

CHAPTER

26

The Keynesian Short-Run Policy Model: Demand- Side Policies

Chapter Goals

- Discuss the key insight of the *AS/AD* model and list both its assumptions and its components.
- Describe the shape of the aggregate demand curve and what factors shift the curve.
- Explain the shape of the short-run and long-run aggregate supply curves and what factors shift the curves.
- Show the effects of shifts of the aggregate demand and aggregate supply curves on the price level and output in both the short run and long run.
- Discuss the limitations of the macro policy model.

The Keynesian *AS/AD* Model: Output

Short-run equilibrium output may differ from long-run potential output assuming a fixed price level.

- **Equilibrium output** is the level of output toward which the economy gravitates in the short run because of the cumulative cycles of declining or increasing production.
- **Potential output** is the highest amount of output an economy can sustainably produce using existing production processes and resources.

The Keynesian *AS/AD* Model: Policy

Keynesian model focuses on the use of monetary and fiscal policy.

- **Monetary policy** – a policy of influencing the economy through changes in the money supply and interest rates.
- **Fiscal policy** – the deliberate change in either government spending or taxes (or more generally the deficit) to stimulate or slow down the economy).

Key Insight of the Keynesian *AS/AD* Model

Paradox of thrift means an increase in saving may lead to a decrease in spending, output, causing a recession and lowering total saving.

Keynesians believe the economy would need government's help to prop up aggregate expenditures.

Keynesian economists advocated an activist demand management policy.

The Components of the *AS/AD* Model

Three important things about the *AS/AD* model:

1. It is a short-run model.
2. It is a pedagogical model.
3. It starts with aggregate relationships.

The *AS/AD* model does provide a simple model that suggest a role for government in keeping feedback effects from spiraling an economy downward.

The *AS/AD* Model Consists of Three Curves

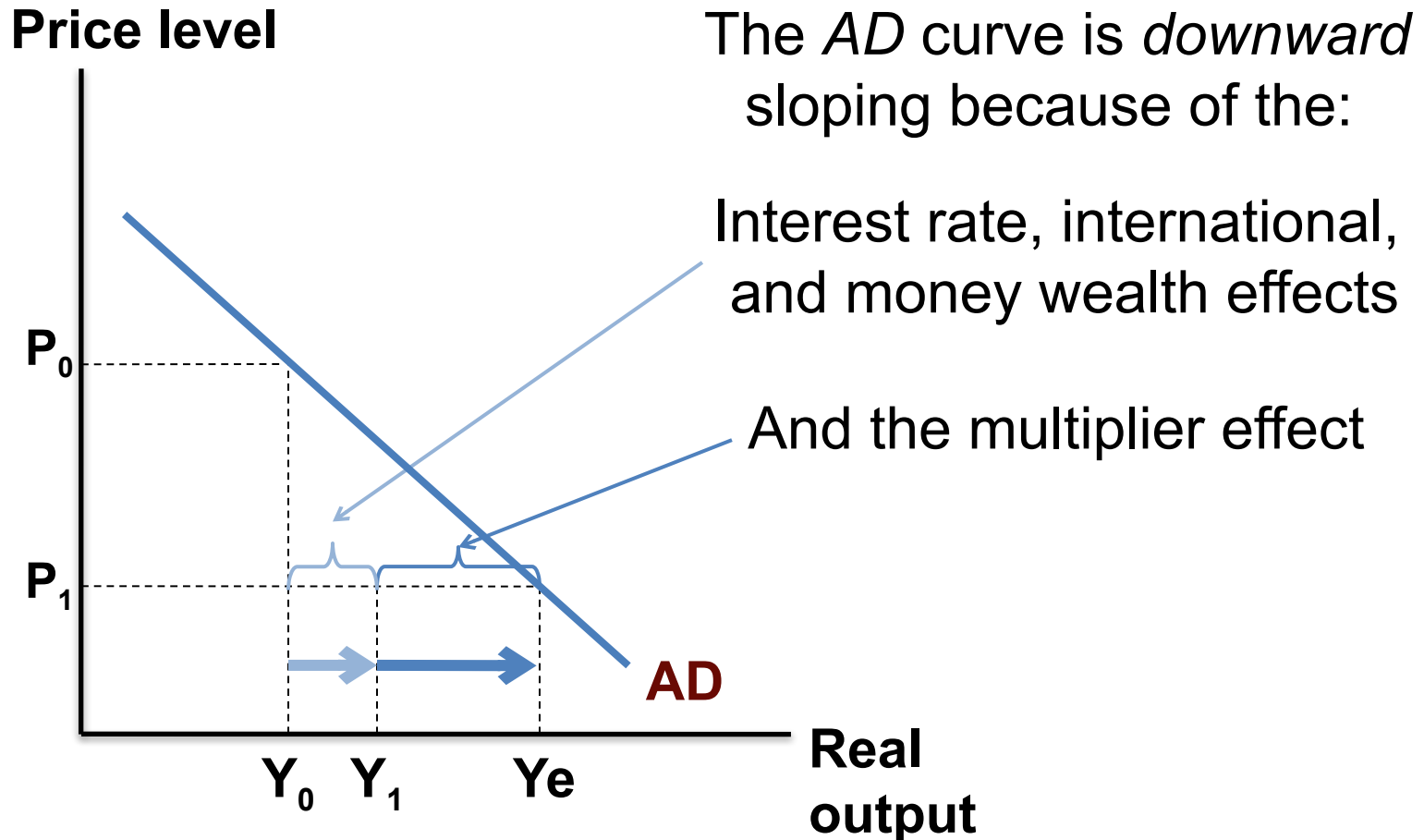
- 1. Aggregate Demand (*AD*) Curve:** a curve that shows how a change in the price level will change aggregate expenditures on all goods and services in an economy.
- 2. Short-Run Aggregate Supply (*SAS*) Curve:** a curve that specifies how a shift in the aggregate demand curve affects the price level and real output in the short run, other things constant.
- 3. Long-Run Aggregate Supply (*LAS*) Curve:** a curve that shows the long-run relationship between output and the price level.

