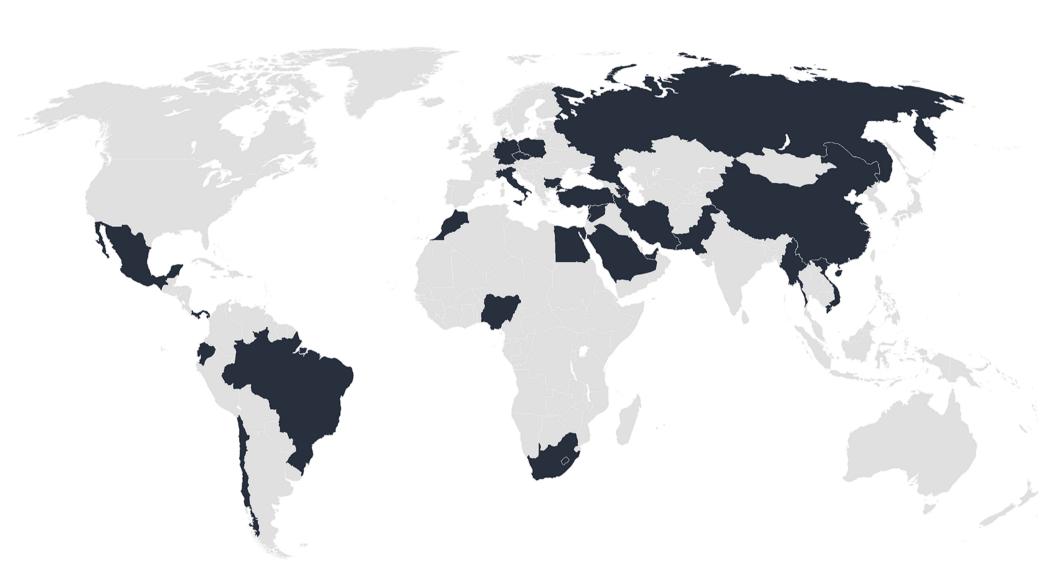
THE SOCIAL COSTS OF DIGITAL VS. IN-PERSON SURVEILLANCE

Experimental and Observational Evidence from China

Xu Xu. Department of Political Science, Penn State University Email: xux112@psu.edu Homepage: https://xu-xu.net

INTRODUCTION



Countries w/ Domestic Surveillance

Autocracies around the world are experiencing significant growth in domestic surveillance in the digital age.





Digital Surveillance in China. Getty Images

Research Question:

What are the social costs of digital surveillance compared with those of in-person surveillance?

Social Trust Civic Participation Regime Legitimacy

Findings:

- Digital surveillance discourages protests, lowers individuals' beliefs on protest coordination, and induces selfcensorship.
- Compared with in-person surveillance, digital surveillance is less likely to lower trust and regime legitimacy.

THEORY AND HYPOTHESES

Similarities: In-person & digital surveillance \Rightarrow *targeted* repression \Rightarrow participation (\searrow) & self-censorship (\nearrow).

VS.

Differences:

In-person surveillance Human intrusion Trust (\(\scrip)\) Legitimacy (\(\sqrt{}\))

Digital surveillance No human intrusion Trust (\leftrightarrow) Legitimacy (\leftrightarrow)

EXPERIMENTAL DESIGN



A survey experiment among 539 students in two universities in North and West China conducted in March 2019.



Table 1: Experimental Design for In-person vs. Digital Surveillance

Yes	Yes	Yes	_	_	_
Control No Info	Treated In-person	Treated Digital	Control No Info	Treated In-person	Treated Digital Yes
124	103	126	61	64	61
	Control No Info Yes	Control Treated No Info In-person Yes Yes	Control Treated Treated No Info In-person Digital Yes Yes Yes	Control Treated Treated Control No Info In-person Digital No Info Yes Yes Yes Yes	Control Treated Treated Control Treated No Info In-person Digital No Info In-person Yes Yes Yes Yes Yes

