Taiwan’s COVID-19 Management: Developmental State, Digital Governance, and State-Society Synergy

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Abstract

This article examines the reasons behind Taiwan’s effective COVID-19 response. While some have argued that Taiwan’s success with COVID-19 is based on its experience with SARS, I argue that we should not attribute Taiwan’s effective response solely to its SARS experience. The country’s success mainly lies in three factors: (1) reliance on the mask policy as the main disease prevention measure and the ability to quickly expand mask production capacity; (2) use of big data and technology to enhance effective implementation of disease prevention and detection measures; and (3) strong state-society relations favoring transparency, communication, and collaboration. The first two factors can trace their roots to the country’s developmental state model. Democracy provides the institutional underpinning for a vibrant civil society and the synergy between state and civil society, strengthening Taiwan’s crisis governance legitimacy and increasing citizens’ voluntary compliance.

Key words: COVID-19, crisis management, developmental state, digital governance, mask policy, Taiwan

Introduction

Due to its geographical proximity to China and the intensive flow of people from/to China, Taiwan was believed to be at the highest risk for importation of COVID-19 when news of the virus first broke in January (Gardner, 2020). Yet, at the time of writing (June, 2020), Taiwan only has 445 COVID-19 cases and seven deaths in total. What explains Taiwan’s success? What are the lessons policymakers can learn from Taiwan’s experience?

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Building upon the crisis management framework, I argue that there are three major elements in Taiwan’s successful response. First, the government relies heavily on the face mask policy for disease prevention. The government ramped up the production capacity quickly by solving the coordination problem that could have emerged from the production process. Second, the government fully leverages the digital governance infrastructure and big data for effective implementation of measures related to disease prevention and detection, albeit that intrusive tracking and tracing raise privacy concerns (Ngerng, 2020). These first two elements demonstrate how Taiwan manages to overcome the coordination and surge capacity challenges, two key obstacles to effective crisis response (Ansell, Boin, & Keller, 2010). The developmental state model paved the foundation for these two elements.

Third, there is a strong two-way communication channel between the government and Taiwan’s vibrant civil society. The strong state-society relation also facilitates more synergy in fighting COVID-19. In some cases, the civil society took the lead in initiating solutions which the government then adopted. Because the ongoing crisis is characterized by immense levels of uncertainty, transparency and communication are crucial for defining and making sense of the crisis for the society. The state-society collaboration also facilitates revision and refinement of crisis response. It increases citizens’ voluntary compliance, which in turn helps enhance the overall effectiveness of Taiwan’s crisis management. A lively democratic regime provides the political underpinning for the demand and supply of transparency, communication, and collaboration between state and society.

I organize the rest of the article in the following way. I first address SARS’s legacy in Taiwan. Taiwan’s successful COVID-19 response is widely attributed to its past SARS experiences, but I contend that even though the SARS experience has certainly had an impact, it cannot fully account for Taiwan’s remarkable achievements in 2020. I then turn to the crisis management framework, discussing how the developmental state foundations and the democratic regime lead to Taiwan’s success on mask policy, digital governance, and strong state-society collaboration and communication. I end by providing some concrete policy suggestions for policymakers.

The Legacy of SARS

There is a strong perception that Taiwan’s effective COVID-19 response is mostly the result of its SARS experience (e.g., Graham-Harrison, 2020). It is worthwhile to address the extent to which SARS affects Taiwan’s COVID-19 response first before we move on to other factors. I contend that even though the SARS experience has certainly had an impact, it cannot fully account for Taiwan’s remarkable achievements in 2020. I then turn to the crisis management framework, discussing how the developmental state foundations and the democratic regime lead to Taiwan’s success on mask policy, digital governance, and strong state-society collaboration and communication. I end by providing some concrete policy suggestions for policymakers.
hospital in Taipei. Within the next month, clusters were identified in another five hospitals (Centers for Disease Control and Prevention, 2003). The sudden spike and ongoing local clusters sent society into outright panic. Multiple nurses and doctors died of SARS because of inadequate protection gears and unknowing exposure to the virus. Taiwan’s people criticized the government’s sudden lockdown and the ill-prepared detecting and reporting mechanism. The WHO offered limited help too at the time because Taiwan was not a WHO member (Lin, Wu, & Wu, 2020). In the end, Taiwan became one of the most severely affected countries by SARS. There were 346 cases, of which 71% were associated with hospital clusters, and 73 deaths (Taiwan, 2013).

