Labor Economics

Critiquing Empirics

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Outline

1. Critiques of Empirical Work

2. Wrap-Up

Critiques of Empirical Work

Empirical Work

- This class has focused on empirical economics
  - Labor economists played an important role in the "credibility revolution"
- Not all empirical work is equal
  - We have seen top-notch research in this class
  - Most research is pretty unconvincing
- You have the tools to critique the validity of research papers
  - But, you should also think critically about empirics *as a whole*

Replication Crisis

- Often discussed that there is a replication crisis in various fields, in particular psychology and medicine
  - See Daryl Bem's study on ESP
- But, could be happening in econ too!
- Chang and Li (2015) try to replicate 67 (macro) papers in 13 good econ journals
  - Can only replicate 49% - even with assistance from the authors
- Famous example: Reinhart and Rogoff found that high government debt slows economic growth
  - Study was used to support austerity measures
  - Made a very simple Excel error in not selecting all their data! The results flip after correcting

Critique

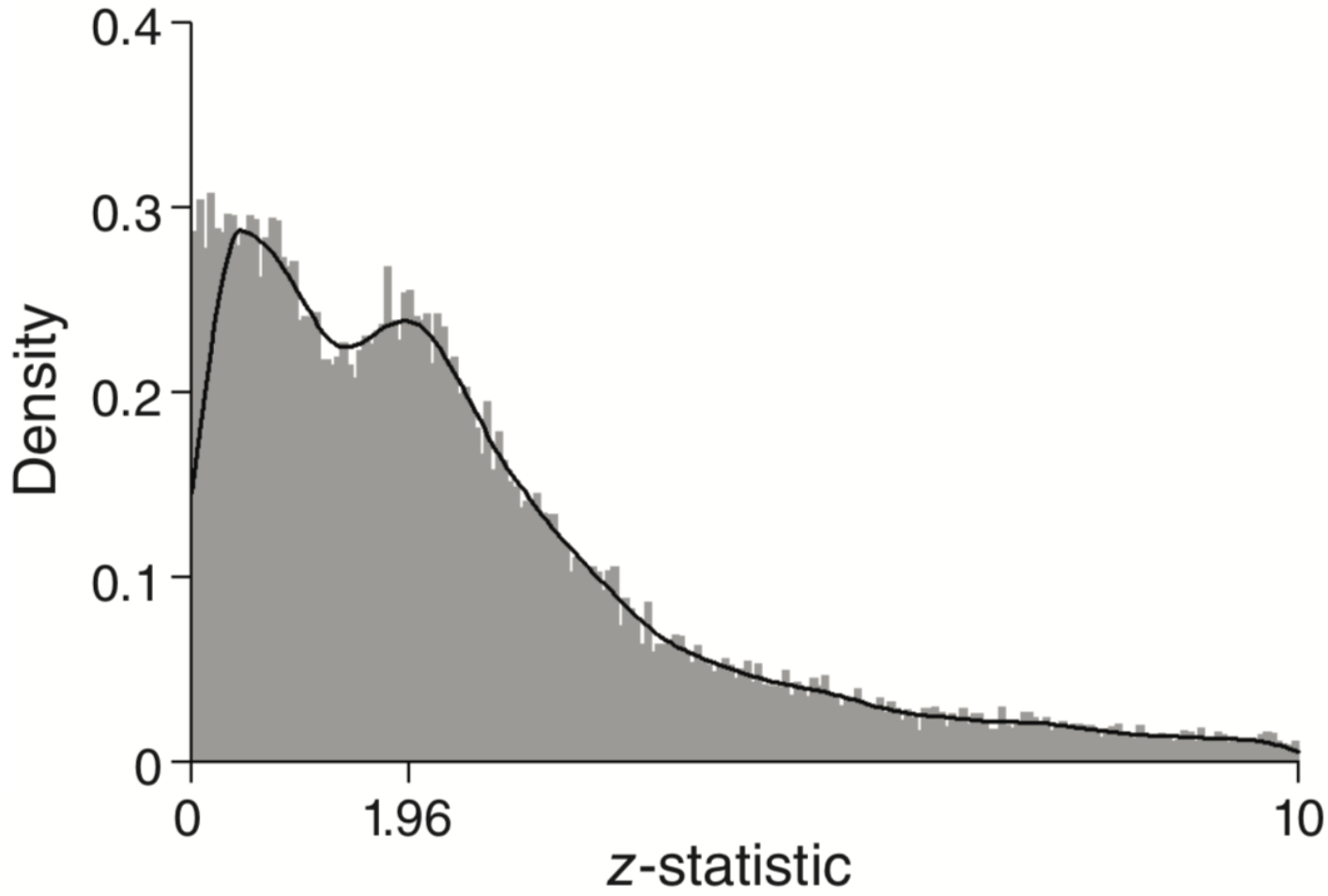
- Why should we be critical of empirical economics?
- Lots of reasons, but three that are stand out (to me):
  1. Transparency
  2. Publication Bias
  3. Causality Obsession
- That being said: don't throw the baby out with the bathwater!
  - Empirical work is wonderful and amazing!
  - But we shouldn't get complacent or arrogant