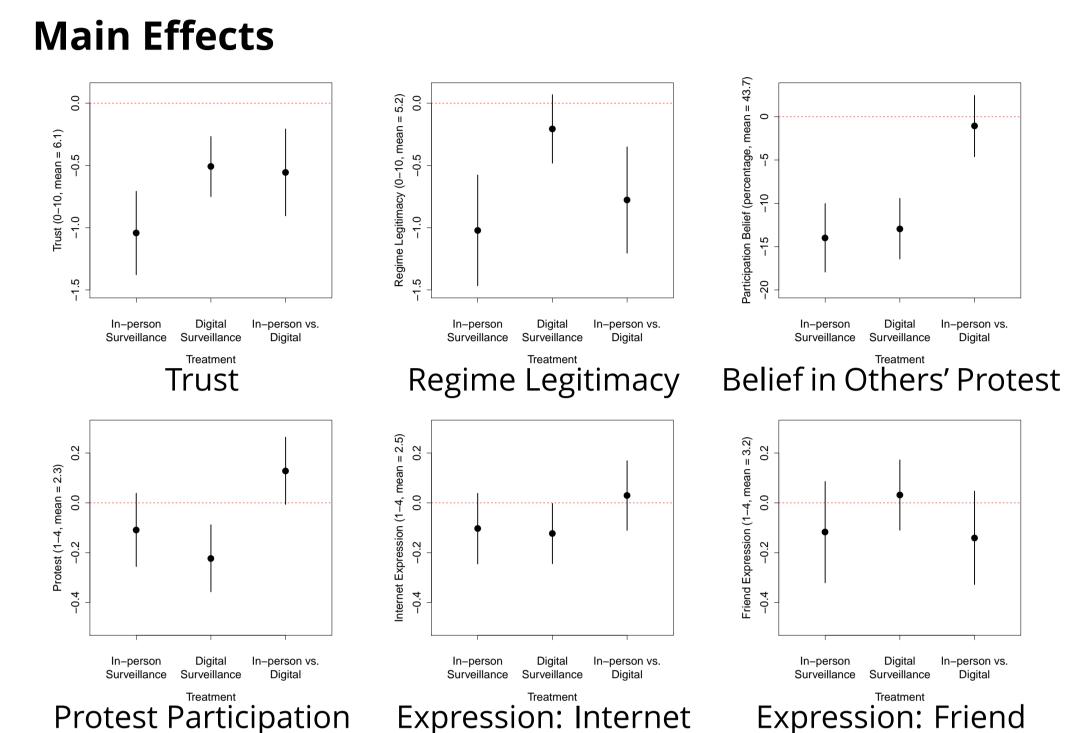
Treatment Vignettes:

- In-person surveillance: "The school authorities approached some of the students in your residence hall and promised them some benefits. In exchange, those students agreed to secretly investigate and report the names of the participants."
- **Digital surveillance**: "The school authorities have the ability to monitor students' online activities (on social media/apps, websites, forums, etc.) through the university's Internet servers to identify the participants."

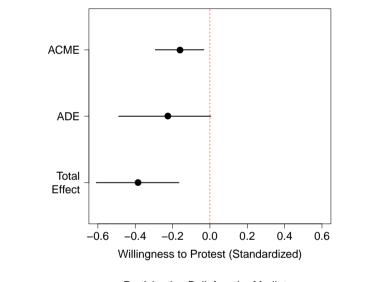
Table 2: Balance Check, Within Subject Sample

	obs.	Control	Human	Digital	p-value
Age	425	20.59	20.67	20.73	0.852
Female (F=1)	431	0.52	0.48	0.51	0.864
Income (1-9)	428	6.69	6.72	6.78	0.909
Income Sat. (0-10)	433	6.68	7.19	6.79	0.179
Party (Yes=1)	434	0.13	0.12	0.11	0.831
Offical Org. (Yes=1)	434	0.47	0.51	0.53	0.542
Stud. Org. (Yes=1)	433	0.64	0.65	0.59	0.521
Commu. Serv. (1-5)	434	2.49	2.56	2.51	0.761
Speech (1-5)	433	3.14	3.15	3.06	0.549
Media: News (1-5)	423	2.06	2.18	2.11	0.476
Media: TV (1-5)	426	3.09	3.03	3.02	0.818
Media: Phone (1-5)	434	4.70	4.74	4.80	0.218
Distrust (0-10)	433	4.38	4.53	3.72	0.051
Diss. Politics (1-5)	432	2.34	2.18	2.25	0.392

EXPERIMENTAL FINDINGS



Causal Mediation Tests

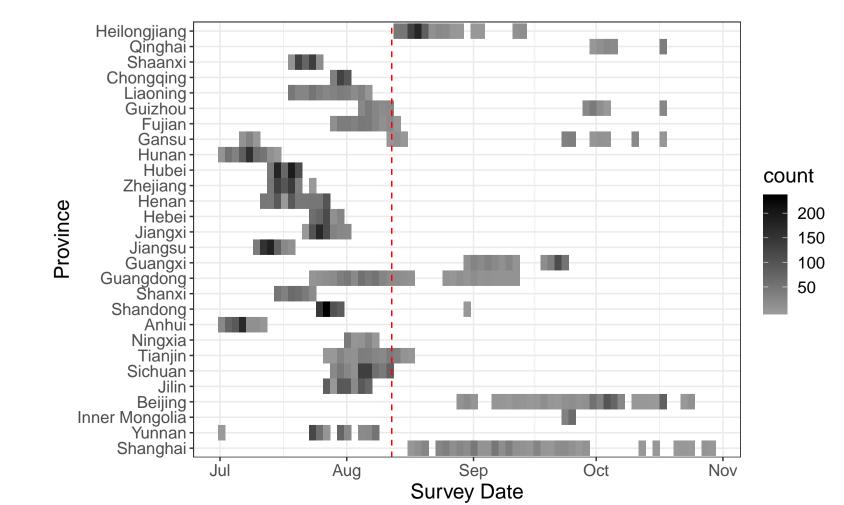


Mechanism: Digital surveillance discourages protest participation through affecting people's belief in the total number of participants instead of interpersonal trust.

