6 We can also rule out the reason for Trump's choice being that he was better informed or more perspicacious than the leaders of Western Europe. Trump's level of (self-proclaimed) genius-ness was plainly revealed on 24 April 2020, when he suggested that injection of disinfectant and exposure to ultraviolet light be the treatment for COVID-19 (BBC 2020a).
- 7 Pitt (2020) is an excellent succinct exposition of the differences between the influenza virus and the coronavirus. Also see Centers for Disease Control (2020), and Hewings-Martin (2020).

**Table 2. Health consequences of selected pandemics**

Disease	Period	Number of cases		Number of deaths	
		Global	USA	Global	USA
<i>Respiratory pandemic caused by influenza virus</i>					
Spanish flu (H1N1)	February 1918 to April 1920	1/3 of global population	na	50 million	675,000
Swine flu (H1N1/09)	January 2009 to August 2010	0.7 billion to 1.4 billion	60.8 million	284,000	12,649
<i>Respiratory pandemic caused by coronavirus</i>					
Severely acute respiratory syndrome (SARS-CoV)	November 2002 to July 2003	8,439	73	812 (WHO) 774 (CDC)	0 0
Middle East respiratory syndrome (MERS-CoV)	April 2012 to present (December 2020)	2,566	2	882 (up to December 2020)	0
COVID-19 (SARS-CoV-2)	November 2019 to present (26-2-2021)	118.8 million	29.3 million	2.5 million	0.5 million
		<i>(2nd and 3rd highest are India and Brazil at 11.3 million each)</i>			

Sources: Center for Disease Control, CDC (2019a and 2019b), Johns Hopkins University (2021), World Health Organization, WHO (2020 and 2021).

by a coronavirus, it was therefore tempting in early 2020 to guess that history would repeat itself, and that the COVID-19 infection would not be a big killer. Herein lies the empirical basis of the willingness of Johnson, Trump, and Tegnell to gamble on the herd immunity solution to the COVID-19 pandemic.

It turns out, however, that this time, the deadliness of the COVID-19 type of coronavirus greatly exceeded that of SARS and MERS. By the end of February 2021, 2.5 million had been killed worldwide, of which 0.5 million deaths were in the United States alone. The United States accounted for 20 percent of global casualties, a proportion that far exceeded the 1.35 percent in the Spanish flu and the 4.35 percent in the swine flu.

The high proportion of global deaths in the United States reflects the extreme concentration of the occurrence of the disease in that country. At the end of February 2020, the United States accounted for 29.3 million of the 118.8 million cases worldwide, with the U.S. number of cases being substantially greater than the sum of the number of cases in India and Brazil, which had the second and third highest number of cases, at 11.3 million each.

In sum, 2020 COVID-19 has proved itself to be deadly different from the earlier 2002 SARS and 2012 MERS, rendering reckless leaders like Trump humbled humbugs. To the rest of us, this event is a timely reminder that the past is often a very poor guide to the future.

### 3. Factors that matter

Before we summarize and integrate the formal analyses of the cross-country comparisons and the in-depth country experiences with COVID-19, we look at some key variables of 23

**Table 3. Public health preparedness, death rate, and growth in 2020**

Economies	Preparedness ranking in 2019	Deaths/100k of population, 28 Feb 2021	GDP growth in 2020 (est)
United States	1	156.49	-3.4
United Kingdom	2	184.90	-10.0
Australia	4	3.64	-2.9
Thailand	6	0.12	-6.6
Sweden	7	125.95	-2.8
Denmark	8	40.69	-3.3
South Korea	9	3.10	-1.0
Finland	10	13.45	-2.9
France	11	128.00	-9.0
Germany	14	84.52	-5.4
Spain	15	147.98	-11.1
Norway	16	11.70	-0.8
Malaysia	18	3.56	-1.1
Belgium	19	193.06	-6.4
Japan	21	6.21	-5.1
Indonesia	30	13.44	-1.9
New Zealand	35	0.53	-2.2
Vietnam	50	0.04	2.9
China	51	0.35	2.3
Philippines	53	11.52	-9.6
India	57	11.16	-8.0
Russia	63	58.37	-3.6
Taiwan	na	0.04	3.0

*Note:* Estimates for 2020 GDP growth: IMF (2021) for Australia, China, France, Germany, India, Indonesia, Japan, Malaysia, the Philippines, Russia, Spain, Thailand, UK and the United States / Kim (2021) for South Korea / Cheng et al. (2021) for Taiwan / Stats NZ (2020) for New Zealand / *countryeconomy.com* (2021) for remaining.

economies to see if there are obvious patterns. Our sample of 23 economies consists of 10 Eastern Asian economies,<sup>8</sup> 9 Western European economies,<sup>9</sup> Russia, the United States, Australia, and New Zealand.<sup>10</sup> We begin by using the Global Health Security (GHS) index<sup>11</sup> in Table 3; this arranges these 23 economies according to their GHS index rank, and reports the death rate (number of deaths per 100,000 of population) and the estimated GDP growth rate in 2020 for each economy.

Table 3 shows the surprising absence of a clear negative correlation between the degree of public health preparedness in 2019 and the COVID-19 death rate in 2020. The United States

8 China, India, Indonesia, Japan, Malaysia, the Philippines, South Korea, Taiwan, Thailand, and Vietnam.

9 Belgium, Denmark, Finland, France, Germany, Norway, Spain, Sweden, and the UK.

10 The analyst's decision about which data series to examine is inevitably based at least on an implicit (often vaguely formed) hypothesis about causality and/or the transmission mechanism. The examination of data is arbitrary only when the analyst is totally at sea about how to think about the problem and is looking randomly at data series that are available.

11 The GHS index was constructed by the Johns Hopkins Center for Healthy Security to rank the degree of preparedness by 195 countries in 2019 to handle negative public health shocks like the emergence and spread of pathogens (enabled by factors like climate change, urbanization, and international mass displacement of people), and accidental or deliberate release of a deadly engineered pathogen.

and the United Kingdom are ranked first and second in the GHS index and yet they have among the highest death rates, 184.9 and 156.5 respectively, compared with the lowest ranked economies, India (no. 57) and Russia (no. 63), which had substantially lower death rates, 11.2 and 58.4, respectively. This surprising feature in Table 3 is actually quite a general phenomenon in that all six economies that had death rates above 100 are in the top 19 rank of the 195 economies—that is, these highest-death economies are in the top 10 percent of economies in terms of preparedness for public health emergencies.

Two factors suggest themselves to be relevant here. The first factor is “wrong policies versus right policies.” Although the United States, the UK, and Sweden (with GHS rank of 1, 2, and 7, respectively) had effective responses in place to be implemented, these responses were either not implemented (Sweden), implemented late (UK), or implemented badly and half-heartedly (United States).

The second factor is that geography matters in COVID-19 outcomes. Five of the six economies with death rates over 100 are in Western Europe and four of them are Schengen countries. Eight economies have death rates under 4, with six of them in East and South-east Asia (Taiwan, Vietnam, China, Thailand, South Korea, and Malaysia) and the other two in Australasia (New Zealand and Australia). There is a Europe–Asia difference in fatality rates.

Table 4 reorganizes the data by regions, and the following two factors for why there is a geographical difference in death rates seem reasonable.

### **Age structure of population**

One general difference between Europe and Asia is that the proportion of elderly is substantially higher in the former; and it is known that COVID-19 is deadlier for the elderly. Finland and Norway have the lowest death rates (13.45 and 11.70, respectively) in Western Europe, and these rates are at the high end of Asian death rates—India (11.16), Indonesia (13.44), and the Philippines (11.52), which are all young societies—even though Finland and Norway are much higher ranked in the GHS index. The importance of the age structure factor as an explanatory factor is given more credence by the fact that (1) Japan, the most aged society in Northeast Asia, also has the highest death rate; and (2) Russia, an aged society, has a death rate of 58, which is within the range of European fatality rates.

