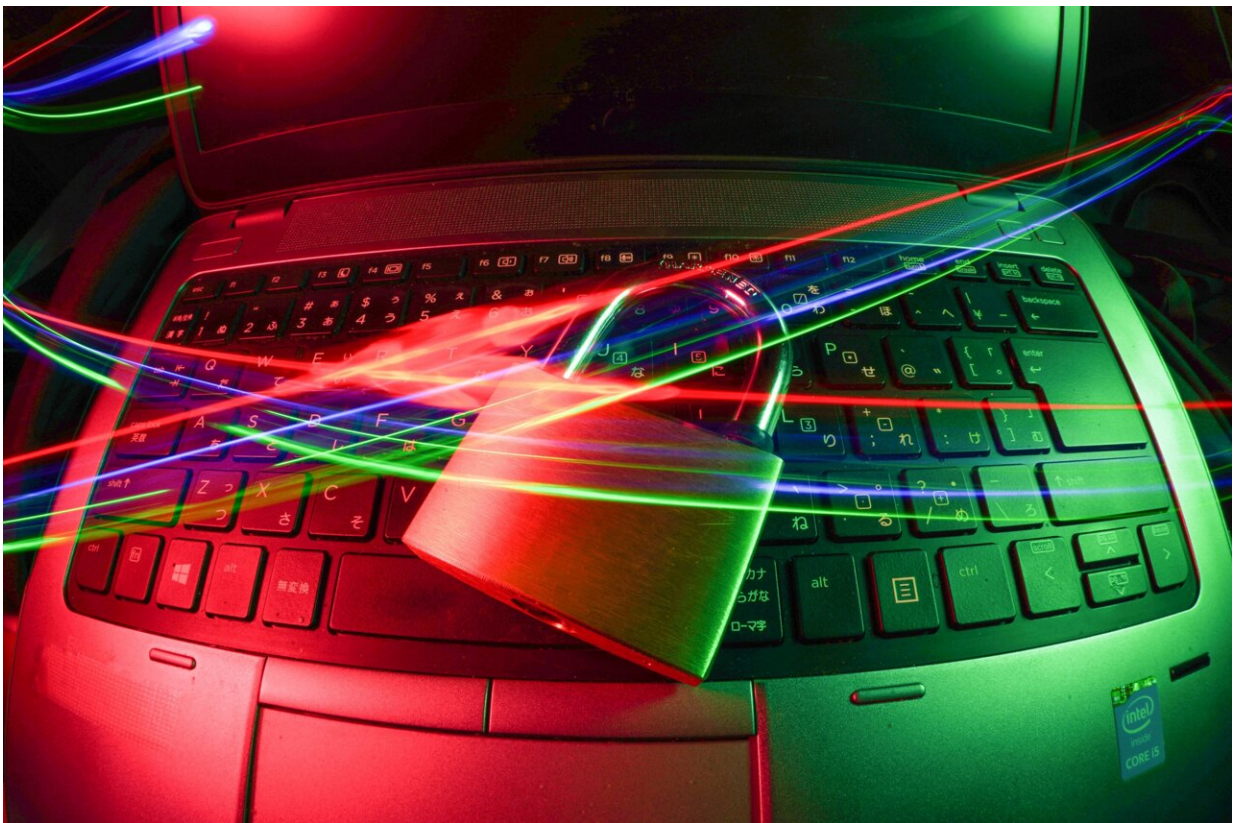


The broad economic and political impacts of internet restrictions

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In 2016, Meicen Sun came to a profound realization: "The control of digital information will lie at the heart of all the big questions and big contentions in politics." A graduate student in her final year of study

who is specializing in international security and the political economy of technology, Sun vividly recalls the emergence of the internet "as a democratizing force, an opener, an equalizer," helping give rise to the Arab Spring. But she was also profoundly struck when nations in the Middle East and elsewhere curbed internet access to throttle citizens' efforts to speak and mobilize freely.

During her undergraduate and graduate studies, which came to focus on China and its expanding global role, Sun became convinced that digital constraints initially intended to prevent the free flow of ideas were also having enormous and growing economic impacts.

"With an exceptionally high mobile internet adoption rate and the explosion of indigenous digital apps, China's digital economy was surging, helping to drive the nation's broader economic growth and international competitiveness," Sun says. "Yet at the same time, the country maintained the most tightly controlled internet ecosystem in the world."

Sun set out to explore this apparent paradox in her dissertation. Her research to date has yielded both novel findings and troubling questions.

