

Beyond the IRB: Research ethics in applied economics

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AAEA panel on research ethics
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Research ethics is dominated by IRB compliance for protection of human subjects

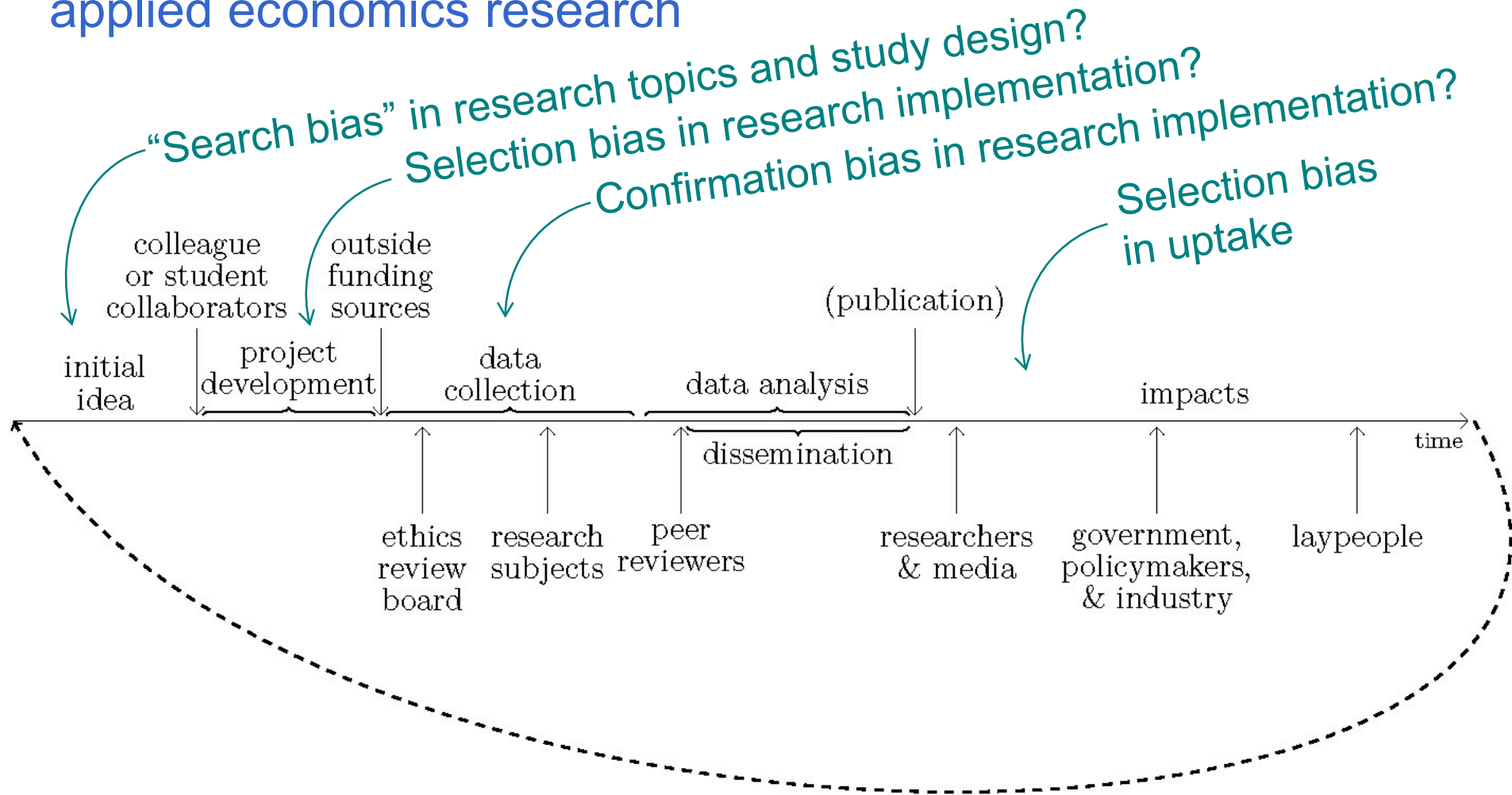
- IRBs were formed in response to abuse of human subjects
 - The Tuskegee syphilis experiment and the Belmont Report
 - Focus is a researcher's responsibility to provide human research subjects with respect, beneficence, and justice
 - CITI training for investigators and IRB registration of studies is often required by employers, research funders and publication outlets
- IRBs have a narrow mandate
 - Pre-approve protocols for all contact with research subjects
 - Protect employers and funders from violation of US law
- Ethical questions beyond the IRB receive less attention
 - We see wide variation and rapid change in rules for transparency and rigor around conflicts of interest, research integrity, etc.
 - Our goal is a typology of concerns, to spark discussion about which principles might be most widely shared among applied economists