The *AD* Curve Is Downward Sloping

Explanations that make the *AD* curve *downward* sloping:

- **Interest rate effect** - the effect that a lower price level has on investment expenditures through the effect that a change in the price level has on interest rates.
- **International effect** - as the price level falls (assuming the exchange rate does not change), net exports will rise.
- **Money wealth effect** - a fall in the price level will make the holders of money richer, so they buy more.
- **Multiplier effect** - the amplification of initial changes in expenditures.

The Slope of the *AD* Curve



Dynamic Price-Level Adjustment Feedback Effects

Dynamic effects exist that can overwhelm the standard *AD* shift factors.

Especially important when aggregate demand is declining are:

- Expectations of falling aggregate demand
- Lower asset prices (declining nominal wealth)
- Financial panics

These forces counteract the standard shift factors.

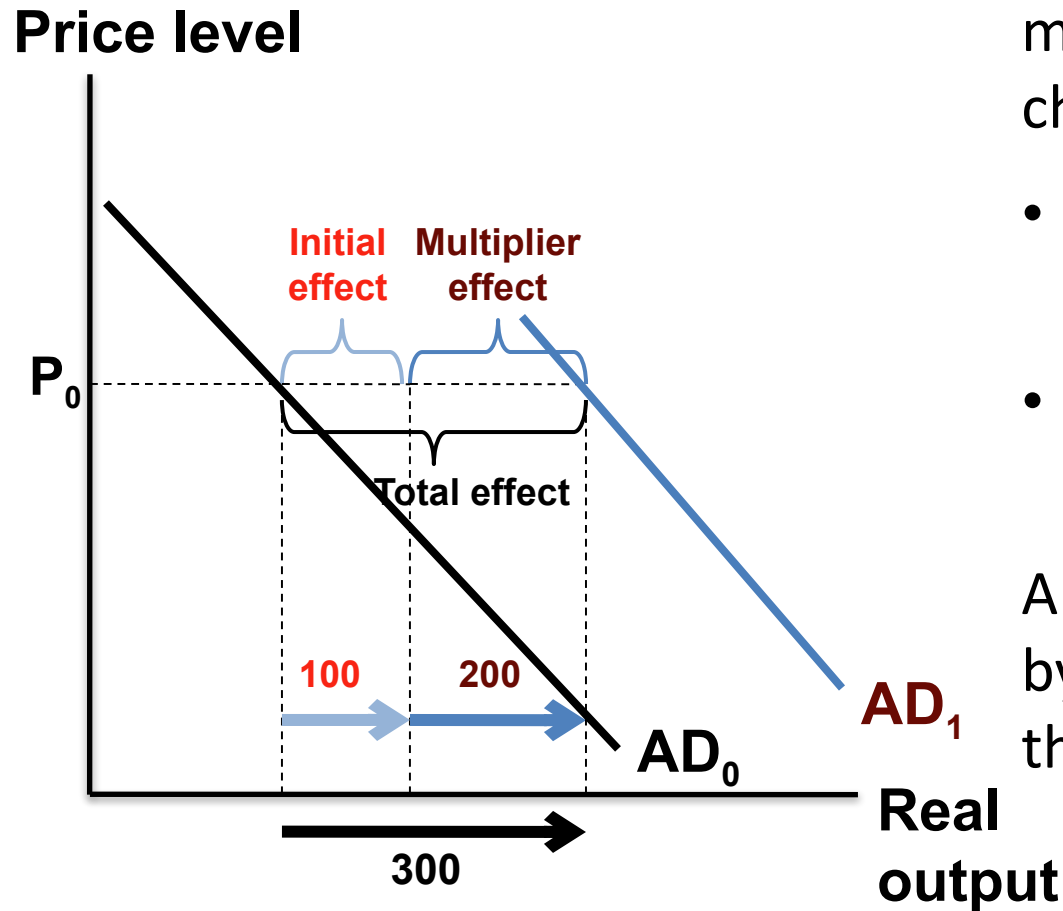
If strong enough, dynamic forces can cause aggregate demand to fall (shift to the left) when the price level falls.

