ECON 7010 - Macroeconomics I

Fall 2014

Notes for Lecture #13

Today:

- Sticky prices

Money and Economic Activity

- Money neutral
  - Proportional transfers; complete information $\Rightarrow \exists$ an SREE in which money is neutral
  - Changes in the distribution of x (i.e., $f(x)$) have no effects on anything real
- Money is not neutral
  - Non-proportional transfers: $c_{t+1} = \frac{p_t n_t + \gamma_{t+1}}{p_{t+1}}$
  - Imperfect information (e.g., Azariadis, Lucas, etc.)
    - x matters
    - $f(x)$ matters
    - DRAW graph with axes as z on horizontal and $\psi(z)$ on vertical. Have two curves $\psi(z)$ and $\hat{\psi}(z)$...
- Another way to get money to be non-neutral is through wage/price stickiness...

Wage/price stickiness

- Simple models:
  - DRAW graph of product market with vertical AS curve and downward sloping AD curve. Show that shift in AD curve has no effect on output but only changes prices
  - DRAW graph of labor market with vertical LS curve and downward sloping LD curve. LD is a function: $L(\$w, p)$, or nominal wage and prices. Show that shift in money supply, which shifted AD out and increases prices also shifts out the LD curve. But the result is no change in labor supply, only an increase in the nominal wage (and no change in the real wage)
  - These graphs are a picture on monetary neutrality
  - DRAW graph with real wage and labor supply curves. Show whats really happing is that w/p not changing so no change in labor supply
- sticky wages (nominal, not real stickiness)
  - Nominal wage preset ($\bar{w}$)
  - Employment determined by labor demand
  - DRAW graph with nominal wage on vertical axis and labor supply on the horizontal. Draw labor demand and labor supply curve, both functions of the nominal age and the expected price level. Show preset wage level. Show that in price exceeds expected price then shift out in labor demand curve. Results in increase in supply because they are locked in at preset wage (i.e., no wage adjustment to move along labor supply curve).
  - DRAW graph with AS and AD intersecting at $Y*$ and p^e

- Concerns w/ the sticky price model:
  - Theory
    - Where is the agent's maximization problem?
      - Literature on this: optimal contracts, menu costs
    - Where are the dynamics?
      - Literature: time-dependent prices - Fischer
  - Facts
    - $corr(\$, Y) > 0$ (for surprise shocks)
    - $corr(Y, Y_{-1})$
      - Data says positive
      - Lucas model says = 0
      - Sticky wages model says = 0
      - The above has been call the "Persistence problem"
    - $corr(\frac{w}{p}, Y) \sim 0$ (sticky wage says <0)
    - $corr(\frac{Y}{L}, Y) > 0$ (Y/L is labor productivity)
      - Concave production function says: $corr(\frac{Y}{L}, Y) < 0$ in sticky wage model (=0 without stickiness)
      - DRAW graph with Y on vertical and N on horizontal and concave function...