macro

Topic 8:

Introduction to Economic Fluctuations

(chapter 9)

macroeconomics
fifth edition

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PowerPoint® Slides
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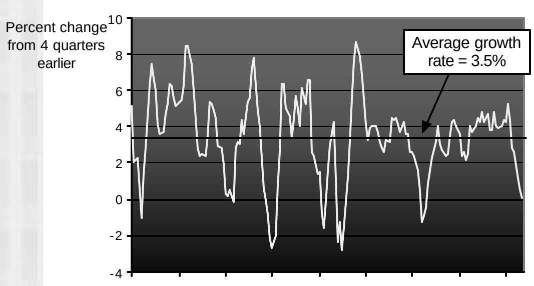
Chapter objectives

- difference between short run & long run
- introduction to aggregate demand
- aggregate supply in the short run & long run
- see how model of aggregate supply and demand can be used to analyze short-run and long-run effects of "shocks"

Real GDP Growth in the United States



Time horizons

- Long run:
  Prices are flexible, respond to changes in supply or demand
- Short run:
  many prices are "sticky" at some predetermined level

The economy behaves much differently when prices are sticky.

In Classical Macroeconomic Theory,

(what we studied in chapters 3-8)

- Output is determined by the supply side:
  – supplies of capital, labor
  – technology
- Changes in demand for goods & services (**C**, **I**, **G**) only affect prices, not quantities.
- Complete price flexibility is a crucial assumption,
  so classical theory applies in the long run.

When prices are sticky

…output and employment also depend on ____________ for goods & services,
which is affected by

-
-
-

The model of aggregate demand and supply

- the paradigm that most mainstream economists & policymakers use to think about economic fluctuations and policies to stabilize the economy
- shows how the price level and aggregate output are determined
- shows how the economy's behavior is different in the short run and long run

Aggregate demand

- The aggregate demand curve shows the ____.
- For this chapter's intro to the AD/AS model, we use a simple theory of aggregate demand based on the Quantity Theory of Money.
- Chapters 10-12 develop the theory of aggregate demand in more detail.

The Quantity Equation as Agg. Demand

- From Chapter 4, recall the quantity equation

$$\mathbf{M\,V} = \mathbf{P\,Y}$$

and the money demand function it implies:

$$(\mathbf{M}/\mathbf{P})^d = \mathbf{k\,Y}$$

where $\mathbf{V} = 1/\mathbf{k}$ = velocity.

- For given values of **M** and **V**, these equations imply an inverse relationship between **P** and **Y**:

____

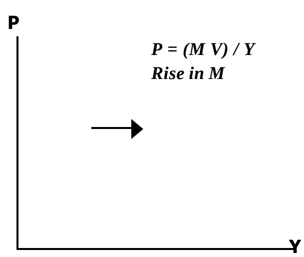
The downward-sloping *AD* curve

An increase in the price level causes a fall in real money balances (**M/P**),

causing a decrease in the demand for goods & services.

Shifting the *AD* curve

An increase in the money supply shifts the AD curve to the right.



Aggregate Supply in the Long Run

- Recall from chapter 3:
  In the long run, output is determined by factor supplies and technology

$$\overline{Y} = F(\overline{K}, \overline{L})$$

$\overline{Y}$ is the _____________ or ________ level of output, the level of output at which the economy's resources are fully employed.

"Full employment" means that unemployment equals its natural rate.

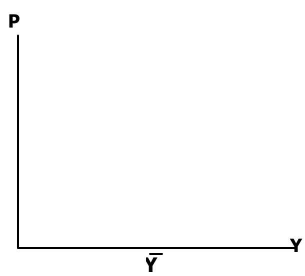
Aggregate Supply in the Long Run

- Full-employment output does not depend on the price level,

  ____
  __________________________:

The long-run aggregate supply curve

The LRAS curve is vertical at the full-employment level of output.

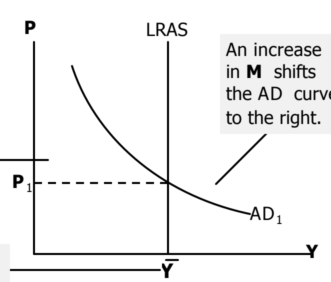


Long-run effects of an increase in *M*

In the long run, this increases the price level…

…but leaves output the same.

An increase in **M** shifts the AD curve to the right.