Shifts in the *AD* Curve

A shift in the *AD* curve means that at every price level, total expenditures have changed. Five important shift factors are:

- Foreign income
- Exchange rate fluctuations
- Distribution of income
- Expectations
- Government policies

Shifts in the AD Curve



The AD curve shifts out by more than the initial change in expenditures:

- Exports increase by 100.
- The multiplier magnifies this shift.

AD curve shifts to the *right* by a multiple of 100, in this case by 300.

The Aggregate Supply Curves

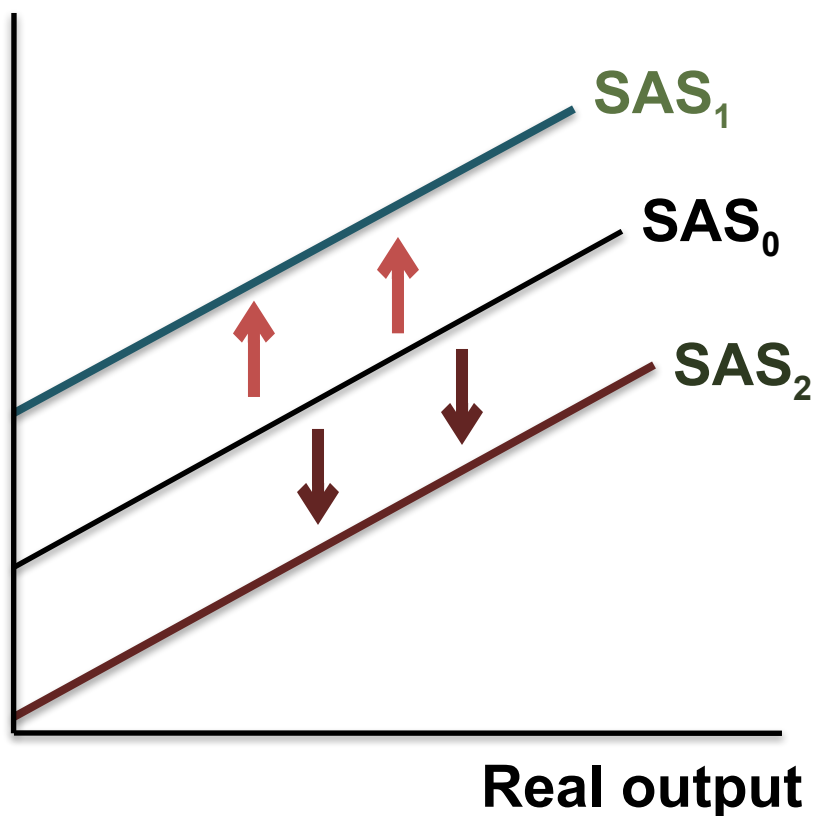
The shape of the *SAS* curve reflects two different types of markets in our economy:

1. Auction markets: The markets represented by the supply/demand model .

2. Posted price markets: Also called **quantity-adjusting markets**, these are markets in which firms respond to changes in demand primarily by changing production instead of changing their prices. Firms tend to increase their markup when demand increases.

Shifts in the SAS Curve

Price level



Shifts in the SAS are caused by:

- Changes in Input prices
- Productivity
- Import prices
- Excise and sales taxes

When production costs increase, the SAS curve shifts up.

In general:

$$\begin{aligned} \% \Delta \text{ in price level} = \\ \% \Delta \text{ in wages} - \% \Delta \text{ in productivity} \end{aligned}$$