REGRESSION DISCONTINUITY IN TIME



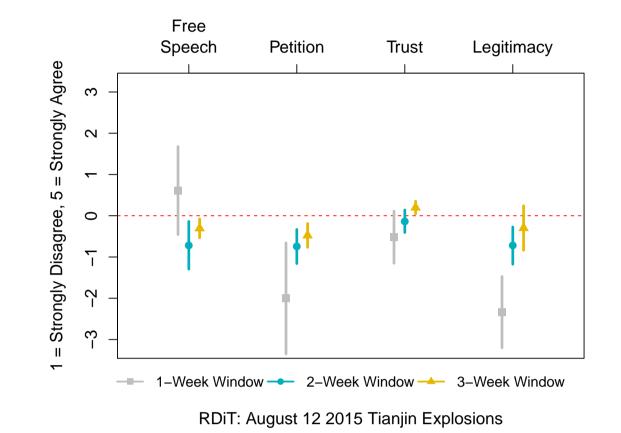
The Port of Tianjin. August 12, 2015. Detonation of about 800 tonnes of ammonium nitrate (336 tons TNT equivalent). 173 people killed, thousands injured. Online surveillance and censorship up tenfold afterward.



A regression discontinuity design based on the 2015 Chinese General Social Survey to establish external validity.

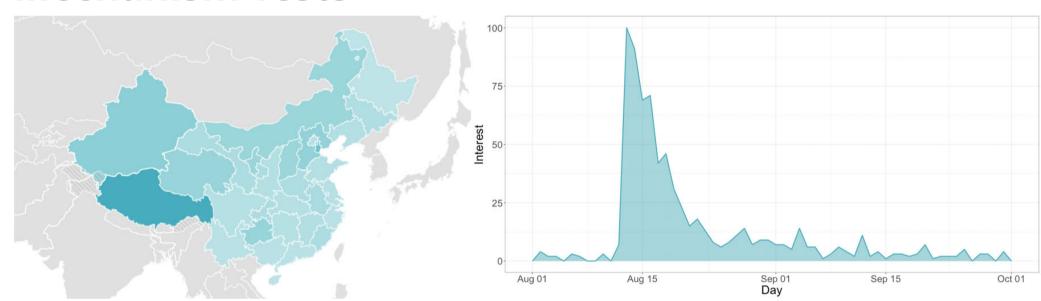
RDIT FINDINGS

Main Effects

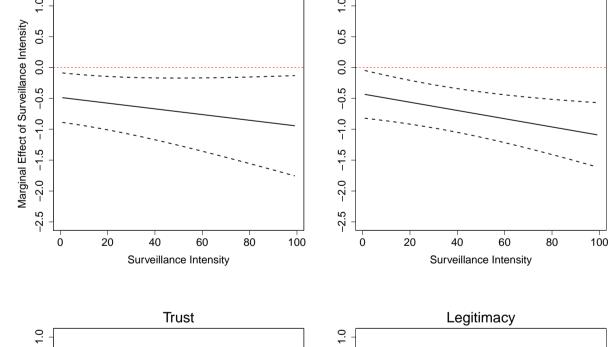


- Excluding respondents who never use Internet.
- Surveillance and repression negatively affect views of free speech and petition in 2-week and 3-week window samples.
- No effect on trust.
- Negative effect on legitimacy, but probably due to the explosion event itself.

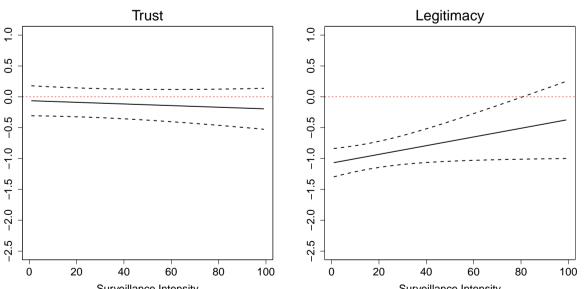
Mechanism Tests



Google is blocked in Mainland China. More searches in a province reflect weaker surveillance and censorship. Using the reverse of Google search interests as a proxy for surveillance intensity, controlling for distance to Tianjin.



 As surveillance and censorship intensity increase, citizens feel less safe for free speech and petition. This evidence is consistent with the hypothesis.



- Effects on trust insignifi-
- As surveillance and censorship intensify, regime legitimacy increases, suggesting that censorship is effective in preventing information spread.

CONCLUSION

- Experimental and observational evidence suggests that both digital and in-person surveillance are effective in inducing self-censorship and deterring protests.
- Experimental evidence suggests that digital surveillance is less likely to lower trust and reduce regime legitimacy than in-person surveillance.
- The reduced social costs of surveillance in the digital age imply that dictators might be more likely to rely on digital surveillance for social control.