

How Companies Can Respond to the Coronavirus

The companies and employees at ground zero of the COVID-19 outbreak provide insight into what works in a time of crisis — and what doesn't.

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Leaders around the world are facing twin anxieties: how severe the coronavirus (COVID-19) outbreak will be for the economy and what companies should be doing to prepare.

Scientists have long warned that emerging infectious diseases represent a new reality with the potential to cause untold human suffering and economic disaster. While the financial damage of the COVID-19 epidemic — first reported from Wuhan, China, on Dec. 31, 2019 — has so far largely been confined to China, organizations around the world are directly and indirectly affected by what is fast becoming a global crisis.

Managers lack clear guidance on how to ready their organizations for a global pandemic event. The World Health Organization (WHO) tracked 1,438

epidemics between 2011 and 2018 and notes, “In addition to loss of life, epidemics and pandemics devastate economies.” Many of the outbreaks in this period, including Ebola and MERS, were able to be contained geographically. But the conflux of hyperurbanization and global warming makes pandemics and other ecological dangers more likely to spread over a larger area — and a very real threat to the world’s economies.

We’ve been taking a close look at the effects on Chinese companies and workers of the government quarantines that began being imposed in January. The responses of these two sets of stakeholders at the front lines of managing this crisis offer important lessons for organizational leaders in other locales. Current projections suggest that it’s only a matter of time before most organizations are facing similar challenges.

The Impact on China’s Economy and Global Trade

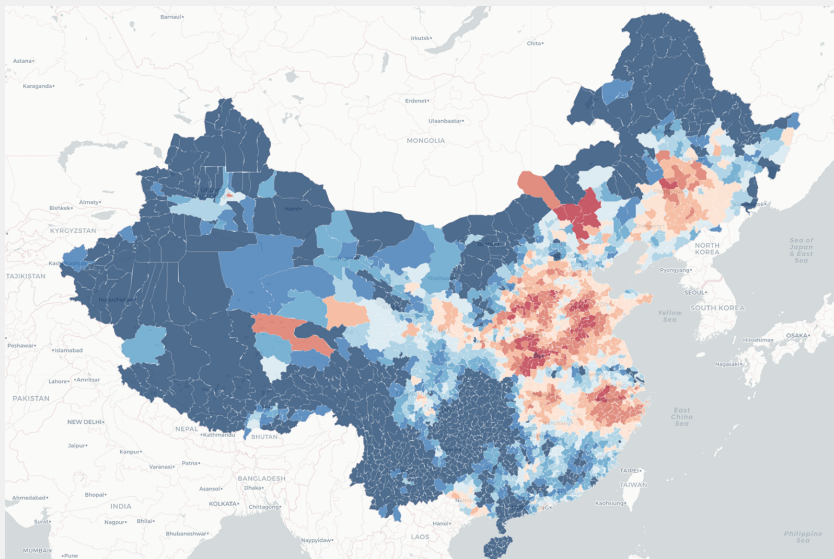
Our first task was to find out how much the virus, and the resultant quarantines, have been affecting Chinese business. Our research initiative at the Global Center for Entrepreneurship and Innovation at the University of St. Gallen, in Switzerland, collects and examines remote sensing data, such as satellite data and digital trace data. We are using this tool to shed light on how COVID-19 has been affecting the Chinese and global economies.

Our team has been analyzing daily satellite data from the European Space Agency’s (ESA) Tropospheric Monitoring Instrument about air pollution emissions to quantify the regional and local impact of the COVID-19 outbreak and government-imposed quarantines on the Chinese economy. Changes in the quantity of pollutants, such as nitrogen dioxide, are useful for identifying daily changes in emissions-heavy industries, such as manufacturing, because of their short lifespan in the troposphere. Emissions data has long been used as a proxy for quantifying shifts in certain types of economic activity. Simply put, a drop in air pollution indicates a drop in manufacturing.

The emissions data shows the severe hit that China’s manufacturing sector took in January and February. (See “Air Pollution Reduction Shows Where Chinese Manufacturing Slowed.”) Our data shows that nitrogen dioxide emissions in China fell by 38% between Jan. 24, the start of the government-imposed quarantines in Hubei Province, and Feb. 21, the targeted “back-to-work” date in many Chinese provinces.