SARS’s direct legacy in Taiwan was the creation of the National Health Command Center (NHCC) and the overhaul of the Communicable Disease Control Act (CDC Act). The new organization and the amended law are the central pillar in Taiwan’s COVID-19 institutional design. Responding to SARS’s regulatory failure, the NHCC became the centralized command point for any type of public health emergency moving forward, including epidemic outbreaks and bioterrorism. The Central Epidemic Command Center (CECC) is one of its sub-units composed of experts from all fields, which became essential for Taiwan’s COVID-19 fight. (Taiwan CDC, 2020). The streamlined response system helped shorten the government’s reaction time, effectively mobilized and allocated resources, and facilitated communication with the public. During the COVID-19 crisis, the CECC was quickly activated on January 20th, one day before the first case was detected in Taiwan, and coordination was set at the ministerial level to maximize CECC’s authority. The CDC Act provides the legal framework for government actions, including how the central and local governments should coordinate with each other, procedures for resource mobilization, and compulsory measures on social behaviors. The law also grants the CECC the authority to penalize lawbreakers. Even though there was criticism of granting the CECC too much authority, the post-SARS institutional design authorizes the CECC with great power and discretion during public health emergencies (Huang, 2020; Lin et al., 2020).

Another legacy of SARS was that many government officials and experts in the COVID-19 fight had direct experiences of SARS. Such experience created a cohort of technocrats who are more agile and cautious about any possible “second SARS” in Taiwan. From very early on in the COVID-19 crisis, government officials constantly and repeatedly mentioned SARS in media interviews. This consensus directed the administration to take a more preemptive approach toward COVID-19. For example, out of precaution, Taiwan immediately sent doctors to Wuhan China on January 5th to gather more information once experts suspected a new epidemic.

There is also a strong consensus within the government that Taiwan cannot and should not repeat the mistakes made during SARS. The technocrats’ SARS experience leads to their emphasis on face mask policy. During the SARS epidemic, panic buying of face masks became a major issue. As a result, the government foresaw that mask hoarding would occur again during this crisis. The government swiftly imposed export bans on N95 and surgical masks on January 24, one day after China decided to lockdown Wuhan. To combat panic buying, the government also took over the private sector mask distribution lines and
launched a mask rationing system. SARS’s panic buying was partially the consequence of inadequate face mask supply at the time. During COVID-19, to secure sufficient supplies of masks, the government leveraged its close public-private sector partnership to ramp up the mask production, a point I will elaborate more in the next section.

Even though SARS certainly contributed to Taiwan’s quick reaction to COVID-19, there are other concurrent factors that contributed to Taiwan’s quick reaction. The first was Taiwan’s exclusion from the WHO. Research shows that countries excluded from international organizations would make more cautious and responsible policies (Lipscy & Lee, 2019). Deprived of the WHO’s support, Taiwan must resort to the “self-help” approach, nudging the administration to be more prudent (Chang, 2020a). Another factor is China’s growing hostile relations with Taiwan. Taiwan’s trust toward China has come to a new low. Two weeks before the Wuhan lockdown, Taiwan held its presidential election, during which President Tsai Ing-wen of the Democratic Progressive Party, the party more antagonistic to China, won her second term with a landslide victory. Voters endorse her firm stance against China. Taiwan’s distrust of China can also lead to a quicker response.