### **Degree of geographical isolation that can be achieved**

The low-population Nordic countries of Denmark, Finland, and Norway, which are located on the northern cold fringe of Western Europe, have the lowest death rates in Western Europe. Russia, at the far fringe of Europe, has a death rate that is closer to Denmark than to any of the non-Nordic Western European countries that together contain most of the Schengen area population. The effectiveness of reducing infection and death by the



**Table 4. A geographical perspective on COVID-19 pandemic**

Economies	Preparedness ranking in 2019 (out of 195)	Deaths/100k of population (28 Feb 2021)	GDP growth in 2020 (%), estimate)
Nordic countries			
Denmark	8	40.69	-3.3
Finland	10	13.45	-2.9
Norway	16	11.70	-0.8
Sweden	7	125.95	-2.8
Non-Nordic Western Europe			
Belgium	19	193.06	-6.4
France	11	128.00	-9.0
Germany	14	84.52	-5.4
Spain	15	147.98	-11.1
United Kingdom	2	184.90	-10.0
Northeast Asia			
China	51	0.35	2.3
Japan	21	6.21	-5.1
South Korea	9	3.10	-1.0
Taiwan	na	0.04	3.0
South and Southeast Asia			
India	57	11.16	-8.0
Indonesia	30	13.44	-1.9
Malaysia	18	3.56	-1.1
Philippines	53	11.52	-9.6
Thailand	6	0.12	-6.6
Vietnam	50	0.04	2.9
Others			
Australia	4	3.64	-2.9
New Zealand	35	0.53	-2.2
Russia	63	58.37	-3.6
United States	1	156.49	-3.4

Source: See Table 3.

successful control of a country's borders is supported by the low death rates in faraway Australia and New Zealand, which both have low population and tight controls on entry and stringent border health-screening and quarantine.

The geographical partition in Table 4 also allows us to identify more clearly the contribution of "wrong policies" in creating huge disparities in the death rate. The United States is separated from Europe by the large Atlantic Ocean, and from Asia by the even larger Pacific Ocean; and its border with Mexico in the Trump period was a de facto militarized zone (e.g., heavily guarded with night-vision cameras and intensively patrolled by surveillance drones, backed up by rapid-response immigration teams), complete with a high and thick border wall. Yet, until Joseph Biden took over in January 2021, there was no health screening at the entry points, and there were no quarantine requirements. Geographical isolation was possible to achieve, but barriers to entry into the United States were ramped up only for mainland Chinese, poor Latin Americans, and select groups of Muslims.

The age structure of the U.S. population would have also helped to lower the death rate because it is not an aged society like Western Europe, Japan, and Russia, and is also not a rapidly aging society like China, South Korea, and Taiwan. Only Belgium has a death rate (193) that is higher than that of the United States (156). In contrast, the geographically

isolated and non-aging societies of Australia and New Zealand have deaths rates of only 3.6 and 0.5, respectively.

Until Trump left office in January 2021, he and the conservative governors of several large states maintained their refusal to promote mask wearing and social distancing. Trump devoted his time, instead, to riling up xenophobic emotions. He escalated his racist rhetoric with remarks such as “China Virus” and “Kung Flu,”<sup>12</sup> and he pulled the United States out of the World Health Organization (WHO) in the midst of the deadly COVID-19 pandemic after claiming that WHO had turned a blind eye to malicious behavior by China. This non-science-based public health position of the Trump administration reflected Trump’s political instinct and the tribalist nature of Trump’s political movement.

Table 4 also allows us to see the human and material costs of different public policy responses to COVID-19, taking China and Sweden as polar cases. The death rate was 0.35 in China and 125.95 in Sweden; and their GDP growth rates in 2020 were 2.3 percent and –2.8 percent, respectively.

China adopted lockdowns in its strictest sense, deploying a stringent formula of immediate lockdowns and mass testing even at the first signs of infection. There is perhaps no stronger example of this than Wuhan, the initial epicenter of the pandemic, where a complete lockdown of the population was put in place from 23 January to 8 April. The Chinese government also decreased population mobility nationwide—for example, extending the duration of the Lunar New Year holiday break, and closing schools, museums, and provincial public transportation. A nationwide public information campaign was also launched to promote social distancing and hygienic measures, and to discourage the visiting of relatives during the Lunar New Year period.

Sweden, on the other hand, only provided voluntary social distancing guidelines at bars, restaurants, parks, public transportation, and schools. At the height of the coronavirus outbreak in spring, Sweden’s death rate was not only one of the highest in Europe, it was also on par with the United States. However, the daily number of new infections in Sweden started declining rapidly in late June, bringing the daily number of deaths from COVID-19 to just three daily deaths in early September compared with a peak of 115 in April. When the number of new cases per capita in Sweden averaged lower than Norway and Denmark, state epidemiologist Tegnell proclaimed that “Sweden has gone from being one of the countries in Europe with the most spread to one that has some of the fewest cases in Europe” (Erdbrink 2020).

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<sup>12</sup> Vasquez and Klein (2020) and Lee (2020). Biden banned this racialization of COVID-19 when he came into office (*The Star Democrat* 2021).

But the situation reversed after early September. The debate on the wisdom of the herd immunity solution to the COVID-19 challenge was finally settled on 16 November 2020 when Prime Minister Stefan Lofven told the Swedish public: “Don’t go to the gym, don’t go the library, don’t have dinner out, don’t have parties—cancel!”; followed by the announcement of strict social distancing measures beginning the week after (Schaverien 2020). The next day, King Carl Gustaf posted a royal message on Instagram instructing his subjects to “Hold on tight!” (ibid.). However, Tegnell insisted in a BBC interview that it is “not yet possible to say which country has right strategy” (BBC 2020c).

A month later, in Gustaf’s annual TV interview, he said: “I think we have failed. We have a large number who have died and that is terrible.” Lofven agreed: “Of course the fact that so many have died can’t be considered as anything other than a failure” (BBC 2020c). It seems likely that Tegnell is now one of the few defenders of herd immunity left.

As China is very different from Sweden, the comparison of outcomes is rightly subject to disputes on many dimensions. A comparison among the Nordic countries in Table 4 would come closest to a controlled experiment, given their similarities in economic structure, physical geography, and socioeconomic framework. The unfortunate but unsurprising outcome is that Sweden has a significantly higher death rate than its Nordic neighbors, which had all implemented early lockdowns of their economies. The death rate (up through the end of February 2021) was 125.95 6 in Sweden, 40.69 in Denmark, 13.45 in Finland, and 11.70 in Norway.

The surprising outcome from the comparison of Nordic countries was on the economic front. The 2020 GDP growth rate for Sweden is expected to be  $-2.8$  percent, a bit better than Denmark’s ( $-3.3$  percent), almost the same as Finland’s ( $-2.9$  percent), but markedly worse than Norway’s ( $-0.8$  percent). In short, Sweden allowed many more citizens to die without bringing much more economic benefits to the survivors. It was magical thinking to believe that COVID-19 could be allowed to run its course unimpeded to attain the natural nirvana state of herd immunity in the community.

#### 4. The proof in the pudding

“Comparing COVID-19 Control in the Asia-Pacific and North-Atlantic Regions” by Jeffrey D. Sachs in this issue quantifies the relative importance of the key factors in determining the virus’ daily reproduction number ( $R$ ) in 25 economies during the first wave of infection.  $R$  tells us the average number of infections that is transmitted by an infectious individual. If  $R$  is less than 1, then the infectious individual would infect less than one other individual on average, meaning the number of active cases in the population would decline over time.

But if  $R$  is larger than 1, each infected individual will, on average, infect more than one person, hence causing the epidemic to expand.

Sachs' main finding is that the Asia-Pacific Region—which Sachs defines as mainland China, Hong Kong, Taiwan, Japan, Korea, Australia, New Zealand, and the ASEAN countries—has effectively controlled the epidemic in comparison with the North Atlantic region, which includes North America and Western Europe. Between the two regions, the Asia-Pacific region reported fewer confirmed cases and deaths per million, with a lower disruption of economic activity.

Sachs also evaluates the seven public health approaches to control and contain the virus, to be used in combination:

1. stopping the entry of infected individuals from other countries;
2. promoting individual responsibility in avoiding infection through hygienic practices such as wearing face masks and physical distancing;
3. isolating infected individuals to keep them from infecting others;
4. protecting vulnerable groups, especially the elderly, from infection;
5. protecting residents of congregate settings such as care centers, prisons, and worker hostels;
6. shutting down schools and public events (sports, religious, entertainment); and
7. shutting down workplaces and order non-essential workers to shelter at home.

He notes that strategies (1), (2), and (3) are low-cost measures. In contrast, the lockdowns espoused in strategies (6) and (7) carry a tremendous cost to the economy.

