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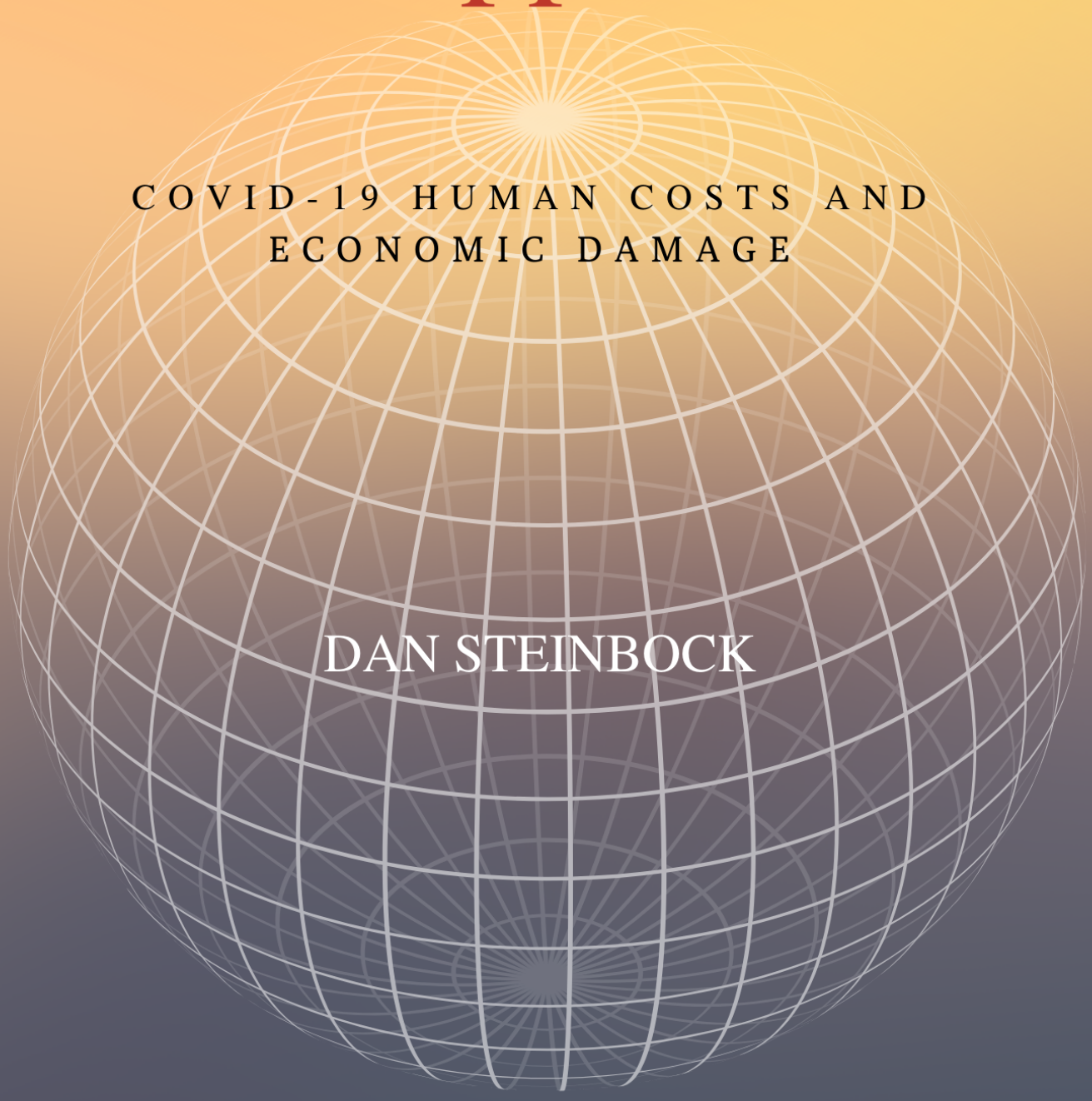
SHANGHAI INSTITUTES FOR INTERNATIONAL STUDIES

The Tragedy of Missed Opportunities

COVID-19 HUMAN COSTS AND ECONOMIC DAMAGE



DAN STEINBOCK

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Prologue

I have analyzed the COVID-19 prospects ever since the 'mystery pneumonia with an unknown etiology' was discovered in Wuhan, Hubei, at the end of December 2019. The first major international pandemic since the Spanish flu is likely to cause millions of infections and hundreds of thousands of deaths, and a global contraction that will prove far more consequential than the 2008/9 global recession.

Despite China's relatively successful battle to contain the outbreak, and the World Health Organization's (WHO) international alerts and repeated warnings, the mobilization against the outbreak in Europe and the United States began weeks too late as several critical opportunities were missed. That's why I wrote the report at hand. It is important to understand the underlying forces behind major policy mistakes to avoid new mistakes and overcome future challenges. It is heavily documented to show how critical pathways were missed.

"For too long, the world has operated on a cycle of panic and neglect," WHO director-general Dr Tedros said over a year ago, months before the novel coronavirus outbreak. "We throw money at an outbreak, and when it's over, we forget about it and do nothing to prevent the next one" And he warned: "This is frankly difficult to understand, and dangerously short-sighted."

COVID-19 is not the first pandemic; nor will it be the last one. Policy mistakes that cost more lives than major wars and greater economic devastation than past global recessions, particularly among the poorest of the world, should not permitted to recur.

This report was prepared on a pro bono basis. I feel honored to publish it via Shanghai Institutes for International Studies (SIIS), a leading Chinese and a major global think-tank.

On April 26, 2020
Dan Steinbock

About SIIS

Founded in 1960, the Shanghai Institutes for International Studies(SIIS) is a government-affiliated high-caliber think tank dedicated to informing government decision-making by conducting policy-oriented studies in world politics, economics, foreign policy, and international security. SIIS maintains intensive and extensive exchanges and cooperation with research institutions at home and abroad, bolstering China's international influence and soft power.

SIIS has an authorized size of 106 full-time research fellows and staff, including 60% senior fellows. SIIS was ranked one of the top ten Chinese think tanks In 2006, and one of the top ten global think tanks (non-American) in 2008. SIIS comprises seven institutes and six research centers, namely, the institute for global governance studies, the institute for foreign policy studies, the institute for world economic studies, the institute for international strategic studies, the institute for comparative politics and public policy, the institute for Taiwan, Hong Kong & Macao Studies, the institute for data processing and studies, the center for American studies, the center for Asia-Pacific Studies, the center for Russian and Central Asian Studies, the center for West Asia and Africa studies, the center for European studies, and the center for maritime and polar studies. In addition, SIIS is an institutional member of the Shanghai International Strategic Studies Association and the Shanghai International Relations Association.

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Executive Summary

As of this writing - April 26, 2020 - the novel coronavirus has caused some 3 million confirmed cases and 200,000 deaths around the world, and a major global contraction. Even if the pace decelerates, the cases and the deaths could double by the end of June (and recorded figures are only a part of the full story). This report is an attempt to explore the costs of the missed opportunities that led to the pandemic.

Although mobilizations in Europe and the United States began only in late March, both began monitoring the outbreak in China already in the first week of January and had their own first virus cases in late January. So did Singapore and Hong Kong, which also began proactive mobilization. Advanced economies in the West did not.

The 1st Opportunity: Early Mobilization. Between the first recorded case in Wuhan (Dec 30, 2019), and the WHO's announcement of the international emergency (Jan 30, 2020), the epicenter of the outbreak was centered in Wuhan, Hubei, and proximate Chinese provinces. Yet, during the same period, first cases were also recorded in some 20 countries worldwide. In China, social distancing was initiated in late January to flatten the epidemic curve, along with broad containment measures. As a result, human costs and economic damage are likely to prove significantly lower than in the West. The same goes for Hong Kong and Singapore where the mobilization was proactive. Yet, the information that these two used for early mobilization was *also* available to the White House on Jan 3 and European CDC began its risk assessments only days later. Yet, neither *chose* to mobilize.

The 2nd Opportunity: Late Mobilization. The second critical opportunity to contain the virus outbreak covers the 1st quarter. On Mar 10, the WHO declared the virus a pandemic. Although the epicenter moved to Europe and then to the U.S., full mobilization in both ensued only 1-2 weeks after the pandemic warning; almost 3 months later than proactive mobilization in Hong Kong and Singapore. Until early February, most countries failed to provide WHO full case reports, which penalized international cooperation at a critical moment. Complacency and inadequate preparedness contributed to new challenges, including faulty test kits and long delays in testing; huge shortages of personal protective equipment that endangered the lives of frontline healthcare professionals; other shortages, due to trade wars; failed responses to the outbreak, which added to health risks; sensational media coverage that was high on hype, but short on facts causing an 'infodemic.' Many international observers also began an odd battle against the WHO and its leaders.

The 3rd Opportunity: Failed Mobilization. In cumulative terms, this period covers the first two quarters of the year. It could be dated from the WHO's declaration of the pandemic on Mar 10, yet effective responses in the U.S. and Europe only began in late March/early April. As escalation continued in Europe, the epicenter moved from the West Coast to the East Coast in the U.S. while quarantines and lockdowns diffused worldwide. It was only now that the social distancing measures first initiated in China in January were widely introduced in the West. As late mobilization and weaker enforcement proved less effective, the result was *effective* herd immunity. Instead of flattening the epidemic curve, many countries initially fattened that curve for weeks. When the human and economic costs soared, some government leaders

sought to evade responsibility via a "paranoid style of politics." So, the WHO and its chiefs, and China, were targeted, as politically expedient scapegoats.

The 4th Opportunity: Resource-Poor Mobilization. In this period, the epicenter will move from advanced economies to emerging and developing countries with weaker healthcare systems. Although many of these countries have been willing to fight the outbreak, they lack adequate resources. Any public health catastrophe in the developing economies is likely to have adverse feedback effects worldwide.

There was nothing inevitable about these response trajectories. In the U.S., the Trump administration initially engaged in a short-sighted effort to "protect the economy" (read: the markets). So, it chose not to develop an adequate policy response on science-based evidence. The story also features whistleblower complaints and dangerous ideas, such as Trump's chloroquine plan and proposed disinfectant injections. In contrast, the European Union (EU) may have been more willing but was unable to fight the virus earlier. It is not fully integrated and thus lacks the requisite common institutions for effective response.

In the baseline case - the *Coronavirus Contraction* scenario - the slump is *currently* seen as steep and broad, but somewhat temporary. Yet, the contraction could prove a major medium-term challenge, depending on its duration, depth, and aftermath.

Human Costs. In the baseline scenario, the pandemic effects are predicated on the rise and fall of the epidemic curve in China in the 1st quarter; in the U.S. and Europe mainly by the end of the 2nd quarter. Yet, the *cumulative* human costs will continue to linger. Having peaked in February, the cases in China were over 82,000 at the end of the 1st quarter, whereas those in Europe and the U.S. were over 425,000 and 140,000, respectively, and will continue to climb for months (**Table ES1**).

Table ES1 Human Costs of the Pandemic*

Human Costs	Jan 30, 2020 (#)		Q1 2020 (#)		Apr 26, 2020	
Cumulative cases	*World:*	*7,800*	*World:*	*750,900*	*World:*	*2,805,000*
	China:	*7,736*	*China:*	*82,500*	*China:*	*84,300*
	EU:	*14*	*EU:*	*425,300*	*EU:*	*1,320,000*
	UK:	*2*	*UK:*	*22,100*	*UK:*	*148,000*
	US:	*5*	*US:*	*140,600*	*US:*	*900,000*
Cumulative deaths	*World:*	*260*	*World:*	*36,400*	*World:*	*194,000*
	China:	*260*	*China:*	*3,300*	*China:*	*4,600*
	Europe:	*1*	*Europe:*	*26,700*	*Europe:*	*120,000*
	UK:	*0*	*UK:*	*1,400*	*UK:*	*20,300*
	US:	*0*	*US:*	*2,400*	*US:*	*46,200*

* The figures have been rounded.

Source: WHO, European CDC, Worldmeter, John Hopkins, Difference Group.

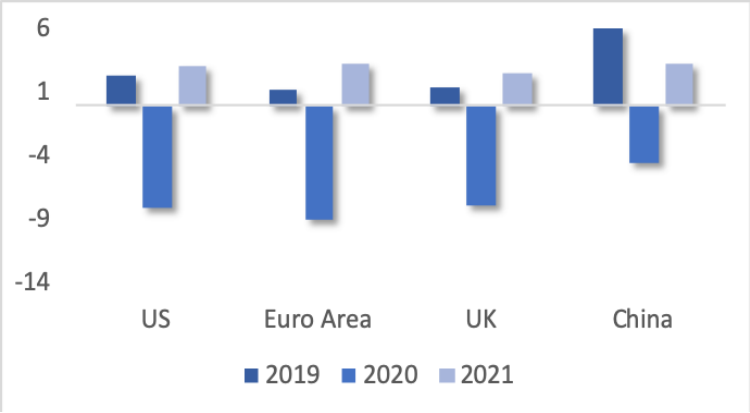
Even assuming gradual deceleration, the cumulative cases at the end of the 2nd quarter could double worldwide. Human costs will climb until the epidemic curves gradually normalize. Conversely, if the late mobilizers and the failed mobilizers had

followed the proactive measures of the early mobilizers, hundreds of thousands, even millions of people might have avoided COVID-19.

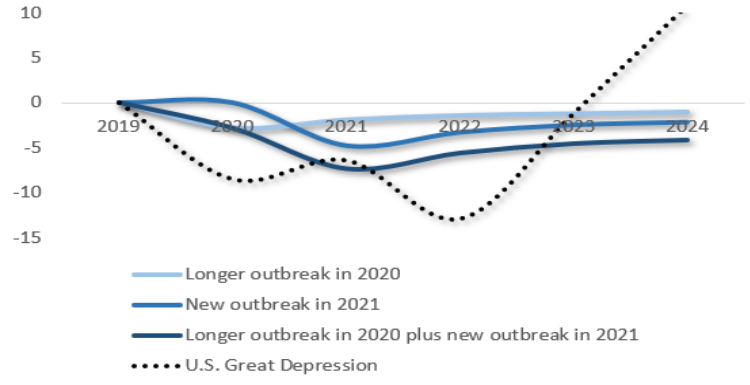
Cumulative Losses, Alternative Pandemic Effects. Even in the baseline case, the level of the GDP will remain below the pre-virus benchmark. In this scenario, the negative differences between the pre-virus forecast (as measured by the IMF's World Economic Outlook, Oct 2019) and the current forecast (WEO/IMF, Apr 2020), is of historical magnitude. In this view, the cumulative loss to global GDP over 2020 and 2021 could amount to about $9 trillion. That's more than the world's third and fourth largest economies - Japan and Germany - combined. The Euro Area/UK would have to cope with a steep contraction (-8.9% and -7.9%, respectively), while the U.S. loss would be unique in its history (-8.0%). Despite rapid rebound, even China would have to absorb a historical loss (-4.6%) (**Figure ES1a**). Yet, the baseline scenario's underlying assumptions are too optimistic. In the alternative scenarios, the post-pandemic environment would be similar to the U.S. Great Depression assuming continued potential policy mistakes, particularly new trade wars. And since the advanced economies' output potential is today low relative to that in the 1930s, the secular stagnation that preceded the pandemic is likely to depress the economic outlook in the medium-term (**Figure ES1b**).

Figure ES1 Cumulative Economic Losses

(a) Cumulative Losses: Baseline Scenario



(b) Cumulative Losses: Alternative Outcomes



Source: WEO/IMF database; Difference Group

Even when coupled with alternative outcomes, the baseline is not adequately realistic because it effectively ignores the dire economic landscape that *preceded* the pandemic. In the past decade or so, the world economy has coped with the global financial crisis, the European sovereign debt crisis, and a decade of secular stagnation. There was a brief historical moment around 2017/18, when world trade, investment and migration showed a promise of mild recovery. But that moment was missed, thanks to new protectionism and tariff wars. These trade wars and technology conflicts occur against the backdrop of a huge accumulation of global debt, which climbed to an all-time high of 230% of world GDP already in 2018. With the global pandemic, all major economies will take far more debt to deter the damage. Ironically, the protection they will achieve in the short-term will make them highly vulnerable to debt crises in the longer-term.

A more benign *realistic* baseline scenario is a "mumbling through" trajectory in which the pandemic could eventually fade, while the worst excesses of trade wars could be avoided. Yet, trade and tech friction would prevail along with geopolitics and weaker economic prospects. Let's assume two alternative pathways (see **Table ES2**).

Table ES2 Realistic Scenarios: Baseline, Conflicts and Cooperation

Pandemic Conditions	**Great Power Conflict**	**Great Power Cooperation**
Baseline: Coronavirus contraction	Fading pandemic, degree of trade friction and geopolitics, weak economic prospects	Fading pandemic, lower degree of trade friction and geopolitics, moderate economic recovery
Kinds of Pandemic Effects		
Longer virus spread (2020)	Protracted pandemic, trade friction, geopolitical threats, economic deterioration	Protracted pandemic, prolonged trade truce, geopolitical risks, economic recovery
Milder outbreak (2021)	Renewed social distancing measures, elevated contraction risks, greater trade friction, deeper economic scarring	Renewed social distancing, moderate contraction risks, prolonged trade truce, subsequent economic recovery
Lingering pandemic (2020-21)	Lingering pandemic risks, intense trade and technology wars, "hot" geopolitical conflicts, renewed and a long global depression	Lingering pandemic risks, deals in trade and technology, subdued geopolitical friction, eventual return to economic recovery

***Great Power Conflicts* Scenario.** The *Great Power Conflicts* scenario presumes progressive deterioration of pandemic and economic costs. In the first alternative, a protracted pandemic would be coupled with protracted pandemic, trade and geopolitical friction and more economic deterioration. In the second, a milder outbreak in 2021 would result in new social-distancing measures, greater contraction risks and deeper economic scarring. In the third case, lingering pandemic risks would generate intense trade and technology wars, "hot" geopolitical conflicts and a long global depression.

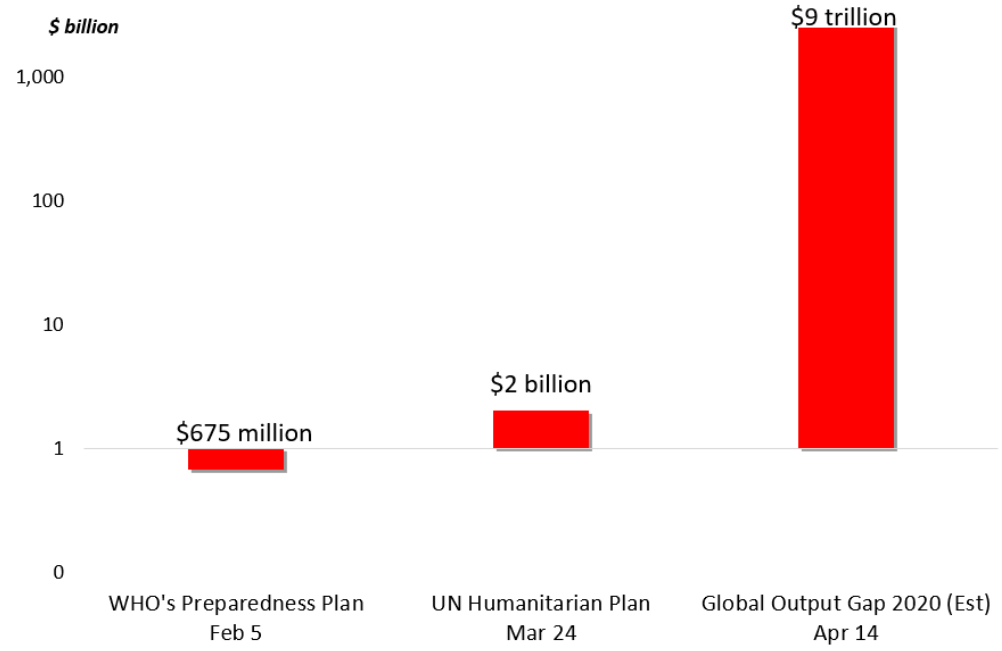
***Great Power Cooperation* Scenario.** Friction and conflict are not the only alternatives, however. In the *Great Power Cooperation* scenario, pandemic and economic costs would be significantly reduced. In the light of the pandemic effects and the first alternative, a protracted pandemic would lead to a prolonged trade truce, while geopolitical risks and economic would remain, but a recovery from the pandemic would ensue after 2020. In the second alternative, new social distancing measures would have to be deployed, yet contraction risks would remain moderate, trade truce would be continued with subsequent economic recovery. The third alternative would mean lingering pandemic risks longer than expected, but trade deals in trade and technology and subdued geopolitical friction would result in the eventual return to economic recovery.

