Does “random” mean you toss a coin?

No

Note: coin-tossing is still a great way to randomize!

Someone else might have already tossed the coin:

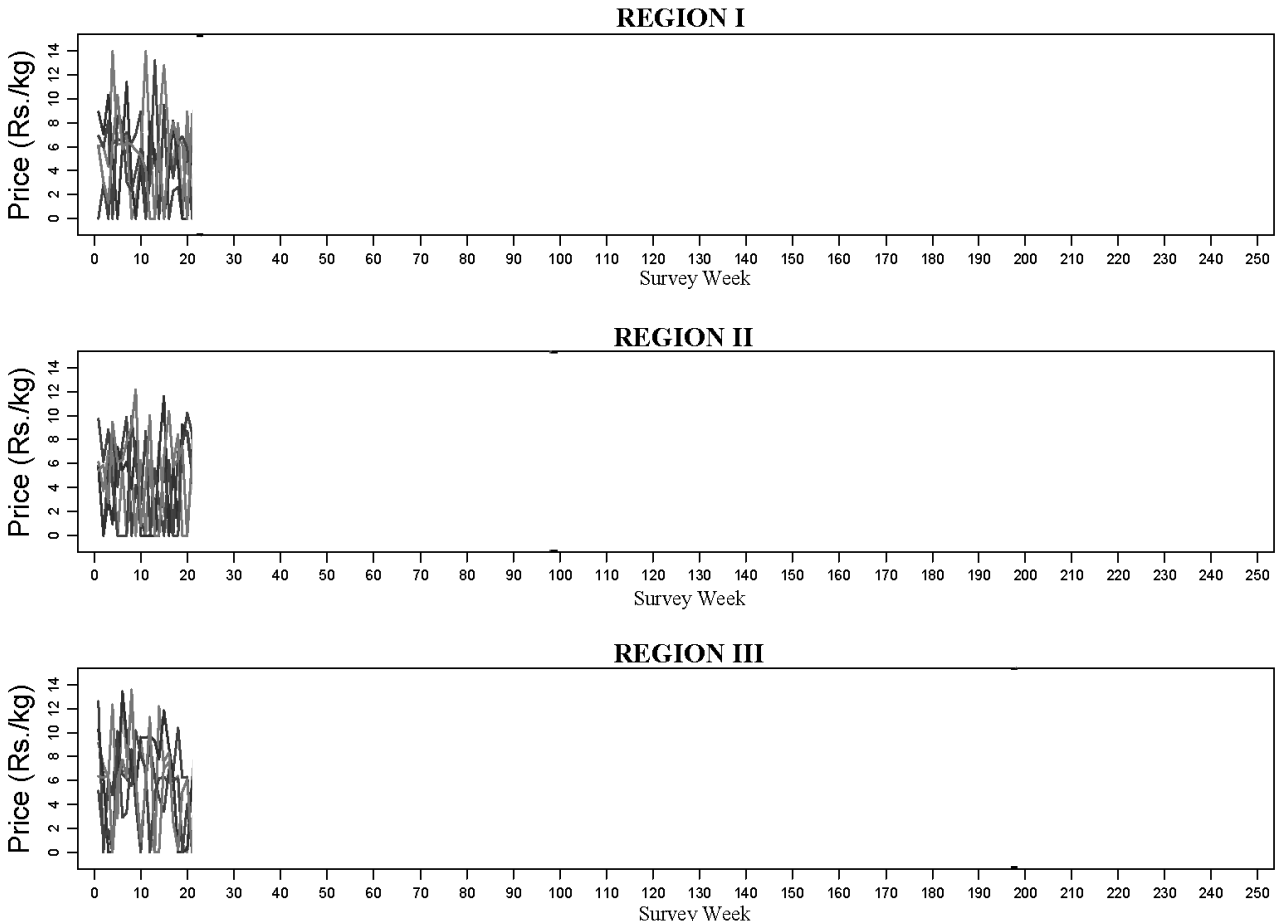
Natural experiments

Can cell phones improve the efficiency of markets?