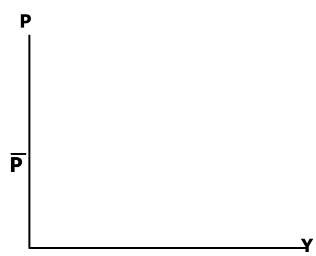
Aggregate Supply in the Short Run

- In the real world, many prices are sticky in the short run.
- For now (and throughout Chapters 9-12), we assume that all prices are stuck at a predetermined level in the short run…
- …and that firms are willing to sell as much as their customers are willing to buy at that price level.
- Therefore, ______________________
  _________________________________:

The short run aggregate supply curve

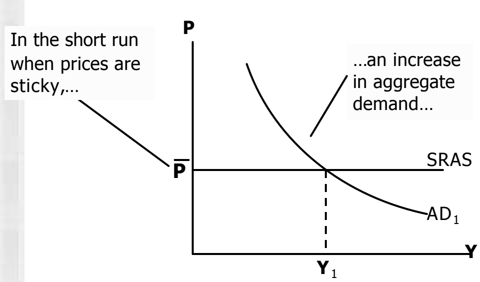
The SRAS curve is horizontal:

The price level is fixed at a predetermined level, and firms sell as much as buyers demand.



Consider example of catalogue company: publishes price, and takes orders for quantity

Short-run effects of an increase in *M*



From the short run to the long run

Over time, prices gradually become "unstuck." When they do, will they rise or fall?

In the short-run equilibrium, if	then over time, the price level will
$\mathbf{Y} > \bar{\mathbf{Y}}$	
$\mathbf{Y} < \bar{\mathbf{Y}}$	
$\mathbf{Y} = \bar{\mathbf{Y}}$	

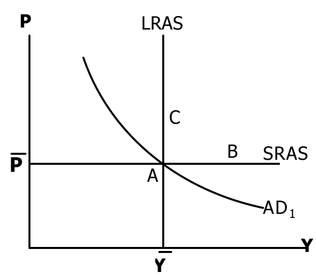
This adjustment of prices is what moves the economy to its long-run equilibrium.

The SR & LR effects of $\Delta M > 0$

A = initial equilibrium

B = new short-run eq'm after Fed increases **M**

C = long-run equilibrium



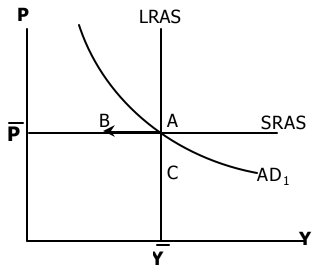
How shocking!!!

- **shocks**:______________________________
  ____
- Shocks temporarily push the economy away from full-employment.
- An example of a demand shock:
  ____
- If the money supply is held constant, then a decrease in **V** means people will be using their money in fewer transactions, causing a decrease in demand for goods and services:

The effects of a negative demand shock

The shock shifts AD left, causing output and employment to fall in the short run

Over time, prices fall and the economy moves down its demand curve toward full-employment.



Supply shocks

A **supply shock** ______________________

______________________________________.

(also called **price shocks**)

Examples of adverse supply shocks:

- Bad weather reduces crop yields, pushing up food prices.
- Workers unionize, negotiate wage increases.
- New environmental regulations require firms to reduce emissions. Firms charge higher prices to help cover the costs of compliance.

(Favorable supply shocks lower costs and prices.)

CASE STUDY: The 1970s oil shocks

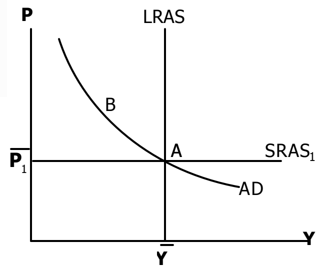
- Early 1970s: OPEC coordinates a reduction in the supply of oil.
- Oil prices rose
  - 11% in 1973
  - 68% in 1974
  - 16% in 1975
- Such sharp oil price increases are supply shocks because they significantly impact production costs and prices.

CASE STUDY:

The 1970s oil shocks

The oil price shock shifts SRAS up, causing output and employment to fall.

In absence of further price shocks, prices will fall over time and economy moves back toward full employment.



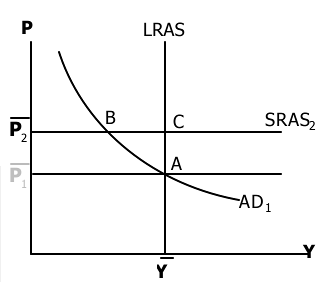
Stabilization policy

- def: ___________________________
  ___________________________________.
- Example: Using monetary policy to combat the effects of adverse supply shocks:

Stabilizing output with monetary policy

But the Fed accommodates the shock by raising agg. demand.

results:
P is permanently higher, but **Y** remains at its full-employment level.



Chapter summary

1. Long run: prices are flexible, output and employment are always at their natural rates, and the classical theory applies.

   Short run: prices are sticky, shocks can push output and employment away from their natural rates.

Chapter summary

2. Aggregate demand and supply framework:

   The aggregate demand curve slopes downward.

   The long-run aggregate supply curve is vertical, because output depends on technology and factor supplies, but not prices.

   The short-run aggregate supply curve is horizontal, because prices are sticky.

Chapter summary

3. Shocks to aggregate demand and supply cause fluctuations in GDP and employment in the short run.
4. The Fed can attempt to stabilize the economy with monetary policy.