We develop a typology of research ethics based victims of research misconduct

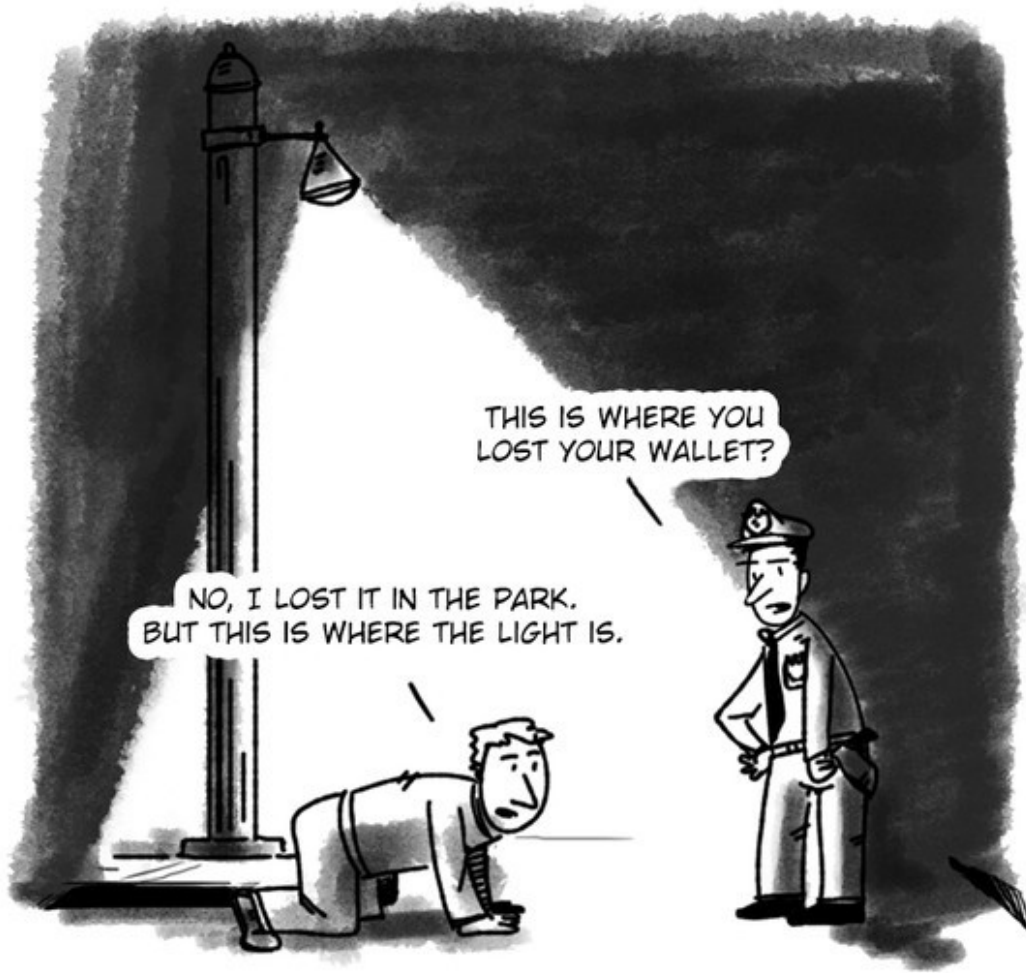
1. Describe the life cycle of a research idea
2. At each stage ask
“Who is affected by this research, and how might the choices of the principal investigator (PI) help or harm those individuals or institutions?”
3. Examine existing institutions and norms and ask
“How effective are existing institutions and norms at protecting those potentially harmed by research misconduct?”
4. This is a big agenda, will discuss only some of it now