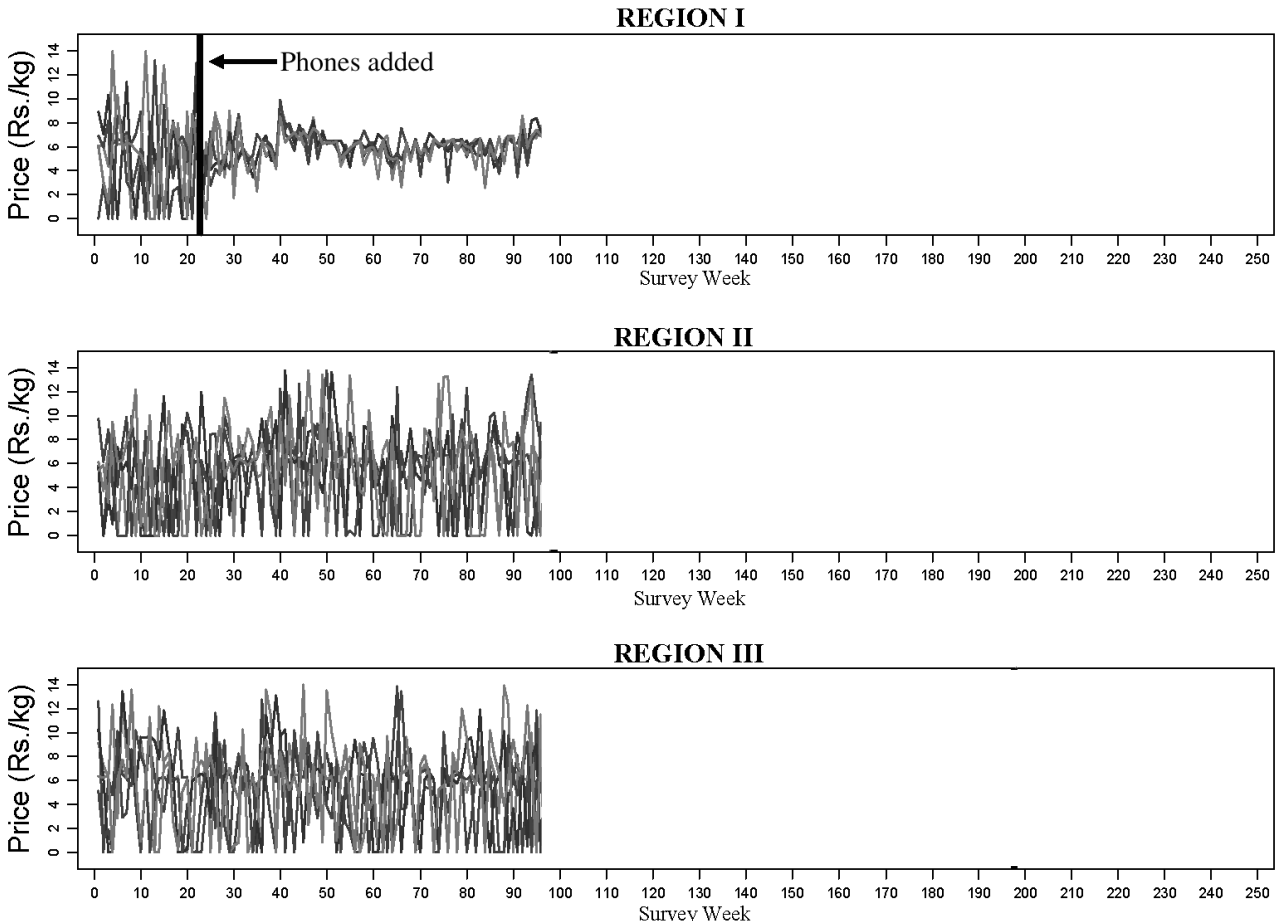
THE DIGITAL PROVIDE: INFORMATION (TECHNOLOGY), MARKET PERFORMANCE, AND WELFARE IN THE SOUTH INDIAN FISHERIES SECTOR*

ROBERT JENSEN

When information is limited or costly, agents are unable to engage in optimal arbitrage. Excess price dispersion across markets can arise, and goods may not be allocated efficiently. In this setting, information technologies may improve market performance and increase welfare. Between 1997 and 2001, mobile phone service was introduced throughout Kerala, a state in India with a large fishing industry. Using microlevel survey data, we show that the adoption of mobile phones by fishermen and wholesalers was associated with a dramatic reduction in price dispersion, the complete elimination of waste, and near-perfect adherence to the Law of One Price. Both consumer and producer welfare increased.