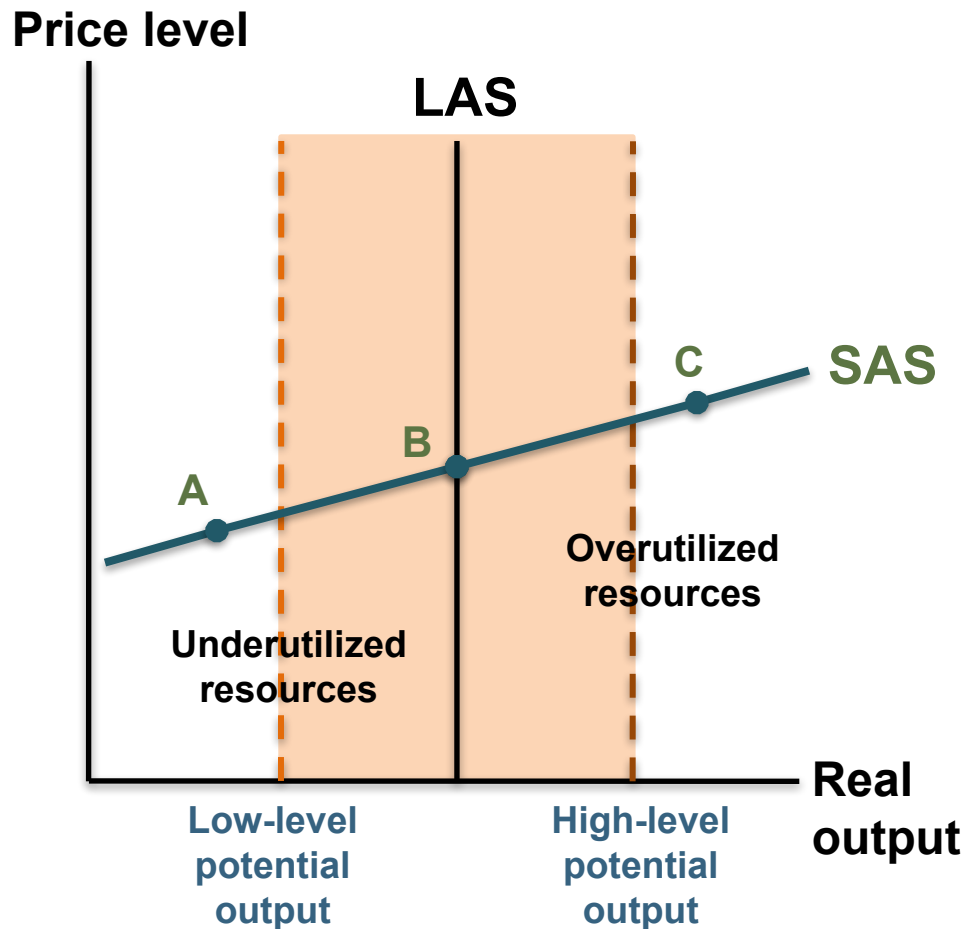
The Long-Run Aggregate Supply Curve

The long-run aggregate supply (*LAS*) curve shows the long-run relationship between output and the price level.

The position of the *LAS* curve depends on **potential output** which is the amount of goods and services an economy can produce when both capital and labor are fully employed.

The *LAS* curve is vertical because potential output is unaffected by the price level.

The *LAS* Curve



Potential output is assumed to be in the middle of a range bounded by high and low levels of potential output.

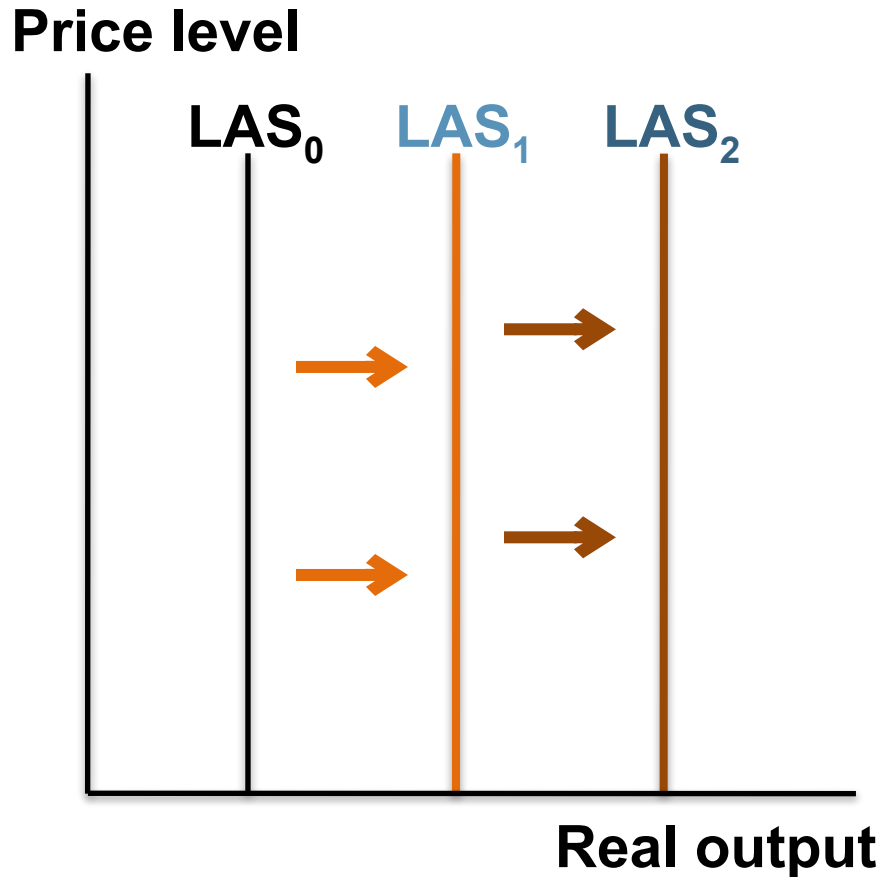
When resources are overutilized (point C), factor prices may be bid up and the SAS shifts up.

When resources are underutilized (point A), factor prices may decrease and SAS shifts down.