"Through its control of the internet, China has in effect provided protectionist benefits to its own data-intensive domestic sectors," she says. "If there is a benefit to imposing internet control, given the absence of effective international regulations, does this give authoritarian states an advantage in trade and national competitiveness?" Following this thread, Sun asks, "What might this mean for the future of democracy as the world grows increasingly dependent on digital technology?"

Protect or innovate

Early in her graduate program, classes in capitalism and technology and

[public policy](#), says Sun, "cemented for me the idea of data as a factor of production, and the importance of cross-border information flow in making a country innovative." This central premise serves as a springboard for Sun's doctoral studies.

In a series of interconnected [research papers](#) using China as her primary case, she is examining the double-edged nature of internet limits. "They accord protectionist benefits to domestic data-internet-intensive sectors, on the one hand, but on the other, act as a potential longer-term deterrent to the country's capacity to innovate."

To pursue her doctoral project, advised by professor of political science Kenneth Oye, Sun is extracting data from a multitude of sources, including a website that has been routinely testing web domain accessibility from within China since 2011. This allows her to pin down when and to what degree internet control occurs. She can then compare this information to publicly available records on the expansion or contraction of data-intensive industrial sectors, enabling her to correlate internet control to a sector's performance.

Sun has also compiled datasets for firm-level revenue, scientific citations, and patents that permit her to measure aspects of China's innovation culture. In analyzing her data she leverages both quantitative and qualitative methods, including one co-developed by her dissertation co-advisor, associate professor of political science In Song Kim. Her initial analysis suggests internet control prevents scholars from accessing knowledge available on foreign websites, and that if sustained, such control could take a toll on the Chinese economy over time.

Of particular concern is the possibility that the economic success that flows from strict internet controls, as exemplified by the Chinese model, may encourage the rise of similar practices among emerging states or those in political flux.

"The grim implication of my research is that without international regulation on information flow restrictions, democracies will be at a disadvantage against autocracies," she says. "No matter how short-term or narrow these curbs are, they confer concrete benefits on certain economic sectors."

Data, politics, and economy

Sun got a quick start as a student of China and its role in the world. She was born in Xiamen, a coastal Chinese city across from Taiwan, to academic parents who cultivated her interest in international politics. "My dad would constantly talk to me about global affairs, and he was passionate about foreign policy," says Sun.

Eager for education and a broader view of the world, Sun took a scholarship at 15 to attend school in Singapore. "While this experience exposed me to a variety of new ideas and social customs, I felt the itch to travel even farther away, and to meet people with different backgrounds and viewpoints from mine," than she says.

Sun attended Princeton University where, after two years sticking to her "comfort zone"—writing and directing plays and composing music for them—she underwent a process of intellectual transition. Political science classes opened a window onto a larger landscape to which she had long been connected: China's behavior as a rising power and the shifting global landscape.

She completed her undergraduate degree in politics, and followed up with a master's degree in international relations at the University of Pennsylvania, where she focused on China-U.S. relations and China's participation in international institutions. She was on the path to completing a Ph.D. at Penn when, Sun says, "I became confident in my perception that digital technology, and especially information sharing,

were becoming critically important factors in international politics, and I felt a strong desire to devote my graduate studies, and even my career, to studying these topics,"

Certain that the questions she hoped to pursue could best be addressed through an interdisciplinary approach with those working on similar issues, Sun began her doctoral program anew at MIT.

'Doer mindset'

Sun is hopeful that her doctoral research will prove useful to governments, policymakers, and business leaders. "There are a lot of developing states actively shopping between data governance and development models for their own countries," she says. "My findings around the pros and cons of information flow restrictions should be of interest to leaders in these places, and to trade negotiators and others dealing with the global governance of data and what a fair playing field for digital trade would be."

Sun has engaged directly with policy and industry experts through her fellowships with the World Economic Forum and the Pacific Forum. And she has embraced questions that touch on policy outside of her immediate research: Sun is collaborating with her dissertation co-advisor, MIT Sloan Professor Yasheng Huang, on a study of the political economy of artificial intelligence in China for the MIT Task Force on the Work of the Future.

This year, as she writes her dissertation papers, Sun will be based at Georgetown University, where she has a Mortara Center Global Political Economy Project Predoctoral Fellowship. In Washington, she will continue her journey to becoming a "policy-minded scholar, a thinker with a doer mindset, whose findings have bearing on things that happen in the world."

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