R. Jensen (2007)



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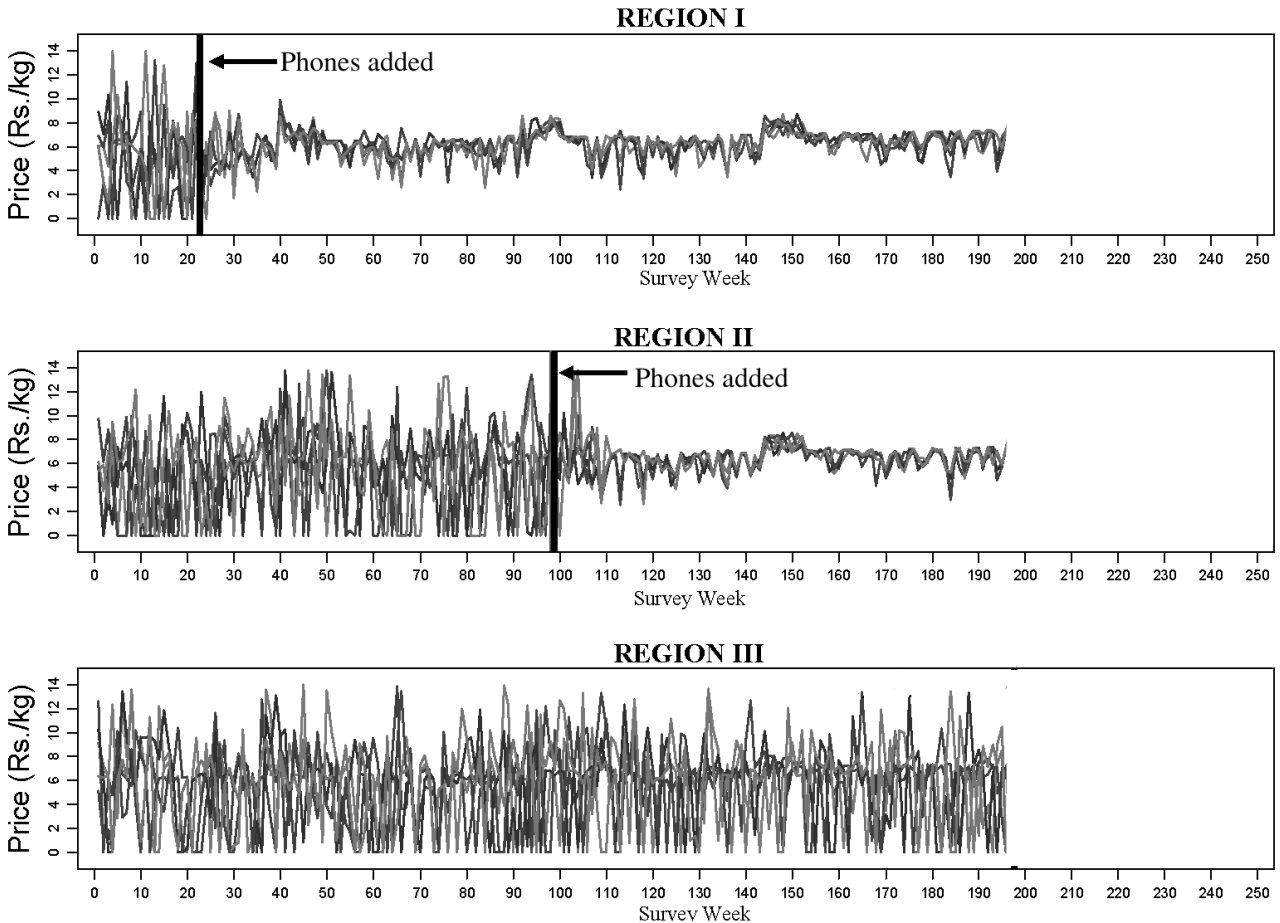