According to Sachs' regression results, the variable with the largest magnitude by far is hygienic behavior, which includes four distinct practices: the wearing of face masks, avoiding crowded places, improving personal hygiene, and avoiding touching objects in public. According to Sachs' estimate, varying hygienic behavior from 0 to 1 results in a reduction of  $R$  by 2.0. As the frequent point estimate of COVID-19's  $R$  reproduction number is 2.4, universal hygienic practices would thus reduce  $R$  to 0.4, which is more than enough to contain the virus.

The indicator with the next largest impact on the regression is the economic shutdown indicator. However, a full lockdown, meaning a 100 percent drop in visits to economic sites, would only result in a modest reduction of the  $R$  reproduction number of the virus. Sachs argues that this underscores that lockdowns are "at best a stop-gap policy until more efficient and powerful public health measures—hygiene and isolating—can be scaled up."

Sachs found that when it comes to deploying the low-cost public health measures of early restrictions on international travel, widespread use of face masks and physical distancing, and testing-isolating-and-tracing, the Asia-Pacific region outperformed the North Atlantic region and were less reliant on costly lockdowns.

This difference translated to the Asia-Pacific region's performance in terms of containing the virus. In contrast to North Atlantic countries, several Asian-Pacific economies showed "superlative results" in suppressing the virus and keeping death rates per million very low, which include Australia, Cambodia, China, Hong Kong, Japan, Korea, Lao PDR, New Zealand, Taiwan, and Vietnam.

Sachs' analysis of the Asia-Pacific experience provides evidence that the pandemic can be contained through public health means such as improved hygiene, face mask wearing, and isolation of infectious individuals, instead of a primary reliance on lockdowns.

In response to Sachs' findings, Pengfei Li, Ming Lu, and Yilin Zheng, in "A Note on the Role of Cultural, Institutional, and Urbanization Features in the COVID-19 Pandemic," contend that hygienic behavior like the willingness to wear masks is "related to cultural traditions." According to the authors, "traditional Confucian culture emphasizes the achievement of social stability via individual internalization of social welfare," which explains why "governments throughout much of East Asia adopted comprehensive lockdown policies during the initial outbreak of COVID-19 because they judged their citizens to be willing to comply." In contrast, North Atlantic countries tend to prioritize individual freedom, thus its governments were "less inclined" to impose lockdowns in containing the pandemic.

James K. Galbraith, in his comment on Sachs' paper, cautions that while the Asia-Pacific region has indeed outperformed the North Atlantic region in terms of containing the virus, "one should be wary of drawing cultural inferences." Galbraith highlights that Japan's performance in reducing R is not much better than the United States or Canada, and the Philippines, Indonesia, and India have some of the highest cases in the world despite hailing from the Asia-Pacific region. On the other hand, Denmark, Norway, and Finland are doing well despite opting for lockdowns instead of low-cost public health means, as we discussed above. To borrow Galbraith's words, much remains to be explored.

## 5. Lives versus livelihoods

The IMF's World Economic Outlook in October 2020 reports that lockdowns can substantially lower infections (e.g., a stringent lockdown leads to a reduction in cumulated infections of about 40 percent after 30 days). Countries that deployed lockdowns early when the number of cases were still low reported considerably fewer infections compared with

countries that introduced lockdowns when cases were already high. Besides the early adoption of lockdowns, the lockdowns must be strict enough to contain infections, suggesting therefore that stringent and short-lived lockdowns would be superior to mild but prolonged measures.

The IMF's analysis also confirmed what many already knew, that lockdowns have a considerable negative effect on economic activity. Interestingly, it found that the recession was also largely driven by people voluntarily reducing their social interactions out of fear of contracting the virus. In fact, the analysis indicates that voluntary social distancing played a near comparable role with lockdowns in the contraction of economic activity. The crucial ramification is that lifting lockdowns would unlikely result in a rise in economic activity as voluntary social distancing would still persist, especially when infection numbers are still high.<sup>13</sup>

What is becoming clearer to see from the emerging evidence is that the oft-touted assumption that countries face a trade-off between health and the economy in their responses to COVID-19 is perhaps unfounded. This initial assumption has been revealed to be a false dilemma. Table 3 showed that the three economies with the lowest death rates—Taiwan (0.04), Vietnam (0.04), and China (0.35)—were the only ones with positive GDP growth rates in 2020, suggesting that economies that had managed to control the pandemic had also generally protected their economy. This relationship is a weak one, however. The next group of low-fatality economies—Thailand (0.12) and New Zealand (0.53)—had negative growth rates but there was not a monotonic relationship between death rate and GDP growth rate, as the 2020 GDP growth rate was  $-6.6$  percent for Thailand and  $-2.2$  percent for New Zealand. To quote Bhanupong Nidhiprabha, there is simply “no paradox between the low death rate caused by COVID-19 and the economic hardships caused by COVID-19 because there is no determinate relationship between these two variables” (“Comment on ‘The Paradox of Thailand’s Success in Controlling COVID-19’ by Poum Tangkitvanich”).

## 6. Asian experiences

The evidence just discussed shows that it is possible for countries to achieve good outcomes on both health and economic dimensions in response to COVID-19. But what were the precise strategies taken by these countries and are there lessons to be learned by the

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13 Analyzing location data from about 45 million mobile devices, Alcott et al. (2020) confirmed that official stay-at-home orders had very little to do with the huge drop of economic mobility in the United States. Chetty et al. (2020) found from private sector data that high-income households sharply reduced spending in sectors that require physical interaction due to health concerns and that state-ordered reopening of economies have had only small impacts on spending and employment.

rest of the world? Where do Asian economies fall in the divide between lockdown or no lockdown?

The experience of Taiwan, detailed by Chun-Chien Kuo in “COVID-19 in Taiwan: Economic Impacts and Lessons Learned,” is particularly worth examining as Taiwan finds itself with the stunning record of actually recording a positive 1.59 percent GDP growth in the first quarter of 2020, while maintaining one of the lowest death rates in the world without the use of lockdowns. Kuo’s analysis reveals that much of its economic rebound can be attributed to a rise in external demand for its information and communications technology and semiconductor products. The author asserts that this is more the exception than the norm, stating that Taiwan’s economic success in this specific area seems more the result of being situated in larger global economic contexts, instead of the government’s relief package.

If Kuo is hesitant to credit the government’s actions for Taiwan’s bounce in its information and communications technology and semiconductor exports, any reluctance dissipates in his exposition of Taiwan’s implementation of its national “precision-prevention” strategy, which he praises for the minimal health and economic impacts to the society. Taiwan’s experience of SARS led to substantial improvements in its public health system, of which the existence of a national health insurance program with 99 percent population coverage played a crucial role in ensuring that all active cases, even foreigners, received proper medical care. A key success factor in the Taiwanese response was how early the government responded to the outbreak, with the creation of a central command center merely weeks after the first cases of an unknown pneumonia were notified to the WHO by China. Although it did not adopt a lockdown, Taiwan was one of the earliest economies to implement border closures, which helped reduce the influx of potentially infectious travelers from China in the early stages of the outbreak. Taiwan also applied its artificial intelligence and big data technology not only to detect and track cases, but also to enforce home isolation and home quarantine policy. For instance, passenger travel histories, medical information of quarantined individuals, and even their cellphone location data are captured by Taiwan’s big data cloud system, which makes it easy to test, trace, isolate, and monitor cases.

Similarly, South Korea was able to flatten the curve of its infections with minimal economic disruption, as Byungho Lim et al. recount in “COVID-19 in Korea: Success Based on Past Failure.” Initially deemed as the second most vulnerable country to the virus after China, South Korea has instead become a model nation in the global fight against COVID-19. Its “3T” approach of large-scale testing-tracing-treating has been key to its success, especially the much-heralded use of drive-through testing centers that have been followed by other countries. Instead of imposing a lockdown when numbers surged, the government merely announced work-from-home guidelines and asked the public to reduce non-essential outdoor activities and to wear masks in public. When numbers dropped to single digits in

April 2020, the government decided to relax the guidelines and switch to what it calls the “everyday life quarantine” system, whereby, with social distancing and maskwearing in place, Koreans could return to their daily lives with the exception of attendance at high-risk facilities such as sports stadiums, concert halls, and universities. Economically, South Korea’s private consumption did not fall as much as the OECD’s prediction of a one-third decrease. Instead, fueled with a large fiscal stimulus that is equivalent to 54 percent of its 2020 budget, domestic sales have returned to pre-outbreak levels.

