

ECON 3510 - INTERMEDIATE MACROECONOMIC THEORY

Fall 2015

Mankiw, *Macroeconomics, 8th ed.*, Chapter 10

Chapter 10: Economic Fluctuations

Key points:

- Business cycle facts
- Aggregate supply, aggregate demand model
- Understand shocks to AS/AD and how stabilization policy can be used

Business Cycle Facts:

- Defining Business Cycles:
 - Dates are given from peak to trough (so when “over”, really at bottom starting to climb out)
 - No hard and fast rule
 - Usually multiple quarters of GDP decline and increases in unemployment
- Volatility of GDP and components:
 - Volatility of $C <$ Volatility of Y
 - Volatility of $Y <$ Volatility of I
- Okun’s Law
 - GDP and unemployment move in opposite directions
 - Relationship: $\% \Delta Y = 3\% - 2 \times \% \Delta \frac{U}{\bar{U}}$

Big picture:

- Long run: prices perfectly flexible (this is what we’ve been studying)
- Short run: prices “sticky”
 - Like reason for structural unemp we talked about
 - Lead to less output, lower employment in short run as response to negative shocks
- Key to short run fluctuations will be these sticky prices
- Because sticky prices lead to bad outcomes, there is a role for government policy (monetary and fiscal)

Aggregate Demand:

- Relates total demand for output and price levels
- DRAW AD function - vertical axis is P, horizontal Y - it slopes downward
- Slopes downward:

- Not because of substitution effects (which is why an individual market's demand curve slopes downward)
- It slopes downward because of stuff we'll talk about shortly
- Think of it this way: $MV = PY$
 - * Along the AD curve, M fixed
 - * V is constant
 - * Thus, if $\uparrow P$, $Y \downarrow$
 - * e.g., imagine have fixed number of dollars in wallet. Go to bar \rightarrow find beer is 2x as much as yesterday \rightarrow buy less
- If $M \uparrow$, shift AD outward
 - DRAW AD_1 and AD_2 where AD_2 is shifted out b/c M increases...
- There are other reasons that AD would shift
 - E.g. a shift in V as people hold more/less money
 - This may be a good explanation for the Great Recession
 - * There was a large contraction in credit
 - * Which means that $V \downarrow$
 - * Which means that AD shifts down and left

Aggregate Supply:

- Long run:
 - L and K fixed
 - DRAW P and Y axes and vertical $\bar{Y} = F(\bar{K}, \bar{L})$
 - Classical dichotomy holds \rightarrow in long run, prices don't affect output (i.e., nominal variables don't affect real variables)
 - If price level falls, so do factor prices, but output unchanged
 - See with AD :
 - * DRAW AD_1 and AD_2 (shift out AD_1). Have LRAS curve - show how prices adjust, but output does not
- Short run:
 - Prices fixed (this is the extreme case)
 - Firms hire enough to meet demand
 - AS horizontal
 - * DRAW P and Y axes and horizontal $SRAS$ curve
 - With AD :
 - * DRAW AD_1 and AD_2 (shift in AD_1). Have SR AS curve - show how prices fixed, so change in AD affects output
 - * Output falls b/c demand falls and prices do not move

From Short Run to Long Run:

- DRAW AD with SRAS and LRAS curves
- Intersection of AD and $LRAS$ is eq'm
- B/c prices are at eq'm level, $SRAS$ intersects as well
- Now consider a shift in AD from this eq'm:
 - DRAW picture above, but shift in AD to $AD2$. Note points: A = original eq'm, B intersection of $AD2$ and $SRAS$, C intersection of $AD2$ and $LRAS$
 - What happens:
 1. Go from A to B b/c fall in demand \Rightarrow lower output in the short run
 2. Go from B to C b/c prices adjust \Rightarrow only price level affected in long run

Stabilization Policy:

- Sources of fluctuations - exogenous shocks
 - Supply shocks (e.g. oil price spike, natural disaster) (NOTE: these are adverse shocks and shift $SRAS$ curve up)
 - Demand shocks (e.g. stock mkt crash, introduction of credit cards) (NOTE; these shift AD in and out, respectively)
- Stabilization policy - policy to reduce severity of short run fluctuations
- Demand Shock:
 - Introduce credit cards $\Rightarrow V \uparrow \Rightarrow AD \uparrow$
 - DRAW $AD1$ and $AD2$ shifted out. Note that at fixed $SRAS$ output increases
- Supply Shock:
 - High oil prices \rightarrow adverse supply shock - prices increase
 - DRAW $SRAS1$ and $SRAS2$ shifted up. Note that moved along AD curve to new higher price and lower output
- Stabilization policy in response to supply shock
 - DRAW adverse supply shock as above. Show AD shift out with M increase (or tax cut) so that no change in Y