Observationally, it is hard to tease out the effect of SARS, and it is likely that there are multi-factors leading to Taiwan’s quick reaction. As such, we should not exaggerate SARS’s legacy on the country’s COVID-19 response. Taiwan is not unique in its quick response to the new coronavirus outbreak either. Almost all China’s neighboring countries (except for Japan) activated their response system to a greater or lesser extent in early January after China notified the WHO about the potential coronavirus disease. Some of these countries do not have painful SARS memories. South Korea is considered very successful in its comprehensive testing capacity; Vietnam, as a country that directly borders China but with only less than 400 cases in June 2020, is also another remarkable example. Neither of them suffered SARS. Moreover, not all SARS veteran countries orchestrate successful crisis responses this time. Judging from the number of COVID-19 cases, past SARS experiences do not fully shield Singapore and Canada, two SARS veteran countries, from this crisis.

Even though a coronavirus is the cause of both epidemics, COVID-19 and SARS are still different. Unlike SARS, the defining features of COVID-19 include longer incubation periods, higher transmission rates, more virus mutations, but lower death rates. Patients can be asymptomatic when spreading the virus. Relying solely on SARS’s experience would not be adequate for containing the crisis. In addition, COVID-19 is a prolonged and ongoing crisis. Orchestrating a successful multi-agency response requires complex and different policy tools at different stages. An early reaction itself would not be sufficient. Therefore, while SARS’s legacy is important and the SARS experience can be informative for the current crisis, we should not exaggerate SARS’s impacts on Taiwan’s success, or on any country’s success.

**Three Elements in Taiwan’s Success**

An effective COVID-19 response still hinges on a country’s governance structure, capacity, and legitimacy. COVID-19 is a transboundary epidemic crisis.
Facing an epidemic, all governments must compose a response strategy combining disease prevention, detection, and treatment. Disease prevention includes measures such as border control, regulations on mask wearing and social distancing, etc.; disease detection includes measures such as screening incoming travelers, contact tracing, quarantine policy, and testing policy, etc.; disease treatment measures focus on healthcare facility surge capacity and vaccine research and development. As a transboundary and unprecedented crisis, COVID-19 also confronts all governments with a common governance challenge (Ansell et al., 2010). That is, how to cope with the uncertainty brought by or embedded in this crisis? How do the public perceive the risks? Amid high uncertainty, how to make collective sense of this crisis as a society? The four tasks are part of the Public Health Crisis Management Framework, as illustrated in Figure 1.

The framework suggests that there is no one-size-fits-all strategy, and there are multiple routes to effective crisis management. No matter what the strategies are, an effective response would balance resources between disease detection, treatment, and prevention, while minimizing the uncertainty and panic the public may feel. For an effective response, it is of vital importance that a government can mobilize resources to provide surge capacity and to coordinate a coherent response (Ansell et al., 2010). Moreover, the capacity of a government to define and communicate the uncertainty the crisis brings is also an essential element in an effective response because collective sense-making can help increase citizens’ voluntary compliance.

Of the three epidemic tasks, Taiwan relies heavily on disease prevention and detection in their COVID-19 response. Relatively, the country spends fewer resources on disease treatment, such as increasing health care beds or investment in vaccine development. Moreover, the synergy and transparent communication between the government and civil society strengthen governance legitimacy and citizens’ cooperation. In this section, I will show that Taiwan’s developmental state lineage benefits the country through resource mobilization and inter- and intra-agency coordination for their disease prevention and treatment measures. Its democratic regime and robust civil society also conducive to more

![Figure 1. Public Health Crisis Management Framework.](Source: Author.)
transparency and open communication with the society, which in turn enhances the country’s governance legitimacy and cooperative compliance.