Where Taiwan and South Korea were successful in containing the virus without use of a lockdown, China adopted the most severe lockdowns. In the early stages of the two-month-long lockdown of Wuhan, people were allowed out to purchase food, but this was completely halted by mid-February where no one could leave their home compounds. Wei Tian in “How China Managed the COVID-19 Pandemic” provides us with an explanation as to why such a harsh lockdown was enacted in Wuhan. The month before Wuhan was placed under lockdown coincided with the peak period of population mobility due to the Lunar New Year celebrations, where people usually return to their hometowns for the festivities. The city of Wuhan had the tenth largest population outflow among Chinese cities, with an average daily outflow of 250,000 people. During this peak period, the population outflow from Wuhan to other cities numbered at 4.3 million, which made up 70 percent of total outflow. The lockdown of Wuhan was therefore necessary to avoid a large outflow of people spreading the virus across the country.

In general, China discouraged all travel, both within-country and out-of-country, by reducing flights and train services, closing tourist sites and public events, and enforcing maskwearing and social distancing. Due to measures like these, intercity population mobility was greatly reduced, helping China to curb massive spreads of the virus across the country. Although China’s GDP contracted by 6.8 percent in the first quarter, its rapid containment of the virus has helped its economy to rebound in the second quarter by 3.2 percent, far exceeding the 1.2 percent projection of the IMF and superior to many other economies. Tian’s account of the second wave of infections that hit Beijing in June is particularly valuable in understanding how the Chinese government has so efficiently refined its systematic and standard epidemic containment practices, so much so that this second wave was brought under control in less than a month.

If the likes of China and Taiwan’s responses exemplify the continent’s “gold standard,” a region as large and diverse as Asia would inevitably also carry accounts of government missteps and policy failures.

For instance, the speedy response of Malaysia’s Ministry of Health in combining robust contact tracing measures with punitive lockdown orders helped the country to record one of the lowest death rates in the world. There was a severe lockdown from 18 March



through 3 May under four consecutive Mobility Control Orders (MCOs), followed by a Conditional MCO between 4 May and 9 June that allowed many businesses to reopen and permitted some interstate travel. With continued decline in COVID-19 cases, a Recovery MCO was proclaimed on 10 June 2020, which allowed the almost complete resumption of normal economic life, but restrictions on international travel remained in place, albeit greatly relaxed. Nevertheless, its 17.1 percent GDP contraction in the second quarter of 2020 was the worst in ASEAN. Muhammed Abdul Khalid, in “COVID-19: Malaysia Experience and Key Lessons,” attributes this to the government’s miniscule direct fiscal injection of only 1.9 percent of GDP, far lower than the ASEAN-6 average.

After the completion of Khalid’s paper in mid-September 2020, the point at which his account stopped, Malaysia’s initial successful response has become a distant memory. At the end of July 2020, the Sabah state government on Borneo island was brought down by defections and new elections were called for 26 September 2020. The enforcement of social distancing regulations at political gatherings was not strict, making all of them superspreader events. Politicians and campaign workers travelled back and forth between Peninsular Malaysia and Sabah in August and September, but quarantining and screening protocols at these airports were deemed unnecessary by health authorities.

Malaysia’s case tally started skyrocketing upward in October and a partial lockdown was re-introduced on 9 November 2020. The number of infections continued to climb, however, and on 11 January 2021, the federal government announced the re-imposition of its strictest form of lockdown, the MCO, on 13 January 2021. On the day before, 12 January 2021, the King declared Emergency Rule in Malaysia (whereby the seating of Parliament was suspended) under advice from Prime Minister Muhyiddin Yassin that this political measure was necessary to “to control and flatten daily COVID-19 positive cases that have breached four figures continuously since December” (Rodzi 2021). Previous nationwide emergencies were in 1964 during the Indonesia-Malaysia conflict, and in 1969 during an ethnic clash.

Unlike the temporary success in Malaysia, Thailand was successful in containing the outbreak of the virus within its population. This achievement, however, risks being overshadowed by its economy’s largest annual contraction in 22 years during the second quarter of 2020. Poum Tangkitvanich opines in “The Paradox of Thailand’s Success in Controlling COVID-19” that the Thai economic lockdown was overly harsh and lasted longer than needed with its repeated extensions despite the fact that daily domestic infections were regularly at zero, although some, like Nidhiprabha, speculate that the prolonged lockdown was more likely to prevent political protests.

If the Thai case shows that a country’s economic recovery may not necessarily accompany its epidemiological success, the Philippines stands on the other end of the spectrum. Despite imposing the longest lockdown on Southeast Asia, the country now has the highest

number of infections in the sub-region. Despite having strong macroeconomic fundamentals before the pandemic, the Philippines ended up with the second largest GDP contraction in the second quarter of 2020 and the worst projected economic growth outcome in 2020 among its ASEAN neighbors (see Table 4). Most commentators and fund managers have attributed this output collapse to the strict community lockdown imposed by the government in March that went on until the third quarter of the year.

However, Toby Melissa C. Monsod and Maria Socorro Gochoco-Bautista (“Rethinking ‘Economic Fundamentals’ in an Era of Global Physical Shocks: Insights from the Philippine Experience with COVID-19”) argue that underlying institutional factors play a larger role in explaining the Philippines’ economic and health outcomes rather than the country’s use of lockdowns. According to the authors, the choice of containment measures was a reflection of how organized and prepared public health institutions were in facing global shocks like COVID-19. The authors agree that the lockdown of the country was necessary to contain the pandemic but make the case that the Philippines failed to use the “bought time” from the lockdown to scale up an effective national system of testing and tracing. Specifically, they point at the country’s poor pandemic response infrastructure, which would help explain the recent blunders in testing and quarantine protocol amid the return of more than 100,000 overseas workers after losing their jobs abroad.

Citing the Philippines’ robust macroeconomic ratings before the pandemic, the authors assert that the institutional preparedness of governments matter much more in dealing with global shocks than macroeconomic metrics. Using a cross-sectional data set of 24 countries, the authors sought to test this hypothesis by examining the relationship between the projected economic contraction in 2020 and the capability of the national health systems to detect and respond to emergency outbreaks. The regression findings strongly support the authors’ argument that institutional capacities and capabilities influence intercountry difference in post-pandemic economic outcomes more so than other factors such as initial fiscal position, average age of the population, and country-specific geographical effects. Thus, instead of the timing, intensity, or length of lockdowns, the core capacities of countries to detect and respond to the pandemic accounts significantly for the poor economic outcomes of countries like the Philippines.

The Monsod and Gochoco-Bautista results also suggest that, for pandemics, the usual metrics of robust macroeconomic fundamentals either do not matter or, worse, are associated with poorer economic outcomes. The authors opine that that the usual multiplier effects of traditional macroeconomic channels are either not operative or, if they are, are overshadowed by the need for specific core capacities to address the underlying physical causes of disease transmission and progression. Crucially, the authors warn that large fiscal spending can even result in perverse economic effects if it is not directed at addressing the pandemic itself. Fiscal injections to boost a country’s national health system capacity should be prioritized over and above other types of traditional stimulus spending, with

**Table 5. GDP loss in 2020 (% deviation from the baseline)**

Country/region	S01	S02	S03	S04	S05	S06	S07
Argentina	-0.2	-0.3	-0.5	-1.6	-3.5	-6	-1.2
Australia	-0.3	-0.4	-0.7	-2.1	-4.6	-7.9	-2
Brazil	-0.3	-0.3	-0.5	-2.1	-4.7	-8	-1.9
Canada	-0.2	-0.2	-0.4	-1.8	-4.1	-7.1	-1.6
China	-0.4	-1.9	-6	-1.6	-3.6	-6.2	-2.2
France	-0.2	-0.3	-0.3	-2	-4.6	-8	-1.5
Germany	-0.2	-0.3	-0.5	-2.2	-5	-8.7	-1.7
India	-0.2	-0.2	-0.4	-1.4	-3.1	-5.3	-1.3
Indonesia	-0.2	-0.2	-0.3	-1.3	-2.8	-4.7	-1.3
Italy	-0.2	-0.3	-0.4	-2.1	-4.8	-8.3	-2.2
Japan	-0.3	-0.4	-0.5	-2.5	-5.7	-9.9	-2
Mexico	-0.1	-0.1	-0.1	-0.9	-2.2	-3.8	-0.9
Other Asia	-0.1	-0.2	-0.4	-1.6	-3.6	-6.3	-1.5
Other oil producing countries	-0.2	-0.2	-0.4	-1.4	-3.2	-5.5	-1.3
Republic of Korea	-0.1	-0.2	-0.3	-1.4	-3.3	-5.8	-1.3
Rest of Euro Zone	-0.2	-0.2	-0.4	-2.1	-4.8	-8.4	-1.9
Rest of OECD	-0.3	-0.3	-0.5	-2	-4.4	-7.7	-1.8
Rest of the world	-0.2	-0.2	-0.3	-1.5	-3.5	-5.9	-1.5
Russia	-0.2	-0.3	-0.5	-2	-4.6	-8	-1.9
Saudi Arabia	-0.2	-0.2	-0.3	-0.7	-1.4	-2.4	-1.3
South Africa	-0.2	-0.2	-0.4	-1.8	-4	-7	-1.5
Turkey	-0.1	-0.2	-0.2	-1.4	-3.2	-5.5	-1.2
United Kingdom	-0.2	-0.2	-0.3	-1.5	-3.5	-6	-1.2
United States of America	-0.1	-0.1	-0.2	-2	-4.8	-8.4	-1.5