In early February, the WHO called for $675 million to implement priority public health measures, in order to support countries to prepare for and respond to the pandemic spread. On Mar 25, UN Secretary-General António Guterres launched a $2 billion coordinated global humanitarian response plan to fight the pandemic in the world's most vulnerable countries. Yet, these efforts have faced obstacles in fund raising.

In view of the baseline scenario, the expected cumulative output loss has already soared to $9 trillion and will climb higher in the early 2020s The combined fund-raising WHO/UN target represents barely 0.03% of these losses. Why would the choice between the two be so difficult? And why would new delays, more lost lives and new losses be preferable to swift, multilateral global action? (**Figure ES2**).

What is needed is multilateral cooperation among major economies and across political differences. In this quest, China, where containment measures have been relatively successful, can show the way, along with those government leaders in the United States and Europe, who take pandemic risks seriously.

Figure ES2 The Costs of Complacency*



* Logarithmic scale. *Source: WHO, UN, IMF, Difference Group*

The First Missed Opportunity

According to the World Health Organization (WHO), the prevention and control measures against the novel coronavirus)[1] were implemented rapidly in China, from the early stages in Wuhan and key areas of Hubei, to the national outbreak.[2]

Timeline of the Outbreak in China

The first novel coronavirus was confirmed in Wuhan on Dec 30 2019.[3] That's when three bronchoalveolar lavage samples were collected from a patient in Wuhan Jinyintan Hospital, with pneumonia of unknown etiology. The protocol was based on a surveillance definition established after the SARS outbreak of 2002-2003. Described as the "mystery pneumonia" in media, it had close relationship with the bat SARS-like coronavirus strain (BatCov RaTG13, identity 96%). So, the outbreak was announced by the Wuhan municipal health commission (WHC), while China's National Health Commission (NHC) and China's Center for Disease and Control (CDC) were involved in investigation and response.

On Jan 1, the Huanan seafood wholesale market, where the virus spread may have been amplified, was closed. Thereafter, researchers have pointed to the wet market as an amplifier, but not the source of the outbreak.[4] On Jan 3, gene sequencing was completed by China's CDC. Emergency monitoring, case investigation, close contact management and market investigation were initiated and technical protocols for the virus released. NHC notified the WHO and relevant countries. With SARS, gene

[1] Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the virus strain that causes coronavirus disease 2019 (COVID-19). It was previously referred to by its provisional name 2019 novel coronavirus (2019-nCoV).

[2] The timeline draws from the Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19), Feb 16-24, and updated reports from science journals.

[3] On the earliest cases, see Huang, Chaolin et al. 2020. "Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China". The Lancet, Vol 395, Issue 10223, P497-506,, Jan 24.

[4] This distinction was obfuscated later in the politicization efforts of the pandemic. In early April, a bipartisan group of US lawmakers called for a ban on wet markets. The assumption was that these markets were all open in China. Yet, many markets selling animals in China had been closed or restricted following outbreaks of SARS and other infectious diseases. Moreover, there are different kinds of risks with different markets. Worse, full closures could deprive low-income people from affordable food and result in uncontrollable black market, as happened during the 2003 response against SARS. On the debate, see "Why shutting down Chinese 'wet markets' could be a terrible mistake." Conversation, Jan. 31; Standaert, Michael. 2020. "'Mixed with prejudice': calls for ban on 'wet' markets misguided, experts argue." The Guardian, Apr 15; Samuel, Sigal. 2020. "Should wet markets be banned? It's more complicated than it seems." Vox, Apr 15. On cultural stigmatization – "Orientalization" – disguised as racial hygienic concern, see Mei Zhan. 2008. "Civet Cats, Fried Grasshoppers, and David Beckham's Pajamas: Unruly Bodies after SARS." AnthroSource, Jan 7.

sequencing had taken months; now China's CDC completed it on Jan 7 isolating the novel coronavirus. By then, international science media began to follow the story.[5]

The outbreak accelerated after mid-January. On Jan 20, after two medical staff were infected in Guangdong, Chinese authorities believed the virus was human-to-human transmissible (some three weeks later the WHO-China Joint Mission concluded that human-to-human transmission was largely occurring in families). A day later, NHC began to release daily disease information. The Chinese Communist Party (CCP) Central Committee and State Council launched the national emergency response, led by General Secretary Xi Jinping, Prime Minister Li Keqiang and Vice Premier Sun Chunlan. President Xi Jinping stressed that information on the epidemic should be released in a timely manner and international cooperation strengthened. Moreover, lower-level officials were warned not to cover up the spread of a new coronavirus.[6] (The debate about Wuhan's statistics revived in mid-April, when the city revised upward its official death toll from the coronavirus outbreak by 50%.[7] In the West, some observers saw the upward revision as a purposeful effort at concealment. But as the WHO noted, China revised its Covid-19 figures "to leave no case undocumented" and that other countries would also likely need to revise counts as systems around the world are overwhelmed.)[8]

Later, Zhong Nanshan, a renowned scientist at China's National Health Commission who had been the first to identify the SARS virus in 2003, argued that even a five-day delay in controlling the virus would have infected more than two times as many people; potentially hundreds of thousands. He thought there had been a delay of a few days in alerting higher authorities to the new coronavirus.[9] In contrast, Shao Yiming, Chinese CDC's prominent virologist, said that the delay in the CDC's direct reporting system may have been the mistaken assumption that health authorities were dealing with another avian influenza without human-to-human transmission.[10]

The WHO held Emergency Committee meetings on Jan 22 and 23, 2020. Without solid consensus, the WHO decided it was too early to declare an international emergency (PHEIC), given the lack of data and low global impact.[11]

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[5] See e.g., Hamzelou, Jessica. 2020. "Doctors scramble to identify mysterious illness emerging in China." New Scientist, Jan 7.

[6] The handling of the new SARS-like virus by local health officials in Wuhan, Hubei province, led to a scrutiny afterwards. See " Transparency and cooperation are crucial to contain new coronavirus: China Daily editorial". China Daily, Jan 21, 2020.

[7] Adding 1,290 deaths which brought the total to 3,869, Wuhan also adjusted the number of confirmed Covid-19 cases upward by 325, bringing the total to 50,333, according to a notice from Wuhan's disease-control task force on the website of the Xinhua News Agency.

[8] "WHO says China revised coronavirus infection data to 'leave no case undocumented." CNBC, Apr 17, 2020.

[9] Zhong Nanshan argued that "the CDC has no power to make any decision for the next move." See "Virus disclosure in China was delayed because disease control group lacks authority, top scientist says." CNBC, Feb 28, 2020.

[10] Shao Yiming, the chief HIV/AIDS expert at the Chinese CDC, doubted that giving the CDC greater administrative power was the right solution. See "Exclusive: Why 'Smart' Covid-19 Virus May Be Here to Stay." Caixing, Mar 19, 2020.

[11] "Statement on the meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus 2019 (n-CoV)." WHO, Jan 23, 2020.

As China began to mobilize nationwide, officials announced a quarantine of the greater Wuhan area on Jan 23. Next day, all public transportation was suspended, while outbound trains and flights were halted. Meanwhile, a study by Chinese researchers indicated people could be symptom-free for several days while the coronavirus is incubating, increasing the risk of contagious infection without forewarning signs.[12] By then, Hubei province was under a city-by-city quarantine.

As the U.S. was swept by the outbreak in March-April, the White House repeatedly blamed China for it. And yet, on Jan 24, President Trump thanked President Xi for his country's handling of the coronavirus.[13] In reality, the epidemic curve had not peaked yet. On Jan 25, President Xi called the "accelerating spread" of the coronavirus a "grave situation."[14] A day later, the Lunar New Year holiday was extended to contain the outbreak and to keep people at home and reduce the risk of the contagion. That saved countless lives. Meanwhile, Beijing extended billions of dollars to alleviate the economic impact of the outbreak.[15]

On Jan 26, the Chinese CDC started developing vaccines against the coronavirus.[16] To contain imported infections, China began requiring nationwide use of monitoring stations for screening, identification and immediate isolation of coronavirus-infected travelers at airports, railway stations, bus stations and ports. Zhong Nanshan said the outbreak would peak "in one week or around 10 days."[17] His research team warned about premature lifting of the Hubei quarantine and projected that "even a five-day delay in implementation would have increased epidemic size in mainland China three-fold."[18] Thanks to China's early stringent measures, the epidemic curve peaked and fell fairly rapidly. Despite initial criticism, many advanced economies would adopt such measures but only belatedly, at the cost of human lives and economic damage (**Figure 1**).

Usually markets respond relatively fast to extraordinary events. In China, the Shanghai Composite Index had peaked at 6,000 in mid-2015. After the trade wars, it hovered around 3,800 in 2019. Following the national emergency, it plunged almost by a third to 2,750. In late February, after stringent containment measures and economic accommodation, it had recovered to 3,050.

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[12] Huang, Chaolin et al. "Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China". The Lancet, Jan 24, 2020, pp 497–506. A consortium of Chinese medical experts charged by the Chinese CDC also reported details of 41 first known patients in Lancet. See Wang, Chen et al. "A novel coronavirus outbreak of global health concern". The Lancet, Jan 24, 2020, pp 470–473

[13] "Trump thanks China's Xi Jinping for handling of coronavirus." CNBC, Jan 24, 2020.

[14] "CPC leadership meets to discuss novel coronavirus prevention, control". People's Daily. Jan 25, 2020.

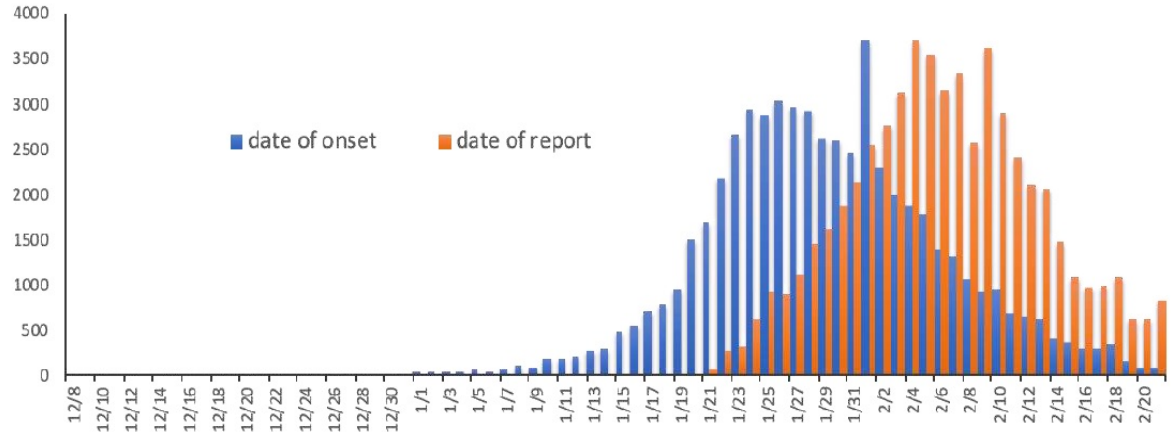
[15] See Steinbock, Dan. 2020. "Pioneering efforts to contain virus outbreak." China Daily, Jan 31.

[16] "China CDC developing novel coronavirus vaccine". Xinhua. 26 Jan 2020.

[17] "Novel coronavirus outbreak may reach peak in one week or about 10 days: expert." Xinhua, Jan 28, 2020.

[18] Yang, Zifeng et al. 2020. Modified SEIR and AI prediction of the epidemics trend of COVID-19 in China under public health interventions." Journal of Thoracic Disease, Feb 28.

Figure 1 Epidemic Curves for Confirmed COVID-19 Cases in China



* By symptom onset and date of report (February 20, 2020) for laboratory confirmed cases in China.

Source: WHO China Joint Mission, Feb 29, 2020

As the epicenter arrived in Europe and then in the U.S., it plunged again to 2,700 in mid-March. When Washington and Brussels finally began mobilization, the Index rose to over 2,800 by early April. Chinese market responded in parallel with the emergency measures and COVID-19 acceleration. This was very different from the U.S. and Europe, where the markets tanked and virus spread weeks *before* the policymakers responded.

Reflecting typical post-industrial deceleration, China's GDP annual growth rate decreased in 2017 to 7%, which the trade wars further penalized to 6.1% in 2019 (that remained within the government's target). In the 1st quarter of 2020, the virus impact caused a historical contraction in China, but by the 2nd quarter the economy was rebounding.

On Jan 30, as the number of the infected continued to accelerate *and* some evidence of human-to-human transmission had been discovered in and outside China, the WHO declared the virus outbreak a "public health emergency of international concern" (PHEIC).[19] Under the 2005 International Health Regulations (IHR), states have a legal duty to respond promptly to a PHEIC, which is seen as a "call to action" and "last resort" measure.[20] The WHO was particularly concerned about the possible effects of the virus, if it would spread to countries with weaker healthcare systems.[21] There were already more than 7,800 cases confirmed globally,

[19] At WHO, the PHEIC connotes "an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response", which "may require immediate international action." See "International Health Regulations and Emergency Committees". WHO, Jun 19, 2019.

[20] Compare Renee Dopplick. 2009. " Swine Flu: Legal Obligations and Consequences When the World Health Organization Declares a 'Public Health Emergency of International Concern'." Inside Justice, Apr 29.

[21] The recommendations are temporary and require reviews every three months. Since 2009 there had been six PHEIC declarations, including the 2009 H1N1 (swine flu) pandemic, the 2014 polio declaration, the 2014

affecting some 20 countries.[22] A day after the PHEIC, United States declared the virus an "unprecedented public health threat."[23] The unilateral action went against guidance by the WHO but did not result in an effective mobilization in the U.S.

Social Distancing: Flattening the Curve

With the novel coronavirus, the basic reproduction number (R_0) of the virus was estimated at 1.4-3.9; that is, each infection from the virus is expected to result in about 2.5 new infections on average, when no members of the community are immune and no preventive measures are taken.[24] If the symptoms take long to manifest or asymptomatic cases contributed to transmissions, or both, that seemed to undermine traditional containment practices in the West. If the new virus could be detected only after considerable collateral damage, there might be much worse ahead, as Chinese authorities suggested already in January.[25]

With the novel coronavirus, mortality rate seemed less fatal (currently 2.2%) relative to SARS (11%) and particularly to Middle East Respiratory Syndrome MERS (34%). However, Chinese health authorities were concerned about asymptomatic cases; those that did not manifest symptoms during the incubation period, which was estimated 2-3 weeks or even longer.[26]

As virus continued to accelerate outside China, the WHO recognized the spread of COVID-19 as a pandemic on Mar 11, 2020. Historically, there have been a number of pandemics of diseases. In the 14th century, the Black Death killed some 75 to 200 million people. Pandemics had been less common in advanced economies after the 1916 New York City polio epidemic and the 1918 influenza pandemic (Spanish flu) in which 17 to 100 million perished. In Asia, such pandemics *had* been witnessed in 1957 and 1968 and, again, with SARS in 2003 (**Figure 2**). To preempt the potential of such disasters, China initiated social distancing, i.e., a set of non-pharmaceutical interventions or measures to prevent the spread of a contagious disease.

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outbreak of Ebola in Western Africa, the 2015-16 Zika virus epidemic, the 2018-20 Kivu Ebola epidemic, and the ongoing 2019-20 coronavirus pandemic.

[22] "Novel Coronavirus (2019-nCoV): Situation Report-10" . WHO. Jan 30, 2020.

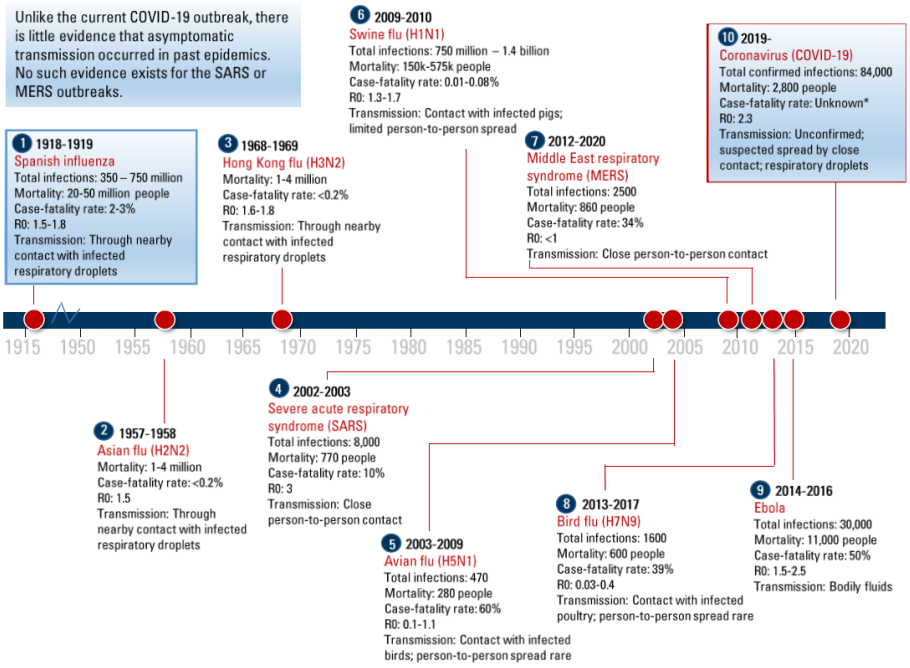
[23] See "US officials prepare for a coronavirus pandemic, declare 'public health emergency." Live Science, Jan 31, 2020.

[24] On transmission: "How COVID-19 Spreads". U.S. Centers for Disease Control and Prevention (CDC). January 27, 2020.

[25] See Steinbock, Dan. 2020. "Pioneering effort to contain coronavirus outbreak in megacities." China Daily, Jan 31.

[26] On human to human transmission, see Chan JF, et al. (2020). "A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster". The Lancet. 395 (10223): 514–523, Feb. On viral peak load: Wölfel R et al. 2020. "Virological assessment of hospitalized patients with COVID-2019". Nature: 1–10, Apr.

Figure 2 Some Pandemic Milestones



Source: CDC, WHO, NCBI, NIH, NLM, John Hopkins, Goldman Sachs Investment Research

Coupled with hand- washing and good respiratory hygiene, these measures include avoiding physical contact, school and workplace closures, canceling mass gatherings, travel restrictions, self-shielding, quarantine of potential cases, *cordon sanitaire*, protective sequestration and a host of other measures, including shutting down or limiting mass transit, closure of recreational facilities and so on.[27]

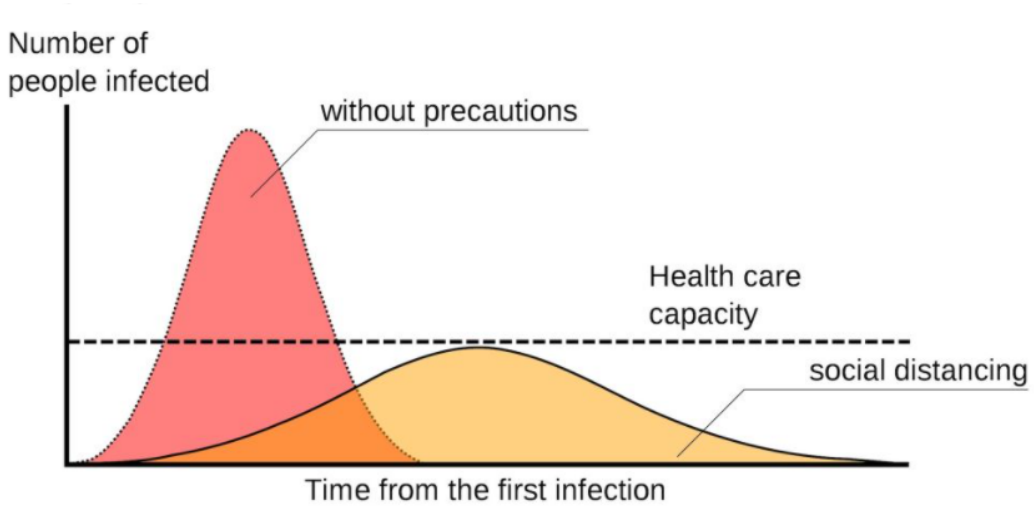
Seeking to maintain physical distance between people, these efforts aim to reduce close interactions. Obviously, such drastic measures go hand in hand with significant drawbacks, including loneliness and the loss of benefits associated with human interaction.[28] Social distancing causes drastic disruption, reduced productivity, steep contraction, and extraordinary welfare loss; huge collateral damage. But amid a pandemic, the alternatives tend to be worse.

