Lecture II

Harvard Econ 2416
Professor Gabriel Chodorow-Reich
Spring 2021

Outline

1. Summers (SJE 1991) The Scientific Illusion in Empirical Macroeconomics
2. Romer (2016) The Trouble with Macroeconomics
3. Christiano, Eichenbaum, Trabandt (2018) On DSGE Models
4. Nakamura and Steinsson (2018) Identification in Macroeconomics
5. Reis (2018) Is Something Really Wrong with Macroeconomics?

Outline

Questions

- What's the argument?
- Was it right then?
- Was it right with hindsight?
- Is it right now?

Summers on the literature

- Likes:
  - Friedman and Schwartz (1963).
  - Friedman (1957).
  - Mehra and Prescott (1985).
  - Shleifer (1985).
  - Mussa (1986).
- Dislikes:
  - Hansen and Singleton (1982).
  - Bernanke (1986).
  - Shiller (1981).

Hansen and Singleton (ECMA 1982)

- First empirical implementation of GMM.
- Prominent reference in Hansen's Nobel prize citation ($>$ 3200 google scholar citations).
- Simple idea (in hindsight!): with rational expectations, Euler equation

$$1 = E_t \left[\beta \frac{u'(c_{t+1})}{u'(c_t)} R_{i,t+1} \right]$$

  for any asset i implies orthogonality condition

$$0 = \frac{1}{T} \sum_{t=1}^{T} \left[\left(\beta \frac{u'(c_{t+1})}{u'(c_t)} R_{i,t+1} - 1 \right) z_{j,t} \right]$$

  for any instrument $z_{j,t}$ in the period t information set.
- Paper tests the condition using lagged returns as the instruments and CRRA utility.
- Estimates of risk aversion coefficient and β reasonable, but model rejected.

Mehra and Prescott (JME 1985)

- Classic reference for equity premium puzzle ($>$ 7800 google scholar citations).
- Model consists of two equations: Euler equation for stock market, and Euler equation for risk free bond.
- Data:
  - Consumption growth mean, standard deviation, and serial correlation.
  - Average return on equity and average return on risk free bond.

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Critique

- Strikingly similar to Summers, although doesn't cite it.
- Mostly (all?) a critique of DSGE estimation.
  - Opaque.
  - Reliance on priors.
- Also likes natural experiments.

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Response

- DSGE models are transparent relative to alternative of informal model averaging.
- Modern DSGE models disciplined by micro data.
- And by conditional (causal) moments, such as effect of monetary policy on output and inflation.

OUTLINE

Argument

- Causal effects in macroeconomics is hard!
- The best natural experiments do not easily extend to other settings.
- Macroeconomists need models; empirical causal effects useful for model selection and parameterization.

OUTLINE

Asking an active researcher in macroeconomics to consider what is wrong with macroeconomics today is sure to produce a biased answer. The answer is simple: everything is wrong with macroeconomics. Every hour of my workday is spent identifying where our knowledge falls short and how can I improve it. Researchers are experts at identifying the flaws in our current knowledge and in proposing ways to fix them. That is what research is. So, whenever you ask me what is wrong with any part of economics, I am trained by years on the job to tell you many ways in which it is wrong. With some luck, I may even point you to a paper that I wrote proposing a way to fix one of the problems.