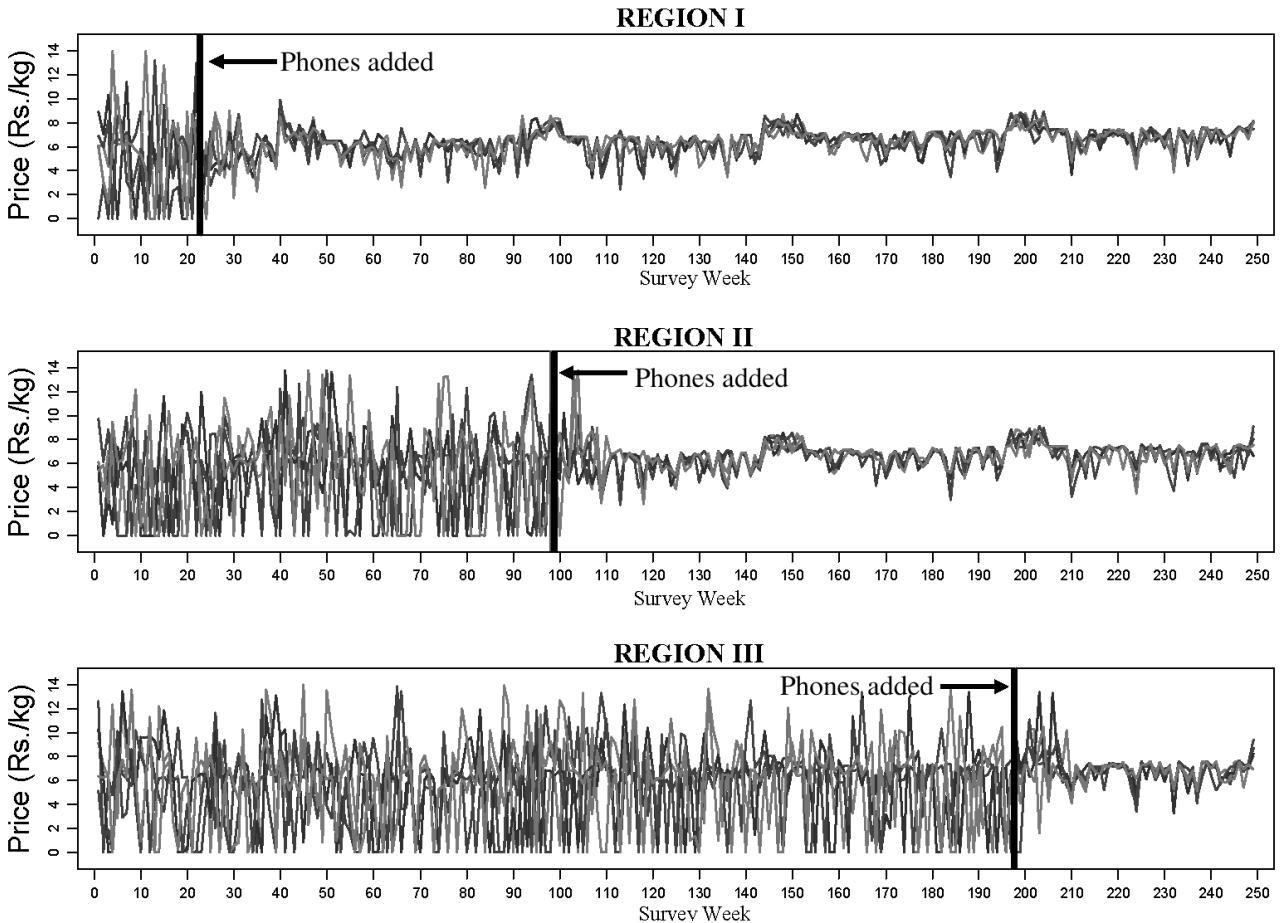
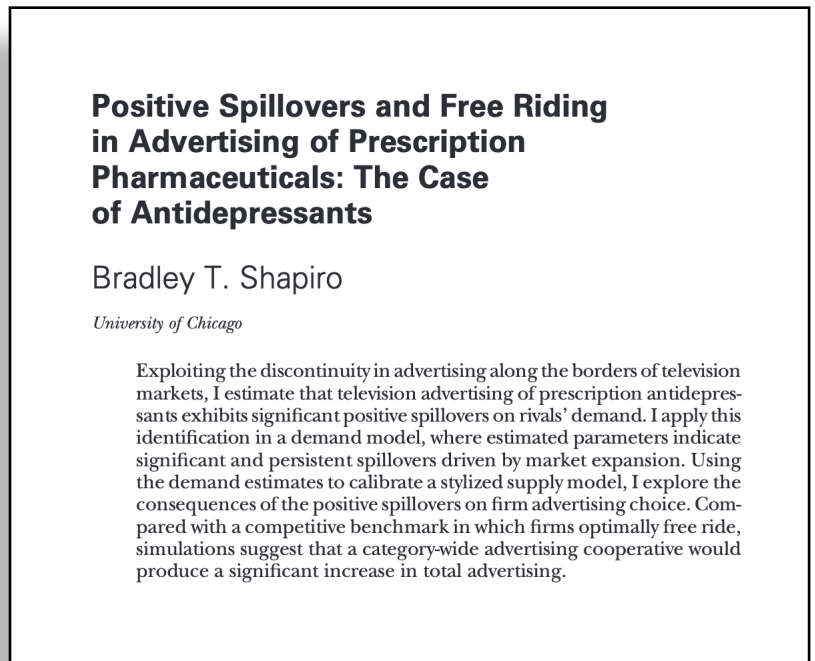