In epidemiology, the idea of slowing a virus spread so that fewer people need treatment at any given time is known as "flattening the curve." The curve refers to the projected number of people who will contract COVID-19 over a period of time. It is steep when the virus spreads exponentially (case counts double at a consistent rate), and the total number of cases peaks within a few weeks. Conversely, such infection curves tend to have a steep fall when case numbers drop (**Figure 3**).

[27] See Anderson, Roy Malcom et al. 2020. "How will country-based mitigation measures influence the course of the COVID-19 epidemic?" The Lancet. 395 (10228): 931–934, Mar 9.

[28] Brooks, Samantha K. et al. 2020. " The psychological impact of quarantine and how to reduce it: rapid review of the evidence." The Lancet 395(10227), Feb 26.

Figure 3 A stylized epidemic curve, with and without social distancing



Source: Johannes Kalliauer/ CC BY-SA 4.0

A flatter curve assumes the same number of people ultimately get infected, but over a longer period of time. A faster infection rate means a strained healthcare system, many daily hospital visits daily and thus many infected being turned away. In contrast, a slower infection rate means a less stressed health care system, fewer hospital visits on any given day and fewer sick people being turned away. That's why, so many countries have recently introduced social distancing guidelines against the virus. In China, social distancing to flatten the curve served as an instrument in a broader strategy, however.

Aggressive Containment in Three Phases

In the early 2000s, China's efforts to control SARS were criticized as the disease spread internationally before the global outbreak was subdued. Only a decade later, Chinese response to the Avian influenza (H7N9) was significantly faster, broadly praised and the disease did not spread widely. With COVID-19, WHO stated China should be credited with identifying the virus in "record time," sharing its genetic sequence quickly, flagging potential international spread rolling out "perhaps the most ambitious, agile and aggressive disease containment effort in history."[29]

The rapid identification of the virus was based on years of science-based knowledge base, which made it possible for Chinese scientists to disclose the COVID-19 gene sequencing after the first week of January.[30] It was this prior work that led to the

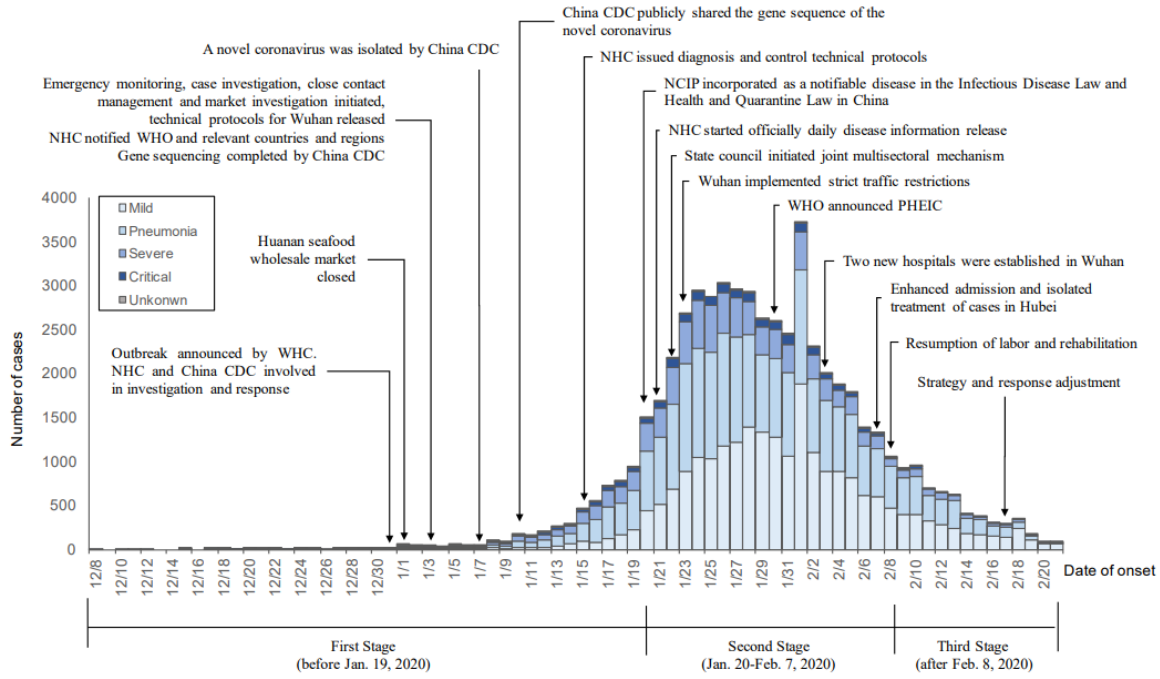
[29] Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19), WHO, Feb. 16-24, 2020, pp. 16-17.

[30] Shi Zhengli et al. Feb 3, 2020. "A pneumonia outbreak associated with a new coronavirus of probable bat origin". Nature. 579 (7798): 270–273 "Mining coronavirus genomes for clues to the outbreak's origins". Science, Feb 1, 2020.

identification of the link between the bat-origin of the novel coronavirus, by the Wuhan Institute of Virology. The scientists were particularly concerned the potential for SARS-like diseases and warned already in 2017 about the potential risks of animal-to-human spillovers.[31]

The strategy that underpinned the Chinese containment effort started as (1) a national approach, which pushed hard for universal temperature monitoring, masking, and hand washing. When China initiated the quarantine of tens of millions, it was a drastic measure amid a drastic crisis. As the outbreak evolved, more knowledge was gained. (2) That's when China took a science and risk-based approach to tailor the implementation. (3) Finally, specific containment measures were adjusted to the provincial, county and even community context, the capacity of the setting, and the nature of transmission there (**Figure 4**).

Figure 4 Overcoming COVID-19 in China: Three Stages (Dec 8 – Feb 8, 2020)



SOURCE: Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19), WHO, Feb. 16-24, 2020, p. 29.

[31] After the SARS 2003 outbreak, a team led by Shi Zheng-Li and Cui Jie of the Wuhan Institute of Virology (WIV) had sampled thousands of horseshoe bats in locations across China. In fall 2017, researchers finally found the smoking gun in a remote cave in Yunnan province, where a population of horseshoe bats harbored virus strains with all the genetic building blocks of the one that had jumped to humans in 2002. The scientists warned that all the ingredients are in place for a similar disease to emerge in future: "The risk of spillover into people and emergence of a disease similar to SARS is possible." These findings were publicized by the world's leading science journals. On the prior work, see See Cui J, et al. 2007. Evolutionary relationships between bat coronaviruses and their hosts. Emerg Infect Dis, Oct. On the gene pool of bat SARS-related coronaviruses, see Hu B, Zeng L-P, et al. 2017. Discovery of a rich gene pool of bat SARS-related coronaviruses provides new insights into the origin of SARS coronavirus. PLoS Pathog 13(11): e1006698. See also "SARS outbreak linked to Chinese bat cave: Scientists find all the genetic elements of the deadly human virus in a single population of horseshoe bats." Nature, Dec 7, 2017.

Leadership and solidarity. It was the deep commitment of the Chinese people to collective action, which was devised and implemented by their leaders, that made possible broad containment and its enforcement; but not just at the national level. Remarkable solidarity was achieved in provinces and cities in support of the most vulnerable populations and communities.[32]

At national, provincial and municipal levels, it was a lesson about the power of multi-level governance cooperation, as opposed to disunity and friction.[33] What impressed international observers was that, despite ongoing outbreaks in their own areas, Chinese governors and mayors sent thousands of health care workers and tons of personal protection equipment supplies into Wuhan, and its surrounding province Hubei.

Resolute determination. It was this bold approach to contain the rapid spread of the novel respiratory pathogen that changed the course of the escalating epidemic. What seemed to be a crushing plague-like disaster that would first spread across China, then through Asia and the rest of the world was subdued in weeks.[34]

In China, economic development is seen as critical to the country's future. But ultimately, Chinese leaders are not accountable to GDP figures. People come first. It is thanks to that mindset that China is now busy getting back to business, working to bolster the economy with accommodative monetary and fiscal policies, while reopening schools and trying to contain the remaining chains of transmission. The massive quarantine of tens of millions of people delayed the export of the outbreak not just to the rest of China but abroad (just as Italy later opted for a nationwide quarantine to protect the rest of the country and Europe overall).

Outside China, much of that advantage was missed, due to the slow mobilization.

Timeline of the Outbreak Outside China

On Jan 3, when the virus gene sequencing was completed by China's CDC and emergency monitoring initiated, NHC notified WHO and relevant countries. The next day, the Hong Kong Hospital Authority activated a "serious response level" in public

[32] On the Chinese struggle against COVID-19, see the reports by the Shanghai Institutes for International Studies (SIIS): Liu, Kan et al. 2020. China's Fight Against COVID-19 Epidemic: A Decisive Campaign. SIIS, Feb 14; Ye, Yu. 2020. Revitalize Chinas Economy：Winning Another Battle Against COVID-19 Epidemic. SIIS. Feb 24; Lu, Chuanying. 2020. International Cooperation For The Coronavirus Combat: Results, Lessons, And Way Ahead. SIIS, Mar 9; Yu, Hongyuan et al. 2020. Working Together With One Heart: People-To-People Diplomacy In The Coronavirus Crisis. SIIS. Apr 2.

[33] In China, megacities are not seen as autonomous entities; they have regional responsibilities. See Steinbock, Dan. 2009. Global Crisis, Shanghai's Moment, Shanghai Institutes for International Studies (SIIS), April.

[34] When the WHO Mission arrived in China, there were almost 2,500 newly confirmed cases daily. Two weeks later when they left, the number of new cases had shrunk to barely 400; by over 80%.

hospitals, while the city's Center for Health Protection implemented thermal body sensors at its International Airport. Singapore followed in the footprints.

That very same day, U.S. CDC director Dr. Robert R. Redfield called Alex M. Azar II, secretary of health and human services, telling him China had potentially discovered a new coronavirus. Azar told his chief of staff to make sure that the National Security Council (NSC) was aware. When Trump arrived in the White House three years before, his administration had eliminated the global health unit that had been part of the NSC. Now a team began daily meetings in the basement of the West Wing.[35] Yet, no mobilization occurred. Rather, a long debate began within the Trump administration over "what to tell to the American public."

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On Jan 7, the U.S. CDC issued a travel notice for travelers to Wuhan. A day later, as scientists in China announced the discovery of the new coronavirus, South Korea reported the first possible case of virus coming from China. On Jan 9, the European CDC posted its first risk assessment. Four days later, Thailand witnessed the first confirmed case of 2019-nCoV, the first outside China. On Jan 15, a patient with confirmed infection – the first American case - sought care at a medical facility in the state of Washington. The WHO was alerted by Japan's Ministry of Health that the first case in Japan, a 30-year-old male Chinese national, had tested positive during a hospital stay around Jan 10-15. Yet, it took another 3 months until Japan, still hoping to have its Olympic games in July, began national mobilization against the outbreak.

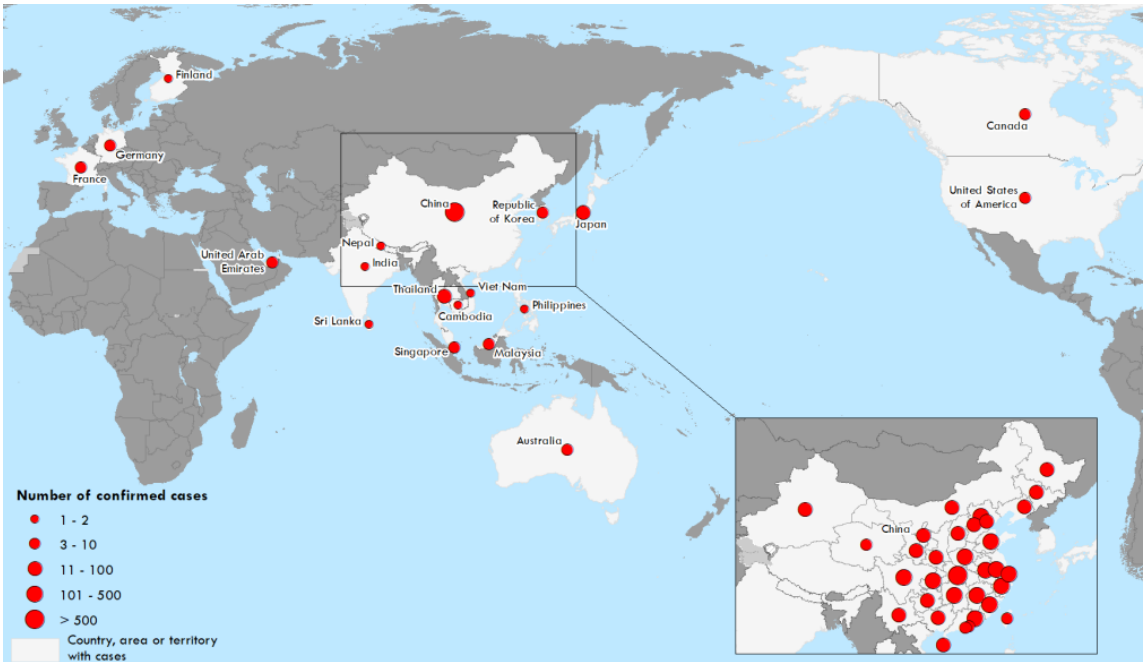
On Jan 20, South Korea reported its first confirmed case. Meanwhile, Japan and the U.S. confirmed their second cases. New cases were confirmed in Nepal, while France reported the first cases in the European Union (EU). The first confirmed incidence of human-to-human transmission *outside* China was documented by the WHO in Vietnam. A day later, new cases were reported in East and Southeast Asia, and in Sri Lanka, Australia, Japan, and Canada, followed by cases from California to Arizona in the U.S., along with the first suspected case in Ivory Coast, Africa. On Jan 27, new cases surfaced in Asia, North America and Oceania, and Fiji and Samoa in the Pacific. Germany confirmed its first case of local transmission in Bavaria, while cases were also reported in Eastern Europe and Latin America.

On Jan 27, new cases were proliferating in Asia, North America and Oceania, and Fiji and Samoa in the Pacific. Germany confirmed its first case of local transmission in Bavaria. A day later, cases were reported from Romania to Poland in Eastern Europe. In Latin America, early cases were reported from Ecuador to Brazil. By the end of January, confirmed cases were proliferating fast worldwide, while the first cases were reported in the UAE in the Middle East, the UK and Russia, and the small Nordic states (**Figure 5**).

During this period, the first cases outside China were already reported in almost 20 countries and most world regions. Despite China's emergency measures and the proactive measures in Hong Kong and Singapore, the WHO's repeated pleas and even its international alert, no other major economy mobilized in January.

[35] See Shear, Michael D. 2020. "Inside Trump Administration, Debate Raged Over What to Tell Public The administration." New York Times, Mar 9.

Figure 5 Confirmed Virus Cases by Jan 30, 2020



Sources: WHO; National Health Commission of the People's Republic of China. Map production: WHO Health Emergencies Program.

The Second Missed Opportunity

By the first week of February, there were more than 20,000 accumulated confirmed novel coronavirus cases in China as the daily new cases peaked at more than 3,000. Outside China, there were some 170 cases. Even after mid-February, the *recorded* virus cases outside China remained relatively low, in part due to inadequate testing. However, the WHO chief Dr Tedros warned "that may not stay the same for long."[36] In absolute terms, China was the epicenter. But in relative terms, the crisis was changing. In China, the virus spread reflected tentative signs of deceleration. Outside China, the outbreak was accelerating fast, though from a low starting point.[37]

On Mar 11, 2020, the WHO declared the novel coronavirus a pandemic. It was "deeply concerned both by the alarming levels of spread and severity, and by the alarming levels of inaction." As WHO chief Dr Tedros added: "This is the first pandemic caused by a coronavirus. WHO has been in full response mode since we were notified of the first cases. And we have called every day for countries to take urgent and aggressive action. We have rung the alarm bell loud and clear."[38]

Late Mobilization in United States

Two days later, on March 13, the White House mobilized all federal resources against the COVID-19 outbreak. Declaring a national emergency, President Trump invited states to access over $42 billion in existing funding to combat the virus.[39] By then, there were already 1,264 confirmed cases in the U.S. and 277 deaths. Yet, these figures grossly under-estimated the true spread of the virus since daily testing was minimal until the end of February and basic testing capacity was in place only at the end of March. Virus diagnoses were lagging behind the outbreak into April.[40]

Usually markets force policymakers into action earlier rather than later. Yet, this time was different. In the Trump era, the Dow Jones Industrial Average (DJIA) had soared from 20,000 to more than 28,300 at the end of 2019. When China began its national emergency and the WHO announced its international alert in late January, the DJIA fell barely 3% and began to rise again peaking at 29,200 in the end of February. That's when cases in Europe exploded and those in the U.S. soared, and the DJIA

[36] "Coronavirus cases outside China remain low, but WHO chief warns 'that may not stay the same for long'." CNBC, Feb 20, 2020.

[37] Steinbock, Dan. 2020. "Is China approaching a coronavirus crossroads?" China Daily, Feb 10.

[38] "WHO Director-General's opening remarks at the media briefing on COVID-19." WHO, March 11, 2020.

[39] See "President Donald J. Trump Has Mobilized the Full Resources of the Federal Government to Respond to the Coronavirus." Briefing Statement, The White House, Mar 13, 2020.

[40] See Popovich, Nadia. 2020. "How U.S. Coronavirus Diagnoses Are Lagging Behind the Outbreak." New York Times, Apr 1.

began a free-fall to 18,400 in late February losing more than a third of its value. America's longest, debt-fueled bull market decade ended in a few weeks. As Washington finally mobilized, the Index slowly recovered to 24,200 in mid-April.

Why did the market decline occur so late relative to the virus spread? One reason is that since Jan 3, the Trump cabinet had debated the virus outbreak, but only within the White House and without disclosing the realities in public.[41] In public, Trump continued "talking down" the virus concerns. That kept the market up and humming for two months, but it would prove immensely costly in terms of human lives and economic damage. Ultimately, it delayed but couldn't mitigate the free-fall.

Usually monetary easing seeks to be proactive. After the trade wars, the Fed had cut the benchmark rate to 1.75% in 2019. On March 15, 2020, it was cut down further to 0.25%, while large asset purchases and liquidity injections ensued quickly. The circumstances of the drastic action reflected concern that the market plunge could precipitate an economic meltdown, as perceptive observers suggested.[42] While the Fed hoped for the best, it braced for an extended period ultra-low interest rates, once again. A decade of progress was reversed in about a week.

Despite the Trump administration's tax reforms and a deregulatory agenda, the GDP annual growth rate had stayed close to 2% in 2019, constrained by trade wars. After growth of 2.3% in the 4th quarter and full-year growth of 2.1%, the U.S. faced a massive contraction in the 2nd quarter of 2020. Trump's mishandling had successfully deferred the inevitable awakening but when it finally ensued, it was devastating.

As the Trump administration began national mobilization weeks belatedly, it hoped to reduce the economic damage by reopening the economy after mid-April. Trump gave governors a road map for recovering from the economic pain of the coronavirus pandemic.[43] Politically, the White House conveniently delegated the responsibility to the states, should the exit moves prove premature. By then, new confirmed cases in the U.S. totaled almost 26,000 and 2,400 daily new deaths. Obviously, flexibility was needed in a populous country where the spread of the virus differed significantly among the states, from 300-400 in Alaska and North Dakota to more than 226,000 in New York and 75,000 in New Jersey. Following the Trump administration's loss of credibility, many states developed their own exit stances. Together with the governors of New Jersey and Connecticut, Gov. Andrew Cuomo (D) even brought in outside consultants to prepare a "Trump-proof" plan to reopen the three states' economies.[44]

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[41] See Shear, Michael D. 2020. "Inside Trump Administration, Debate Raged Over What to Tell Public The administration." New York Times, Mar 9.