**The Developmental State Roots of the Successful Mask Policy**

Taiwan adopts a border control and strict quarantine policy to block the outside-in transmission route for disease prevention. Domestically, Taiwan relies heavily on the mask policy to prevent the disease from spreading. As mentioned above, the government quickly imposed export bans on masks and introduced a rationing system after the CECC was activated, but a crucial piece to a successful mask policy is ensuring sufficient mask supplies. In normal times, Taiwan imports facemasks from China. Therefore, at the beginning of the crisis, domestic production was only 1.8 million masks per day, far short of the quantity needed. Yet Taiwan managed to ramp up its mask production eightfold in 3 months to 16 million per day (Yen, 2020). Under the real-name rationing system, people can receive two masks per week in early February; by mid-April, the quantity was increased to nine masks per 14 days. Taiwan was even able to start “mask diplomacy” to supply masks to other countries (Horton, Li, & Cheng, 2020).

Facemask production is not a skill-intensive industry. Nevertheless, one of the most baffling issues during COVID-19 is the mask shortage around the globe. Taiwan’s ability to produce sufficient mask, in contrast, stands out. Why can’t other countries mass-produce facemasks like Taiwan does? According to Economics 101, if there is demand, there is supply. There is obviously huge demand for facemasks during this crisis, but why isn’t there corresponding supply? The reasons why it is hard to rely on the market to sort out the demand and supply issue are that, first, developing a production line poses high transaction costs. Even though facemasks are not a skill-intensive product, challenges still exist in sourcing raw materials, especially the melt-blown fabric for filtration, and re-tooling machines for rapid production. It would require a substantial amount of effort and time to coordinate and assemble a production line if the task was left to the private sector. Second, from the private sector’s perspective, it is not clear if investment in facemask machinery now can be profitable in the post-COVID-19 world. China has been the major facemask supplier for the world because facemask is an industry of slim profit margins where other countries no longer have a comparative advantage. Therefore, for private sector companies, investment without guaranteed returns or high yield would hamper their interest in massive investment in the first place.

Taiwan’s mask policy success lies exactly in the government intervention in lowering transaction cost and enlarging future profitability for the private sector. The developmental state model, which governed Taiwan’s industrial policy from the post-war era, provided the foundations for resolving these issues. Briefly speaking, a developmental state is characterized by the government’s active role in the economic growth process. Under this model, the government maintains a very close relationship with the private sector but keeps its autonomy in making policy (Evans, 1995). With the goal of rapid economic growth, the government would nudge specific industries by proactively solving growth-induced coordination problems, which, under a more market-oriented economy, are usually solved by the market’s invisible hand. In general, there are three types of coordination the government helps overcome. First, the government...
coordinates the supply chain, linking upstream to downstream companies in an industry. Second, the government would also coordinate between the financial sector and industry by channeling the capital needed to grow the targeted industries. Last, to facilitate industrial upgrading, the government would support R&D and coordinate knowledge transfer between public research institutes and industries (Haggard, 2018).

The developmental state logic is applied extensively behind the massive increase in mask production. First, to lower the transaction and coordination costs between different companies in the industry, the government directly intervened to coordinate the production line. The Industrial Development Bureau of the Ministry of Economic Affairs (MOE) and the Taiwan Textile Research Institute, a government-funded agency supporting R&D for the textile industry, were both involved in the effort. In early February, the MOE directly gathered all face-mask-industry related manufacturers, including machine tool companies (for producing face mask machines), raw material providers, and the downstream facemask manufacturers. By the end of the lengthy meeting, an ambitious face-mask production plan was drafted and agreed upon by all companies. The government coordinated all the machine tool companies to produce more facemask machines, matched raw materials suppliers with downstream facemask manufacturers, assigned quotas to every company, and set the purchasing price structure. It was not coincidental that Taiwan successfully assembled and coordinated among relevant companies for mask production within such a short time. The long public-private partnership tradition made such a task possible.

Though the government played a big role in the process, it is still different from a planned economy in the sense that, in a developmental state, the government does not directly force the private sector to reach certain production capacities. Instead, the government incentivizes or nudges (i.e., tax incentives, knowledge transfer, capital investment, etc.) industries to enhance voluntary compliance. In the COVID-19 fight, the government incentivized the companies to participate in the government’s plan through several measures that can guarantee and increase companies’ future profitability.

