Empirical Etiquette: 
A Not-So-Modest Proposal

Timothy Simcoe
Boston University and NBER
The Proposal

• Maintained Assumptions
  – Evidence of causal relationships is more interesting and more publishable than most correlations
  – Experiments are the gold standard for evidence of causation
  – Most management papers will continue to rely on observational data

• Hypothesis: “What we’ve got here is a failure to communicate”
  – The term “endogenous” (as used by many referees) is not very precise
  – Solutions employed by many authors are completely off-point
  – The “identification revolution” == lots of frustration and a little progress

• Proposal: Empirical Etiquette
  – “A code of behavior that delineates expectations”
  – In practice: a checklist for authors and referees
  – Disclaimer: old wine in recycled bottles
    • Angrist and Pischke, Leamer, Andrew Gelman, Edward Tufte, etc.
General Etiquette

• Describe the “notional experiment”
  – To answer the causal question, what is the experiment you would run in a world without financial or other constraints?
    • How would you measure each of the key constructs?
    • What would you randomize/manipulate?

• Describe the primary threat to causal inference
  – This is a conceptual point. Don’t say “X could be correlated with e”
  – Does “endogeneity” == Omitted Variables, Selection, Simultaneity or Reverse Causality?
  – Explain the likely direction of bias in an OLS regression
  – Describe (in plain language) how your research design solves the problem

• Help readers interpret results
  – Discuss economic significance
    • Translate results into meaningful units
    • Describe how much variance they explain
  – Don’t start with the super mega-model. Build up from OLS.
Method-Specific Etiquette

• Articulate Maintained Assumptions
  – What must you believe to accept that X causes Y?
  – Stating assumptions makes you confront their plausibility
  – Key assumptions depend on research design
    • Matching / Regression: Conditional independence
    • Instrumental Variables: First-stage & IV validity
    • Diff-in-diffs: Δ Control = Counter-factual Δ treated

• Conduct Falsification Tests
  – Impossible to test maintained assumptions directly
  – Can often provide indirect supporting evidence
    • Matching/Regression: Are control/treatment covariates “balanced”?  
    • Instrumental Variables: First stage and over-identification tests  
    • Diff-in-diffs: Do control/treatment have similar trends prior to “shock”?
Concluding Thoughts

• Proposing an etiquette is presumptuous, but could have real benefits
  – Greater appreciation that causality is conditional on assumptions
    • Less “proof by citation” and more room for papers that reproduce findings with a better causal research design
  – Improved communication between authors and referees
    • From “has endogeneity problem” to “failed to do X”
  – Cuts down on “endogeneity air time”
    • More time and attention for practical significance and theoretical implications.

• Resources for the interested PDW participant
  – Mostly Harmless Econometrics, Angrist & Pischke
  – Various Survey Papers (e.g. Nichols, Stata Journal 2007)
  – **PhD Class**: Goldfarb, Grennan, Snyder, Simcoe, and Ziedonis
  – My etiquette: people.bu.edu/tsimcoe/etiquette.html

• Thanks for attending