[42] See Chappatta, Brian. 2020. "Fed's 100-Basis-Point Shock Rate Cut Expects the Worst." Bloomberg, Mar 15.

[43] "You're going to call your own shots," Trump told the governors. "We're going to be standing alongside of you." See "Trump unveils phased approach to reopening economy amid coronavirus outbreak." Associated Press, Apr 16, 2020.

[44] See "New York state hires McKinsey to create science-based, 'Trump-proof' plan for the safe economic reopening." The Hill, Apr 16, 2020.

The friction had broad ramifications, including the official virus-related death toll. In a week in New York alone, the state's death toll spiked more than 50% to over 10,000. Meanwhile, government records revealed how supply shortages, lapses in care, a lack of transparency and inadequate infection control precautions were fueling the COVID-19 spread within America's nursing homes. As a result, government watchdogs warned it was becoming easier for substandard care to go unchecked and for some facilities to keep dangerous secrets.[45] Despite earlier precedents in China and Europe and thus more time to prepare for such misconduct, belated mobilization devastated not just nursing homes, but prison systems and other dense closed facilities. As perceptive observers noted that this was the next information battle field in America: "Who gets counted in the coronavirus death toll."[46]

Late Mobilization in the Euro Area

On Jan 25, 2020, the European Centre for Disease Prevention and Control (ECDC) was still painting a fairly rosy picture about the virus spread: ""Even if there are still many things unknown about 2019-nCoV [coronavirus], European countries have the necessary capacities to prevent and control an outbreak as soon as cases are detected," it reported.[47] Yet, the consequent delays can hardly be attributed to ECDC alone, despite its vital role. The inadequate EU preparedness involves not just its small virus-alert agency, but delays at the highest levels of EU institutions.

In the EU, the regional response took even longer than in the U.S., although some member states had been more proactive, and the most affected countries had to mobilize earlier. On Mar 10, 2020, when Italy already had 9,200 confirmed cases and over 460 deaths, its EU ambassador Maurizio Massari pled for help: "Italy has already asked to activate the EU Mechanism of Civil Protection for the supply of medical equipment for individual protection. But, unfortunately, not a single EU country responded to the Commission's call," Massari noted. "Only China responded bilaterally."[48] Just days later, Italian Foreign Minister Luigi Di Maio hailed the arrival of a Chinese plane loaded with medical equipment and doctors to help fight the coronavirus.[49] In the U.S., Chinese aid was discounted – and continues to be discounted - as a "propaganda push" and "information warfare," however.[50]

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[45] Ellis, Blake and Hicken, Melanie. 2020. "Covid-19 is ravaging nursing homes. Government records show why." CNN, Apr 24.

[46] Elliot Hannon observed that "some countries have far more capacity to test and treat victims of the virus—and interest in doing so—while others have sent people home and hoped for the best. Further complicating matters is that how a coronavirus death is defined is also a matter of interpretation." See Hannon, Elliot. 2020. "Trump's Next Propaganda War: Who Gets Counted in the Coronavirus Death Toll." Slate, Apr 16.

[47] See "How the EU's virus alert agency failed." EUobserver, Apr 10.

[48] Massari, Maurizio. 2020. "Italian ambassador to the EU: Italy needs Europe's help." Politico EU, Mar 10.

[49] "Many foreign ministers offered their solidarity and want to give us a hand ... [and yet] the first aid arrived from China" said Di Maio in a pointed rebuke to the EU. See "Italy's foreign minister hails Chinese coronavirus aid." Politico EU, Mar 13, 2020.

[50] "China's Coronavirus Diplomacy." Wall Street Journal, Mar 10, 2020; "China, Italy, and Coronavirus: Geopolitics and Propaganda." Mar 20, 2020; "China Isn't Helping Italy. It's Waging Information Warfare."

When the EU mobilization finally began – weeks after Massari's pleas – the number of cases in Italy had soared tenfold, while the deaths had tripled. And by the time the EU aid finally arrived in the worst-hit Italian cities, more time would still pass.

As part of the EU's joint response to the COVID-19 outbreak, the European Parliament almost unanimously adopted three urgent proposals in an extraordinary plenary session, on March 26, 2020. That is when the EU launched its "Corona Response Investment Initiative." It was expected to mobilize up to €37 billion to support national health care systems, SMEs, labor markets and other vulnerable parts of its member economies. The EU also extended the EU Solidarity Fund to cover public health emergencies. The measures would make up to €800 million available for European countries in 2020.[51] (That proved soon inadequate, due to the belated response. By late April, European leaders gave Brussels the green light to draw up plans for a huge €1 trillion stimulus package to ease the EU's recovery from the coronavirus crisis.)[52] Nevertheless, when EU began mobilization, there were already more than 251,000 confirmed cases and over 14,000 deaths in the EU.[53]

In the U.S., the markets (eventually) penalized the policymakers, but what about Europe? By year-end 2019, the Euro Stoxx 50 had recovered from 2,200 in 2012 back to 3,800. In late January 2020, the WHO's international alert did cause the Index to fall by 5%. After a brief recovery and a peak of nearly 3,900, the soaring number of cases in Italy and the rest of Western Europe caused a free-fall of the Index by nearly 40% within a single month. The plunge ended only with full mobilization in late March. By mid-April, the Index was still struggling below 2,900.

What about monetary policy? If the number of cases were in hundreds of thousands and deaths in thousands in late March, when and how did it respond? Unlike the U.S. Fed, the European Central Bank (ECB) had not been able to begin the exit from ultra-low rates in the course of the 2010s, however. Following the debt crisis, the benchmark rates were cut close to 0%. Despite the then-far greater number of cases, deaths and economic damage in Europe, the ECB responded only after its "emergency meeting" on Mar 18, 2020, when the ECB moved ahead with large asset purchases and a new round of quantitative easing, while interest rate stayed at 0%.

The delays in Brussels penalized severely the Euro area's GDP annual growth rate. In the early 2012s, growth had plunged to less than -1% amid the sovereign debt crisis. After six years of slow, debt-fueled recovery, it peaked at 3% at year-end 2017. Despite hopes for a moderate recovery, U.S. tariff wars virtually ensured that Euro

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Foreign Policy, Mar 31, 2020; "China's Coronavirus Battle Is Waning. Its Propaganda Fight Is Not." New York Times, Apr 8, 2020; "Thanking big brother: China's post-covid propaganda push." Apr 16, 2020.

[51] After a disappointing start, Europe's collective response to the coronavirus crisis was the "most impressive anywhere in the world", said European Commission President Ursula von der Leyen in mid-April (a quarter of a year after, the European CDC first learned about the virus in China). The EU was not ready when the pandemic first began sweeping the continent, she said, and member states did not offer enough support to hard-hit Italy.. See "COVID-19: Parliament approves crucial EU support measures." Press Release, EU, March 26; See "Coronavirus: EU offers 'heartfelt apology' to Italy." BBC News, Apr 16, 2020.

[52] See "Europe plans trillion-euro fund to rebuild its economy." CNN, Apr 24, 2020.

[53] COVID-19 situation in the WHO European Region, WHO Europe, Mar 26, 2020, 10.00 (CET).

area growth would fall to 0.9% in the 4th quarter of 2019 (the full-year rate was 1.2%; the weakest expansion since late 2013. At the end of the 1st quarter, growth would contract severely paving the way to the carnage in the 2nd quarter.

Despite the economic damage, the European Commission, as President Trump in the U.S. hoped to introduce early "exit strategies" to the lockdown measures, especially after Austria and Denmark announced plans to ease restrictive measures. At the time new deaths had fallen to 31,000 and new deaths to about 5,000. In contrast, the European branch of the WHO urged countries not to lift restrictions prematurely. "Now is not the time to relax measures," said Europe WHO regional director Hans Kluge.[54] After pressure by member states, the EC was forced to delay plans for exit. Premature opening would have resulted in still another disaster.[55]

A Series of International Delays and Failures

In addition to belated mobilization in the U.S. and Europe, several major obstacles derailed effective overall international cooperation:

- Failure of WHO members to provide full case reports in time;
- faulty test kits and delays in testing;
- failed responses, elevated health risks;
- misguided virus coverage that fostered an "infodemic";
- battle against the WHO, its chief and key executives;
- and efforts to politicize the virus outbreak.

Failure of International Information Sharing

On February 4, WHO chief Dr. Tedros dropped a news bomb stating that countries *outside China* had proved slow in sharing information about the cases:

> Of the 176 cases reported outside China so far, WHO has received complete case report forms for only 38% of cases. Some high-income countries are well behind in sharing this vital data with WHO. I don't think it's because they lack capacity.[56]

[54] See "*EU delays 'exit strategies' plan, as WHO urges caution.*" EUobserver, Apr 9, 2020.

[55] Even in mid-April there were still more than 35,000 new cases daily and over 4,700 deaths. See COVID-19 situation in the WHO European Region." WHO Europe, Apr 16, 2020.

[56] Dr Tedros called on all member states to share detailed information with WHO, including epidemiological, clinical severity and the results of community studies and investigations. This was the responsibility of all *countries under the International Health Regulations. See Dr Tedros. 2020. "WHO Director-General's opening remarks at the technical briefing on 2019 novel coronavirus." WHO, Feb 4, 2020.*

It is easy to understand the frustration of the WHO leadership. After a month of international crisis and global alert, three of five member countries outside China had failed to provide adequate information to WHO by Feb 4, 2020. Without full data, it was very hard for the WHO to assess how the outbreak was evolving, what impact it could have and to provide appropriate recommendations. It was only *after* Tedros's public statement that some member states began to share data with WHO. Yet, critical time had been lost, again.[57]

Faulty Test Kits, Delays in Testing

When the virus went global at the turn of March, most countries began to mobilize, but belatedly. While international media focused on the new epicenter in Europe, particularly Italy with its 3,100 cases, the U.S. had only 129 *recorded* cases; half of those in France, Germany and Spain. Unlike European countries, the U.S. was barely testing. On Feb 5, the U.S. CDC had begun sending out coronavirus test kits, but many were found to have faulty negative controls (what shows up when coronavirus is absent), caused by contaminated reagents. This was the likely side effect of a rushed job to put the kits together. Consequently, laboratories with failed negative controls had to ship their samples to the CDC for testing.

By Mar 5, 2020, other countries had been able to run millions of tests, but CDC had tested only 1,235 patients, although the idea of local testing was to expedite the diagnosis process. To make things worse, red tape prevented other labs from creating their own test kits thus compounding the long delay.[58] The debacle contributed to the virus epicenter moving from Europe to the U.S. at the turn of April.

U.S. virus tests remained below 100 per day from January to Feb 26. They exceeded 1,000 only in the first week of March. At the time of the national emergency declaration, the tests had increased to 7,000 daily. It was only after the end of March, that they would vary around 5,000 to 10,000 (**Figure 6**).[59] Even in late April, it was still half the level of Italy in per capita terms.

Shortages of Personal Protective Equipment

When the virus went global, most countries began to mobilize for supplies only belatedly. As a result, the frontline health personnel has suffered disproportionately in these countries, due to the shortage of personal protective equipment (PPE).

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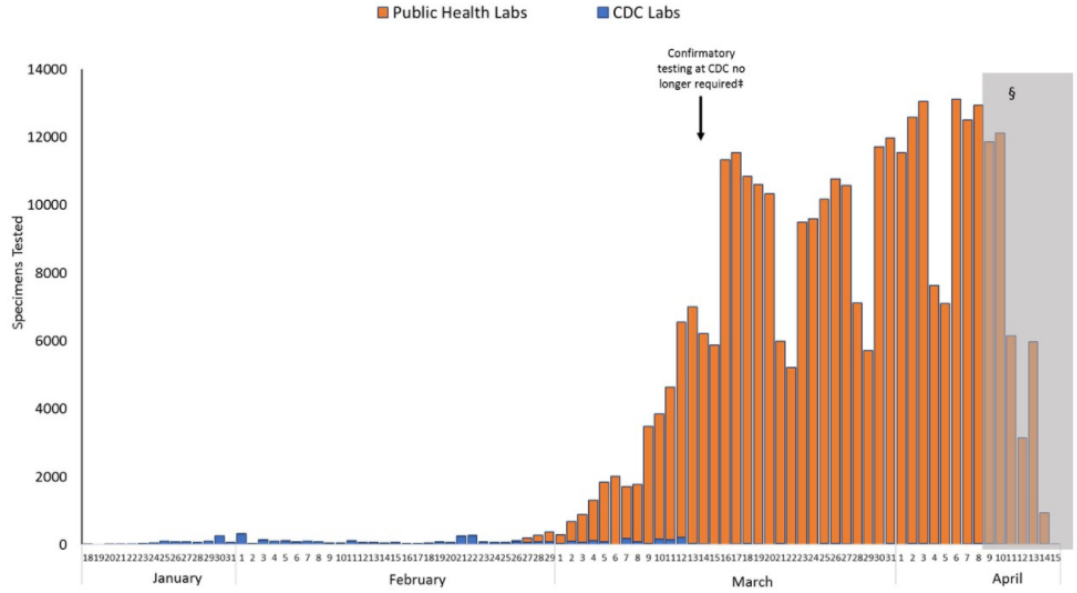
[57] See Steinbock, Dan. 2020. "How Failed Int'l Cooperation Amplifies Virus Damage." Feb 10.

[58] Patel, Neel V. 2020. "Why the CDC botched its coronavirus testing." MIT Technology Review, Mar 5.

[59] See "Testing in the U.S." CDC, Apr 4, 2020.

Figure 6 U.S. Delays in Testing for the Novel Coronavirus*



Source: U.S. CDC

Despite China's demonstration effect two months before, there had been little or no preparation in U.S. and European hospitals to protect frontline health personnel *before* the pandemic outbreaks in March and April. In the U.S., the greatest challenges centered on testing and caring for patients with known or suspected COVID-19 and keeping staff safe.[60] In late March, European Parliament was informed that 200 million face masks and 30 million respirators would be needed "weekly for at least 3 months."[61] Such pleas did highlight the massive lack of medical equipment necessary to fight the pandemic.

The WHO warned that severe and mounting disruption to the global supply of PPE - caused by rising demand, panic buying, hoarding and misuse - was putting lives at risk from the virus and other infectious diseases. Based on modelling, an estimated 89 million medical masks were necessary for the COVID-19 response *each month*. Consequently, WHO called on industry and governments to increase manufacturing by 40% to meet rising global demand.[62]

Healthcare professionals in Wuhan and Hubei had been the first to suffer from these shortages, which the central government alleviated by encouraging other provinces to allocate PPE to the hardest-hit province. In Europe and the U.S., comparable actions proved more challenging. In part, this was due to inadequate PPE capacity.

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[60] See "Hospital Experiences Responding to the COVID-19 Pandemic: Results of a National Pulse Survey. March 23–27, 2020." Office of Inspector General, U.S. Department of Health and Human Services, April, 2020.

[61] See "How the EU's virus alert agency failed." EUobserver, Apr 10.

[62] Since the start of the outbreak, prices had surged. Surgical masks had seen a six-fold increase, N95 respirators had trebled and gowns had doubled. Worse, supplies can take months to deliver and market manipulation is widespread, with stocks frequently sold to the highest bidder. See "*Shortage of personal protective equipment endangering health workers worldwide.*" WHO, News Release, March 3, 2020.

In part, cooperation failed in fragmented Europe and among divisive U.S. states, as evidenced by shortages in the Tri-state area (New York, New Jersey, Connecticut). When the virus epicenter moved from the West Coast to New York City, Governor Andrew Cuomo had to beg for assistance: "Please come help us in New York now."[63]

Shortages Due to Tariff Wars

Worse, the inadequate capacity was also a self-induced challenge. Governance issues and China's significant role in the global PPE supply chain were not the only reasons for U.S. shortages. As many countries tried to lock down crucial medical supplies to treat the coronavirus, large shipments of U.S.-made respirators and ventilators were sold to foreign buyers. Due to the PPE manufacturers' profit incentive, the needs of the infected in the U.S. were neglected into late March.

Ironically, the misguided U.S. trade policy made a bad situation lot worse. Due to its tariff wars, the White House had placed no restrictions on exports of medical supplies and continued to impose financial penalties on the import of personal protective gear, protective goggles, pulse oximeters, hand sanitizers, and other medical products from China. On Mar 10 and 12, President Donald Trump lifted tariffs, but only temporarily and on some of these medical products. The tariffs on some of these medical products had been in place since 2017. These blanket bans on exports disrupted production of health care products by breaking supply chains in the midst of a crisis, and limited U.S. ability of the U.S. to assist poorer countries.[64]

A bad situation got still worse in late April, when the Trump administration effectively blocked the states and hospitals from getting the desperately needed PPE. As one journalist put it, "in addition to abandoning the states to their own devices in a time of national emergency, the federal government has effectively erected a blockade — like that which the Union used to choke off the supply chains of the Confederacy during the Civil War — to prevent delivery of critical medical equipment to states desperately in need."[65]

Though such measures may have been in line with the politicization of the pandemic, they virtually ensured significantly higher human costs and economic damage over time.

Moreover, failed and belated crisis responses resulted in elevated health risks.

[63] See "'Please Come Help Us': New York Gov. Cuomo Begs for Medical Volunteers." TIME, Mar 31, 2020.

[64] See Fang, Lee. 2020. "Key Medical Supplies Were Shipped from the U.S. Manufacturers to Foreign Buyers, Records Show." The Intercept, April 1.

[65] See "The White House Has Erected a Blockade Stopping States and Hospitals From Getting Coronavirus PPE." New York Magazine, Apr 19, 2020.

Failed responses, Elevated Health Risks

Botched quarantines. On February 3, more than 3,700 passengers and crew of *Diamond Princess* were quarantined by the Japanese Ministry of Health after one passenger on the ship tested positive for COVID-19. Just weeks later, more than 710 people had tested positive for the virus, while 12 had died.[66] At the turn of February, many other cruise ships were found to be infected with the novel SARS-CoV-2 virus, including the *World Dream,* MS *Grand Princess,* MS *River Anuket,* MS *Braemer* and *Ruby Princess.* Some of their passengers tested positive after cruises and new infections from East and Southeast Asia to Oceania and North America.[67] More than a month after the WHO's global alert, the *Coral Princess* arrived at Miami with coronavirus victims on board, including 2 fatalities.[68]

Failure to contain "super-spreaders." With rapidly-expanding deadly viruses, super-spreaders who endanger others were a great concern. On February 10, a 61-year old woman, who worshipped at a cult church in Daegu, South Korea, developed fever but twice refused to be tested for the virus claiming she had not recently travelled abroad. By late February, South Korea's CDC attributed 346 confirmed cases to this "Patient 31." It contributed to the country's virus crisis, which has resulted in more than 10,500 confirmed cases and over 220 fatalities.[69]

Poorly-managed evacuations. As countries sought to rescue citizens from infected territories, failed evacuations posed new risks. With *Diamond Princess,* the US CDC urged to keep 14 infected US citizens in Japan. Since the infected passengers had no symptoms, they could be segregated on the plane in a plastic-lined enclosure, the State Department said. The CDC criticized the decision contending that a plastic-aligned enclosure would not mitigate infection risks and the evacuees could still spread the virus.[70] The incident led to Sen. Elizabeth Warren's (D-Mass) public criticism followed by attacks against China by Secretary of State Mike Pompeo and Secretary of Health and Human Services Alex Azar in a political deflection effort.[71]

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[66] It was not the first outbreak in the ship. In February 2016, Diamond Princess had suffered a gastroenteritis outbreak, caused by norovirus sickening 158 passengers and crew on board. See "Cruise ship hit by norovirus gastroenteritis docks in Sydney." ABC News, Feb 4, 2016. On the Diamond Pricess data, see Coronavirus disease 2019 (COVID-19) Situation Report – 75, WHO, Apr 4.