Source: McKibbin and Fernando, *this issue*.

investments in the former potentially being able to do more for economic recovery than the latter.

Aside from studies of country-level responses to the pandemic, this double special issue of ASEP also features empirical analyses of novel queries that have arisen from the pandemic. Applying a hybrid of dynamic stochastic general equilibrium and computable general equilibrium models, Warwick McKibbin and Roshen Fernando in “The Global Macroeconomic Impacts of COVID-19: Seven Scenarios” look at the potential global economic costs of COVID-19 in 2020 under seven different permutations. Scenarios 1–3 assume that the virus’ epidemiological effects are contained in China but the economic effects spill over from China to other countries through trade, capital flows, and changes in the risk premia in global financial markets. On the other hand, scenarios 4–6 reflect epidemiological shocks occurring in differing degrees in all countries. For scenarios 1–6, it is assumed that the shocks are temporary whereas scenario 7 expects a mild pandemic to recur each year indefinitely.

The McKibbin-Fernando model predicts that for each scenario, there is a V-shape recovery apart from scenario 7, where COVID-19 recurs indefinitely. Table 5 summarizes the resulting GDP loss for each country under the seven scenarios.

An interesting finding from “Impacts of Lockdown Policies on International Trade” by Kazunobu Hayakawa and Hiroshi Mukunoki is that workplace closure orders do not affect intra-Asian trade. In comparison, Iwan J. Azis, I. G. Sthitaprajna Virananda, and

Fauzi I. Estiko (“Financial Spillover in Emerging Asia: A Tale of Three Crises”) found that the scale and nature of spillovers from the ongoing COVID-19 pandemic is set to be more severe than the financial spillover during the GFC and the 2013 taper tantrum from the phasing of quantitative easing by the U.S. Federal Reserve.

On the effects of the pandemic at a more micro-level, Toshihiro Okubo, Atsushi Inoue, and Kozue Sekijima (“Teleworker Performance in the COVID-19 Era in Japan”) look at teleworker efficiency in Japan and whether COVID-19 has changed the performance of Japanese teleworkers. Overall, the authors found that: (1) compared with working as normal, the efficiency of most teleworkers is reduced by around 20 percent on average; (2) longer experience in teleworking helps improve efficiency; (3) the employment system, such as flexible working time, can contribute to boosting efficiency; and (4) poorer mental health conditions due to the COVID-19 crisis worsens teleworking efficiency.

## 7. Unmasking culture

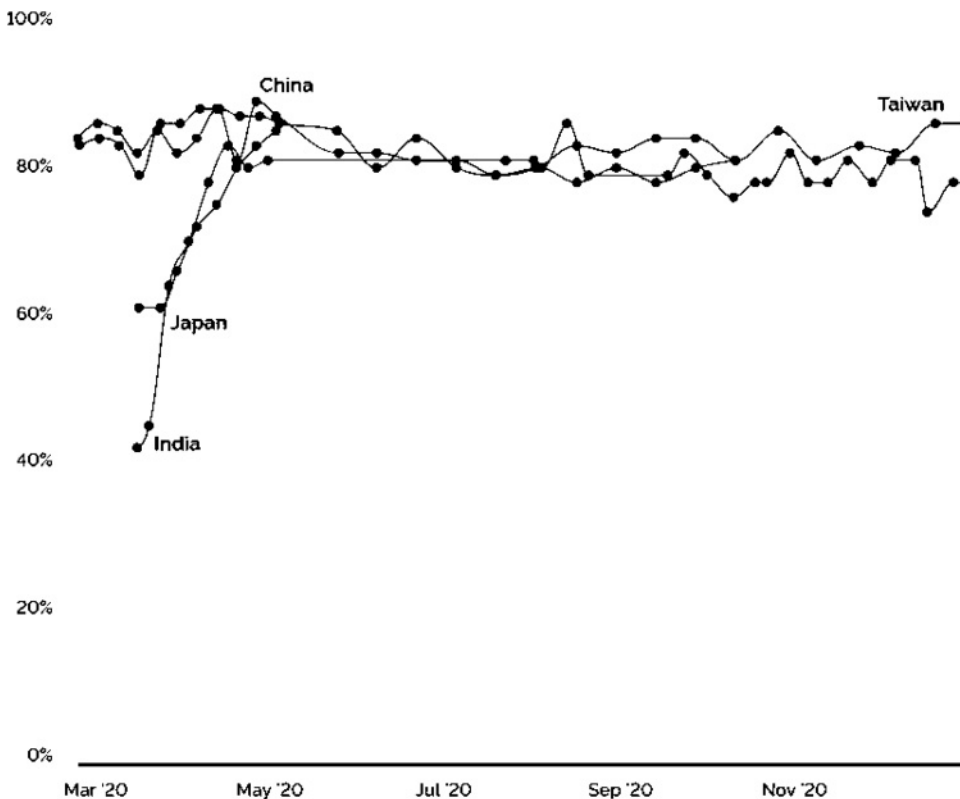
What various sources of evidence have shown is that there is much diversity and divergence in terms of both approach and result in the responses of governments to the pandemic. From Table 3, we know that prior preparedness counts for little when there is failure in execution (UK), leadership (USA), and diagnosis (Sweden). Countries like China and South Korea drew on their past experiences with epidemics (particularly SARS and MERS) to mount successful strategies to contain the virus. It is simply wrong to largely view the solution as a binary choice between lockdown or no lockdown. We see from the success stories in Asia that the appropriate policy combination consists of (a) public health measures like social distancing, mask-wearing, and hygienic behavior; and (b) targeted macro-stimulus aimed at disaster relief, service industries, and small and medium enterprises.

Take the wearing of face masks. As Sachs points out, there was a large disparity in hygienic practices such as face mask use between Asian and Western economies, especially in the first few months of the pandemic. The proportion of the population that wore masks at each point in time is shown for China, India, Japan, and Taiwan in Figure 1; for Indonesia, Malaysia, the Philippines, and Thailand in Figure 2; for the four Nordic economies in Figure 3; and for France, Germany, the United Kingdom, and the United States in Figure 4. These four figures on mask-wearing behavior in 16 economies cover (mostly) the period from March 2020 through December 2020. Comparison of them highlights two differences that need explaining.

### **The four Nordic economies and the UK were unusually slow in adopting mask-wearing**

In other economies, the proportion of mask-wearers in the population responded quickly to the COVID-19 outbreak in the home economy to reach at least 60 percent in May 2020.