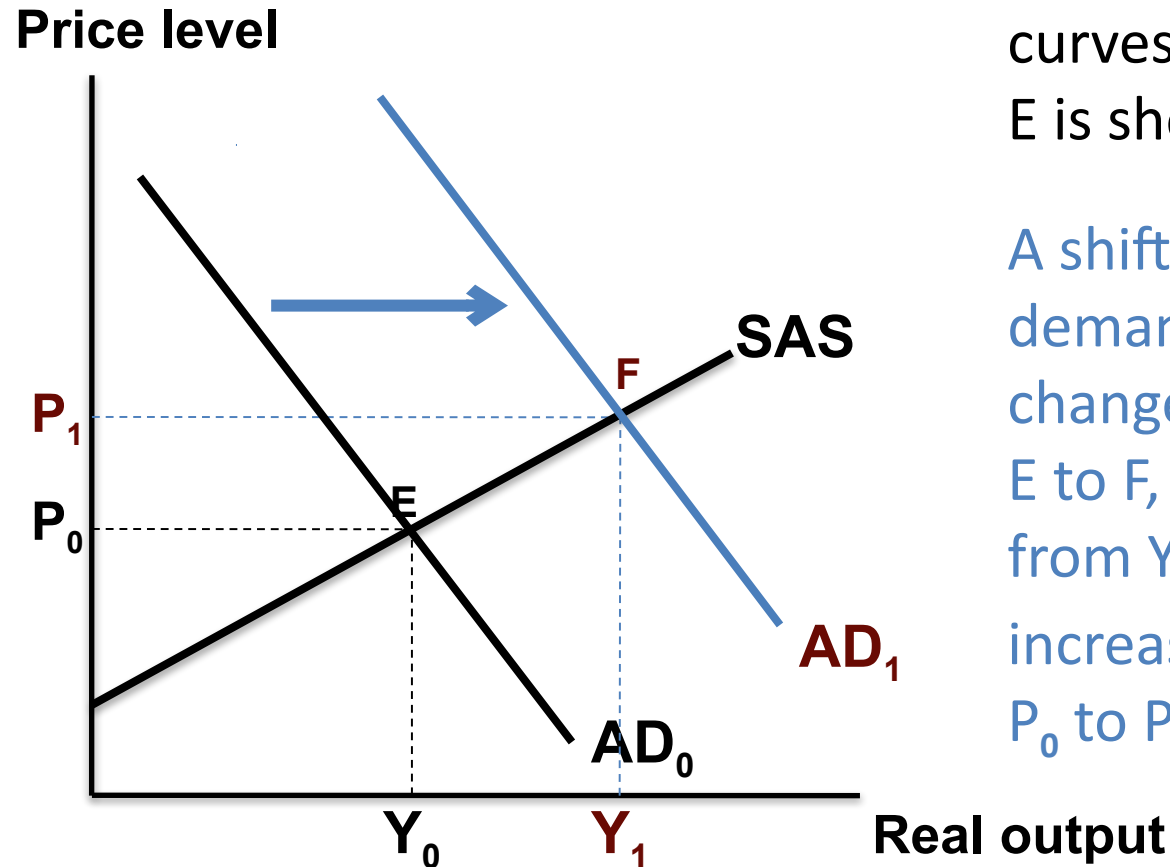
Shifts in the *LAS* Curve

Increases in the *LAS* are caused by increases in:

- Capital
- Available resources
- Growth-compatible institutions
- Technology
- Entrepreneurship



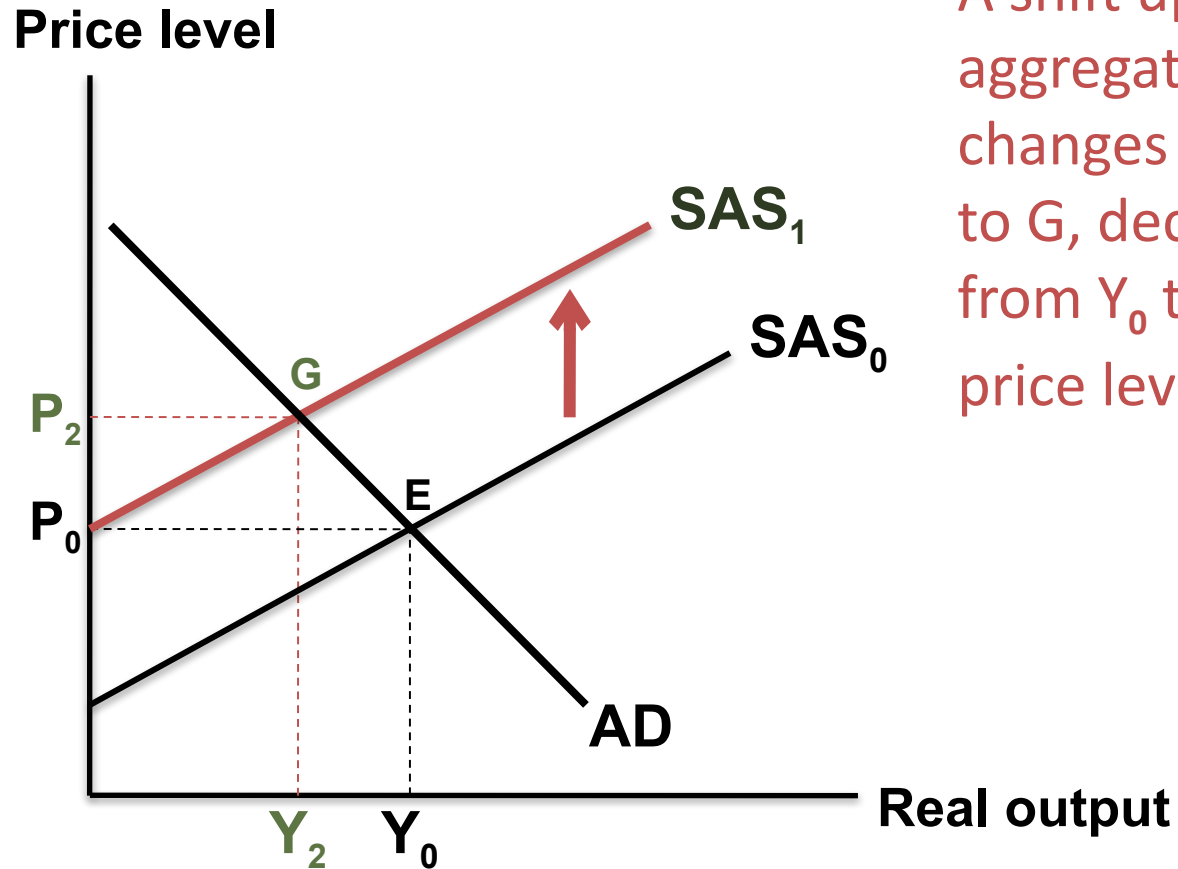
Short-Run Equilibrium in the *AD/AS* Model