Transparency

- We read papers and trust the results, but there's a lot going on behind the scenes
  - Small (seemingly innocuous) decisions could have big impacts
- **Data:** is your data reliable? are there outliers driving the result?
  - Push towards publicly posting data
  - Even still, not much incentive to do replications
  - Administrative/proprietary data will never be posted
- **Regressions:** we only see the specifications that the authors have chosen
  - Different specifications could give wildly different results. It's become "too easy" to run regressions
  - Concern of "p-hacking" and obsession with significance stars

P-Hacking

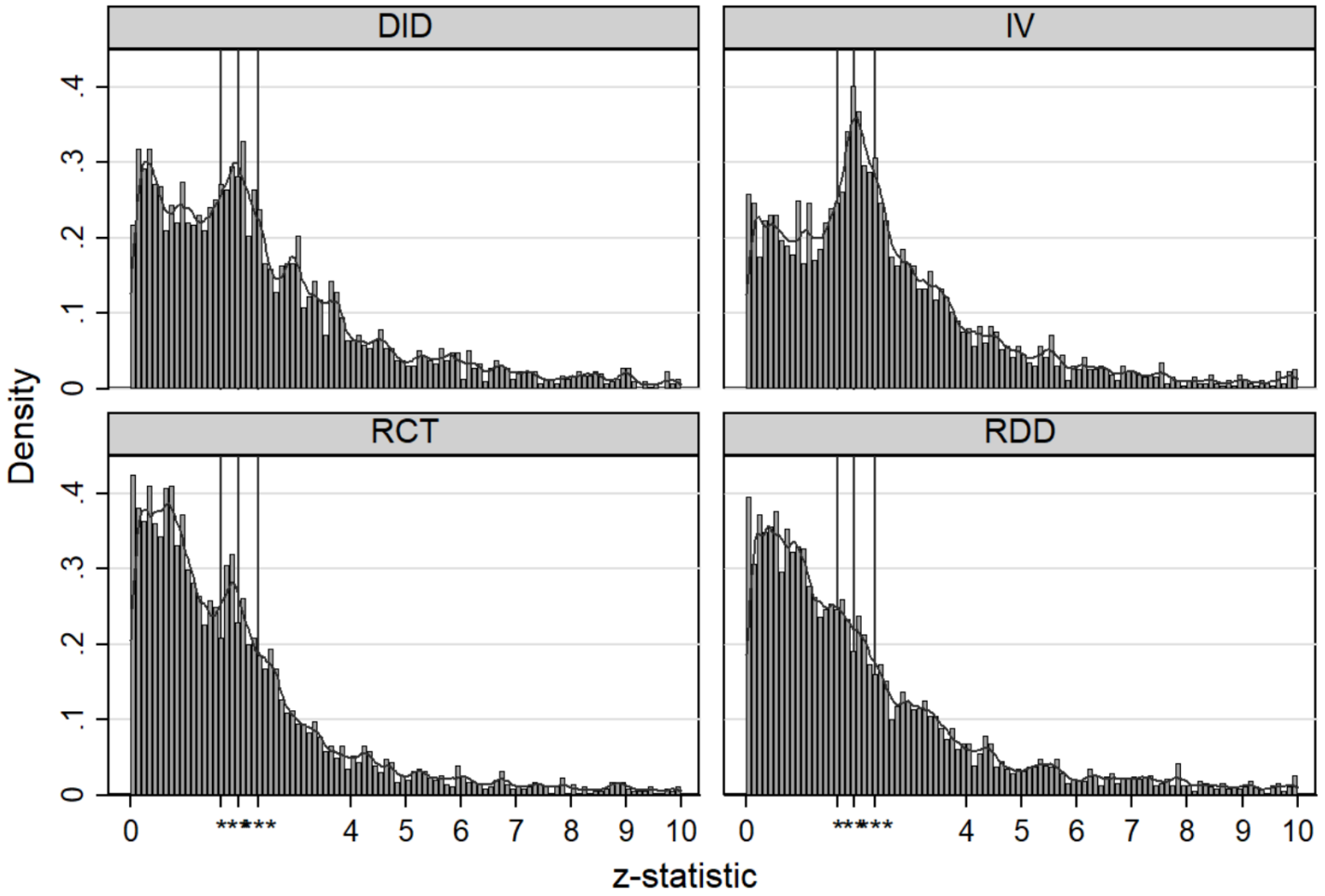
Figure 1: Distribution of *z*-Statistics (AER/QJE/JPE 2005-2011)