Life cycle of a research idea

We focus on some of the ethical issues that arise in the *initial idea* and *project development* stages of applied economics research



Selection bias in applied economics research, or the principle of the drunkard's search



The principle generally refers to asking the easy research questions

But we can also think of corollaries that help explain selection bias in the choice of research questions

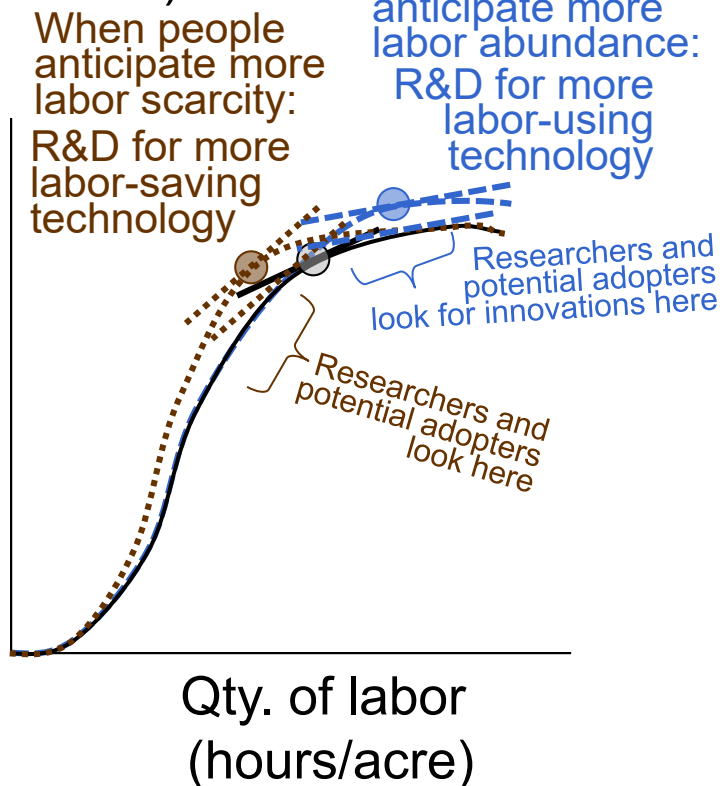
These are often concerned about the availability of funding and the opportunity for policy impact

Applied economists have long understood how induced innovation shapes technological change

We usually think of anticipated price changes as what drives the direction of R&D and future production technology

Qty. of corn

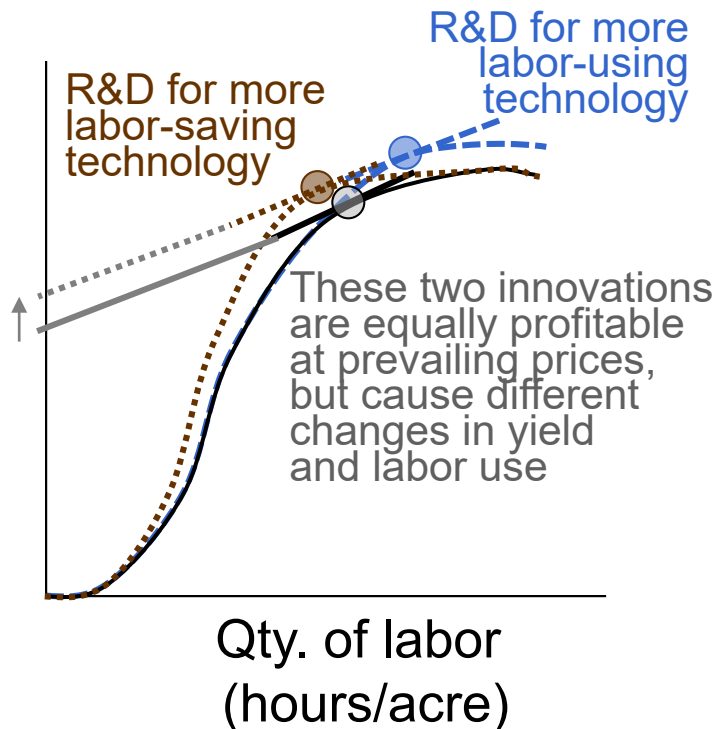
(bu/acre)



We understand that institutional priorities affect the direction of R&D and hence technical change