Short-run equilibrium is where the *SAS* and *AD* curves intersect and point *E* is short-run equilibrium.

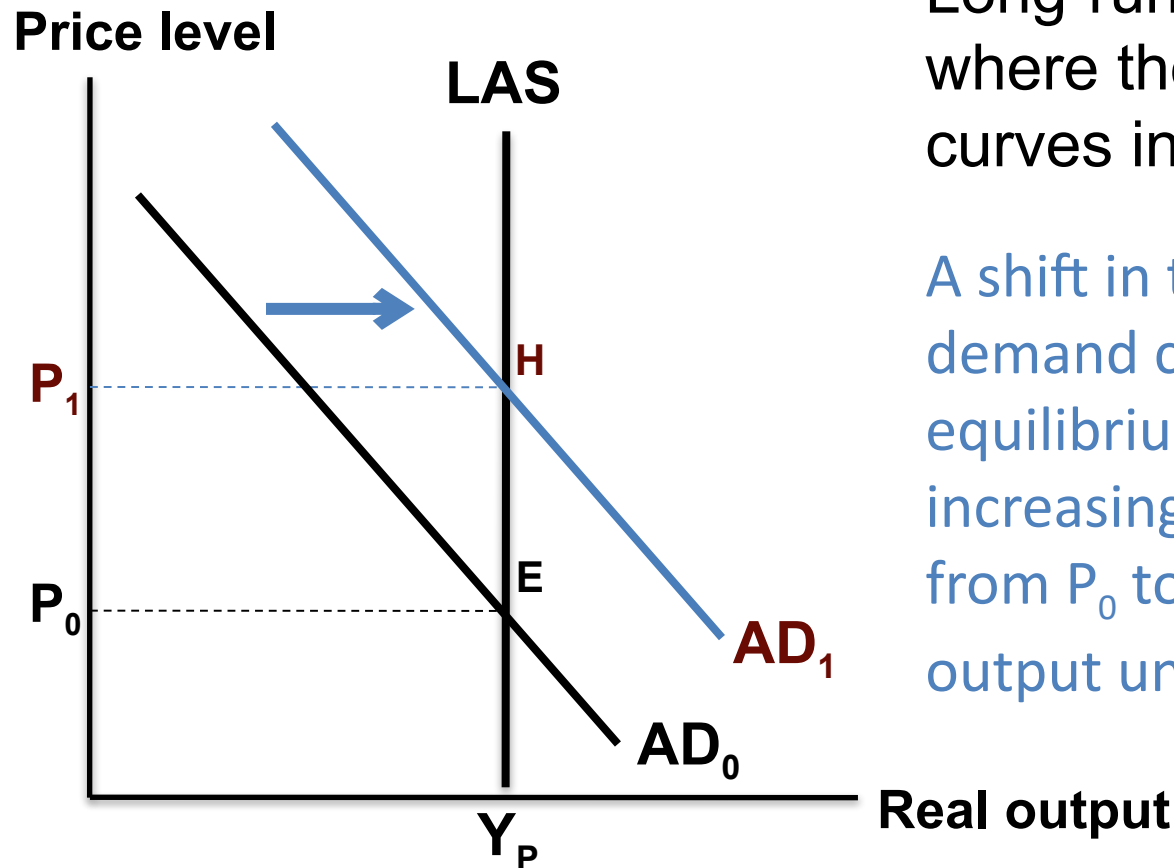
A shift in the aggregate demand curve to the right changes equilibrium from *E* to *F*, increasing output from Y_0 to Y_1 and increasing price level from P_0 to P_1 .

Short-Run Equilibrium in the *AD/AS* Model



A shift up in the short-run aggregate supply curve changes equilibrium from E to G , decreasing output from Y_0 to Y_2 and increasing price level from P_0 to P_2 .