R. Jensen (2007)



R. Jensen (2007)

What is the effect of direct-to-consumer drug advertising?



Positive Spillovers and Free Riding in Advertising of Prescription Pharmaceuticals: The Case of Antidepressants

Bradley T. Shapiro

University of Chicago

Exploiting the discontinuity in advertising along the borders of television markets, I estimate that television advertising of prescription antidepressants exhibits significant positive spillovers on rivals' demand. I apply this identification in a demand model, where estimated parameters indicate significant and persistent spillovers driven by market expansion. Using the demand estimates to calibrate a stylized supply model, I explore the consequences of the positive spillovers on firm advertising choice. Compared with a competitive benchmark in which firms optimally free ride, simulations suggest that a category-wide advertising cooperative would produce a significant increase in total advertising.

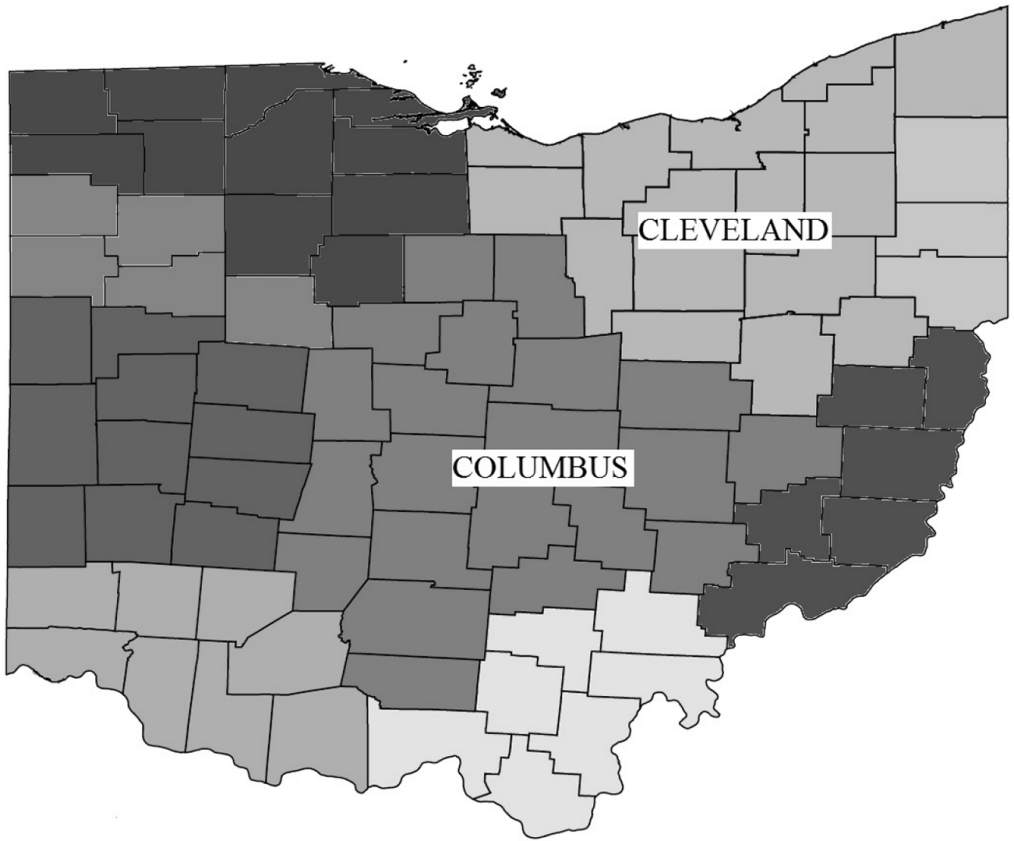


FIG. 5.—Ohio and its DMAs

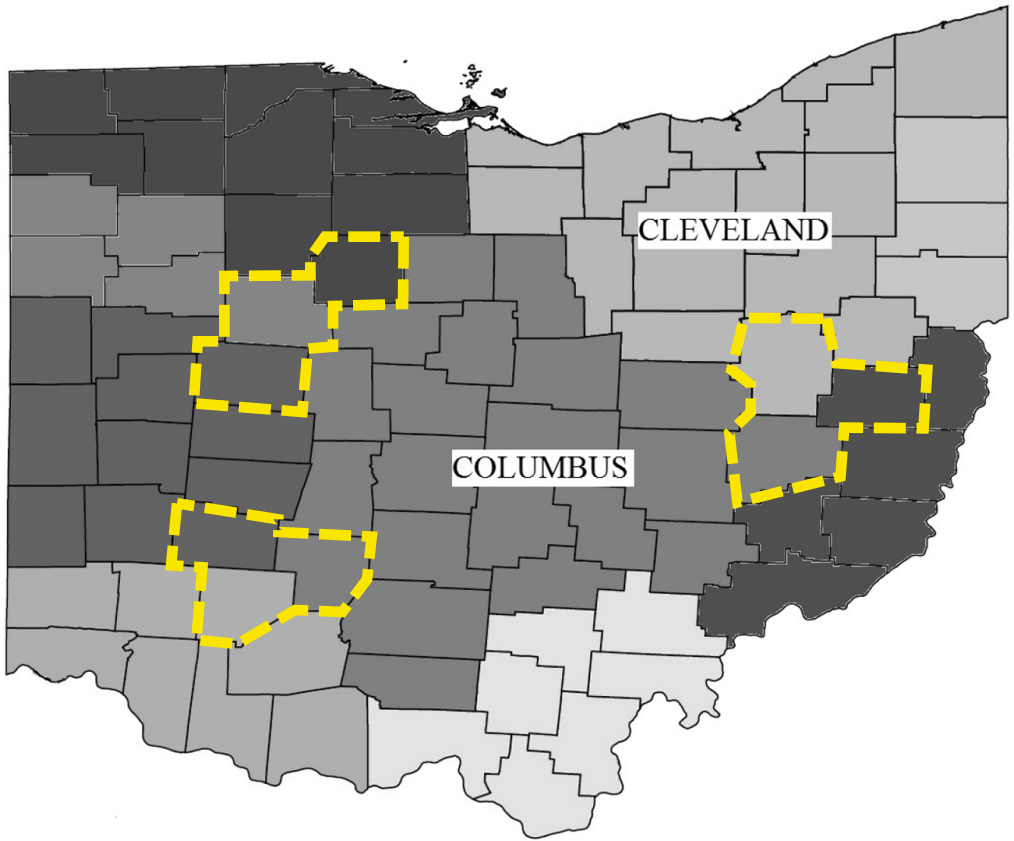
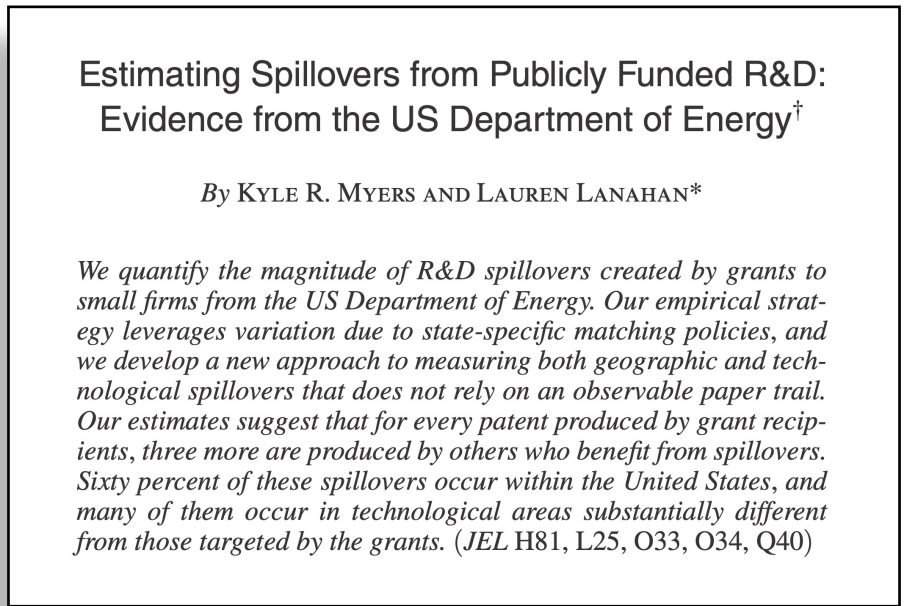


FIG. 5.—Ohio and its DMAs

B. Shapiro (2018)

How does the DOE SBIR program influence technological progress?



Estimating Spillovers from Publicly Funded R&D: Evidence from the US Department of Energy†

By Kyle R. Myers and Lauren Lanahan*

We quantify the magnitude of R&D spillovers created by grants to small firms from the US Department of Energy. Our empirical strategy leverages variation due to state-specific matching policies, and we develop a new approach to measuring both geographic and technological spillovers that does not rely on an observable paper trail. Our estimates suggest that for every patent produced by grant recipients, three more are produced by others who benefit from spillovers. Sixty percent of these spillovers occur within the United States, and many of them occur in technological areas substantially different from those targeted by the grants. (*JEL* H81, L25, O33, O34, Q40)