[67] Cruise line stock fell sharply only at the end of March, when the $2.3 trillion relief package passed by the U.S. Congress and signed by President Trump excluded companies that were not "organized" under U.S. law. Even by early Apr 2020, there were dozens of such cruise ships with confirmed cases and many others with suspected cases, including Pullmantur Horizon, Coral Princess, Costa Magica, Costa Favolosa, Costa Luminosa, Costa Victoria, Silver Shadow, Silver Explorer, Zaandam, Artania, Ovation of the Seas, Voyager of the Seas and Celebrity Solstice.

[68] "Another Cruise Ship With Virus Victims Docks in Florida." Associated Press, Apr 4.

[69] See Coronavirus disease 2019 (COVID-19) Situation Report – 75, WHO, Apr 4. On the role of the cult church and its super-spreader in the South Korean outbreak, see Choe Sang-Hun. 2020. "Shadowy Church Is at Center of Coronavirus Outbreak in South Korea." New York Times, Feb 21.

[70] See Sun, Lena H. et al. 2020. "Coronavirus-infected Americans flown home against CDC's advice." Washington Post, Feb 21.

[71] The decision to overrule the CDC and place the evacuees on the flight came from the State Department and HHS. See "Warren calls on Trump admin to explain process for bringing back Americans infected by coronavirus." Politico, Feb 26, 2020.

Failures in self-quarantine monitoring. After mid-February, California health officials said that 7,600 people who had returned after visiting China during the outbreak had been asked to quarantine themselves at home. Yet, the CDC was not tracking how many people from each US state who had returned from China had been asked to isolate themselves. Local health departments had discretion to carry out the quarantines. Federal officials shared passenger details with states that passed the information on to local health agencies.[72] At the time, 10 people in California had tested positive for the virus in lab tests performed by the CDC, the California Department of Public Health said. Some were from people who had recently traveled to China. Two months later, the U.S. had almost 340,000 cases, more than four times relative to those in China, and nearly 10,000 fatalities. Of the confirmed cases, California accounted for more than 15,000.

Information Versus "Infodemic"

Virus misinformation on global scale compelled the WHO to declare the COVID-19 an 'infodemic" on Feb 2. Tabloid hysteria had contributed to ugly instances of xenophobia, even racism against people of Chinese and Asian descent, while leading to bullying in schools, colleges, even universities. Since international media seemed to be shunning its responsibility to correct myths and rumors, WHO had to allocate some of its scarce resources to do the job.[73]

Even reputable media contributed to misunderstandings. On February 4, *New York Times* reported: "Deaths in China Rise, With No Sign of Slowdown."[74] In fact, the daily increase of new virus cases in China was decelerating.[75] Oddly, it took until *mid*-February for the Silicon Valley's largest tech giants to get together to tamp down on virus misinformation. The companies at the meeting included representatives from Facebook, Amazon, Twilio, Dropbox, Alphabet's Google, Verizon, Salesforce, Twitter and YouTube. Private companies including Airbnb, Kinsa and Mapbox also attended. Apple, Lyft and Uber were invited but did not attend.[76]

Outside China, international containment was complicated by misguided media coverage and continued attacks against people of Chinese and Asian descent in the U.S., Europe and elsewhere. Hoping to correct the distorted headlines, such as the

[72] "California Tells 7K People to Stay Home Because of New Virus." Associated Press, Feb 21, 2020.

[73] As the WHO Situation Report expressed the matter on February 2: "The 2019-nCoV outbreak and response has been accompanied by a massive 'infodemic' – an over-abundance of information - some accurate and some not - that makes it hard for people to find trustworthy sources and reliable guidance when they need it." See Novel Coronavirus(2019-nCoV). Situation Report – 13, WHO, Feb 2, 2020.

[74] "Deaths in China Rise, With No Sign of Slowdown," The New York Times, Feb. 4, 2020.

[75] Steinbock, Dan. 2020. "Is China approaching a coronavirus crossroads?" China Daily, Feb 10.

[76] "Facebook, Amazon, Google and more met with WHO to figure out how to stop coronavirus misinformation." CNBC, Feb 14, 2020.

"Wuhan virus" and the "Chinese virus," the WHO renamed the virus COVID-19 on February 12.[77]

What followed next was even more distressing.

Battle Against the WHO, Its Chief and Key Executives

The odd battle against the WHO, its director-general and leading executives did not start in early April, when President Trump targeted the UN organization and its chief. It began already in 2017, when the WHO got its first Ethiopian chief executive who was targeted by a defamation campaign of his British rival candidate. It was fueled by a murky online petition and disinformation campaign originating from Taiwan, which heralded a series of attacks by international media through early 2020, until Trump resorted to financial blackmail against the UN agency and its chief.[78] Between late January and late April, 1 million people signed an online petition to the UN for the WHO chief Dr Tedros to resign, since he "solely believes" Chinese virus data, *and* to include Taiwan among the WHO members. In reality, WHO chief Dr. Tedros initiated a review process in the early days of the Chinese outbreak to study the causes of the virus. And the online platform Change.org has been criticized widely.[79]

The smear campaign was an ugly déjà vu. In 2017, Dr Tedros Adhanom Ghebreyesus, a high-level Ethiopian health executive, succeeded Margaret Chan as the chief WHO. While seen as highly qualified for the job and an innovative reformer, his candidacy was attacked at the last eve of the WHO election, when stories surfaced about an alleged cover-up of cholera epidemics in Ethiopia. The allegations came from Lawrence Gostin, a U.S. law professor who advised the rival UK candidate.[80] In the UN, the African Union dismissed the allegations as an "unfounded and unverified defamation campaign."[81] Yet, by spring 2020, the old smear campaign stories were recycled in media.

On Feb 5, a day after Dr Tedros had urged countries to provide complete case reports, the Financial Times reported that the influential WHO emergency committee member and veteran professor John Mackenzie "hit out at Beijing's 'reprehensible'

[77] Dr Tedros. 2020. "COVID-19." Tweet, Feb. 12, 2020.

[78] See Steinbock, Dan. 2020. "The Strange War with WHO's Battle Against COVID-19." The World Financial Review, Feb 17.

[79] Later, when Dr Tedros had to face racial slurs and death threats, he disclosed that "this attack came from Taiwan. And Taiwan, the Foreign Ministry also, they know the campaign. They didn't disassociate themselves." See "WHO chief addresses death threats, racist insults: 'I don't give a damn.'" CNBC, Apr 8, 2020. In turn, criticism of the online campaign includes charges of fake signatures, abuse of personal information, selling of personal data, for-profit exploitationof non-profit initiatives etc. See e.g., Brooks, Raven. 2012. "Change.org sells out progressive movement". Daily Kos, Oct 23.

[80] See McNeil, Donald G. Jr. 2017. "Candidate to Lead the W.H.O. Accused of Covering Up Epidemics". The New York Times, May 13.

[81] Saez, Catherine. 2017. "Attacks On WHO Candidate Are Defamatory, 'Colonial', Ambassador Says". Intellectual Property Watch, May 17.

response," and "accused China of not reporting coronavirus cases fast enough."[82] The charge was not publicly supported by other committee members, nor by WHO executives. Moreover, the FT neglected to mention that the highly qualified Mackenzie also serves in Australian government's Indo-Pacific Centre for Health Security, which plays a role in the U.S.-led Indo-Pacific initiative aiming to contain China's rise. Mackenzie was also co-chair of a major NGO, which is partnering with the Defense Threat Reduction Agency (DTRA) within Pentagon and which competes "against Chinese influence."[83] Yet, he was portrayed as an independent expert.

On Feb 13, Wall Street Journal released a front-page story, "WHO Criticized for Virus Response," that broadened the WHO criticism. It relied in part on critical quotes from both Mackenzie and Gostin. Once again, both were portrayed as independent, neutral observers. All interviewees represented experts from the U.S. and its allies. No major Chinese health experts were interviewed.[84]

When attacks against Dr. Tedros went nowhere, international spotlight focused on WHO Infections Hazards Director Dr. Sylvia Briand when she stated in early February that "we are not in a pandemic." The statement met with broad criticism in international media.[85] Though there was "no official category [for a pandemic],[86] its definition tends to stress international spread and local transmissions. At the time – on February 4 – there had been over 1,500 virus deaths in China but only 2 recorded deaths outside China. In contrast, the last pandemic the 2009 H1N1 flu outbreak (swine flu) killed around 150,000 to 575,000 people around the world.[87]

The battle against the WHO, its chief and key executives was not an irrelevant side effect of the virus outbreak. It was the net effect of the kind of unilateralism that had evolved in Washington in the aftermath of the Cold War and that seeks to marginalize the UN and multilateralism. In the Trump era, these efforts led to U.S. withdrawal from the Paris Climate accord, the exit from the Iran nuclear deal and consequent regime change efforts, threats against the funding of the World Trade Organization (WTO), the UN and the WHO; a UN organization.

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[82] "WHO expert says China too slow to report coronavirus cases." Financial Times, Feb 4.

[83] As the Fiscal Year 2020 budget puts it. In Asia, one of the Agency's strategic objectives was to be the partner of choice in a region competing against Chinese influence." See Fiscal Year (FY) 2020 President's Budget Operation and Maintenance, Defense-Wide Cooperative Threat Reduction Program.

[84] Page, Jeremy and McKay, Betsy. 2020. "The World Health Organization Draws Flak for Coronavirus Response," Wall Street Journal, Feb 12. The piece was subtitled "Public-health experts question whether the WHO has been too deferential to China in its handling of the new virus." In a series of similar "exposes," the tacit message seemed to be that only those who have a track-record of criticism against China, the WHO and/or its executives, could serve as "experts" and no Chinese experts need be included.

[85] See, "WHO Says Coronavirus Is Not A Pandemic, Despite Increase in Cases and Deaths." Forbes, Feb 4, 2020.

[86] See "WHO says it no longer uses 'pandemic' category, but virus still emergency". Reuters. Feb 24, 2020. A pandemic is an epidemic occurring on a scale that crosses international boundaries, usually affecting a large number of people. See Porta, Miquel, ed. (2008). Dictionary of Epidemiology. Oxford University Press. p. 179.

[87] "First Global Estimates of 2009 H1N1 Pandemic Mortality Released by CDC-Led Collaboration". cdc.gov. 25 June 2012.

Since January, Dr Tedros had warned about the perils of politicization urging leaders to focus on saving lives, arguing that political attacks would only lead to "more body bags."[88] Nevertheless, Trump threatened the WHO with the withdrawal of US funding and charged WHO chief Dr Tedros for siding with China.[89] Timing mattered. The White House targeted the WHO on the second week of April, when the failures of U.S. virus mobilization became evident, due to the peak of the epidemic curve in America. In mid-April, President Trump instructed his administration to halt funding to the WHO, as it would conduct a "coronavirus review."[90]

Politicization of International Virus Coverage

Despite the first cases in the U.S. and Europe in January, international media responded relatively slowly to the outbreak. While China moved toward a national emergency, some of the world's largest news weeklies began to monitor the topic in January. Nevertheless, the first cover stories ensued only in mid- (Bloomberg Businessweek, Time, Newsweek) to late February (Economist). Typically, the early cover features framed the outbreak as an abstract story of man versus nature (e.g., "Man Vs Microbe," Bloomberg Businessweek, Feb 10).

The first cover story focused on China ensued only after the epidemic curve had risen and fallen in the mainland (Time, Feb 17). Moreover, globalization of the virus became a cover feature only at the turn of March, when the outbreak was expected to "go global" (Economist, Feb 27) – that is, over a month after the WHO had declared international emergency and the outbreak began to spread across countries (**Figure 7**).

When the virus coverage finally began, many observers framed the outbreak as mainly a Chinese issue; and one that could cause China's "economic collapse." Although the outbreak epicenter moved from Europe to the U.S. in March, the first covers reflecting virus quarantine in America followed only toward early to mid-April, when the cases in America already exceeded 310,000.

In the Trump cabinet, efforts to exploit the crisis for political purposes began almost two months before U.S. virus mobilization, as exemplified by Commerce Secretary Wilbur Ross. On Jan 30, right after the 'Phase 1' trade deal and the deadly virus in China, Ross declared that the outbreak in China would benefit U.S. manufacturing and bring jobs back to America.[91] Despite the first cases in the U.S., both Ross and Navarro apparently presumed the virus would not spread in America.

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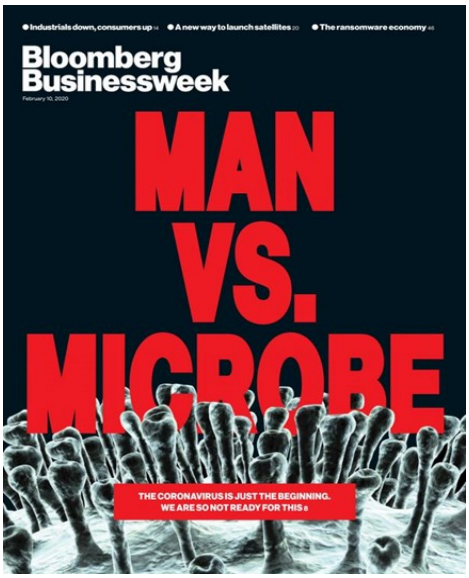
[88] For a recent statement, see "WHO chief warns against 'politicizing' coronavirus unless 'you want to have more body bags'." The Hill, Apr 8.

[89] See "Trump slams 'China-centric' WHO, says agency 'called every shot wrong' in coronavirus pandemic." Fox News, Apr 7.

[90] It was not clear how Trump would withhold WHO funding, much of which is appropriated by Congress.

[91] Trump's trade advisor, Peter Navarro, said U.S. tariffs on Chinese imports would not be lifted even if the deadly coronavirus starts to weigh on China's economy. "China's deadly coronavirus could be good for US jobs, manufacturing, says Trump Commerce Secretary Wilbur Ross." CNBC, Jan 30, 2020.

Figure 7 Covers of Global Weeklies



Feb 10

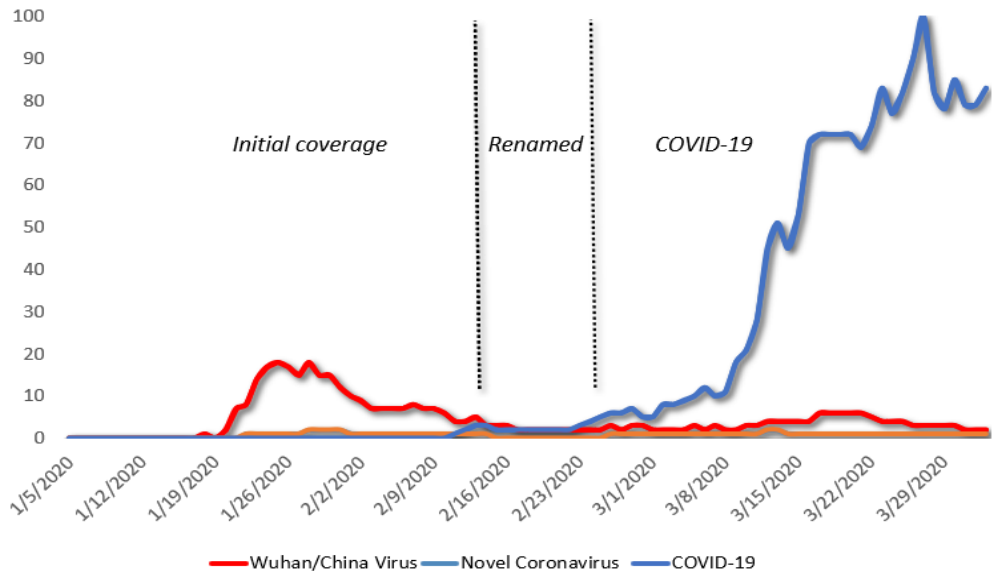
Feb 27

The Trump administration's accusations against China intensified with widespread criticism of the administration for its handling of the outbreak from early January to mid-March. As the debate escalated over the botched evacuations, faulty test kits and failed monitoring of self-quarantines, the politicized attacks were reflected by the repeated statements of Secretary of State Mike Pompeo and Health and Human Services Secretary Alex Azar who blamed China for American virus crisis. Meanwhile, Trump sought to "talk down" the virus impact. When the WHO declared the global emergency on Jan 30, Trump still claimed that "we have it very well under control." Thereafter, he repeated his statement in verbatim (Feb 23) and declared that "[coronavirus is] going to disappear. One day — it's like a miracle — it will disappear" (Feb 27). He also accused Democrats for politicizing coronavirus, "their new hoax" (Feb 28), proclaimed again that his administration had the virus fully under control and thanked his healthcare advisers whose advice he continued to reject (Feb 29). Then, he suggested the WHO's estimate of the global death rate was "false," described the virus as "very mild" and said the infected could get better by "going to work" (Mar 4) and the common flu was worse than COVID-19 (Mar 9).[92]

Based on Google Trends, the term "Wuhan virus" and "China virus," or both, predominated international coverage from the start of the year until Feb 12. Despite the WHO's renaming of the virus to avoid further stigmatizing, the practice did not immediately change. The transition occurred around Feb 13-24, but the widespread use of the new term COVID-19 took off only after March 8. Ironically, the terms "China virus" and "Wuhan virus" were most used by international media precisely when the virus was rapidly spreading *outside* China, which served to further cloud the rapid COVID-19 internationalization (**Figure 8**).

[92] For more on the timeline of Trump's statements, see Bort, Ryan. 2020. "*'Not Concerned at All': A Timeline of Trump's Coronavirus Dismissals*." Rolling Stone, Mar 19.

Figure 8 International Media Coverage: Redefinition of Virus
Google Trends, Jan 1 – March 31, 2020



Source: Difference Group. Data from Google Trends: Interest over time (3 months), April 5, 2020.

When these accusations failed to deflect public criticism of the Trump administration, reputable media was used to launder intelligence meant to ratchet up tensions with China. As investigative journalist Joe Lauria has shown: "During the saga of Russiagate [when the Democratic Party attempted to shift the blame from its disastrous 2016 loss to Donald Trump onto Russia], the New York Times was the main vehicle for unnamed U.S. intelligence officials to filter uncorroborated allegations about Russia, presenting them as proven fact." Now China replaced Russia as the politically expedient target. As Lauria concluded: "the Trump administration is now trying to shift the blame from Trump's disastrous handling of the coronavirus crisis onto China."[93]

The release of unsubstantiated stories ensured the Times continued access to high-level intelligence and catchy headlines, which attracted readers amid a tough media era.[94] At the same time, the scapegoating – the Chinagate – fostered a high-profile debate on China, which the White House needed to deflect its responsibility for mishandling the COVID-19 crisis, which threatened to derail Trump's second term.