Figure 1. Mask-wearing as percent of population in China, India, Japan, and Taiwan



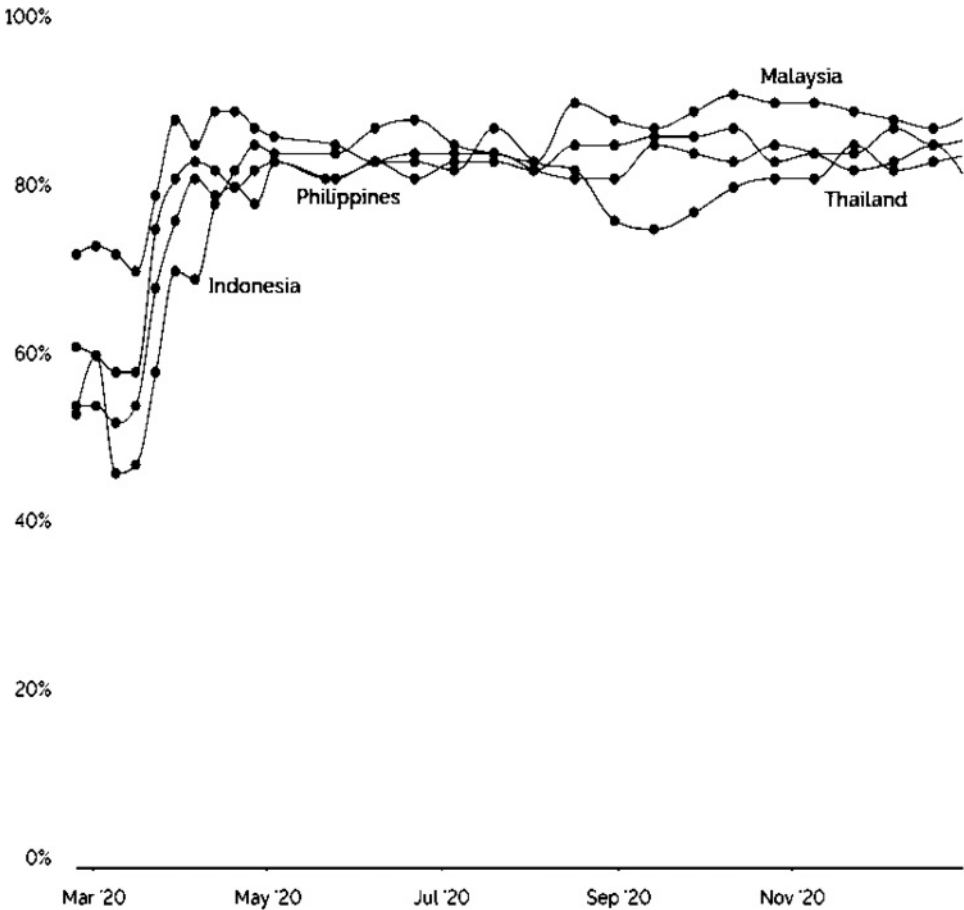
Source: YouGov (2021).

Note: Period is March 2020 through December 2020, except for China data ending on 11 Oct 2020; and Japan data ending on 3 May 2020.

In May 2020, the proportion of mask-wearers was less than 10 percent in the Nordic economies, and under 20 percent in the British economy.

One could think of mask-wearing as less needed for sanitary reasons in the “sparsely populated” Nordic economies when interpersonal contact is rarer, but then the UK is definitely not sparsely populated. Does the reluctance to respond quickly to wearing masks in these five populations show a deep cultural difference not only between them and Asians, but also between them, Americans, and other Europeans (France and Germany)? This last question suggests that “culture” is a weak explanation for this “slow to adopt” phenomenon in Denmark, Finland, Norway, Sweden, and the United Kingdom.

Figure 2. Mask-wearing as percent of population in Indonesia, Malaysia, the Philippines, and Thailand

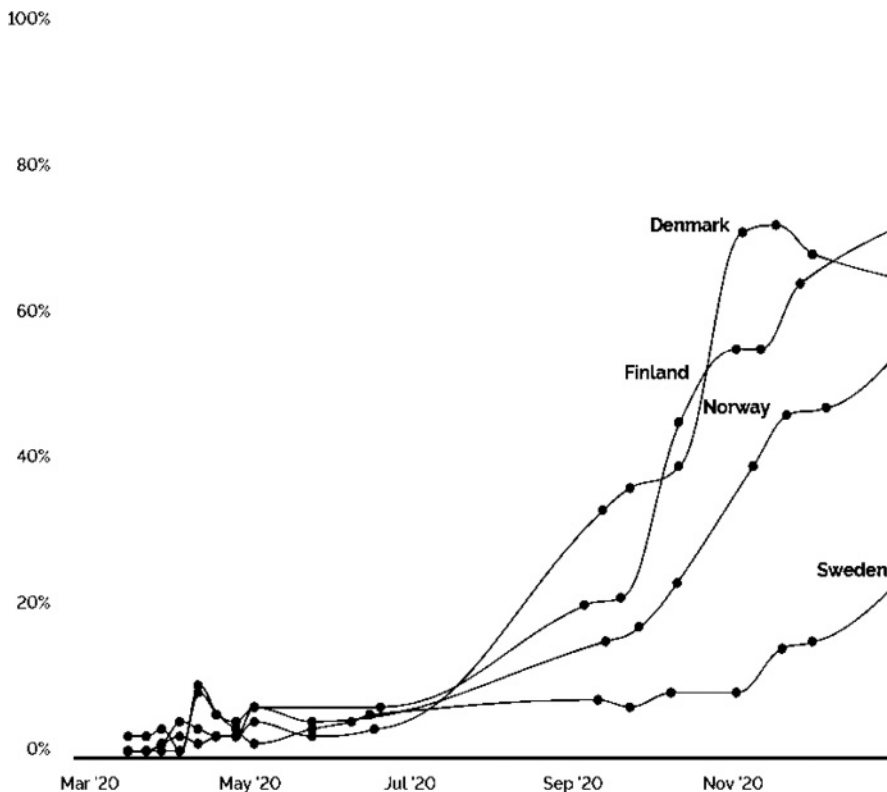


Source: YouGov (2021).

**In steady-state, Asian populations had a generally higher proportion of mask-wearing than non-Asian populations**

In all eight Asian populations, the proportion of mask-wearing was mostly at or above 80 percent in the May 2020 through December 2020 period. The French proportion of mask-wearers went over 80 percent since late July 2020; the U.S. proportion reached 70 percent in late June 2020, and went over 80 percent only since November; the British proportion climbed upward slower (as noted earlier) to cross 70 percent in mid-August 2020 and then to cross 80 percent on November 2020; and the German proportion stayed put at 60 percent in the May–October 2020 period and moved to 70 percent in November.

**Figure 3. Mask-wearing as percent of population in Denmark, Finland, Norway, and Sweden**

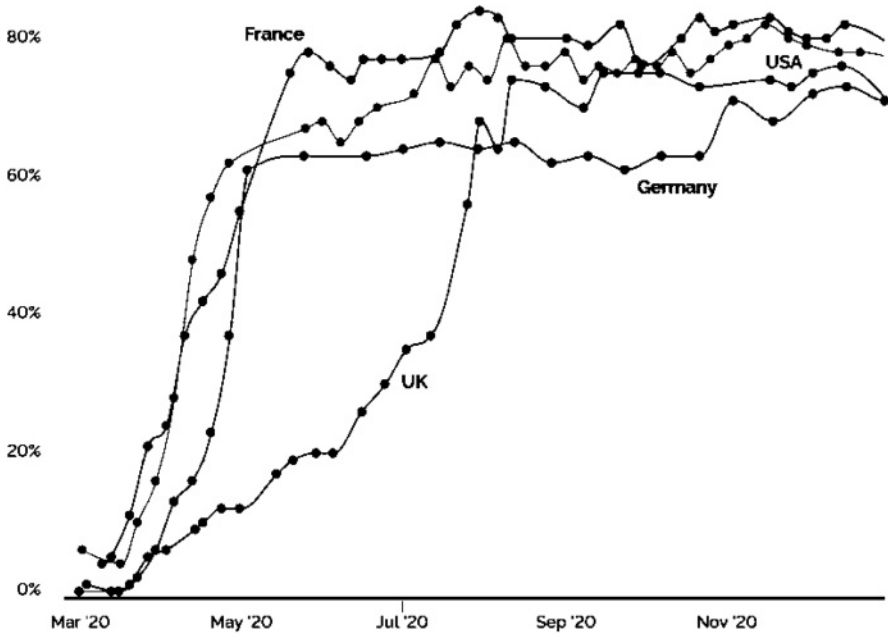


Source: YouGov (2021).

This resistance to mask-wearing is most pronounced in the four Nordic economies, where the proportion of mask-wearers in June 2020 was under 10 percent for every country. In September 2020, it was 34 percent in Denmark, 21 percent in Finland, 16 percent in Norway, and 8 percent in Sweden; and the respective numbers in December 2020 were 69 percent, 65 percent, 48 percent, and 16 percent.