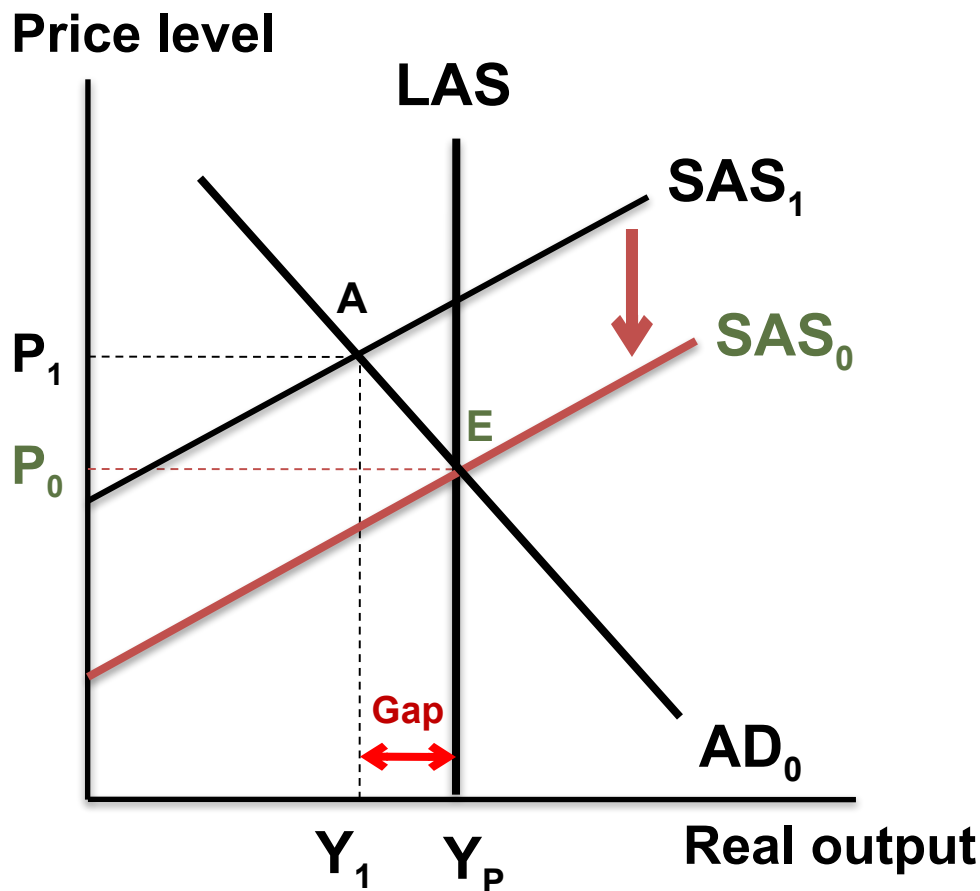
Long-Run Equilibrium in the *AD/AS* Model



Long-run equilibrium is where the LAS and AD curves intersect.

A shift in the aggregate demand curve changes equilibrium from E to H, increasing the price level from P_0 to P_1 but leaving output unchanged.

