

Taiwan's Coronavirus Lesson—Technology with Transparency

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Taiwan is undisputedly having a moment. Countries around the world are heralding the “Taiwan model” for combatting the coronavirus pandemic. Sitting only 81 miles off the coast of mainland China, it has, to date, recorded fewer than 500 cases and seven deaths. Vice President Chen Chien-Jen, Digital Minister Audrey Tang, and representatives from the Ministry of Foreign Affairs are in demand to share Taiwan’s experiences and expertise with a global audience. It has also boosted its production of masks and other supplies for aid donations around the world, augmenting its efforts with flashy #Taiwancanhelp branding. Meanwhile, the United States is leading a global diplomatic push for the World Health Organization to encourage China to allow Taiwan to join its annual conference later this month as an observer.

Now is an opportune time for Europe and the United States to coordinate and collaborate meaningfully with Taiwan on the pandemic. Speaking at the kickoff for a U.S.-Taiwan coronavirus hackathon last month, American Institute in Taiwan Director Brent Christensen highlighted lessons the world could learn from the initially successful response to the coronavirus, in particular “5 Ts”: transparency, transportation controls, tracking, testing, and technology. Taiwan built on past experience to make some important decisions early on in the crisis. But it also relied on new technologies to help track and contain the virus. Europe and the United States can learn a lot from these examples even if, in many ways, its approach could not be replicated exactly elsewhere.

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Taiwan moved quickly at the earliest signs of the virus, building on its experience with the SARS outbreak in 2003 and a culture of civic engagement. In 2004 it established the National Health Command Center to coordinate disaster management among central, regional, and local authorities. A component of this, the Central Epidemic Command Center (CECC), was activated on January 20 to coordinate across agencies, integrate databases, and mobilize resources in the fight against the coronavirus. The CECC is led by the health and welfare minister, who gives daily press briefings. One of the tenets of Taiwan’s coronavirus response has been a commitment to transparency. In addition to daily briefings, Vice President Chen, an epidemiologist by training, has been active on social media, posting regular updates and information about the virus on his Facebook page and other online platforms.

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Experts have catalogued 124 rapid-response actions the CECC implemented from January 20 to February 24, including the integration of the national health insurance database with the immigration and customs database to create a data pool for contact tracing. Taiwan moved quickly to restrict travel from other countries and in mid-February deployed the Entry Quarantine System where a Quick Response code could be scanned to complete an online health declaration form. Low risk travelers who “passed” were notified via text message for faster immigration clearance. Cell phones have also been used to monitor the whereabouts of those ordered to remain quarantined at home with a system known as a “digital fence.”

Digital Democracy

The coronavirus outbreak has served as a critical opportunity to showcase and test Taiwan’s commitment to digital democracy. Led by Digital Minister Tang, it has leaned heavily on technology as a way to strengthen democracy by increasing participation in government. Since 2014 a group of civic-minded citizens and coders called g0v (pronounced “gov-zero”) has sought to improve government transparency via open-source tools. Many entered into government partnerships and now collaborate via the VTaiwan or “Virtual Taiwan” platform. Along with another government-managed civic-engagement site called Join, this allows for online brainstorming and works to create consensus around policy debates.

These sites have fostered collaboration in the development of tools to fight the pandemic. After Taiwan announced the rationing of face masks, Tang worked with this community of social innovators to manage the development of a platform of over 100 digital maps that draws on data from health authorities to provide real-time information about the availability of face mask supplies across Taiwan. In another example, Tang’s office worked with convenience stores to design and implement an online “eMask 2.0” system in which citizens use their health cards to order masks online for pick-up or delivery. These apps have generated pride across Taiwan and drawn praise from all quarters for being an effective, bottom-up solution.

A high degree of public participation in the development of new tools has built confidence in the government’s actions. For the time being at least, it appears as though Taiwan’s citizens trust data and technology will be used for good and for limited use to fight the pandemic. Tang has stressed the narrow restrictions on the “digital fence” and the importance of protecting personal information and privacy. A poll conducted in February found that people on average rated the government highly for its pandemic response, although critics have pointed out that many people do not fully understand how all the technology works.

Despite Taiwan’s initial success in keeping its coronavirus numbers low, its reliance on data and technology gives pause to many privacy advocates and policymakers elsewhere. It is tough to imagine Europe or the United States suddenly embracing “big brother”-style surveillance even in the name of health. Privacy is paramount in Europe and individual liberty is a foundational concept in the United States. But Taiwan’s encouragement of civic engagement, such as through use of its VTaiwan platform, inspires trust and helps to mitigate potential concerns over some of the more worrisome aspects of a technology-dependent government intervention. Particularly as China’s response to the pandemic has been to obfuscate facts, silence scientists and critics, and censor discussion, it is significant that Taiwan chose the opposite tack, opting for openness and transparency even despite the fact that political objections from Beijing bar it from directly communicating valuable health information via the World Health Organization.

With their joint hackathon, the United States and Taiwan seek to emphasize direct communication with the public while soliciting input about how to “use artificial intelligence and big data to develop predictive tools to track the virus.” Coders and industry professionals were invited to submit ideas for innovative tech solutions to fight the pandemic.

Some of the tools Taiwan has harnessed in its coronavirus success story naturally raise questions and concerns about the future of big data and technology in public health. But it has also demonstrated a commitment to civic engagement and open government throughout its response. Even if it is hard to imagine the “Taiwan model” being replicated fully elsewhere, its low case numbers, efforts at transparency, and its demonstrated assistance to countries around the world make it hard to argue that it is not doing many things right.

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