On the one hand, the government directly supported the infrastructure needed for rapid mask production, which essentially lowered the private sector’s machinery costs. The government intervened with a US$6.6 million subsidy and built 60 new mask production lines. When it realized that the production capacity still fell short of expectations, a second tranche of US$3 million dollars was released to add another 32 production lines. In total, Taiwan’s government added 92 new production lines in 2 months. In the traditional developmental state, the government would channel the capital the industry needs through financial institutions. In this crisis, direct government interventions solved both the capital and the basic infrastructure issues (Yen, 2020).

On the other hand, the government relied on price setting and guaranteed demand to further guarantee companies’ profitability in working with the government. At the onset, a big concern for the manufacturers is how to tackle the potential oversupply issue when the crisis demand wanes. Amid the pandemic, the demand can easily be bigger than the supply, but in a post-COVID19 world, that demand might disappear. Oversupply could also create an undesirable price war situation between mask suppliers. To tame the concern and to incentivize
production increase, Taiwan’s government set the purchasing price structure and guaranteed that face masks will become a national security necessity. The government will continue purchasing a fixed number of masks to ensure the demand stream (Yen, 2020). Moreover, with the government-supplied facemask machines, the government promised that once the export bans are lifted, companies can re-start facemask export for more profit. The facemask export ban in Taiwan was lifted in June, and the facemask companies are now realizing a substantial facemask profit margin given that the pandemic is still severe around the globe.

An Effective Digital Governance Regime

The second element to Taiwan’s successful COVID-19 response lies in its full utilization of digital governance. Digital tools are not the main infrastructure to fight coronavirus, but when combined with other policy tools, digital governance reinforces the effectiveness of disease prevention and detection measures, such as GPS tracking, which greatly expands the government’s governance capacity. Specifically, during COVID-19, digital governance helped improve disease detection through integrated databases of people’s health records and travel history, through more accurate contact tracing, and through active surveillance tracking for people under quarantine. On disease prevention, the mask rationing system also benefited from the digitized mask distribution platform.

The most important e-governance step the government took early on was to link individual international travel history to the national health insurance system on January 27th. The database integration relies on the inter-agency collaboration between the National Health Administration and Customs. With the data integration, all healthcare facilities can have access to patients’ immediate travel history (first limited to 14 days and then extended to 30 days) when seeing the patient. Such measures enhance local health facilities’ real-time classifying and monitoring capacity. Meanwhile, Taiwan asked incoming travelers to submit a mandatory health declaration form before entering the border. Such information would be further integrated into the database. Travelers could then be classified into different risk levels based on their flight origin and health symptoms, allowing proactive monitoring and testing.

Digital tools are also used for active surveillance of quarantined people. Due to Taiwan’s geographical advantage as an island, the coronavirus risks come mostly from imported cases. Therefore, Taiwan imposed a strict quarantine policy with a high monetary penalty (compared to other Asian countries) (Duchâtel, Godement, & Zhu, 2020). Effective enforcement of the quarantine policy was further enhanced through active surveillance. Taiwan’s government works with telecom companies to track quarantined people’s whereabouts through their phones’ GPS data. To ensure accurate implementation, the standard operating procedure is as follows: The CDC first compiles the quarantine list, which is then reviewed by local health facilities and local civil departments (i.e., village chiefs) to check the accuracy of the quarantine people’s phones and addresses. The local authorities then call the individuals twice a day to check on their physical and mental wellbeing. The quarantined individuals can also self-report their health conditions to the centralized tracking system through the mobile chat app (e.g., Line). Meanwhile, local authorities send these numbers to the telecom
companies who can start tracking the quarantined people’s movement. If the individual could not be reached or if the phone location changed based on triangulating the base station data, an alarm would be triggered. The quarantined person and local authorities (i.e., village chiefs, police, etc.) would all receive a text message. Local authorities would also pay an in-person visit to verify the individual’s whereabouts (Ngerng, 2020).

