Real Business Cycles

The research program

RBC – Facts to be explained

- Deviations of output from trend
- Its correlation with other macro variables

RBC – Modeling strategies

- Micro-foundations
  - Explicit optimizing behavior
  - Prices clear markets
- Rational expectations
  - Model consistent opinions
  - As if economists
- Calibration
  - Comparing actual and simulated moments

RBC – Substantial claims

- Productivity shocks important
- Money not important
- Employment fluctuates along the labor supply curve
- Fluctuations tend to be efficient
- Stabilization policy not warranted

RBC – The prototypical model

- Neoclassical growth model with
  - endogenous labor supply
  - stochastic productivity shocks
- Starting point: Kydland and Prescott (1982): Time to build and aggregate fluctuations.
- Evolving program

RBC – Background 1960s

- Monetarists versus Keynesians
- Milton Friedman (monetarist)
  - Mistaken monetary policy main source of business cycles
  - Active stabilization dangerous
  - Constant money supply growth, floating exchange rates
  - Theoretical framework shared with Keynesians
  - Disagreement about quantitative issues

RBC – Background 1970s

- Rational expectations revolution
  - Robert E. Lucas, Thomas Sargent, Robert J. Barro
  - Micro-foundations, equilibrium
  - Rational expectations
  - Erratic monetary policy causes cycles (Lucas)
  - People mistake movements in the general price level for movements in relative prices

Some main dividing lines

- Attitudes to unemployment
- Price flexibility and market clearing
- Fluctuations around trend or variations in capacity utilization

Claims from Keynes or his followers

- In the short-run many markets clear through adjustments of quantity
  - Unanticipated changes in stocks
  - Waiting time
  - Overtime and slack
- Some short-run price rigidity

Claims from Keynes or his followers

- Fundamental uncertainty about the future
  - Fully rational expectations impossible ("Animal spirits" matter)
  - Potential for large shifts in opinions ("waves of optimism and pessimism")
- Production lags ("time to build")
  - Price known, slope of demand curve not
  - When to stop building?

Claims from Keynes or his followers

- Separation of decisions on savings and on real investment
  - Everyone may want to hoard liquid *financial* assets
  - Lower bound on nominal interest rate
  - Sometimes no market-clearing prices exist
  - Price rigidity may then be an advantage

Sources of shocks

- Innovations, discoveries, natural phenomena, legal
  - through direct effects on output or on input demand
  - through effects on investment and consumption demand
- Monetary and fiscal policies
- Shifts in opinions or preferences

Dynamic Stochastic General Equilibrium models -DSGE

- Theory based
- Stochastic shocks: productivity, demand, financial markets etc
- Estimation supplemented with calibration
- Nominal rigidities
- Monetary policy important
- Some consumers have short horizons

More Keynesian than RBC