Instrumental Variables

Conclusion

We've Come a Long Way in One Day…

From parameters vs. estimands to instrument recentering!

- Thank you for your attention & effort — not easy to learn by Zoom!

We've Come a Long Way in One Day…

From parameters vs. estimands to instrument recentering!

- Thank you for your attention & effort — not easy to learn by Zoom!

At the same time we have barely scratched the surface on IV topics (including the ones we covered today!) E.g.:

- Large literature on weak IV detection and robust inference

- Subtle issues with controls and multiple endogenous variables

- Tons of Bayesian IV methods

- Combining observational and quasi-experimental estimates

- Improving efficiency with compliance estimation

My Advice

For any IV analysis (or econometric analysis in general), be clear on your *parameter* of interest

- Requires taking a stand on the *model*: constant effects? POs?

- Not all parameters of interest must be causal/structural!

My Advice

For any IV analysis (or econometric analysis in general), be clear on your *parameter* of interest

- Requires taking a stand on the *model*: constant effects? POs?
- Not all parameters of interest must be causal/structural!

Make clear your identifying assumptions, for a given *estimand*

- Test them as best as you can: balance/pre-trend checks etc.

My Advice

For any IV analysis (or econometric analysis in general), be clear on your *parameter* of interest

- Requires taking a stand on the *model*: constant effects? POs?

- Not all parameters of interest must be causal/structural!

Make clear your identifying assumptions, for a given *estimand*

- Test them as best as you can: balance/pre-trend checks etc.

Visualize the variation underlying your *estimator*, as best as you can

- E.g. binscatter the reduced form and first stage

- Useful not only for the "finished product" but for thinking about identification issues (e.g. balance failiures) too

Keep Calm and `ivreg2` On!

Good luck on your future adventures with IV!

peter_hull@brown.edu

@instrumenthull