Despite its effectiveness, active digital surveillance tools raised substantial concerns about individual privacy. The CECC claims such invasive monitoring is authorized by the CDC Act and the Special Act on Covid-19 Prevention, Relief, and Restoration. Based on the Acts, the CECC can take any measures that deem necessary for disease prevention. However, this did not ease the public’s concern. The government promised that all the data collected during the pandemic or for the quarantine purpose will be deleted after COVID-19. Yet, the issue of how to strike a balance between individual privacy and public interest remains an issue all societies must confront in the digital governance era.

To summarize, it is obvious that digital governance itself is not adequate for successful disease detection and prevention. The state is already capable of penetrating society and collecting people’s information. For example, the prerequisite for database integration was the existence of such health data in the cloud space, which Taiwan’s National Health Insurance had already completed when it digitized individual health records in recent years (Ngerng, 2020). Another example is that the central government was capable of working with local authorities to check the quarantined. The function of digital governance infrastructure is to help facilitate and further enhance the effectiveness of government regulations. Thanks to the digital governance infrastructure, Taiwan achieved the intended policy goals more effectively. To some extent, Taiwan’s comprehensive digital infrastructure has its roots in the developmental state as well. Under the government’s intentional planning in the 1980s, Taiwan upgraded its economic engines to semiconductor and technology-related industries, leveling up the basic digital infrastructure in Taiwan. The industrial transformation not only created the infrastructure hardware but also a population with high levels of digital literacy. The tech-savvy civil society also played a big role in the COVID-19 fight.

**Strong State-Society Relation with Open Communication and Synergy**

Despite its impact on the world, we still know relatively little about COVID-19. For months, the world was learning whether and how the virus is transmitted from human to human and the complete range of symptoms. Six months after the outbreak, it is still not entirely clear how contagious asymptomatic cases can be (Yan, 2020). The WHO also changed its policy from discouraging masks on healthy individuals to encouraging wide-spread mask use in June 2020. Still, it is unclear when or if a vaccine will become available. Simply put, COVID-19 is an epidemiological crisis with high levels of ongoing uncertainty.

Amid the immense level of uncertainty, governments around the world are confronted with two tasks. First, as the crisis and the inherent uncertainty are evolving, it is almost impossible for a government to identify best practices. Governments are likely to make mistakes. The task at hand is to continue calibrating the national response after considering the structural and moving
factors. Second, since there are many unknowns, government responses are of vital importance. With an uncertain crisis, the public depends on the government to help define the nature of the crisis. This “meaning making” step is essential for how the public perceive the risk. Different perceptions can result in different health-related behaviors and compliance levels (Kushner Gadarian, Goodman, & Pepinsky, 2020).

Taiwan’s government dealt with such uncertainty through continuing and transparent communication with the country’s vibrant civil society. Active communication helped the government define the crisis as dangerous at an early stage. The CECC used the analogy of “war time mobilization” to warn the seriousness of COVID-19. It helped the society’s collective sense-making of the virus. The major communication channel between the government and people during COVID-19 has been a daily press conference. Starting on January 5th, Taiwan’s CDC hosted a daily press briefing, during which the CECC provides the most recent update on COVID-19 and responds to questions. Moreover, the daily conference is used as an educational platform to address false information, social stigmas, and bias. For example, one case of COVID19 was an illegal migrant caregiver, which triggered panic and demands for crackdowns on illegal migrant workers. The CECC used the conference platform to educate the public that every migrant worker, legal or illegal, should be included and treated the same during the coronavirus fight. The CECC stated that illegal foreign workers should not be excluded from the healthcare system, explaining that a crackdown would only result in a bigger loophole in the fight against COVID19.8 In another example, a schoolboy was bullied because he wore a pink mask; the CECC team all appeared wearing pink masks at the next press briefing, fighting gender stereotypes (Chang, 2020b). These daily conferences are informative, educational, and morale boosting. It is not an exaggeration to say that the daily press briefing anchored and calmed Taiwanese society. People listened to and followed the instructions provided in those daily briefings.