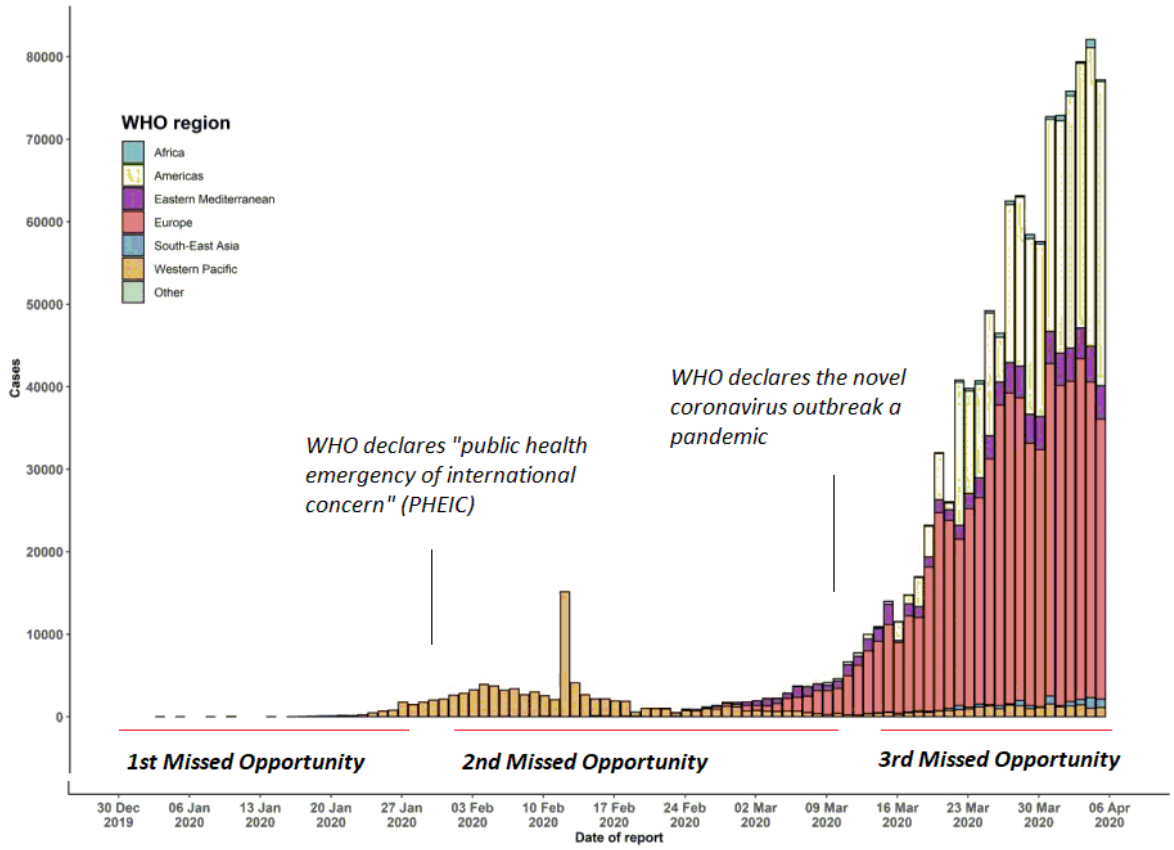
[93] See Lauria, Joe. 2020. "COVID-19: New York Times Revives its Role in Chinagate." Consortium News, Apr 22. Lauria's analysis was prompted by several Times reports, including Wong, Edward, Rosenberg, Matthew and Barnes, Julian E.. 2020. "Chinese Agents Helped Spread Messages That Sowed Virus Panic in U.S., Officials Say." New York Times, Apr 22.

[94] Ironically, the revival in the Times's subscription base and its share performance stems from the Trump policies. As Emily Bell has observed: "Digital subscriptions have boomed as the progressive audience sees support for reporting institutions like the New York Times as the only effective opposition to a corrupt government." See Bell, Emily. 2020. "The New York Times's success lays bare the media's disastrous state." The Guardian, Feb 9.

The Third Missed Opportunity

As WHO chief Dr Tedros noted in late March, "the time to act [against the outbreak] was actually a month ago, two months ago."[95] By mid-April 2020, the number of accumulated confirmed cases in Europe was almost 10 times and in the United States nearly 8 times higher than in China. In the absence of adequate containment and preparedness, the epicenter of the outbreak moved from China and Asia to Europe, where peak growth was reached in March, and the United States, where it ensued a few weeks later. This was the third missed opportunity to battle the COVID-19 spread and it prevailed until late March when effective mobilization was initiated in both Europe and the U.S. (**Figure 9**).

Figure 9 Human Costs of Coronavirus Complacency*



* *Confirmed COVID-19 cases worldwide through March 2020*

Source: WHO, Difference Group.

[95] The international community should have been more proactive against the virus preferably in late January, following the international emergency alert, or in late February, when the cases outside China began to soar. See "'WHO official: 'The time to act was actually a month ago'." CNN, Mar 26, 2020.

From Quarantine to Social Distancing in the West

In the United States, the first coronavirus case was identified on Jan 20. In Europe, the first cases were detected just days later. Yet, thereafter, weeks were missed as major European countries hoped for the best but didn't prepare for the worst, until a dramatic escalation ensued in Italy on Feb 21. By then, Italy had few alternatives but to adopt the Chinese strategy of shutting down cities and banning social activities, strictly isolating infected people. Only weeks before, many European leaders had criticized such measures as "autocratic" and "counter-productive." Now they rushed to adopt them, but belatedly.

By mid-April, most of Europe, the United States and the rest of the world were under coronavirus lockdown; reportedly, most of the global population. Coupled with hand washing and good respiratory hygiene, the social distancing measures typically included avoiding physical contact, school and workplace closures, canceling mass gatherings, travel restrictions, self-shielding, quarantine of potential cases, *cordon sanitaire*, protective sequestration and a host of other measures, including shutting down or limiting mass transit, closure of recreational facilities and so on.[96]

Unlike markets, the novel coronavirus could no longer be "talked down," despite the efforts of the Trump administration. On Mar 16, the *New York Times* released a report about the Trump administration's mishandled virus response. The conclusions were damning: "Infighting, turf wars and a president more concerned with the stock market and media coverage than policy have defined the Trump White House. They have also defined how it has handled a pandemic."[97] A day later, the White House shared with the Times its pandemic report, perhaps hoping to show it was in control. But timelines reveal a different story. Even though the government's leading health executives had been monitoring the crisis since early January, White House failed to act upon pressing evidence. After delays, the Trump administration's pandemic report made several assumptions for the baseline case:

> A pandemic will last 18 months or longer and could include multiple waves of illness… Increasing COVID -19 suspected or confirmed cases in the U.S. will result in increased hospitalizations among at-risk individuals, straining the healthcare system. States will request federal assistance… Supply chain and transportation impacts due to ongoing COVID-19 outbreak will likely result in significant shortages for government, private sector, and individual U.S. consumers.[98]

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[96] See Anderson, Roy Malcom et al. 2020. "How will country-based mitigation measures influence the course of the COVID-19 epidemic?". The Lancet. 395 (10228): 931–934, March 9.

[97] The report added, "Senior aides battling one another for turf, and advisers protecting their own standing. A president who is racked by indecision and quick to blame others and who views events through the lens of how the news media covers them. A pervasive distrust of career government professionals, and disregard for their recommendations. And a powerful son-in-law whom aides fear crossing, but who is among the few people the president trusts." See Haberman, Maggie and Weiland, Noah. 2020. "Inside the Coronavirus Response: A Case Study in the White House Under Trump." New York Times, Mar 16.

[98] See PanCAP Adapted: U.S. Government COVID - 19 Response Plan, Mar 13, 2020.

If a proactive phased mobilization had started after Jan 3, when the White House learned about China's outbreak, or even after the WHO's global alert on Jan 30, the battle against the virus in America could have started earlier and proved more successful. In late March, the White House could only prepare for the worst in April and hope to reduce human costs and economic damage within the 2nd quarter.

The alternative idea was to permit the virus a relatively free ride, frame this idea as a foresighted strategy and then focus on post-virus mitigation. Although that strategy was rejected in the UK after initial consideration, its modified version would cast a shadow over the virus response in both the U.S. and Europe.

Effective Herd Immunity

Like the United States, the Euro area and the UK were mobilizing with a delay of 4 to 8 weeks. In addition to the slow start, most of Europe initially relied on voluntary measures until the accelerated spread forced stricter measures. In contrast, German Chancellor Angela Merkel was blunt about the pandemic risks. "Not since World War II has our country faced a challenge that has required such a high degree of common and united action."[99] She expected up to 70% of Germany's population of roughly 83 million people to be infected eventually.

Other European leaders tried to frame inadequate preparedness as a foresighted strategy. In the UK, the virus impact had been under-estimated initially. Like Trump in the U.S., Prime Minister Boris Johnson then tried to reframe the lost opportunities in optimistic terms: "We can turn the tide within the next 12 weeks."[100] Yet, the envisioned turnaround compelled the country to resort to more restrictive measures, which could have been launched weeks before.

Relying on the advice of a group of epidemiologists, Johnson, who eventually contracted the virus himself, had initially advocated "herd immunity" as the new strategy.[101] In their race to serve the public, epidemiologists rushed to release

[99] "Merkel: Coronavirus is Germany's greatest challenge since World War Two." DW, Mar 18, 2020.

[100] "UK can turn the tide against virus in next 12 weeks: PM Johnson." Reuters, Mar 20, 2020.

[101] At Imperial College, Neil Ferguson's team produced "terrifying research," which initially projected 2.2 million deaths in the U.S. and another 500,000 UK deaths. Two weeks later, he downgraded the estimate to 20,000 UK deaths. The idea of the herd immunity was to keep transmission of the virus at low levels until a vaccine was available. It was impractical to keep the UK in lockdown for so long, especially because of the impact on the economy. Another report from Oxford University suggested that the UK had already achieved herd immunity presuming that more than 50% of the population likely had the virus and recovered. That caused the UK government to downgrade the COVID-19 from being an acute, deadly, infectious disease to a "high consequence infectious disease." See Walker, Patrick GT et al. 2020. The Global Impact of COVID-19 and Strategies for Mitigation and Suppression, Imperial College London. On the Oxford report, see Lourenco, Jose et al. 2020. Fundamental principles of epidemic spread highlight the immediate need for large-scale serological surveys to assess the stage of the SARS-CoV-2 epidemic. medRxiv 2020.03.24.20042291. For a critical review, see Kucharski, Adam. 2020. "Can we trust the Oxford study on Covid-19 infections?" The Guardian, Mar 26. On the UK government guidance, see See "Guidance: High consequence infectious diseases (HCID)." UK Government, Mar 21, 2020.

modeled pandemic reports that provided dubious support to controversial policy positions, including the idea of herd immunity.[102] As a result, the UK would no longer try to trace the contacts of every suspected case, and it would test only people who were admitted to hospitals.[103] And while suppressing the virus might be successful for months, it would return when those measures would be lifted. Consequently, to avoid a second peak in the winter, Sir Patrick Vallance, the U.K.'s chief scientific adviser, said the U.K. would suppress the virus "but not get rid of it completely," but it could protect vulnerable groups, such as the elderly.[104]

At the time, the U.K. had identified some 1,400 cases. Inadequate testing ensured that thousands more were not detected. Even in late March, WHO had to stress that widespread virus testing was crucial and countries should not be faulted for reporting higher numbers of cases.[105] While testing would remain critical, the opportunity window for containment had now been missed. Barely a month later – in mid-April – UK had almost 100,000 cases and more than 12,000 fatalities.

In contrast to its portrayal, herd immunity was neither a new idea nor a strategy. It presumes that, within a certain group of people, the circulation of diseases can be stopped after enough are infected and gain immunity. If, say, two thirds of people in a group have immunity, the number of people a sick person can infect will plunge below one, which is thought to bring the disease under control. That is presented as a "realistic" solution since tight control and isolation strategies may not work anymore and the virus is already widely spread all around the world. The idea first evolved in the 1920s and in the '30s it was recognized as a recurring phenomenon when, after a significant number of children had become immune to measles, new infections temporarily decreased. Subsequently, mass vaccination to induce herd immunity became common.[106] Since then, complexities and challenges to herd immunity have arisen, however.[107]

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[102] Adam, David. 2020. "Special report: The simulations driving the world's response to COVID-19: How epidemiologists rushed to model the coronavirus pandemic." Nature, Apr 2.

[103] With the peak of the pandemic still weeks away, the time hadn't come yet for stricter measures, Johnson and his advisers said. See "Johnson: many more people will lose loved ones to coronavirus." The Guardian, Mar 12, 2020.

[104] In the meantime, other people would get sick. But since the virus causes milder illness in younger age groups, most would recover and subsequently be immune to the virus. "Herd immunity" would reduce transmission in the event of a winter resurgence. Vallance said that "probably about 60 percent" of people would need to be infected to achieve herd immunity. See "Sir Vallance Interview: UK needs to get COVID-19 for 'herd immunity'." Sky News, March 13, 2020.

[105] By then, WHO had few alternatives but to support a shift toward public health strategies that would allow us "to live with this virus" until a vaccine emerges. See "UN Health Agency Settles in for Long Fight With Virus." Associated Press, Mar 27, 2020.

[106] Hinman, A. R.; Orenstein, W. A.; Papania, M. J. (May 2004). "Evolution of measles elimination strategies in the United States." The Journal of Infectious Diseases. 189 (Suppl 1): S17–22, May 1. See also Sencer, D. J. et al. 1967. "Epidemiologic basis for eradication of measles in 1967". Public Health Reports. 82 (3): 253–56.

[107] In modeling, a number of questionable assumptions were made (including that entire populations are susceptible and well-mixed). See Fine, P.; Eames, K.; Heymann, D. L. 2011. "'Herd immunity': A rough guide". Clinical Infectious Diseases. 52 (7): 911–16, Apr 1.

Unsurprisingly, Johnson's initial plan came quickly under heavy criticism. Herd immunity is typically generated through vaccination. Although it could arise through widespread infection, no country can rely on a highly contagious and deadly infectious agent to create an immune population.[108] Without an effective and safe vaccine, herd immunity may condemn major risk groups – the elderly, those with chronic pulmonary conditions, hypertension, diabetes and asthma patients, and those without adequate access to affordable health care – into a premature death.

Eventually, the idea of herd immunity was rejected as unrealistic in the UK. Nevertheless, delays in identification, testing and isolation of virus cases across Europe and the United States did result in a net effect, in which inadequate preparedness in February and March fattened rather than flattened the virus curve.

Fattening the Curve

Early in the year, Chinese epidemiologists seized the idea of slowing a virus spread so that fewer people need treatment at any given time. The strategic goal was to "flatten the curve" as quickly as possible to reduce the potential of the virus to spread exponentially. In Wuhan and Hubei, a faster infection rate had resulted in a strained healthcare system, many hospital visits daily and many infected people being turned away. The objective was to preempt such scenes elsewhere in China. Consequently, social distancing was adopted quickly with the national emergency to contain the virus spread.

Despite the rejection of the idea of herd immunity, most countries in Europe and North America in effect adopted a form of it. Since they resorted to social distancing only belatedly, their health care systems were already overloaded, healthcare professionals suffered disproportionately and the virus got a free ride. Social distancing became a popular catch word in the United States as well, but only in March-April when lockdowns proliferated in America – a month and a half after the first Chinese experiences and weeks after Italy's example.[109] Since these countries – from the U.S. to the Euro area and the UK – did deploy social distancing only later, they effectively fattened the curve before purposeful efforts to flatten it. And that has broad ramifications.

First, the human costs – infection cases and fatalities – will prove far higher than initially expected. Second, in a global, inter-connected economy, all countries are linked. And with pandemics, it is the weakest links that determine the future of the whole, through the flows of world trade, investment and particularly migration and tourism. Yet, support for advanced, and particularly emerging and developing economies began belatedly and inadequately. Third, when countries that can be characterized by effective herd immunity recover from COVID-19, they may serve as

[108] On UK's brief herd immunity debate, see Young, Ed. 2020. "The U.K.'s Coronavirus 'Herd Immunity' Debacle." The Atlantic, Mar 16.

[109] See "Social distancing could buy U.S. valuable time against coronavirus." The Washington Post, Mar 10, 2020.

reservoirs of future infections elsewhere, as evidenced by the rise of imported cases in China, Hong Kong and Singapore and South Korea in the 2nd quarter of the year. Fourth, the early imported cases are just a prelude for waves of potential imported infections later in 2020. Fifth, since COVID-19 is a global pandemic, it has potential to become endemic, which means elevated long-term risks in emerging and developing countries that have relatively weaker healthcare systems. Finally, since the de facto herd immunity in the West implies millions of effective cases, the potential for new mutations could be heightened adding to uncertainty.

By the end of March, Chinese virus specialists, including Zhang Wenhong, head of Shanghai's COVID-19 clinical expert team, warned that, due to belated responses, the pandemic may continue into 2021, especially as some European countries seemed to have opted for the herd immunity. Such an approach is likely to support a lengthy and painful process, especially when countries do not test mild or asymptomatic patients.[110] In some countries, the debate about adverse feedback effects called for appropriate political scapegoats. While President Trump had thanked President Xi for China's success in the virus fight in late January, he adopted a far more critical tone when the public debate about his administration's mishandling of the virus could no longer be contained. "As the number of Americans infected climbs toward 10,000," a perceptive journalist concluded, "Trump is now attempting to recast the effort to mitigate the impact of the coronavirus as a 'war' against an 'unseen enemy' unleashed on the nation by China."[111]

China as a Scapegoat

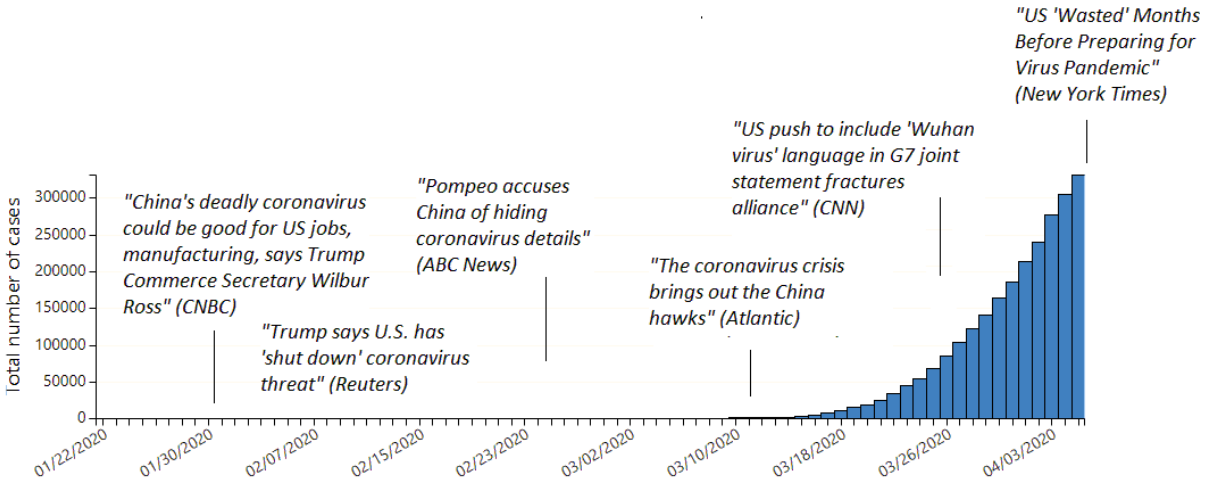
The politicized efforts to re-redefine the COVID-19 as the "China virus" or the "Wuhan virus" had continued into late March, as evidenced by statements of Secretary of State Mike Pompeo, Vice President Mike Pence, Trump and the China hawks who support regime change in Beijing. The springtime G7 Summit *could* have been used for international mobilization, in cooperation with large emerging and developing economies. Yet, political priorities overrode a vital opportunity to mobilize an international multilateral battle against the virus, again (**Figure 10**).[112]

[110] Interview by People's Daily. For the English-language version, see "Zhang Wenhong: Little Chance Coronavirus Pandemic Will End This Summer." Caixin, Mar 27, 2020.

[111] See Bort, Ryan. 2020. "'Not Concerned at All': A Timeline of Trump's Coronavirus Dismissals." Rolling Stone, Mar 19.

[112] Even at the end of March, there was a small spike in media coverage about the virus, when Pompeo called for COVID-19 to be identified by name as the "Wuhan virus" at a G7 Summit. European officials resisted the redefinition since the WHO and other organizations had cautioned against giving it a geographic name because of its global nature. See "Coronavirus: no agreement on Pompeo's 'Wuhan virus' terminology as G7 foreign ministers spar over infection source." Associated Press, Apr 7, 2020.

Figure 10 China as the Scapegoat for U.S. Mishandling of the Pandemic



The COVID-19 was not the first pandemic that Washington has sought to attribute to other nations, particularly in Asia. When the swine flu outbreak was first identified in Mexico City in March 2009, U.S. agricultural officials blamed it on Asia, without evidence but with heavy media coverage. Scientific evidence proved them wrong.[113]

More broadly, the purposeful use of projective bashing of targeted scapegoats has a controversial but long history in U.S. politics. In the mid-1960s, Richard Hofstadter, the iconic historian of postwar liberal consensus, defined it as a recurring "paranoid style in American politics."[114] In the effort to explain away the presence of class, ethnic, and immigration divisions in America, this style projects such divides onto others, as evidenced by the 1950s McCarthyism and the Trump administration's controversial ties with the U.S. alt-right movement.[115]

What the paranoid style sought to obfuscate amid the COVID-19 outbreak was that, "from the beginning, the Trump administration's attempts to forestall an outbreak of a virus now spreading rapidly across the globe was marked by a raging internal debate

[113] A subsequent scientific report by the Mount Sinai School of Medicine attributed the 2009 H1N1 virus to pigs in a very small region of central Mexico. On the Times's misguided report, see McNeil Jr DG. 2009. "In New Theory, Swine Flu Started in Asia, Not Mexico". The New York Times, June 23. On the scientific cause of the swine flu pandemic, see Mena I, et al. 2016. "Origins of the 2009 H1N1 influenza pandemic in swine in Mexico". eLife: e16777, June 5.