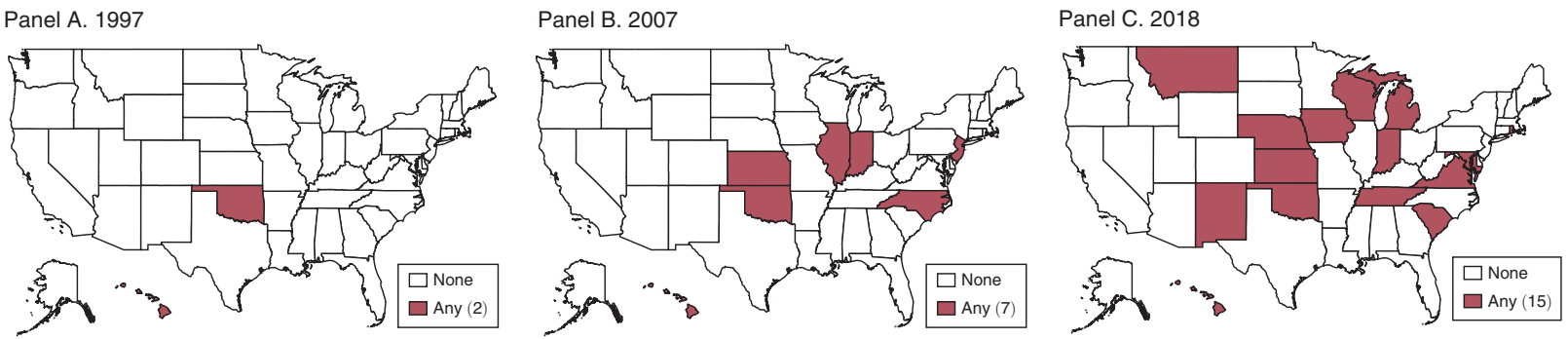


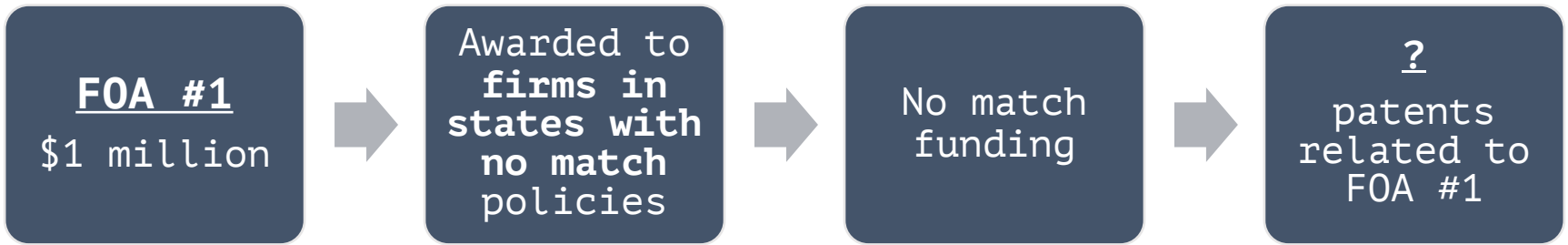
FIGURE 1. STATE MATCH PROGRAMS OVER TIME