Air Pollution Reduction Shows Where Chinese Manufacturing Slowed

During a 28-day span, when areas of China were under government-imposed quarantine to slow the spread of COVID-19, manufacturing slowed — evidenced by the decrease in nitrogen dioxide emissions. Municipalities in red had the highest decrease in emissions, while areas in blue had no decrease.



Global Center for Entrepreneurship and Innovation at the University of St. Gallen, using data from ESA from Jan. 24 to Feb. 21, 2020

The numbers were more extreme closer to the outbreak's epicenter in eastern China: Within Hubei Province, emissions fell by 53%, and in the worst-affected industrial municipalities around Wuhan City, emissions plunged by as much as 85%.

What is the economic impact of this sudden nosedive in production?

Converting emissions data to dollar amounts is fraught, but we estimate that a 38% decline in emissions may indicate a conservative loss of up to U.S. \$215.6 billion to Chinese manufacturing during this period alone. (To make our estimate, we compared nitrogen dioxide emission reductions with province-level 2018 gross regional product attributable to the secondary sector values from the Chinese National Bureau of Statistics.)

The real economic impact of COVID-19 on the Chinese economy, though, is likely to be far higher. While nitrogen dioxide emissions began recovering in many less-affected Chinese provinces in mid-February, countrywide emissions levels are not likely to return to pre-outbreak levels until the end of the quarantines in Hubei Province, scheduled for late March 2020 (as of this writing). Moreover, the manufacturing being done in China is a hinge point for many of the world's largest companies and economies. The effects of the

slowed Chinese production include customers who must find alternate sources of supplies and slowdowns of entire global production schedules as a result of the trade upheaval and uncertainty.

Best Practices to Guide Companies Through the COVID-19 Crisis

In addition to analyzing emissions data, our team has also been systematically aggregating news and social media data from the most severely hit regions in China to better understand how COVID-19 has affected the Chinese economy, including those portions that are less observable through traditional economic proxies. This data collection has given us a unique lens on how Chinese companies and other Chinese organizations have been responding to the ongoing crisis.

Our data shows that there are several steps that Chinese managers are successfully taking, often with the encouragement of Chinese authorities, to mitigate the impact of the virus and its disruptions. There are also several areas where a lack of preparedness has led to less-than-desirable outcomes.

We believe that managers can learn a lot from how companies in China have been coping with COVID-19. These coping practices include having smart policies around remote work; anticipating and mitigating operational roadblocks; and addressing the social impacts of this health emergency.

Develop an Infrastructure for Remote Work

Telecommuting has long been seen as integral to maintaining normal operations during a crisis. In Chinese social media, searches on the phrase “remote work” were stagnant from the Dec. 31, 2019, announcement of the coronavirus through the Jan. 24, 2020, start of the Wuhan quarantine. They only began to rise after Feb. 14, the start of Chinese government’s efforts to return employees to work with the goal of having full productivity restored by the intended “back-to-work” day of Feb. 21.

Many Chinese companies, with the encouragement of Chinese authorities, began transitioning large portions of their nonmanufacturing workforce to telecommuting after the end of the Chinese New Year, in late January. For employees, especially those unaccustomed to remote work, there may be questions around best practices of telecommuting, as we observed comments

on Weibo, a popular Chinese social media platform, remarking concern about the obligation to “stand by 24 hours a day.”

Of course, many jobs, particularly those in manufacturing, cannot be transitioned to remote work. Only 33% of Chinese small and medium enterprises, which employ 80% of Chinese workers, were able to resume normal operations by the end of February.

Using the Chinese experience as a model, we believe there are steps managers can take to maximize the effectiveness of the remote work option during a crisis. They include these four:

- **If you are not already doing so, allow your employees to telecommute.**

Companies that allow for remote work — right now — will have the necessary tacit knowledge, planning, and infrastructure in place to quickly transition more operations if that becomes necessary.

- **Train your leaders.** Our data shows that employees’ biggest complaints about remote work are about managers who lack respect for normal working hours. Leaders need sensible rules about when they expect workers to be available — and when they don’t.

- **Identify employees who are most crucial to maintaining business continuity.** Do they have the tools to work effectively from home if they have to? Ensure that they are prepared.

- **Develop a disaster scenario that incorporates telecommuting.** How would your organization operate if there was a quarantine that shut down geographic areas where you operate? Use techniques from scenario planning to generate ideas about how your company could pull together the capacity to resume operations in even a limited form.