[114] While Hofstadter coined his term after a decade of McCarthyism and after Senator Barry Goldwater won the Republican presidential nomination over the more moderate Nelson A. Rockefeller, he stressed that the style had been around a long time before the Radical Right discovered it. See Hofstadter, Richard. 1964. "The Paranoid Style in American Politics.' Harper's, November.

[115] On the debate over the Trump administration's paranoid style, see Hart, Roderick P. 2020. "Donald Trump and the Return of the Paranoid Style". Presidential Studies Quarterly, Center for the Study of the Presidency and Congress, Feb 13. On Trump's personal paranoid style and the warnings of prominent American psychiatrists and psychologists about the implications, see Lee, Bandy X. 2017. The Dangerous Case of Donald Trump. Thomas Dunne Books, 2019.

about how far to go in telling Americans the truth."[116] So, the Trump White House projected its mishandling on China, which was then blamed for not being transparent, faking the case counts and associated deaths.[117]

The Trump administration knew about the virus risks already by Jan 3 and thereafter a virus team began regular meetings in the West Wing (see section on the "Timeline of the Outbreak Outside China"). Trump's top public health and national security officials did ban travel from China in late January (yet the ban failed since 40,000 passengers came to the U.S. in Feb-Mar). But even as Trump's cabinet members repeatedly criticized China's alleged lack of transparency, they continued to debate virus measures within the White House but did not inform American public about the rapidly-rising virus risks.[118]

As China was amid its national emergency and WHO declared the global alert on Jan 30, the administration believed "there were 23,000 visitors [from China] to the U.S. each day. Any one of them could be the trigger for a new and undetected American outbreak."[119] If there truly were 800,000 to million passengers between December and January,[120] why did the Trump administration ban travel from China but ignored the high likelihood of local transmissions in America? Why did it not opt for proactive mobilization against the virus as Hong Kong and Singapore had done?

Due to the holiday period and U.S. transportation intensity, local transmissions were more likely in the U.S. than many countries in Europe where outbreaks stemmed initially from imported infections. In February, when the WHO began to classify transmissions as "local transmissions" or "imported cases only," U.S. already had some 60 confirmed cases, which were characterized as "local transmissions."[121] According to the New York Times, "even as the government's scientists and leading health experts raised the alarm early and pushed for aggressive action, they faced resistance and doubt at the White House — especially from the president — about

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[116] See Shear, Michael D. et al. 2020. "Inside Trump Administration, Debate Raged Over What to Tell Public." New York Times, Mar 7.

[117] Concurrently, Trump rejected the advice of the nation's leading health executives relying on advice by Peter Navarro, the architect of U.S. trade wars with a record of China bashing. See Diamond, Jeremy and Liptak, Kevin. 2020. "How Peter Navarro went from an anti-China 'gadfly' to trusted Trump coronavirus adviser." CNN, Mar 17. On Navarro's controversial track-record, see Steinbock, Dan. 2013. "The Quest to Demonize China." China-US Focus, Aug 19.

[118] Shear, Michael D. 2020. "Inside Trump Administration, Debate Raged Over What to Tell Public The administration." New York Times, Mar 9.

[119] Ibid. According to several U.S. agencies, the real figure may have been closer to 13,000 passengers daily. See U.S. Department of Transportation; U.S. Department of Commerce, and U.S. Travel Association. According to the New York Times report, between Jan 1 and the end of March, at least 430,000 people arrived in the U.S. on direct flights from China. "Thousands of them flew directly from Wuhan, the center of the coronavirus outbreak, as American public health officials were only beginning to assess the risks to the United States." see Eder, Steve. 2020. "430,000 People Have Traveled From China to U.S. Since Coronavirus Surfaced." New York Times, Apr 4.

[120] During the 1st quarter of the year, at least 430,000 people arrived in the U.S. on direct flights from China, including nearly 40,000 in the two months after Trump's travel ban, based on data collected in both countries. Assuming the first actual virus cases in Wuhan occurred in December and a 2-week incubation period, there might have been some 400,000 to 700,000 passengers from China to the U.S. already in December.

[121] See "Coronavirus disease 2019 (COVID-19) Situation Report – 39, WHO, Feb 28, 2020.

spooking financial markets and inciting panic."[122] The cult of secrecy in the White House has not eased. When Dr Fauci, a key member of the Trump administration's coronavirus task force, was asked by the CNN in mid-April, whether earlier mitigation efforts could have saved more lives, he acknowledged: "Obviously, no one is going to deny that… if we had right from the very beginning shut everything down, it may have been a little bit different. But there was a lot of pushback about shutting things down back then." Hours later, Trump retweeted a user who said it was "Time to #FireFauci."[123] Even the high-level members of the coronavirus task force had to balance evidence-based scientific facts with the White House's political priorities.

Whatever the ultimate reason for the long delay in effective mobilization, the simple fact prevails. Like Hong Kong and Singapore after Jan 3, the Trump White House *could* have begun the virus battle proactively. For two long months, it chose not to.

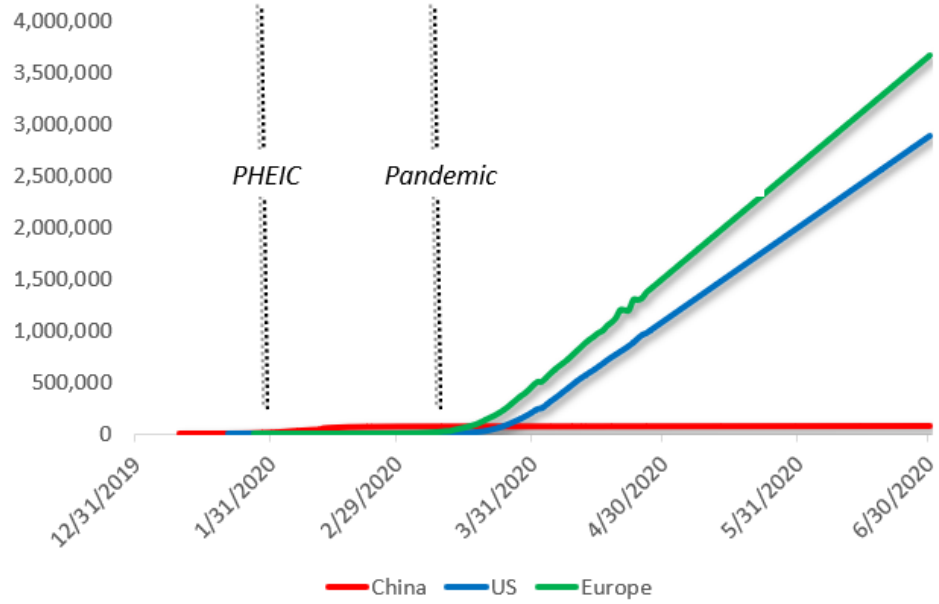
[122] See Shear, Michael D. et al. 2020. "*Inside Trump Administration, Debate Raged Over What to Tell Public*." New York Times, Mar 7.

[123] See "*Trump retweets call to fire Fauci amid coronavirus criticism.:*" CNN, Apr 13, 2020.

CONCLUSIONS: THE COSTS OF COMPLACENCY

Amid the outbreak first in China in early 2020, then in major advanced economies and finally in emerging and developing economies, there was little inevitable about the virus trajectory. Despite several major opportunities to initiate mobilization outside China, only few countries opted for proactive mobilization; most didn't. The belated responses have resulted in historical human costs, as measured by cumulative cases, and economic damage of historical magnitude (**Figure 11**).

Figure 11 Costs of Complacency and Inadequate Preparedness
Confirmed Cases, Missed Opportunities



Source: Difference Group Ltd. Data from CDCs in China, US and Europe.

Missed Opportunities

The 1st Opportunity: Early Mobilization. Between the first recorded case in Wuhan (Dec 30, 2019), and the WHO's announcement of the international emergency (Jan 30, 2020), the epicenter of the outbreak was centered in Wuhan, Hubei, and proximate Chinese provinces. Yet, during the same period, first cases were also recorded in some 20 countries and most major world regions. In China and those countries and regions outside China where the mobilization was proactive – e.g., Hong Kong, Singapore – human costs and economic damage are likely to prove significantly lower than in the West, despite setbacks[124] Yet, the information

[124] On the virus outbreak and its containment in China, see Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19), WHO, Feb. 16-24, 2020. In Hong Kong, non-pharmaceutical interventions have been associated with reduced transmission of COVID-19 in early spring. See Cowling,

that Hong Kong and Singapore used for early mobilization was available to the White House on Jan 3 and European CDC began its risk assessments only days later.

The 2nd Opportunity: Late Mobilization. In early February, the confirmed cases in China were decelerating but began to accelerate outside China. This stage - the second critical opportunity to contain the virus outbreak - lasted through February to Mar 10, 2020, when the WHO declared the virus a pandemic. During this period, the epicenter of the outbreak moved to Europe and thereafter to the U.S. The full mobilization in Europe and the U.S. ensued only a week or two after the WHO's pandemic warning; that is, effectively almost 3 months later than proactive mobilization in Hong Kong and Singapore. In late April, the confirmed cases in Europe and the U.S. accounted for some 80% of the world total, while Europe seems to have served as the initial hub for the pandemic's global spread.[125]

The 3rd Opportunity: Failed Mobilization. The third opportunity to contain the outbreak is ongoing. It could be dated from the WHO's declaration of the pandemic on Mar 10. Yet, effective responses in the U.S. and Europe only began at the turn of April. This period covers mainly the second quarter, when the escalation continued in Europe, but the epicenter moved from the West Coast to the East Coast in the U.S. while quarantines and lockdowns diffused worldwide. Initially, the belated responses resulted in the de facto fattening of the epidemic curve, which drove *effective* herd immunity. In cumulative terms, this period covers the first two quarters of the year.

The 4th Opportunity: Resource-Poor Mobilization. The most recent opportunity to defuse the outbreak can be dated from the first recorded cases in emerging and developing economies, in which living standards are significantly lower and healthcare systems weaker. It was the vulnerability of these countries that motivated the WHO's declaration of the "public health emergency of international concern" (PHEIC) on Jan 30. Without adequate internal resources and external support, these countries could mobilize only later and partially. Any public health catastrophe in the developing economies is likely to have adverse feedback effects in the rest of the world. We hope to examine the full consequences of such scenarios more thoroughly in a later report.

In addition to a decade of effective stagnation in advanced economies and geopolitical friction, world economy had been weakened by the subsequent failure of global recovery 2017/18 and trade wars well prior to the pandemic. As a result, the number of globally displaced persons was 71 million already by mid-2018; higher than ever since World War II.[126] With the global pandemic, expected human and economic devastation, more frequent natural disasters and changing weather

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Benjamin J. 2020. Impact assessment of non-pharmaceutical interventions against coronavirus disease 2019 and influenza in Hong Kong: an observational study. Lancet Public Health 2020, April 17.

[125] "As Covid-19 cripples the U.S. and ravages many countries in the world, politicians are battling to craft a narrative of who is to blame for its damage. The virus started in China, of course, but narratives of how it went from epidemic to global pandemic often leave out a crucial element: the role of Europe." See Penney, Joe. 2020. "Coronavirus started in China, but Europe became the hub for its global spread." The Intercept, Apr 2. See also Penney, Joe. 2020. " U.S. Got More Confirmed 'Index Cases' of Coronavirus from Europe than China." The Intercept, Apr 13.

[126] See *Global Trends: Forced Displacement in 2018*. " UNHCR (UN Refugee Agency), June 20, 2019.

patterns, millions of civilians in conflict-scarred nations are teetering on the brink of starvation. Consequently, the UN food relief agency (WFP) chief David Beasley has warned about an impending "global humanitarian catastrophe."[127]

Following the missed opportunities, global pandemic ensued. China mobilized relatively fast and successfully after mid-January, followed by Hong Kong and Singapore, and later South Korea. Despite access to the same information from the start of January, Europe and the U.S. followed in the footprints but only at the end of the 1st quarter of the year. As a result, when the economies of China, Hong Kong, Singapore, South Korea began to rebound in the 2nd quarter, those of Europe and the U.S. were still absorbing the worst hits of the epidemic curve. Though developing countries were willing to mobilize against the virus relatively early, they were not able to do so effectively, due to minimal resources and inadequate support. Their battle against the novel coronavirus is likely to take significantly longer.

Obviously, major advanced economies *could* have emulated the early mobilizers against the novel coronavirus. Yet, they did not do so. Faced with a potential human disaster that could ravage first Wuhan, then Hubei and rest of China and ultimately other countries, China had to fight the virus with full national mobilization. In the United States and Europe, many factors delayed such mobilizations (see the sections on "The Second Missed Opportunity" and "The Third Missed Opportunity").

In a sense, the missed opportunities are reminiscent of those that led to the 2008/9 crisis. Then, too, there were many warning signals along the way. Yet, the Bush White House chose not to respond to them because of the flawed ideological view that markets are "self-correcting." The U.S. had the institutions needed to contain the crisis but it was not willing to use them.[128] With the novel coronavirus, the ideological fallacy was driven by the narrow priorities of the Trump administration, including the short-sighted effort to protect the economy (read: the markets) and purposeful efforts *not* to develop an adequate policy response based on science-based evidence. The darker side of the story features whistleblower complaints and odd, even dangerous ideas, such as Trump's chloroquine plan and proposed disinfectant injections.[129]

European countries may have been willing to respond earlier in the 2000s. Many did not share the idea of self-correcting markets. Yet, they lacked the common

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[127] Beasley painted a grim picture of 135 million people facing crisis levels of hunger or worse, coupled with an additional 130 million on the edge of starvation prompted by coronavirus. Currently, WFP can offer a lifeline to nearly 100 million people. However, "if we can't reach these people with the life-saving assistance they need, 300,000 people could starve to death every single day over a three-month period", he upheld. "This does not include the increase of starvation due to COVID-19". See "WFP Chief warns of hunger pandemic as COVID-19 spreads." Statement to UN Security Council. World Food Program, Apr 21, 2020.

[128] For the market failure argument, see e.g., Robert J. Shiller. 2000. Irrational Exuberance. Princeton University Press; Shiller, Robert J. 2008. The Subprime Solution. Princeton University Press; Roubini, Nouriel. 2010. Crisis Economics. New York: Penguin. See also Stiglitz, Joseph E. 2010. Freefall: America, Free Markets, and the Sinking of the World Economy. New York: Norton; Johnson, Simon and Kwak, James. 2010. 13 Bankers: The Wall Street Takeover and the Next Financial Meltdown. New York: Pantheon.

[129] See "HHS official plans to file whistleblower complaint over coronavirus drug pressure related to Trump and ouster." CNBC News, Apr 23; Eban, Katherine. 2020. "'Really Want to Flood NY and NJ': Internal Documents Reveal Team Trump's hloroquine Master Plan." Vanity Fair, Apr 24; and "Trump suggests 'injection' of disinfectant to beat coronavirus and 'clean' the lungs." NBC News, Apr 24.

institutions required for a regional response and were thus not able to respond adequately to the global financial crisis. The past few months have been a déjà vu. As sovereign states, European countries could have adopted more differentiated response strategies against the outbreak. Yet, country-based strategies lack Europe's collective force as a regional heavyweight. Conversely, as member states, these countries should ideally enjoy significant strength through Brussels and the EU. Yet, the EU is not fully integrated since it lacks the requisite common institutions needed for a full and effective response. The European battle against the virus reflects these institutional deficiencies.

In both the U.S. and Europe, the damage will be far greater than a decade ago.

Baseline Scenario: The Coronavirus Contraction

Any growth forecast is constrained by very high uncertainty because the envisioned economic outcome stems from multiple forces that are hard to predict separately and whose interplay further complicates projections.[130] Nevertheless, in the baseline case – the *Coronavirus Contraction* scenario – the recessionary outlook is currently seen as steep and broad, but somewhat temporary.[131] In this *current* view, the contraction is likely to prove far worse than the 2008/9 global financial crisis but not as catastrophic as the 1930s Great Depression. However, it could prove a major short- to medium-term threat, depending on its duration and depth, and its aftermath.[132]

Human Costs

In the baseline scenario, the pathways of the pandemic are predicated on the rise and fall of the epidemic curve in China mainly in the 1st quarter; in the U.S. and Europe largely by the end of the 2nd quarter. Yet, the *cumulative* human costs – as measured by cumulative confirmed cases – will continue to linger months thereafter.

In January, China had what was then seen as a huge number of confirmed cases; a total of almost 12,000. At the time, there were fewer than two dozen cases in Europe

[130] These forces include public-health costs and economic damage. The health costs are determined by the anticipated trajectory of the pandemic; the extent and effectiveness of initial containment measures; and the anticipated progress in the development of vaccine and therapies. The economic damage is fueled by the degree and duration of supply disruptions and productivity losses; the tightening in global financial markets; shifts in spending affected by various social distancing measures; behavioral changes (e.g., avoidance of malls and transportation) amid periods of quarantines and lockdowns; the resulting confidence effects among firms, households, governments and municipalities; and the fall of volatile commodity pricess. On these assumptions, see World Economic Outlook: The Great Lockdown, IMF, Apr 14, 2020, Chapter 1.

[131] For early warning signs with tentative data, see Steinbock, D. 2020. "The Global Coronavirus Contraction." World Financial Review, Mar 21.

[132] Countries that suffered severe epidemics are estimated to have lost 8% of working days in 2020 over the containment measures and subsequent easing of restrictions. Other countries are projected to have lost 5% of working days in the period. These losses will be compounded by tighter financial conditions, soft external demand and terms-of-trade losses, particularly in the 1st half of the year, and plunging commodity prices. On these assumptions, see World Economic Outlook: The Great Lockdown, IMF, Apr 14, 2020, Chapter 1.

and over half a dozen in the U.S. That led many international observers mistakenly to presume that the epidemic was a "Chinese thing." What they underestimated was the outbreak's accelerated internationalization in late January and, most importantly, the delays in the mobilization against the pandemic in Europe and the U.S.

Having peaked in early February, the cases in China were 82,500 at the end of the 1st quarter, whereas those in Europe were over five-fold and in the U.S. almost twice the Chinese level; more than 425,000 and 141,000, respectively. In just a month, these cases have more than tripled around the world, quadrupled in Europe and quintupled in the U.S. In China, the cases have steadied. That's the difference between relatively successful containment and effective herd immunity (**Table 1**).

Table 1 Human Costs of the Pandemic*

Human Costs	Jan 30, 2020 (#)		Q1 2020 (#)		Apr 26, 2020	
Cumulative cases	*World:*	*7,800*	*World:*	*750,900*	*World:*	*2,805,000*
	China:	*7,736*	*China:*	*82,500*	*China:*	*84,300*
	EU:	*14*	*EU:*	*425,300*	*EU:*	*1,320,000*
	UK:	*2*	*UK:*	*22,100*	*UK:*	*148,000*
	US:	*5*	*US:*	*140,600*	*US:*	*900,000*
Cumulative deaths	*World:*	*260*	*World:*	*36,400*	*World:*	*194,000*
	China:	*260*	*China:*	*3,300*	*China:*	*4,600*
	Europe:	*1*	*Europe:*	*26,700*	*Europe:*	*120,000*
	UK:	*0*	*UK:*	*1,400*	*UK:*	*20,300*
	US:	*0*	*US:*	*2,400*	*US:*	*46,200*

* The figures have been rounded.

Source: WHO, European CDC, Worldmeter, John Hopkins

Even assuming gradual stabilization, the cumulative cases and deaths around the world at the end of the 2nd quarter could still more than double from the current 3 million and almost 200,000, respectively (and recorded figures are only a part of the full story). Human costs will climb until the epidemic curves normalize. The fact remains: If the late mobilizers and the failed mobilizers had followed the early mobilizers' proactive measures, hundreds of thousands, even millions of people might have avoided COVID-19.

