Macro I: Introduction

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Macro: Introduction

- Macroeconomics is often seen as being controversial. This may be because it addresses big issues concerning how the economy as a whole functions and seeks quantitative answers.
- **Some Questions:**
  Why are some countries rich while others are poor? What drives business-cycle fluctuations? How important are measured technology shocks for producing business-cycle fluctuations in output? What accounts for top-end income inequality and the changes in inequality over the last century? Why are stock returns so much larger on average than short-term bond returns?

Points of (recent but not universal) Agreement

- Method: use GE models to interpret data and do policy analysis. use statistical models to characterize regularities.
- Why use GE models? Answer: Lucas critique.
- Work horse models: two versions of the neoclassical growth model

Key tools: computer and dynamic programming (DP)

- Growth model cannot typically be solved via only pencil, paper and basic math.
- Use DP and the computer to compute equilibria
- Why DP? We will get to this later
- Computer is obviously also critical in many other ways

Your main job is easy to state

- Learn some basic (empirical, theoretical, computational) tools
- Apply them to write two (good) journal articles

The former is easier than the latter. The most critical skill for writing a good journal article is the ability to articulate a well-motivated and narrow research question and a strategy for answering it.

Developing this critical skill is not so straight forward

Writing a good journal article without basic tools (and persistence) almost never happens $\cdots$ at least in macroeconomics.

Macro: Lucas Critique

Lucas (1976) argued against using econometric models (reduced-form, statistical models) for policy analysis:

"Given that the structure of an econometric model consists of optimal decision rules of economic agents, and that optimal decision rules vary systematically with changes in the structure of series relevant to the decision maker, it follows that any change in policy will systematically alter the structure of econometric models."

Effectively, this was an argument against using old-time Keynesian economics as well as a number of other approaches.

Macro: Lucas Critique

He implicitly argued for using GE models for policy analysis as these models are immune to his critique.

He called for a program (read "Methods and Problems in Business Cycle Theory") that theorizes at the level of economic primitives (perferences, endowments and technology). These do not change as policy changes. His program was to estimate or calibrate these primitives. One then evaluates different policies within the estimated model by computing policy counterfactuals.

To Lucas, economic policy is NOT a choice of a policy action today. The type of "policy" that economists may be able to analyze is what a layman might call rules or a policy rule. Nowadays this is well accepted $\cdots$ if not universally practiced.