Source: Brodeur et al. (2016), Figure 1

P-Hacking

Figure 2: Distribution of *z*-Statistics by Method (Top 25 Journals, 2015)



Source: Brodeur, Cook, and Heyes (2018), Figure 1

Publication Bias

- Papers exist to push the boundaries of human knowledge...
  - ... But also to get published so that professors get tenure
- What types of papers get published at good journals?
  - Need to be “novel”: interesting and new results
  - Could promote finding surprising results that goes against expectations
  - How do we know if its true or just a bizarre case study?
- Over-correction leads to file-drawer problem
- Meta-analysis used to get more complete picture of research
  - Not perfect: analysis of skewed sample, how to weigh different studies?

Publication Bias

- Lots of null and boring effects in the world. But we should document them
  - Good science should be about re-checking findings to ensure they are robust
  - Publication bias skews our view of the world
- Brand new journal to try correct this: Series of Unsurprising Results in Economics (SURE)

Credibility Revolution

- Motivated empirics with credibility revolution, both in the first class and today
  - Not all economists are totally on board with this idea (i.e. economists should stop pretending to be scientists)
- Causality is important, but not the be-all and end-all
  - Lots of important questions can never be answered causally
  - We throw out so much data because the variation isn't exogenous
  - Even worse, over-reliance on common techniques without being careful in their application
- Even if we get causal estimate, so what?
  - Doesn't usually help explain *why*? (mechanisms)
  - May not be useful in other settings when other things change

Freakonomics

- Steven Levitt's *Freakonomics* helped show the world how economists can really study anything, especially in a causal way
    - When you look at the world as "how does X cause Y?", you can find lots of X's and Y's to explore

- Obsession with causality leads us to looking for case studies in very weird settings
    - See "Freaks and Geeks: How Freakonomics is ruining the dismal science" (link)

    - Focus on clever identification strategies rather than the question leads to "cute-o-nomics"

- Levitt response: "I've always been someone who's thought it's better to answer a small question well than to fail to answer a big question."

Wrap-Up

Wrap-Up

- As promised, labor is everything: lots of topics covered in this class
    - Many more papers in each of these topics
    - And many more topics in labor
- We couldn't cover everything, but you have the tools to explore research in any topic of interest
- Hopefully signaling theory is wrong, and you've learned something

Course Goals

- “By the end of the course, students will be able to:”

1. Use economic theory, research, and intuition to understand and analyze real-world policies
2. Understand and critique empirical work in applied microeconomics
3. Understand regression analysis and empirical strategies for causal inference
4. Describe and explain trends in the labor market and the questions that are currently being explored by researchers

THANK YOU!

References

References

Brodeur, A., N. Cook, and A. G. Heyes (2018). “Methods matter: P-hacking and causal inference in economics”. In: *IZA Discussion Paper*.

Brodeur, A. et al. (2016). “Star wars: The empirics strike back”. In: *American Economic Journal: Applied Economics* 8.1, pp. 1–32.

Chang, A. and P. Li (2015). “Is economics research replicable? Sixty published papers from thirteen journals say’usually not’”. In: *Working Paper*.