Economic Damage

In the IMF baseline scenario, the coronavirus contraction could prove more challenging than any international recession since 1945. After the '70s stagflation, global growth fell close to zero. The global financial crisis in 2008/9 caused growth to plunge to -0.1%. In light of the current data, the coronavirus contraction could result in a free-fall to -3.0%. It will be particularly challenging to advanced economies (-6.1%). The emerging/developing economies will take a heavy hit as well (-1%).

In the same baseline scenario, the coronavirus contraction in China, the Euro area and the U.S. could outweigh any other major recession in the postwar era. During

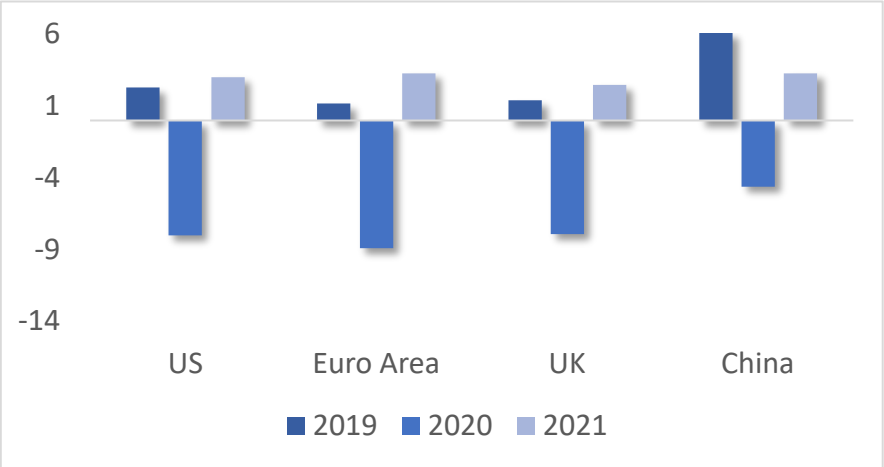
the global crisis of 2008/9, China's growth fell from 14.3% to 9.4%, whereas the EU/UK contracted by -4.2%; and the U.S. by -2.5%. In the baseline case, the coronavirus contraction would be -5.9% in the U.S., -6.5% in the UK and -7.5% in the Euro area. In view of current data, China's growth would not enter the negative territory, but could tank below 2% (although a fast rebound could in part offset that).

The *current* assumption underlying the baseline scenario is that the year 2021 will see a V-shaped recovery worldwide in advanced and emerging/developing economies, while global growth would rebound to 5.8% in 2021. Significantly above trend, that would reflect economic stabilization from the historically very low level in 2020. In advanced economies, growth would climb by 4.5%; in emerging and developing economies, by 6.6%. These projections are predicated on a very optimistic view of a rapid turnaround in 2021 and beyond, however.

Cumulative Losses and Alternative Pandemic Effects

Even in the baseline case, the level of the GDP will remain below the pre-virus benchmark. In this scenario, the negative differences between the pre-virus forecast (WEO/IMF in Oct 2019) and the current forecast (WEO/IMF in Apr 2020), is of historical magnitude. In this scenario, the world output in 2019-20 would fall -6.4% from the level it would have achieved without the pandemic. The cumulative loss to global GDP over 2020 and 2021 could amount to about $9 trillion, which is more than the world's third and fourth largest economies – Japan and Germany - combined. Advanced economies would suffer a greater loss (-7.8%) relative to emerging and developing economies (-5.6%). Among countries, the Euro Area/UK would have to cope with a steep contraction (-8.9% and -7.9%, respectively), while the U.S. loss would be unique in its history (-8.0%). Despite rapid rebound, even China may have to absorb a historical loss (-4.6%) (**Figure 12**).

Figure 12 Cumulative Losses: Baseline Scenario

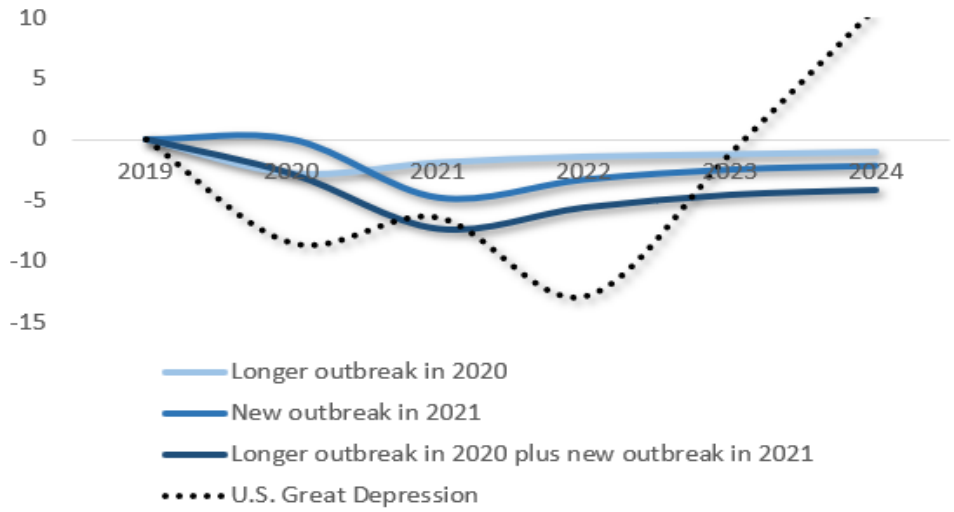


Source: WEO/IMF database; Difference Group

The baseline scenario rests on three broad optimistic assumptions, however. First, the projected rebound in 2021 relies vitally on the end of the pandemic in the 2nd half of 2020, which would permit containment measures to be gradually scaled back and the restoration of consumer and investor confidence. Second, the scenario is predicated on the effectiveness of the major policy actions that have been adopted around the world; i.e., boosting public-health capacity, limiting collateral damage to economic activity and the financial system, coupled with huge measures of fiscal support and monetary accommodation. Finally, the scenario assumes that widespread firm defaults, extended job losses and financial pressures can be deterred. But what if these assumptions prove too optimistic?

If the anticipated COVID-19 progress turns out to be more challenging, the expected economic outlook would deteriorate. In that case, the IMF has described three potential alternative outcomes. In the first, the battle against COVID-19 is estimated to take about 50% longer than in the baseline. In the second, another though milder outbreak is presumed to occur in 2021. The third alternative features the potential impact of both a longer virus spread in 2020 and a subsequent outbreak in 2021.[133] What has been left unsaid in the debate is that, in these alternatives, the post-pandemic environment would be similar to the U.S. Great Depression in the U.S.; or possibly worse – given continued policy mistakes, especially trade wars (**Figure 13**).

Figure 13 Cumulative Losses: Alternative Outcomes



Source: WEO/IMF database; Difference Group

[133] In these alternatives, direct impact of containment measures would be more severe. Financial conditions would tighten more than in the baseline scenario. More policy measures would be needed to support incomes and alleviate financial pressures. And as policy measures prove inadequate, economic deterioration would prove more challenging. See World Economic Outlook: The Great Lockdown, IMF, Apr 14, 2020, Chapter 1.

Downside and Upside Scenarios

Even when coupled with IMF's alternative outcomes, the baseline scenario may not be adequately "realistic." What these outcomes depict are not scenarios, which is the term IMF uses in this context, but underlying public-health conditions, as measured by the anticipated duration and depth of the pandemic, for such scenarios. Moreover, these outcome conditions occur in the underlying *economic* landscape.

Dire global economic prospects did not start with the pandemic; they preceded it. In the past decade, the world economy has coped with the global financial crisis, the European sovereign debt crisis, and the consequent decade of secular stagnation. In the mid-2010s, global economic integration, as measured by world trade, investment and migration, came to a standstill, with a consequent immigration crisis and the greatest number of globally displaced persons since 1945, despite peace time conditions.[134] Yet, there was a brief historical moment around 2017/18, when the world economy showed a promise of mild recovery. But that moment was missed, thanks to the rise of the new protectionism and tariff wars.

With the largest trade surplus with the U.S., China became the first target of U.S. trade wars as the White House's new tariffs soon multilateralized friction around the world. For 2-3 years before the pandemic, these policies undermined the nascent global recovery, while escalating technology friction.[135] As a result, the trade wars and technology conflicts occurred against the backdrop of a huge accumulation of global debt, which climbed to an all-time high of 230% of world GDP in 2018.[136] Today, amid the global pandemic, all major economies are forced to take rapidly far more debt to deter the pandemic damage. The protection they need in the short-term will make them even more vulnerable to debt crises in the longer-term.

Prior to the pandemic in early 2020, the expectation was that the U.S.-Sino 'Phase 1' truce could pave way for some relief in 2020, until the U.S. election in late fall. If the Trump administration will win a second term, trade wars would likely prevail.[137] If the

[134] On the postwar globalization, the 2010s secular stagnation and the consequent scenarios, see Steinbock, D. 2017. "The Great Shift of Globalization: From the Transatlantic Axis towards China and Emerging Asia." China Quarterly of International Strategic Studies, Vol. 03, No. 02, pp. 193-226.

[135] See Steinbock, D. 2018. "U.S.-China Trade War and Its Global Impacts." China Quarterly of International Strategic StudiesVol. 04, No. 04, pp. 515-542. On the faltering of U.S. global innovation, see Steinbock, D. 2015. American Innovation Under Structural Erosion and Global Pressures, Information Technology and Innovation Foundation, Feb 9.; Steinbock, D. 2014. The Challenges for America's Defense Innovation. Information Technology and Innovation Foundation, Nov 21. See also Steinbock, D. 2017. "The Trump Administration's IP Battle Against China." Georgetown Journal of International Affairs, Nov 14.

[136] Kose, M. Ayhan et al. 2020. Global Waves of Debt: Causes and Consequences. Washington, DC: World Bank.

[137] In late January, Trump's trade war architect Peter Navarro said that U.S. will keep tariffs on China, even if the outbreak would harm growth. Two months later, the fallout from the global pandemic was seen to threaten the U.S.-Chinese trade deal and undermine future global stability. See "US will keep tariffs on China even if coronavirus starts hurting growth, Trump advisor Peter Navarro says." CNBC, Jan 29, 2020; Toosi, Nahal and Behsudi, Adam. 2020. "Virus pushes U.S.-Chinese relationship toward fracture." Politico, Mar 18.

Democrats would return to the White House in late fall, trade conflicts might result in tough talks but also efforts to avoid an aggressive "containment" strategy.[138]

In the baseline case, the coronavirus contraction would largely end in 2020 or only in 2021, but the economic landscape is presumed to be fairly accommodative. That assessment downplays the weight of the deep economic scarring of the past decade and trade wars that will not go away anytime soon. In this view, the most benign baseline case might be a "mumbling through" scenario in which the worst excesses of trade wars would be purposefully avoided, yet trade friction would continue and broaden into technology wars. Let's assume two alternative trajectories.

Great Power Conflicts **Scenario**

The *Great Power Conflicts* scenario presumes progressive deterioration of pandemic and economic costs. In the first alternative, a protracted pandemic could be coupled with faster economic deterioration. In the second alternative, a milder outbreak in 2021 could result in renewed containment efforts and thus elevated contraction risks. In the third alternative, lingering pandemic risks would produce potentially dangerous risks of global depression; a kind of 21st century version of the '30s Great Depression, with highly adverse consequences in geopolitics.

Friction and conflict are not the only alternatives, however. "In the contagion," writes Italian physicist Paolo Giordano, "we rediscover ourselves as part of a single organism. In the contagion we become, again, a community."[139] In the past few months, communities around the world have been united by an extraordinary sense of international unity.

Great Power Cooperation **Scenario**

There may be real potential for a great reset trajectory. In this *Great Power Cooperation* scenario, pandemic and economic costs would be significantly reduced. In the light of the pandemic effects and the first alternative, a protracted pandemic would prolong economic scarring, but it would result in solid though delayed recovery. In the second alternative, containment measures would have to be re-deployed but the subsequent recovery would be relatively swift. Finally, the third alternative would sustain lingering pandemic risks longer than expected, but even then, solid recovery would ensue over time (**Table 2**)

In terms of global growth prospects, the baseline *Coronavirus Contraction* scenario would translate to a slow and constrained U-shaped recovery. The *Great Power Conflict* scenario would mean a reverse U-shaped plunge to global depression. In contrast, the *Great Power Cooperation* scenario would foster a more or less V-shaped recovery, either fast, relatively fast or over time, depending on the pandemic effects. Due to its pace and force, the pandemic could lead countries to reassess their priorities. After the outbreak, governments must cope with ravaged economies,

[138] Martin, Peter and Kate, Daniel Ten. 2020. "How China Lost Biden—and America." Bloomberg Businessweek, Apr 27.

[139] See Giordano, Paolo. 2020. How Contagion Works *Science, Awareness, and Community in Times of Global Crises.* New York: Bloomsbury, p. 16.

traumatized publics, and the political feedback effects. As a result, demands for the re-examination of government priorities are likely to ensue.

Table 2 Realistic Scenarios: Baseline, Conflicts and Cooperation

Pandemic Conditions	Great Power Conflict	Great Power Cooperation
Baseline: Coronavirus contraction	Fading pandemic, degree of trade friction and geopolitics, weak economic prospects	Fading pandemic, lower degree of trade friction and geopolitics, moderate economic recovery
Kinds of Pandemic Effects		
Longer virus spread (2020)	Protracted pandemic, trade friction, geopolitical threats, economic deterioration	Protracted pandemic, prolonged trade truce, geopolitical risks, economic recovery
Milder outbreak (2021)	Renewed social distancing measures, elevated contraction risks, greater trade friction, deeper economic scarring	Renewed social distancing, moderate contraction risks, prolonged trade truce, subsequent economic recovery
Lingering pandemic (2020-21)	Lingering pandemic risks, intense trade and technology wars, "hot" geopolitical conflicts, renewed and a long global depression	Lingering pandemic risks, deals in trade and technology, subdued geopolitical friction, eventual return to economic recovery

Despite the end of the Cold War a quarter of a century ago, "security" is still defined in terms of high military expenditures, even though economic damage from the virus could push half a billion people into poverty.[140] Recently, Germany and certain other countries have been pushing for overseas development aid to be included with traditional defense spending as a measure of national security.[141] That's a more viable alternative. The post-pandemic world has to cope with rising pressures to steer spending away from defense toward health and welfare.

Grave Policy Mistakes

None of the current pandemic developments were inevitable. Worse, the effects of the public-health crisis on economic activity and financial markets could turn out to be more adverse and enduring than currently thought, which would further test the

[140] "How the coronavirus pandemic exploits the worst aspects of extreme inequality." Oxfam International, Apr 2020.

[141] Certainly, Europe has a great interest in securing stability in North Africa and the Middle East. See Crawford, Alan. 2020. "How German Is Your Government." Bloomberg Businessweek, Apr 20.

resilience of major central banks, while raising the magnitude of the fiscal burden. U.S. delays herald new pressures in the coming months. Although cases in America are likely to peak in late April in the coastal regions but toward mid-May in the interior, the White House has occasionally encouraged cities and states to reopen the economy far faster. The "return to business" will not happen all at once. Analysts expect half of the employees to return over the summer.[142] In turn, China's economy appears to have bottomed out. While the economy did shrink 6.8% on year-to-year basis, a trough was reached in the 1st quarter. Major indicators for the 2nd quarter, assuming supportive policies, should signal the rebound of the economy.[143]

An earlier than expected discovery of a vaccine or a therapy would allow faster removal of social distancing measures and swifter recovery. Yet, that may not be likely until 2021. Meanwhile, efforts to reduce economic scarring could result in worse deterioration. Premature exits could have huge human, economic and political costs. Indeed, there will be no return to past normality until broad access to effective vaccination, therapies, or both. Even in the best scenario, a gradual return to normality will be accompanied by a long-term need to monitor, identify, isolate and contain any possible new virus clusters; and by increasing preparedness for longer-term economic scarring, including a series of potential debt crises.

In early February, the WHO called for $675 million to implement priority public health measures. The strategic goal was to support countries to prepare for and respond to the spread of the COVID-19.[144] On Mar 25, UN Secretary-General António Guterres launched a $2 billion coordinated global humanitarian response plan to fight COVID-19 in the world's most vulnerable countries and to stop the virus from circling back around the globe.[145] Yet, these efforts have faced obstacles in fund raising.

In view of the baseline scenario, the expected cumulative output loss has *already* soared to $9 trillion - which is three times the real cost of the Iraq war (2003)[146] - and may continue to climb even higher in the early 2020s, thanks to belated responses in major advanced economies. The combined fund-raising WHO/UN target represents barely 0.03% of the cumulative output loss. Why would the choice between the two be so difficult? And why would new delays, more lost lives and greater economic damage be preferable to swift, multilateral global action? (**Figure 14**).

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[142] The expectation is that the U.S. will significantly lag China, where the peak new cases occurred by Feb 3. Since social distancing measures remain not as strict or as broadly monitored as in China, South Korea and several other countries that currently appear more successful in overcoming the virus, the return to normalcy in the U.S. is expected to take longer. See Harrison, Mathew et al. 2020. "COVID-19: A Prescription To Get The US Back To Work." Morgan Stanley Research, Apr 3.

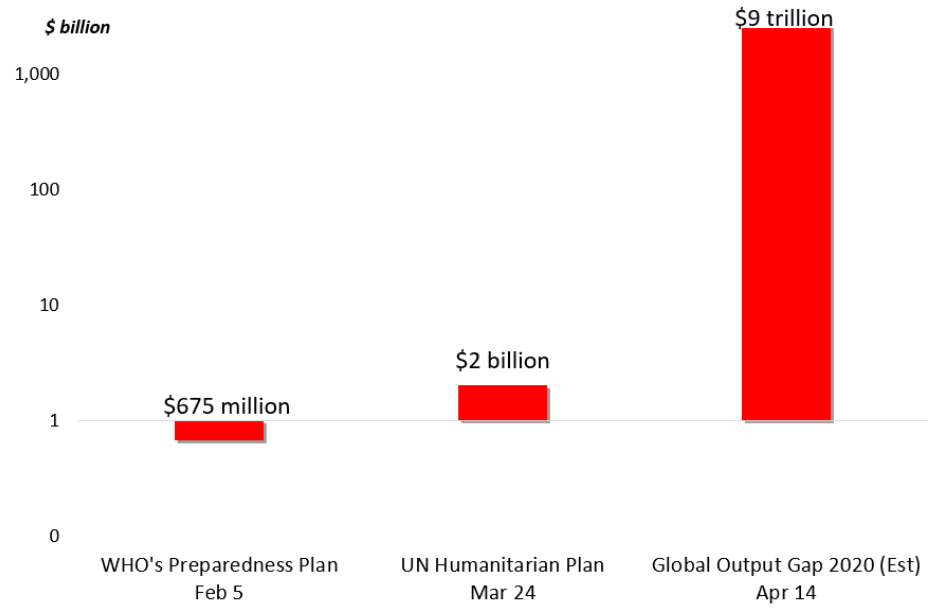
[143] In early April, strong presales recovery in the property sector was one of those signals. See Lam, Jason et al. 2020. "China Property Sector: Witnessing strong presales recovery." DBS Group Research, Apr 17.

[144] As Dr Mike Ryan, head of WHO's Health Emergencies Program, put it, the effectiveness of outbreak response "depends on the preparedness measures put in place before outbreaks strike." The goal was to protect people from the new coronavirus "before it arrives on the doorstep." See "US$675 million needed for new coronavirus preparedness and response global plan: Urgent support needed to protect vulnerable countries from outbreak." News release, WHO, Geneva, Switzerland, Feb 5, 2020.

[145] "UN launches US$2 billion global humanitarian response to fight COVID-19." UN, Mar 25, 2020.

[146] See Stiglitz, Joseph E. and Bilmes, Linda. 2008. The Three Trillion Dollar War: The True Cost of the Iraq Conflict. New York: W.W. Norton.

Figure 14 The Costs of Complacency*



* Logarithmic scale.

Source: WHO, UN, IMF, Difference Group

What is now really needed is multilateral cooperation among major economies and across political differences. In this quest, China, where containment measures have been relatively successful, can show the way, along with those government leaders in the United States and Europe, who take pandemic risks seriously. People and human lives should come first.