Even without price changes, the direction of R&D drives changes in production technology

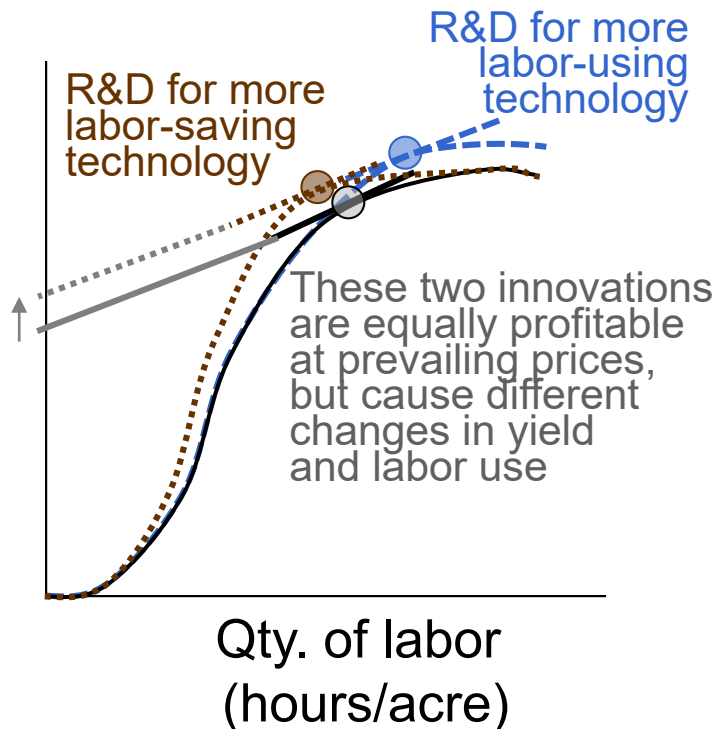
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(bu/acre)



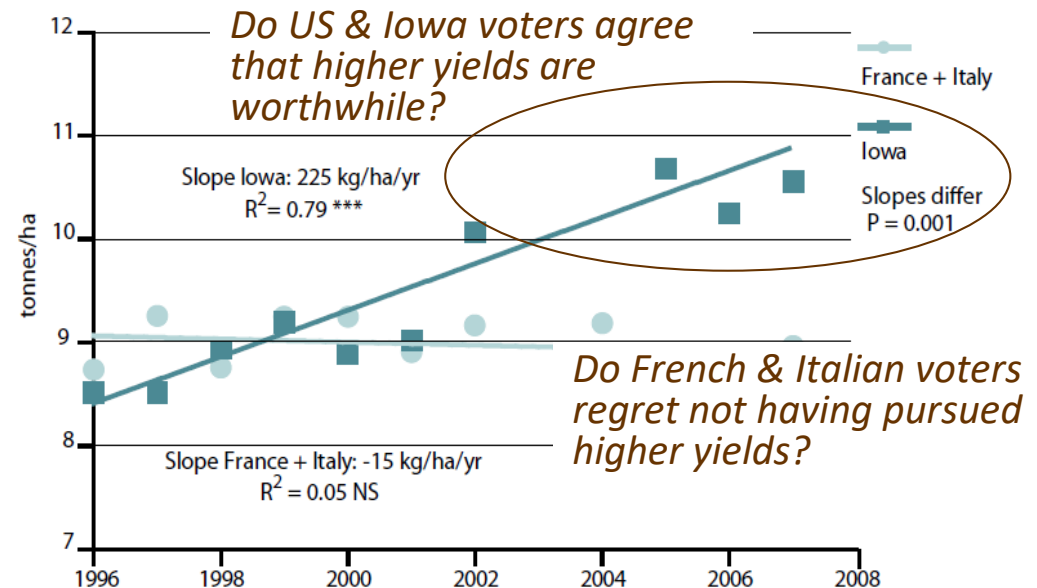
Each agricultural R&D institution is also affected by societal influences driving direction of change

Which path of technical change is more socially desirable?

Qty. of corn
(bu/acre)



Maize yields in Iowa and in France and Italy



2003 is excluded because of severe drought in Europe.