Communications are not only top-down but bottom-up, and a robust civil society is essential for the bottom-up effort. Taiwan has developed a vibrant civil society since democratization in the late 1980s. After the Sunflower Movement in 2014, civil society networks have grown even stronger and can easily be mobilized. A democratic political structure is the institutional foundation that makes a strong civil society possible. Not all democracies breed strong civil societies, but strong civil societies only exist in democratic settings. During the COVID-19 fight, civil society sometimes challenges the government, sometimes collaborates with the government, and sometimes even pioneers and leads the government. Instead of imposing rules and regulations on society, the government must persuade the society of the necessity of those regulations. The government has also benefited from the wisdom of the crowd as it sought to refine regulations. Two-way communications between the government and societal actors have been a hallmark of the Taiwanese response, rather than strictly top-down communications.

During the COVID-19 fight, there have been several collaborative efforts between digital civil society and the government. One example is fighting misinformation. Of the active civil society, a civic-tech community, pioneered by the
G0v (“gov-zero”) movement, has grown rapidly. These “civic hackers” advocate for open government, transparency, and citizens’ agenda-setting power (Tang, 2019). During the crisis, they worked with the government to quickly correct misinformation about COVID-19 on the internet (Quito, 2020). Such synergy was possible partially due to Audrey Tang, Taiwan’s current digital minister. Tang was once a civic hacker and was one of the G0v’s core members. Her long-term advocacy for big data and open government facilitated active collaboration between the government and the digital civil society.

Another example of civil society’s energy is the “Taiwan Can Help” campaign. During COVID-19, Taiwan and the WHO had several disputes over Taiwan’s exclusion from the WHO. While Taiwan’s effective crisis response has gained attention, it remains isolated from the global health governance body. The dispute, at some point, developed into a heated fight over racist slurs. Taiwan’s civil society was furious about the response of WHO’s Director-General. In response, the civil society initiated the “Taiwan Can Help” crowdfunded campaign. The goal was to place a full-page advertisement in the New York Times to promote Taiwan’s effective crisis response and to increase cooperation with the international community despite being excluded from the WHO. The campaign received more than enough money within a few days. With the #TaiwanCanHelp hashtag on Twitter, the campaign began a wave of activism works. Later, when the government launched its mask diplomacy, the same hashtag #TaiwanCanHelp was used to promote its ability to contribute to the international community.

In some cases, the tech-savvy community even pioneered better solutions that were later adopted by the government. One example is the optimization of mask distribution. As mentioned above, Taiwan launched a mask rationing system. Administration of the real-name rationing system was initially difficult, requiring long lines at pharmacies. Civic hackers voluntarily created mask apps combining the stock at local pharmacies and google maps to show mask stocks in different locations to help shorten the waiting queues during the early stages of distribution. The government adopted the idea and later developed an online mask purchasing platform. People can now pre-order masks online through the government website, the National Health Insurance App, or through the wide-spread convenience stores on the island. The state-society synergy indirectly contributed to e-governance expansion too. In the online purchasing platform example, to accommodate the surplus traffic, the National Health Insurance Administration set up 20 extra servers to expand the cloud capacity (Duchâtel et al., 2020).

One myth about Taiwan’s success is that Confucianism plays a role. Some have argued that the successful Asian experiences can be attributed to Asian Values, which emphasize social order and hierarchy. Asian people do not question the government as often and are more submissive to strict government regulation. However, Taiwan’s experience suggests otherwise. In Taiwan, governments are subject to frequent criticism. Even when the government’s measures are necessary, it does not mean that society accepts those decisions submissively. Society questions the government, forcing the government to be transparent and be responsive. The positive consequence is that when the regulatory measures are perceived as necessary and approved by the civil society, it increases citizens’
cooperation and compliance. Governance legitimacy is reinforced through this interaction.