Be Ready for Operational Shocks

Our research is uncovering the struggles of many small and medium-sized enterprises (SMEs) in China that have largely been ignored by Western media. SMEs contribute up to 60% of China’s gross domestic product. However, many smaller Chinese companies, particularly those in manufacturing, tourism, and construction, operate on small margins and are burdened with debt. Our data shows that the lack of available operating funds is one of the most frequent concerns expressed online by Chinese SMEs.

The following comment, which was posted in February on the social media account of a hotel owner in Yichang, Hubei Province, is one of many such

examples: “Originally, businesses in Wuhan and Yichang were supposed to start back up by the beginning of March. Then, this afternoon’s notice came. Enterprises in Hubei Province will restart work, at the earliest, on March 10. March 10 is still 19 days away. When will this stop? I am going to collapse and go bankrupt.”

The middle of a crisis is the worst time to be scrambling for the basics of operations, whether it’s finding cash to make salary payments or finding alternative suppliers because your regular source has gone cold. If you believe your organization could find itself in troubled waters because of COVID-19, start the following now:

- **Have at least one to three months of cash on hand.** This cushion is necessary to cover immediate expenses, such as salary and debt payments. Do not solely rely on financial instruments or short-term credit to make up the difference.
- **Know what your options are for extending loans, terms, and other short-term obligations.** Look this over now. Banks care that they can recoup the principal amount of the loan, and in the midst of a crisis, borrowing more or changing the loan’s conditions is difficult. Some governments have relief programs or provide other forms of targeted assistance. The Chinese government, for instance, earmarked [U.S. \\$114 billion](#) in February to support short term loans to SMEs.
- **Have an adequate buffer stock of crucial parts and other inputs on hand.** If you have not already done so, identify and establish relations with alternative suppliers from countries that are less affected by the crisis. Developing [supply chain resilience](#) is a best practice in any condition. (To our surprise, many Chinese companies were completely unprepared for the need to find new suppliers.)
- **Try to get an understanding of how prepared key suppliers and other stakeholders are for an unexpected event.** Will they be able to sustain their operations? The more knowledge you can gain in the early phases of this outbreak, the better prepared you can be if and when circumstances shift.

Become a Community Player

Charity is an important response to natural disasters such as COVID-19. In addition to simply being a good practice for ethical reasons, there are empirically established [correlations between charitable activities and future financial performance](#), improved relations with government authorities, and

reputational legitimacy. Companies that recognize the stress on social systems during medical emergencies are more likely to do better afterward than companies that do not. Corporate charity provided by local companies has a particularly strong and positive effect.

China's largest private companies have taken the lead in providing outreach during these first few months of the crisis, and the reputational effects are apparent on traditional and social media. One company, Hubei Huanggang Agricultural Development Co., donated 200,000 kilograms (220 tons) of vegetables to families in the worst-affected areas. Alibaba Group established a \$144 million medical supply fund for hospitals in Hubei Province. The Wuhan Charity Federation reports that it raised over \$400 million from corporate and private donations in less than two weeks to support communities affected by the outbreak.

If the COVID-19 epidemic comes to your town, you should be prepared to help. Here are three ideas drawn from the Chinese examples:

- **Target nonprofits and community outreach organizations in your local area.** Corporate generosity has a much larger impact when it is provided directly to a local community.
- **Encourage volunteering by your workforce.** Employees who have the option to participate in corporate volunteer programs are more likely to participate repeatedly.
- **Let others know what you've done.** Release a succinct external announcement when you make donation. Don't boast: Provide only the most pertinent details, including the amount of funds committed, the key beneficiaries and recipients, and what you aim to achieve with your donation. Include a quote from your executive leadership team.

The COVID-19 crisis has inflicted severe human suffering and economic strain already, and it will continue to do so in the near future. Our research confirms numerous reports that the ongoing crisis has significantly affected the Chinese economy, with manufacturing and other emissions-heavy industries particularly hard hit.

While the effects of COVID-19 on the global economy are only starting to be felt, there is a growing awareness in the scientific and business communities that companies need to be prepared to deal with epidemics in their own backyards.

Managers must be prepared to accept that what we are now observing represents a new reality: Diseases and other forms of ecological disasters are very real global threats to operational continuity. The evidence-based recommendations we have outlined in this article can go a long way toward ensuring that your company is prepared to maintain operations during the COVID-19 crisis.

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TAGS: [China](#), [COVID-19 Resources](#), [Crisis Management](#), [Remote Workers](#), [Supply Chain Disruption](#), [Telecommuting](#)