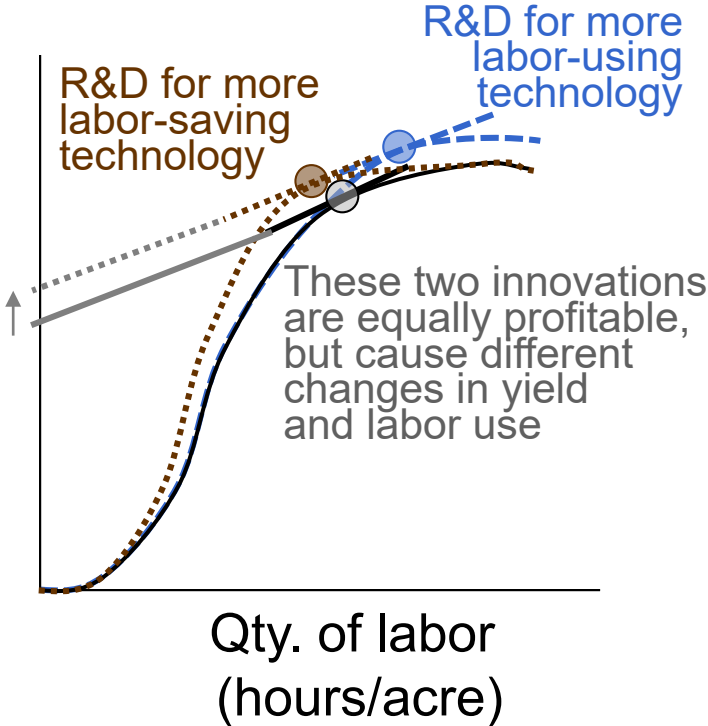
Sources: USDA and FAOSTAT, 2009.

Reprinted from Tony R. Fischer, Derek Byerlee and Gregory Owen Edmeades (2011), "Can technology deliver on the yield challenge to 2050?", Chapter 10 in Piero Conforti, ed., Looking Ahead in World Food and Agriculture: Perspectives to 2050. Rome: FAO.

Applied economics research shapes knowledge about options for public policy

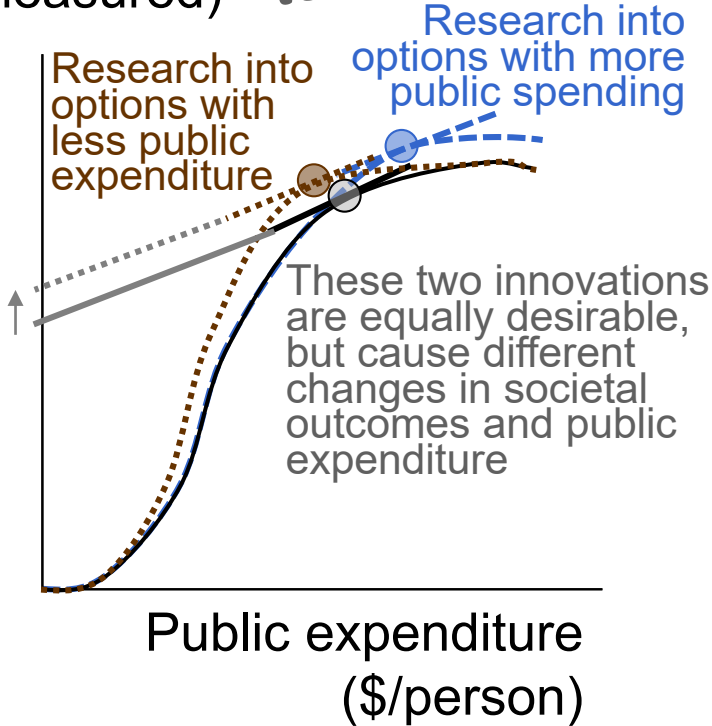
If we sometimes find what we look for, where we look drives what we find

Qty. of corn
(bu/acre)



Societal outcome
(however measured)