Moving Forward: Lessons from the Taiwan Case

In this article, I laid out some of the factors behind Taiwan’s success in fighting COVID-19. The legacy of the developmental state helped Taiwan create the “mask economy” within a short period of time as well as contributing to the digital governance infrastructure. Transparent communication helped define the nature of COVID-19 early on in Taiwan, decreasing public panic and increasing public trust in the government and citizens’ compliance level. The tech-savvy civil society also collaborated with the government in refining crisis measures. The successful crisis management strategy has also had international repercussions, enhancing Taiwan’s standing on the international stage.

The information presented above suggests a few policy lessons. First, while Taiwan has relied on the face mask policies, there are multiple routes to a successful COVID19 policy. Central to success is governance capacity, given a society’s social, cultural, and economic factors. A centralized command center benefits inter- and intra- agency coordination to produce more coherent response strategies and to mobilize and allocate resources more efficiently. Second, for best crisis management outcomes, government legitimacy matters too. People must perceive regulatory measures as necessary to generate high cooperative behaviors. Therefore, the way a government defines the crisis is of utmost importance. Transparency and communication can also help generate higher cooperation and compliance. Additional benefit transparency and communication bring to the table is to allow experts to debate and calibrate a more refined strategy moving forward. Third, the wisdom of the crowd can be useful in the COVID-19 fight. When possible, citizens’ active engagement can be helpful for the government. Through repeated interactions with the society, the government can also refine its crisis to manage strategies to better align the intended policy goals and people’s behaviors.

Notes

1NHCC includes the Central Epidemic Command Center (CECC), the Biological Pathogen Disaster Command Center, the Counter-Bioterrorism Command Center and the Central Medical Emergency Operations Center (“NHCC” n.d.).

2Originally, the chief commander was the Director-General of Taiwan’s CDC, but soon after China locked down Wuhan on January 23rd, the Minister of Ministry of Health and Welfare (MOHW), the superior unit of Taiwan CDC, became the new chief commander of CECC. Leveling up the command center to the ministerial level helps ease inter-ministry cooperation.

3China also shortened its reaction time compared to the country’s reaction time to SARS. The first SARS case in China appeared on November 16th, 2002, but China only reported the outbreak to the WHO in February 2003 when there were already 300 cases and 5 deaths in China. During this crisis, the first reported official case appeared on December 8th 2019, and China reported the outbreak to the WHO on December 31st when there were only 27 reported cases (Wu & McGoogan, 2020).

4Countries that were affected the most by SARS include China, Hong Kong, Taiwan, Singapore, and Canada.

5The rationale behind the government’s active role is to address the latecomer issue that many Asian countries, Taiwan included, had after World War II.

6However, at the beginning, the pricing mechanism was set in a way that only a few manufacturers met their quota in the first week of production. After reviewing the gaps within the production line, the government identified ways to increase capacity and revise its purchasing and bonus structure to encourage suppliers to produce at maximum capacity.
Using the integrated database, the government was able to proactively re-test 113 cases that were tested negative for influenza for COVID-19. 1 out of the 113 cases was COVID-19 positive (Jason Wang, Ng, & Brook, 2020). When permitted, the health authorities can also trace the infected or high-risk individuals’ contact history to prevent any possible virus spread. In one Navy ship cluster infection case, the government sent out 210,000 text messages to people who may have close contact with the infected individuals based on location information from mobile phones.

With Taiwan’s National Health Insurance Program, every legal resident living in Taiwan for more than 6 months (citizens or not) can have access to health resources. The illegal migrant workers are the only group with no access to health resources. To further fix the hole, from April 1 through June 30, Taiwan ran the second amnesty program for illegal migrant workers to encourage them to come forward (Wei, 2020).

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