

Does the Squeaky Wheel Get More Grease? The Direct and Indirect Effects of Citizen Participation on Environmental Governance in China

Based on BFI Working Paper 2022-135, “Does the Squeaky Wheel Get More Grease? The Direct and Indirect Effects of Citizen Participation on Environmental Governance in China,” by Mark Buntaine, University of California-Santa Barbara; Michael Greenstone, University of Chicago; Guojun He, University of Hong Kong; Mengdi Liu, University of International Business and Economics; Shaoda Wang, University of Chicago; and Bing Zhang, Nanjing University

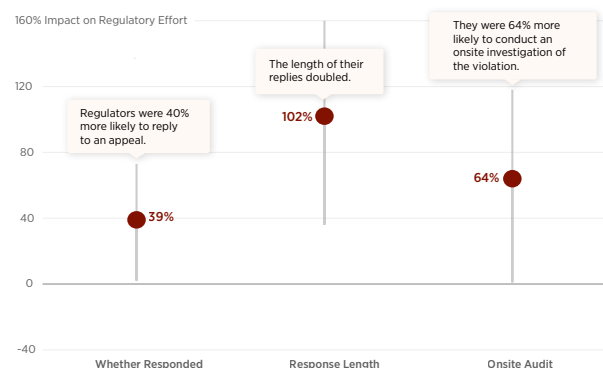
Citizen engagement, especially public engagement through social media, leads to a significant improvement in government enforcement, and a reduction in air and water pollution.

Globally, 2.8 billion people breathe hazardous air and 1.5 billion contend with polluted water, with severe impacts on health, labor productivity, and welfare. One way that governments address this problem is to collect and disclose firm-level emissions data, which allows regulators and citizens to identify violators of environmental standards. Even so, many polluters go unpunished as governments routinely fail to achieve compliance with their own standards.

As the world’s largest polluter and manufacturer, and as one of many countries that suffer from imperfect environmental compliance, China offers an instructive example. China manages one of the few and largest systems in the world to automatically collect hourly emissions data and to disclose that data publicly in real time. Emissions from 25,000 major polluting plants covering more than 75 percent of the country’s total industrial emissions, are publicly listed on a website. Despite that excessive polluters have nowhere to hide, in 2019 more than 33 percent of the CEMS firms committed pollution violations.

Why is non-compliance prevalent when regulators can accurately identify violations?

Figure 1 • Effects of Social Media Publicity



Regulatory challenges abound, including resource-intensive onsite investigations that are required to issue fines or shutdowns. Local governments not only face resource constraints, but given the economic costs of punishments, there is also the possibility that large polluters will defy or even capture local regulators.

Enter China’s citizens. The country has created official channels for the public to report violations of standards and to pressure regulators, while environmentalists and NGOs are increasingly

leveraging social media platforms to call for actions against polluters. This type of citizen involvement in environmental governance is an idea that is gaining momentum, but questions remain about whether and how citizen participation in environmental governance can improve environmental outcomes.

To investigate this bottom-up approach, the authors conducted an eight-month experiment across China. Using data to identify violating firms, they randomly assigned firms to either an experimentally assigned control group, or one of several treatment groups, and recruited citizen volunteers to file messages appealing for action when firms in the treatment group violated pollution standards. Citizen volunteers filed either private appeals (i.e., calling a government hotline or sending a private message to a government official or firm) or public appeals sent through the popular Twitter-like Chinese social media site Weibo, potentially observable by more than 500 million users. For all pollution appeals, a script was provided to ensure that content and wording were comparable, but not identical, across channels. The researchers found the following:

- When citizens used social media to highlight violations and to appeal for enforcement, firms committed 62 percent fewer violations, and air (SO₂ emissions) and water pollution (COD emissions) declined by 12.2 percent and 3.8 percent, respectively. In contrast, private appeals decreased violations only modestly, even when citizens used the same content and wording as the public appeals.

- When the researchers randomly increased the visibility of the Weibo posts by “liking” and “sharing” them, local regulators became 40 percent more likely to reply to the appeal, and the length of their replies doubled. Further, regulators became 65 percent more likely to conduct an onsite investigation of the violation, suggesting there is much opportunity for regulatory efforts to improve.
- Increasing the amount of citizen appeals in a local region does not lead to higher violation rates or emissions from non-appealed firms, implying that citizen participation does not crowd out other local regulatory efforts.

Bottom line: Engaging the public in efforts to reduce pollution can significantly reduce air and water pollution. Additionally, social media is a powerful tool to facilitate citizen involvement in policy implementation and to hold regulators accountable. And these lessons extend beyond China to include countries like the United States, Canada, India, Indonesia, and others looking to citizen engagement to overcome environmental enforcement challenges.

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