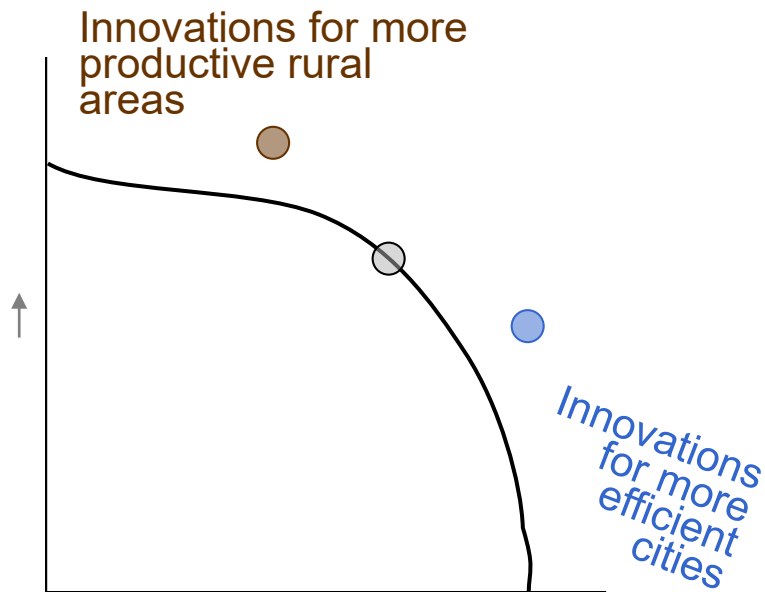
Which path for public policy should researchers choose to investigate?



Search bias can shape innovation in many directions of change

*If we sometimes find what we look for,
where we look drives what we find*

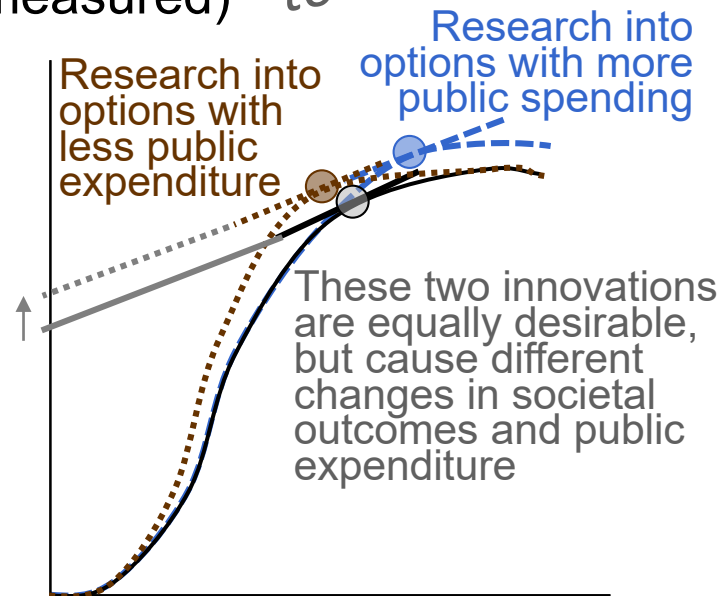
Outcome B
(e.g. rural development)



Outcome A
(e.g. urban development)

Societal
outcome
(however
measured)

Which path for public policy
should researchers choose
to investigate?



Public expenditure
(\$/person)

How does induced innovation work in applied economics research?

If where we look influences what we find,

- To what extent do (or should) we follow funders' priorities?
 - Public funding may be misallocated due to governance failures in representing public interests
 - Industry funding focuses on proprietary innovations and market share/market power, rather than the market as a whole
 - Philanthropic funding often depends on the interests (whims?) of the donor
- To what extent do (or should) researchers' own priorities reflect the public interest?
 - Ionnidis and Trepanowski (2018) in *JAMA* argues that nutritionists' priorities reflect their own dietary habits, which should be disclosed
 - The recent push for “impact” in areas other than scientific contributions (civic, policy) is changing where we look

Prestige outside of academia now plays a bigger role in shaping what research gets done



The New York Times



In conclusion....

What do we know about the market for ideas?

- Selection bias in research could drive which kinds of policy have evidence of success or failure
 - When researchers look for X, we might find it
 - Without similar effort to find Y, all evidence points to X
- Selection bias in policy communication compounds the problem, driving which evidence is widely known
 - When policy platforms reward X, we'll talk about it
 - Without similar emphasis on Y, available evidence points to X
- This “induced innovation” in policy space could be similar to induced innovation in technological change, suggesting opportunities to discuss ethics for:
 - Choosing what we look for, because we might find it
 - Choosing how we communicate, because it drives research uptake