Some analysts have attempted to explain this difference between Asian and non-Asian populations by attributing it to the so-called conformist and collectivist cultures of Asian societies whose citizens are more likely to mask themselves and practice social distancing out of respect for government guidelines and the welfare of others, as opposed to “individualistic” Western populations who care more for personal liberty. Others like Sweden’s Minister of Health and Social Affairs Lena Hallengren would say that there is no “tradition or culture” of mask wearing in their country, unlike Asia.

Figure 4. Mask-wearing as percent of population in France, Germany, the United Kingdom, and the United States



Source: YouGov (2021).

Although cultural values can influence a population’s response to events such as a pandemic, such essentialist caricatures may obscure and ignore the crucial role of government policy in driving these practices in the first place. It is perhaps a trite point that government policy influences behavioral outcomes. The act of mask-wearing is not endemic to any culture nor did it emerge out of a vacuum. If Asian economies such as Hong Kong and Taiwan appear to have a “culture” of mask-wearing, it is more likely because it is a direct result of experiencing past epidemics such as SARS whereby wearing face masks was a recommended practice.

Strict enforcement, especially when accompanied by punitive actions, can be highly effective. In Malaysia, face masks were made compulsory in crowded public areas from 1 August 2020 onwards. Face mask use in the country jumped from under 50 percent in March to 91 percent by August—Malaysia now records the highest face mask use in the YouGov tracker as of 28 February 2021.

Furthermore, countries with high face mask use often had leaders who not only communicated the importance of such practices but also set an example for their populace. For



instance, Western countries like Slovakia and Czech Republic are not the first places that one associates with the prevalent use of face masks, but their leaders have been shown to wear masks in public appearances and this played a crucial role in normalizing its use among their citizens. It is no surprise that face mask usage is so low in countries like the United States where President Trump constantly downplayed the importance of wearing face masks, or in Brazil where President Jair Bolsonaro only started to wear face masks after being ordered to do so by a federal judge.

The contrast in face mask use prevalence between Finland and Sweden is another example. In Sweden, where authorities actually recommend against wearing them, face mask use was at 8 percent in September 2020. In comparison, after Finland reversed its policy in August and recommended that people wear masks in public places, mask use jumped from 7 percent at the end of June to 46 percent on 12 October 2020.

It is also of little use if governments mandate the wearing of masks or other hygienic behavior if there are inadequate supplies of the very items that are needed for these practices, even in countries where mask-wearing is the norm. Once again, the role of government is crucial. In “How Did Japan Cope with COVID-19? Big Data and Purchasing Behavior” by Yoko Konishi, Takashi Saito, Naoya Igei, and Toshiki Ishikawa, the authors use point of sales data from supermarkets, convenience stores, home centers, drug stores, and electronics retail stores to show that mask sales in Japan spiked following the WHO’s declaration of a global state of emergency in January, causing a shortage of face masks in the market. This shortage moderated, however, after Japanese authorities implemented a ban on reselling masks and introduced a subsidy for businesses to expand mask-producing capacity.

In Taiwan, Kuo documents how the government pioneered a digital rationing system to facilitate mask distribution for its residents. Citizens could purchase face masks from state-contracted pharmacies either online or in person. For the latter, the digital system assigned citizens to different dates according to the last digit of their national ID number to avoid long queues. An app was also developed that worked to inform citizens of the number of masks in stock at each store, along with information on store names, locations, opening hours, and contact information. A special committee was also established to drive the production of masks domestically—as a result, 60 mask production lines were created that enabled daily domestic mask production to be increased from 1.88 million to 19 million as of the end of April 2020.

Simply put, if governments do not recommend mask use and implement policies that encourage it, citizens will not wear them readily. This is the key differentiating factor instead of a population’s alleged primordial propensity to wear masks. Although citizens are individually accountable for their own hygienic behaviors, this does not absolve governments

of their crucial role and responsibility to inculcate and encourage such practices, as the Asian experience illustrates.

## 8. What is to be done?

The key practices in successful government responses to the COVID-19 pandemic are:

1. Early border controls to contain the initial spread of the virus from abroad;
2. Rapidly increasing the capacity of national health systems in terms of mobilizing staff, securing supplies (e.g., protective equipment and respiratory devices) and optimizing space (e.g., ensuring adequate numbers of acute and intensive care beds) to scale up testing-tracing-treating infrastructure;
3. Promoting individual hygienic behavior such as social distancing and face mask use, which requires, respectively, active government enforcement of regulations against holding superspreader events, and strong government intervention in the market to ensure adequate supplies;
4. Fiscal measures to extend disaster relief to workers, businesses, and vulnerable populations; and
5. Clear, concise, and consistent communications from leaders and authorities.

These common measures seem so intuitive and straightforward, but why then have so many places failed to implement these measures, or when implemented, fail to achieve comparable results?

Sherry Tao Kong in “Comment on ‘COVID-19 in Taiwan: Economic Impacts and Lessons Learned’ by Chun-Chien Kuo” offers a likely explanation. The likelihood of such measures being implemented successfully by a government is “likely to be a function of its prevailing conditions, such as provision of public health service, degree of socioeconomic inequality, household living arrangements, and general attitude towards its government.”

Indeed, as has been often said, the pandemic has laid bare all the social, political, and economic fault lines that have already existed in a society. This is especially true for lower-income countries. If higher-income countries with sophisticated health systems are struggling to contain the virus, what about states with lesser public health infrastructure and weaker social safety nets? Whereas richer countries can have the luxury of choosing whether to implement lockdowns, low-income countries have had no choice but to keep their economies open (or open them prematurely) because they cannot afford fiscal injections to keep individuals and businesses afloat. The fiscal stimulus in the G20 so far is 17 percent of GDP, which is eight times more than the low-income countries’ macro-stimulus of 1.9 percent of GDP (Ragaa and Velde 2021). India, for instance, had lifted lockdown

measures prematurely to revive an economy that is likely to hit a 30-year-low, although case numbers have surged to record highs.

This is where international cooperation can play a role. International cooperation against the pandemic will not only assist countries, especially poorer states, to contain the virus and exit the epidemiological crisis in the immediate term, but can also facilitate socioeconomic recovery and help prepare for future pandemics and other global crises in the longer run. But a global response to the crisis has been glaringly absent. Instead, efforts against COVID-19 are largely domestic-centric so far. While it is understandable that countries prioritize their own needs first, the infectious nature of the virus means that no country is safe until every other country is also safe. Global access to future vaccines, supplies, tests, and treatments is the only way to ensure the virus is truly eradicated within a country. Governments of rich countries should commit not only to preserve trade openness for these vital items, but also to ensure that poor countries have access to key medical supplies at affordable prices. All these efforts must be accompanied by fiscal support by developed countries to help countries in need to successfully deploy both epidemiological and economic measures in curbing the virus—rich countries should establish a global fund to provide the poor countries with the needed vaccine, and to enhance their efforts in testing, tracking, and treating COVID-19 cases.

The need for global cooperation has become even more urgent as frequent pandemics could become the new norm. Humanity's relentless encroachment on the environment guarantees this.

## References

- Allcott, Hunt, Levi Boxell, Jacob C. Conway, Billy A. Ferguson, Matthew Gentzkow, and Benny Goldman. 2020. What Explains Temporal and Geographic Variation in the Early U.S. Coronavirus Pandemic? NBER Working Paper No. 27965. Cambridge, MA: National Bureau of Economic Research.
- Alwan, Nisreen A., Rochell Ann Burgess, Simon Ashworth, et al. 2020. Scientific Consensus on the COVID-19 Pandemic: We Need to Act Now. *Lancet* 396(10260):e71–e72.
- BBC News. 2020a. Coronavirus: Outcry after Trump Suggests Injecting Disinfectant as Treatment. 24 April. Available at: <https://www.bbc.com/news/world-us-canada-52407177> (Accessed 28 February 2021).
- BBC News. 2020b. Coronavirus: WHO Head Calls Herd Immunity Approach “Immoral.” 12 October. Available at: <https://www.bbc.com/news/world-54518286> (Accessed 14 October 2020).
- BBC News. 2020c. Coronavirus: Swedish King Carl XVI Gustaf Says Coronavirus Approach “Has Failed.” 17 December. Available at: <https://www.bbc.com/news/world-europe-55347021>.
- Bjorklund, Kelly. 2020. The Inside Story of How Sweden Botched Its Coronavirus Response. 22 December. Available at: <https://foreignpolicy.com/2020/12/22/sweden-coronavirus-covid-response/#1/11>.

