

Research in Macroeconomics after the Crisis

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19th Symposium of the
Society for Nonlinear Dynamics and Econometrics
Washington D.C.
17 March 2011

Any opinions expressed here are mine and do not necessarily reflect those of other Federal Open Market Committee participants.

STRUCTURAL MODELING

- Structural modeling is an indispensable tool for macroeconomists.
- Having a tool is necessary but not sufficient for good policy design.
- Pretending to not have a structural model in mind is a falsehood—all approaches to macroeconomics have a theory behind them, implicitly or explicitly.
- Explicit theories have the virtue of laying the assumptions bare for examination and criticism.
- But ...
 - ... the models we need are big and complicated, and
 - ... we need them in order to predict the implications of unusual policy interventions.

THIS TALK

- We all know what needs to be done:
 - *Organize a more intensive research effort in macroeconomics.*
- What we have today:
 - Back rooms (academia) and front rooms (policymakers) of macroeconomics.
- The back room research has been brilliant ...
- ... but has often been resisted in the front room.
- As a result, we are nowhere near where we need to be in terms of having a useful, comprehensive macroeconomic model that we can use to get the economy to perform at its peak level.

BACK ROOMS AND FRONT ROOMS

- Sargent's amusing description of academia—*back rooms*—versus policymaking—*front rooms*.
- My caricature of the back room versus the front room:
 - Back room: States and parameters are known by all, and policy choice is menacingly complicated.
 - Front room: States and parameters are known by none, but policy choice itself is disarmingly simple.
 - Back room: Stationarity assumptions are commonplace, but data are often untrusted.
 - Front room: Stationarity considered unlikely, but thirst for data is unquenchable.
- Implication: The focus in the policy world is on determining the state of the system by looking at lots of data.
- Implication: The focus in the academic world is on determining optimal policy taking states and parameters as given.

A COMMENT ON FORECASTING

- Policy world conclusion is that better forecasting would solve key problems.
 - I doubt this.
- Really, we track the economy.
- We try to understand the quarters immediately past, the current quarter, and the coming quarter.
- Beyond that, many forecasts are a near random walk, with only slow reversion to mean.
- It is possible that the forecastable component of economic activity may never be much greater than it is today.
- Problem: A credible forecast is itself influencing the actions of forward-looking actors in the economy.
- Bottom line: Better forecasting is welcome but is not the ultimate objective.

BETTER POLICY IS THE PRIMARY GOAL

- Better policy is the main objective.
- Improved policy could deliver better outcomes—possibly dramatically better—even in a world in which the forecastable component of real activity is small.
- The ambient noise in an economic system may be large ...
- ... and yet policy interventions may exist that are associated with large welfare gains.

ACTUAL POLICY IS SLOW TO ADAPT

- Actual policy is like best practice medicine.
- Actual policy is slow to adapt to suggestions from the research frontier.
- The tendency is to stick with policy adjustments which seem to have worked well in the past.

THE BACK ROOM RESEARCH

- The academic research in macroeconomics over the past 30 years has been brilliant.
- The advances in the level of understanding of the intricacies of the economy have been astonishing.
- The main lesson:
 - The global economy is no simple system governed by a few equations.
 - The fact that the economy is populated by purposeful, forward-looking actors has huge ramifications for policy.
 - Optimal policies may not look like the policies currently in place.
 - To put a satisfactory, comprehensive macroeconomic model together is a Herculean task.

THE STICKING POINT

- The policy community—the front room—continually resisted the developments in macroeconomics for decades.
 - Sticky policy?
- Instead, there was general condemnation from this community of the new approaches as unrealistic and impractical.
- There was more truth in this early on, and much less truth in it today.
- The current crisis cannot be blamed on Lucas and Prescott having too much influence in the policy world!

IMPROVED MACROECONOMICS

- We need a more intensive national research effort in macroeconomics.
- Our current effort is not sophisticated enough to handle the challenges that lie ahead.
- We are beyond the point where a few professors or a small group of researchers can make a major advance.
- We need a determined effort to put together a satisfactory, comprehensive model.
- We should not allow ourselves to be off the research frontier.
- Daunting? Yes, but we build aircraft carriers and space stations.

COMPREHENSIVE ENOUGH

- Keep very negative outcomes as a possibility inside the model, so that policy choice can be evaluated with the very negative possibilities in mind.
 - Leading example: Financial panic.
- Be able to understand trade-offs of policy choice on a more global level.
- With small models, policymakers have to guess what the effects might be on aspects of the economy outside the analysis.
 - Leading example: Low interest rates as a prelude to a bubble.

FINANCIAL INTERMEDIATION

- We know from the literature that frictions in the intermediation process can profoundly affect the general equilibrium.
- Why assume these frictions away?
- We also have a long line of literature following Diamond and Dybvig (1983) concerning bank runs and related phenomena.
- This should be integrated into our macro models, so that we can understand how our policies are affecting the probability of a run.
- Also: global versus local policy analysis—
 - The run is a departure from the neighborhood of the targeted equilibrium.

MONEY AND LIQUIDITY

- There is a large theoretical literature that attempts to be more rigorous about the nature of money demand.
- This literature should move closer to the data from financial markets.
- Especially interesting are Gorton's (2008) ideas about repos as privately-issued money.
- We cannot make progress on this issue with money-in-the-utility function assumptions.

INTERNATIONAL

- Globalization is upon us.
- Our understanding of the international linkages between monetary and fiscal policies is tenuous at best.
- Still, a critical challenge going forward is to understand the impact of rapid development in much of the world on the global equilibrium.

HETEROGENEOUS HOUSEHOLDS

- We know that policies have an uneven impact.
- The last decade has witnessed a burgeoning research agenda on heterogeneous households.
- With this technology we can better analyze the general equilibrium effects of policies across households.
- It is hard work, computationally intensive.

MULTIPLE EQUILIBRIA AS “BUBBLE-LIKE” PHENOMENA

- Two decades, two bubbles.
- It is time for the policy community to embrace the concept of multiple equilibria from the macroeconomic research world.
- That would give us policymakers at least one way to coherently address these issues.
- The typical policy response in the literature: Adopt a policy that kills off the undesirable equilibria.

LEARNING AND RATIONALITY

- Much of the criticism of macroeconomics is associated with the idea that there is “too much rationality.”
- But the rational households in the models can readily be replaced with learning households, and the analysis can proceed from there.
- This raises new issues, such as learnability of an equilibrium.

GROWTH AND HUMAN CAPITAL

- The pace of long run growth is the most important aspect of economic performance.
- We should be analyzing stabilization policies in conjunction with growth policies.

OTHER AREAS

- These are just examples of the types of features a satisfactory model would have.
- We would like to be able to understand the trade-offs between many policy choices.
- Above all, we would like to be able to understand where the real dangers are:
 - Big ticket welfare losses are associated with leaving the neighborhood of a targeted equilibrium.
 - This has to be a possibility inside the models.

CONCLUSIONS

- We need a more aggressive and better-funded research effort in macroeconomics.
- The current level of effort is unlikely to meet the many challenges the U.S. faces going forward.
- The level of complexity is beyond what individual researchers can handle.
 - Small, shortcut models are going to be wildly wrong on many dimensions.
- The task is daunting, but the nation will spend a great deal on other large projects arguably of lesser consequence.