FOA #1

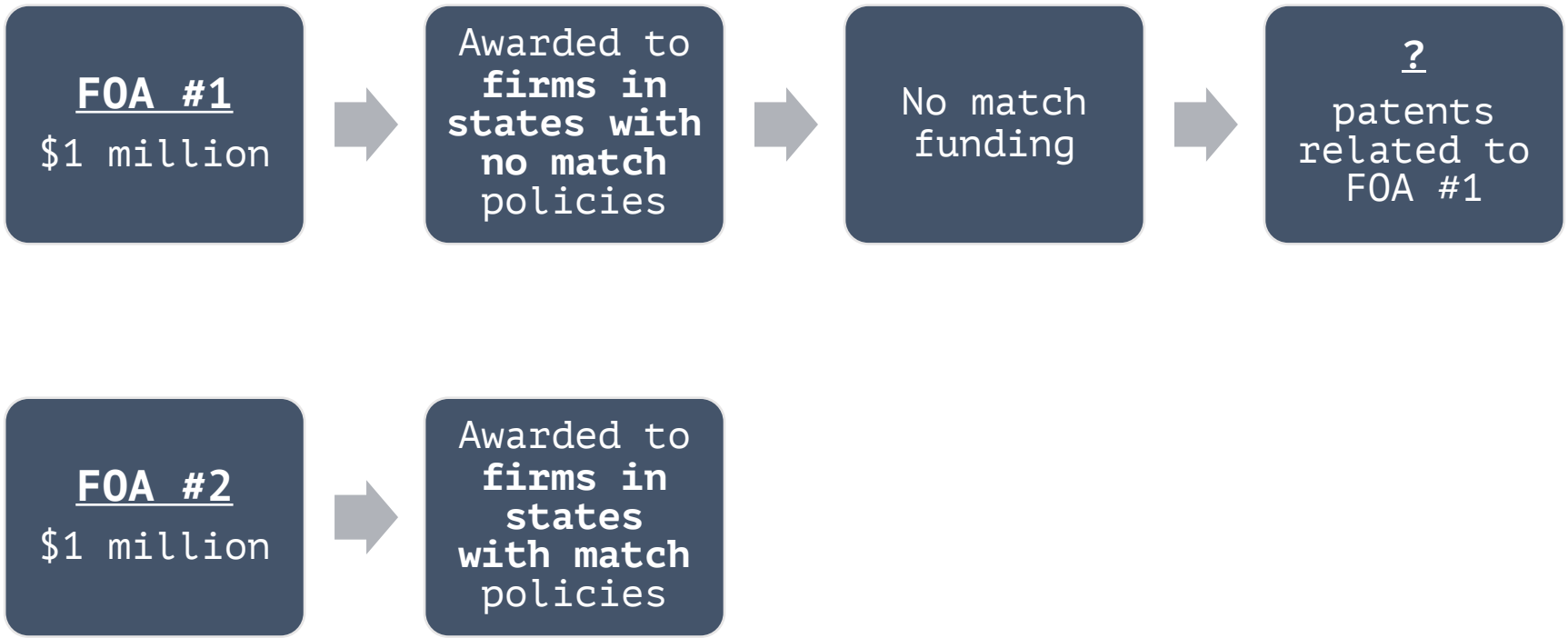
$1 million

K. Myers & L. Lanahan (2022)

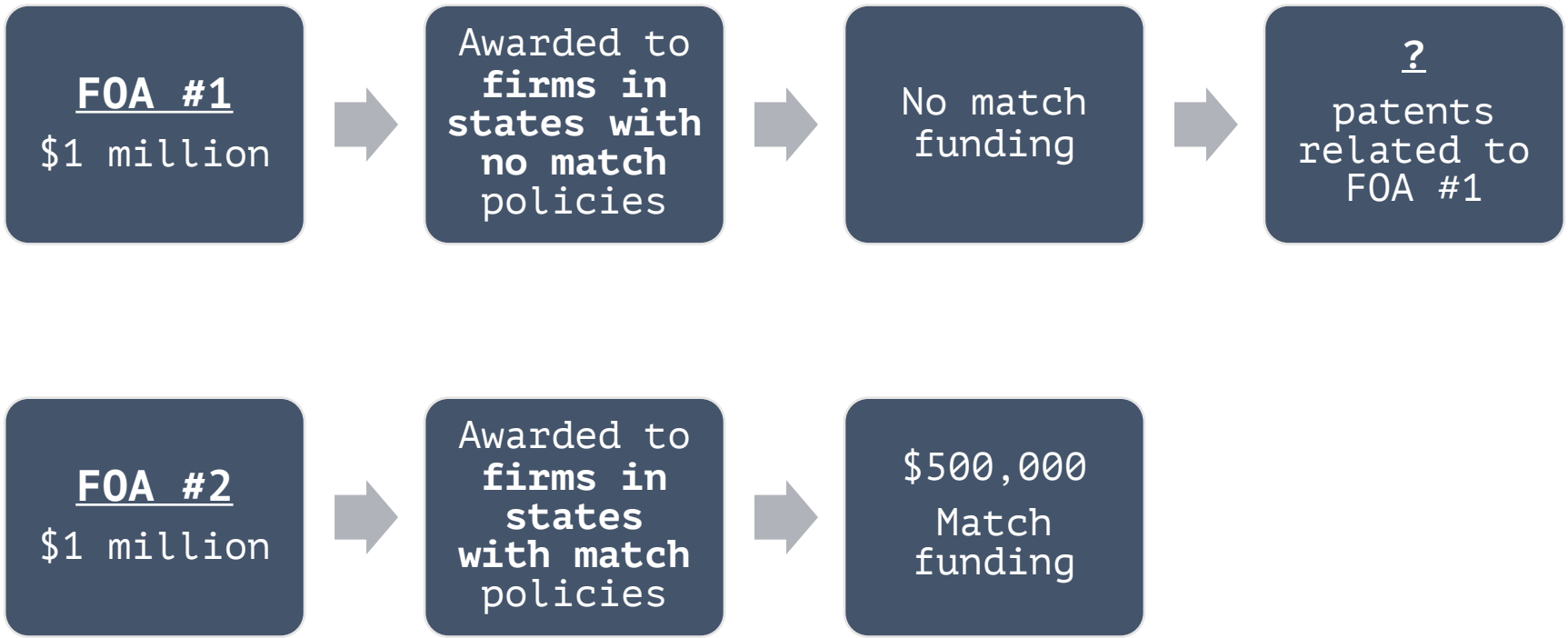
K. Myers & L. Lanahan (2022)