Bump, Philip. 2020. Yet Again, Trump Pledges that the Coronavirus Will Simply Go Away. *Washington Post*, 28 April. Available at: <https://www.washingtonpost.com/politics/2020/04/28/yet-again-trump-pledges-that-coronavirus-will-simply-go-away/>.

Caldera, Aida, and Shashwat Koirala. 2020. Eight Priorities to Strengthen International Cooperation Against COVID-19. London: The Centre for Economic Policy Research. Available at: <https://voxeu.org/article/eight-priorities-strengthen-international-cooperation-against-covid-19>.

Centers for Disease Control and Prevention (CDC). 2019a. 1918 Pandemic (H1N1 Virus). 20 March. Available at: <https://www.cdc.gov/flu/pandemic-resources/1918-pandemic-h1n1.html> (Accessed 28 February 2021).

Centers for Disease Control and Prevention (CDC). 2019b. 2009 H1N1 Pandemic (H1N1pdm09 virus). 11 June. Available at: <https://www.cdc.gov/flu/pandemic-resources/2009-h1n1-pandemic.html>.

Centers for Disease Control and Prevention (CDC). 2020c. Human Coronavirus Type. 15 February. Available at: <https://www.cdc.gov/coronavirus/types.html> (Accessed 28 February 2021).

Cheng, Ting-Fang, Lauly Li, and Michelle Chan. 2021. Taiwan GDP Growth Outpaces China for First Time in Three Decades. *Nikkei Asia Weekly*, 9 January. Available at: <https://asia.nikkei.com/Economy/Taiwan-GDP-growth-outpaces-China-for-first-time-in-three-decades> (Accessed 28 February 2021).

Chetty, Raj, John N. Friedman, Nathaniel Hendren, Michael Stepner, and the Opportunity Insights Team. 2020. The Economic Impacts of COVID-19: Evidence from a New Public Database Built Using Private Sector Data. Opportunity Insights Working Paper October 2020. Cambridge, MA: Harvard University.countryeconomy.com. 2021. GDP - Gross Domestic Product. Available at: <https://countryeconomy.com/gdp>.

Erdbrink, Thomas. 2020. Vilified Early Over Lax Virus Strategy, Sweden Seems to Have Scourge Controlled. *New York Times*, 29 September [Updated 15 December 2020]. Available at: <https://www.nytimes.com/2020/09/29/world/europe/sweden-coronavirus-strategy.html>.

Global Health Security Index. 2019. 2019 Global Health Security Index. Available at: <https://www.ghsindex.org>.

Hewings-Martin, Yella. 2020. How Do SARS and MERS Compare with COVID-19? *Medical News Today*, 10 April. Available at: <https://www.medicalnewstoday.com/articles/how-do-sars-and-mers-compare-with-covid-19#SARS>.

Higgins-Dunn, Noah. 2020. Dr. Fauci Says Letting the Coronavirus Spread to Achieve Herd Immunity is “Nonsense” and “Dangerous.” *CNBC*, 15 October. Available at: <https://www.cnn.com/2020/10/15/dr-fauci-says-letting-the-coronavirus-spread-to-achieve-herd-immunity-is-nonsense-and-dangerous.html> (Accessed 14 October 2020).

International Monetary Fund (IMF). 2020. World Economic Outlook, October 2020. Available at: <https://www.imf.org/en/Publications/WEO/weo-database/2020/October/download-entire-database>.

International Monetary Fund (IMF). 2021. World Economic Outlook Update, January 2021. Available at: <https://www.imf.org/en/Publications/WEO/Issues/2021/01/26/2021-world-economic-outlook-update>.

Johns Hopkins University. 2021. Mortality Analyses, Corona Virus Center. Available at: <https://coronavirus.jhu.edu/data/mortality> (Accessed 28 February 2021).

- Kim, Jaewon. 2021. South Korea Limits COVID Damage to 1% GDP Contraction in 2020. *Nikkei Asia Weekly*, 26 January. Available at: <https://asia.nikkei.com/Economy/South-Korea-limits-COVID-damage-to-1-GDP-contraction-in-2020> (Accessed 28 February 2021).
- Lee, Bruce Y. 2020. Trump Once Again Calls Covid-19 Coronavirus the “Kung Flu.” *Forbes*, 24 June. Available at: <https://www.forbes.com/sites/brucelee/2020/06/24/trump-once-again-calls-covid-19-coronavirus-the-kung-flu/?sh=6480b35b1f59>.
- Lee, Yen Nee. 2021. This Is Asia’s Top-performing Economy in the COVID Pandemic—It’s Not China. CNBC, 27 January. Available at: <https://www.cnbc.com/2021/01/28/vietnam-is-asias-top-performing-economy-in-2020-amid-covid-pandemic.html> (Accessed 28 February 2021).
- Nikel, David. 2020. Denmark Closes Border to All International Tourists for One Month. *Forbes*, 13 March. Available at: <https://www.forbes.com/sites/davidnikel/2020/03/13/denmark-closes-border-to-all-international-tourists-for-one-month/?sh=67557d69726d> (Accessed 28 February 2021).
- Payne, Adam. 2020. Boris Johnson Told Italy’s Prime Minister the UK Had Been Aiming for Coronavirus Herd Immunity, New Documentary Reveals. *Business Insider*, 3 June. Available at: <https://www.businessinsider.com/boris-johnson-told-italian-pm-conte-coronavirus-herd-immunity-plan-2020-6> (Accessed 28 February 2021).
- Pitt, Sarah. 2020. Coronavirus—Is It Just “A Type of ‘Flu’?” *Laboratory News*, 2 April. Available at: <https://www.labnews.co.uk/article/2030503/coronavirus-is-it-just-a-type-of-flu> (Accessed 28 February 2021).
- Raga, Sherillyn, and Dirk Willem te Velde. 2020. How the G20 Can Make the Global Recovery from COVID-19 More Inclusive. *Supporting Economic Transition*, 25 February. Available at: <https://set.odi.org/wp-content/uploads/2021/02/How-the-G20-can-make-the-global-recovery-from-Covid-19-more-inclusive.pdf>.
- Rodzi, Nadirah H. 2021. Malaysia’s State of Emergency: What You Need to Know. *Straits Times*, 12 January. Available at: <https://www.straitstimes.com/asia/se-asia/malysias-state-of-emergency-what-you-need-to-know>.
- Schaverien, Anna. 2020. Abandoning its Loose Approach to Virus Controls, Sweden Clamps Down. *New York Times*, 18 November. Available at: <https://www.nytimes.com/2020/11/18/world/abandoning-its-loose-approach-to-virus-controls-sweden-clamps-down.html>.
- Stats NZ. 2020. Gross Domestic Product (GDP). Released 17 December. Available at: <https://www.stats.govt.nz/indicators/gross-domestic-product-gdp> (Accessed 31 December 2020).
- The Star Democrat*. 2021. Biden Bans Calling COVID “China Virus,” “Wuhan Virus.” 27 January. Available at: [https://www.stardem.com/news/national/biden-bans-calling-covid-china-virus-wuhan-virus/article\\_ed0028fe-81c4-50f3-8dc6-09771b99b15c.html](https://www.stardem.com/news/national/biden-bans-calling-covid-china-virus-wuhan-virus/article_ed0028fe-81c4-50f3-8dc6-09771b99b15c.html).
- Vazquez, Maegan, and Betsy Klein. 2020. Trump Again Defends Use of the Term “China Virus.” *CNN*, 19 March. Available at: <https://edition.cnn.com/2020/03/17/politics/trump-china-coronavirus/index.html>.
- World Health Organization (WHO). 2020. MERS Situation Update, December 2020. Available at: <http://www.emro.who.int/health-topics/mers-cov/mers-outbreaks.html>.
- World Health Organization (WHO). 2021. Cumulative Number of Reported Probable Cases of SARS. Available at: [https://www.who.int/csr/sars/country/2003\\_07\\_04/en/](https://www.who.int/csr/sars/country/2003_07_04/en/) (Accessed 28 February 2021).
- YouGov. 2021. Personal Measures Taken to Avoid COVID-19. Available at: <https://today.yougov.com/topics/international/articles-reports/2020/03/17/personal-measures-taken-avoid-covid-19> (Accessed 28 February 2021).