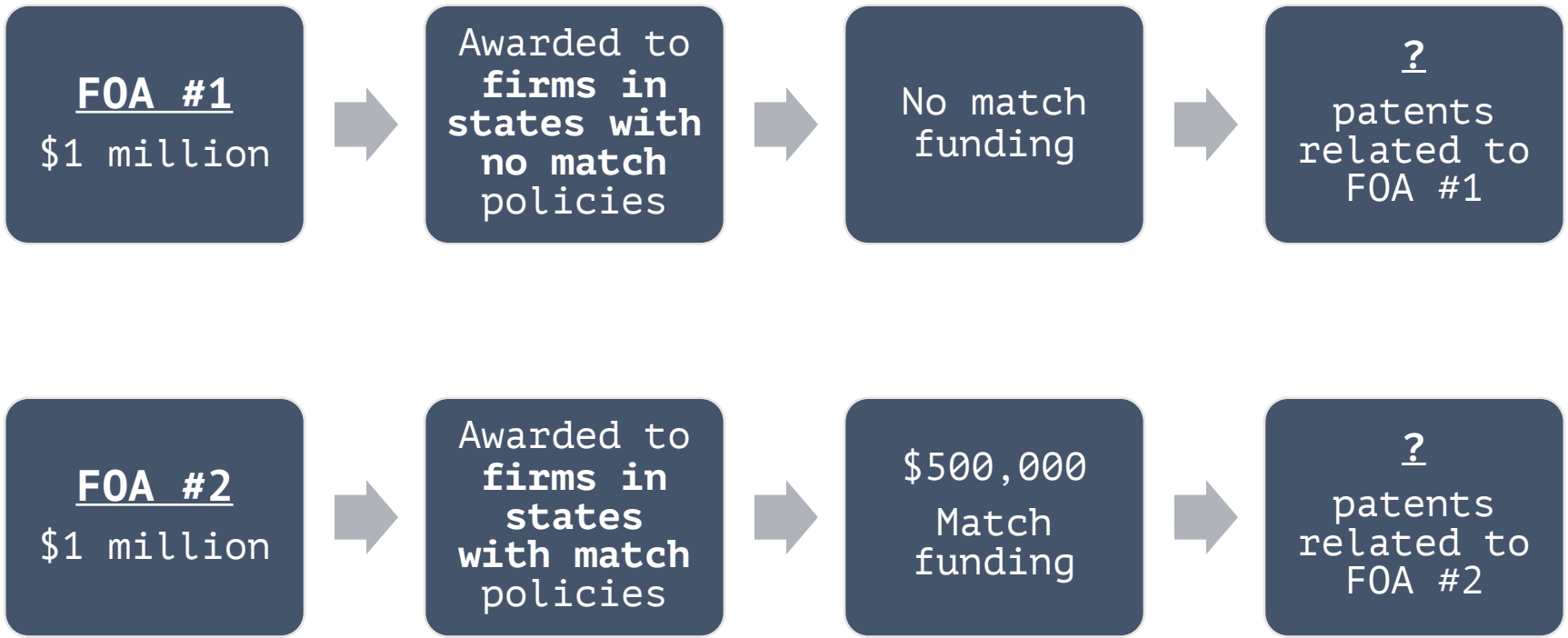
K. Myers & L. Lanahan (2022)



K. Myers & L. Lanahan (2022)



K. Myers & L. Lanahan (2022)



K. Myers & L. Lanahan (2022)

For every $1 million invested, how many patents are generated by grant recipients?

K. Myers & L. Lanahan (2022)

For every $1 million invested, how many patents are generated by grant recipients?

If you use all the variation:

9.0

K. Myers & L. Lanahan (2022)

For every $1 million invested, how many patents are generated by grant recipients?

If you use the natural experiment:

0.75

K. Myers & L. Lanahan (2022)

For every $1 million invested, how many patents are generated by any inventor?

K. Myers & L. Lanahan (2022)

For every $1 million invested, how many patents are generated by any inventor?

If you use the natural experiment:

3.2

K. Myers & L. Lanahan (2022)

For every **1** new patent the program causes grant recipients generate, **3** more are generated by others

K. Myers & L. Lanahan (2022)

For every **1** new patent the program causes grant recipients generate, **3** more are generated by others

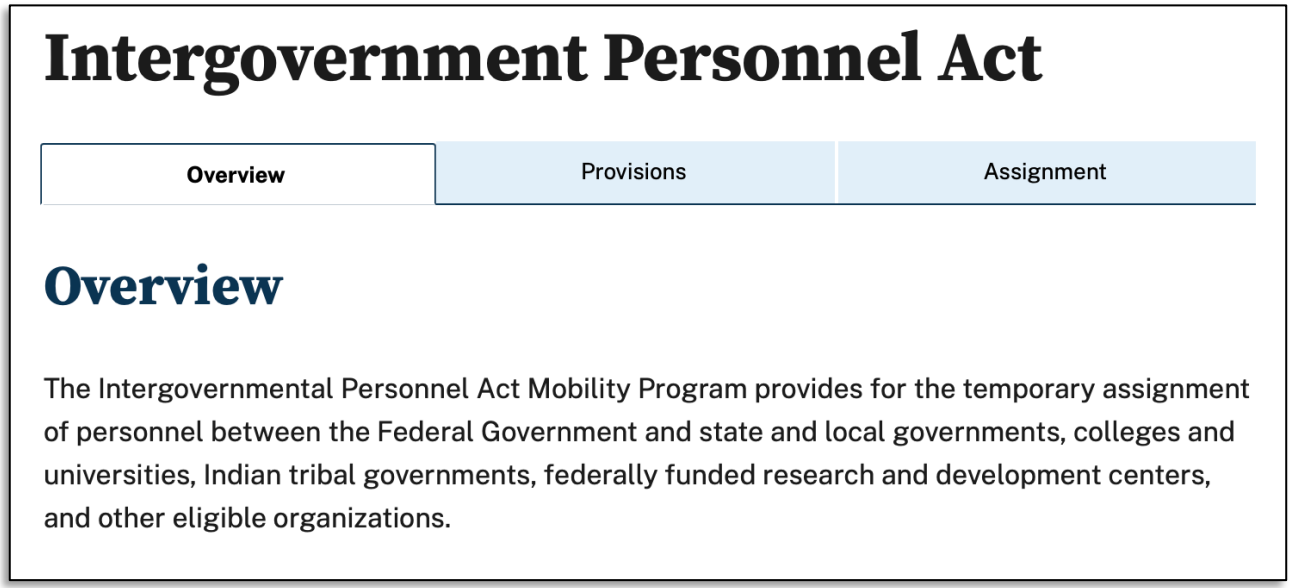
The natural experiment indicates that the DOE SBIR program generates large technological spillovers

K. Myers & L. Lanahan (2022)

Are natural experiments easy to use?

No

Note: coin-tossing is still a great way to randomize!



Does not require OPM approval

Can be cost-neutral (un-paid)

Can be intermittent, part-, or full-time

bit.ly/opm-ipa