Application: A Recessionary Gap in the *AD/AS* Model

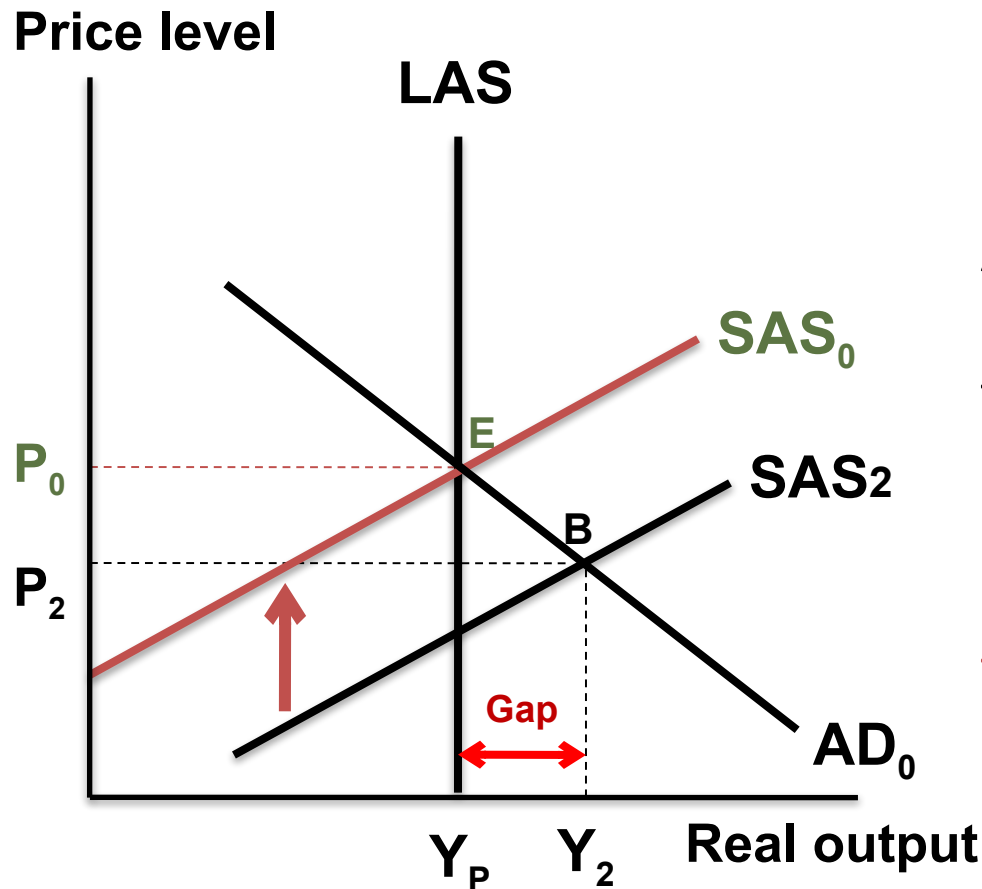


A **recessionary gap** is the amount by which equilibrium output is below potential output.

At point A, some resources are unemployed and the recessionary gap is $Y_P - Y_1$.

Eventually wages and prices decrease and SAS shifts down to return the economy to a long and short-run equilibrium at E.

Application: An Inflationary Gap in the AD/AS Model



An **inflationary gap** is the amount by which equilibrium output is above potential output.

At point B, resources are being used beyond their potential and the inflationary gap is $Y_2 - Y_P$.

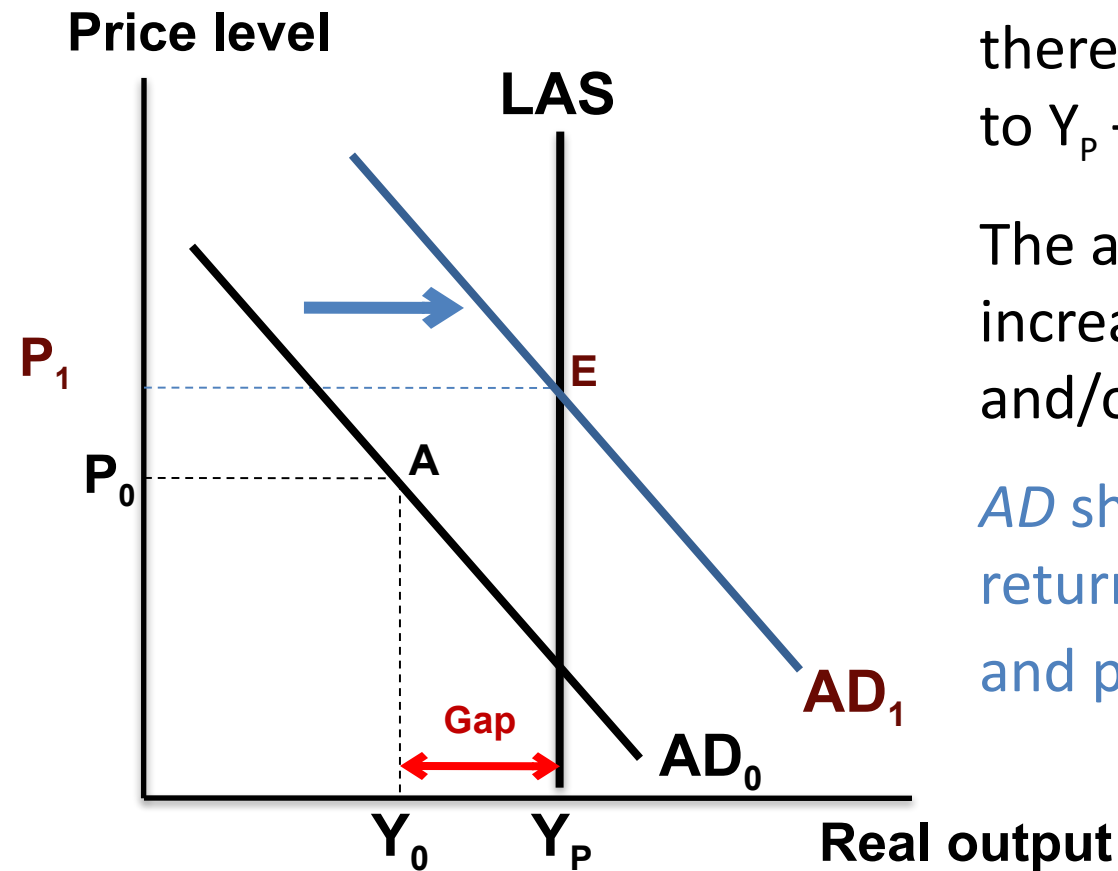
Eventually wages and prices increase and SAS shifts to return the economy to a long and short-run equilibrium at E.

Aggregate Demand Policy

A primary reason for government policy makers' interest in the AS/AD model is that monetary or fiscal policy shifts the AD curve.

- **Monetary policy** involves the Federal Reserve Bank changing the money supply and interest rates.
- **Fiscal policy** is the deliberate change in either government spending or taxes to stimulate or slow down the economy.

Application: Expansionary Fiscal Policy in the *AD/AS* Model

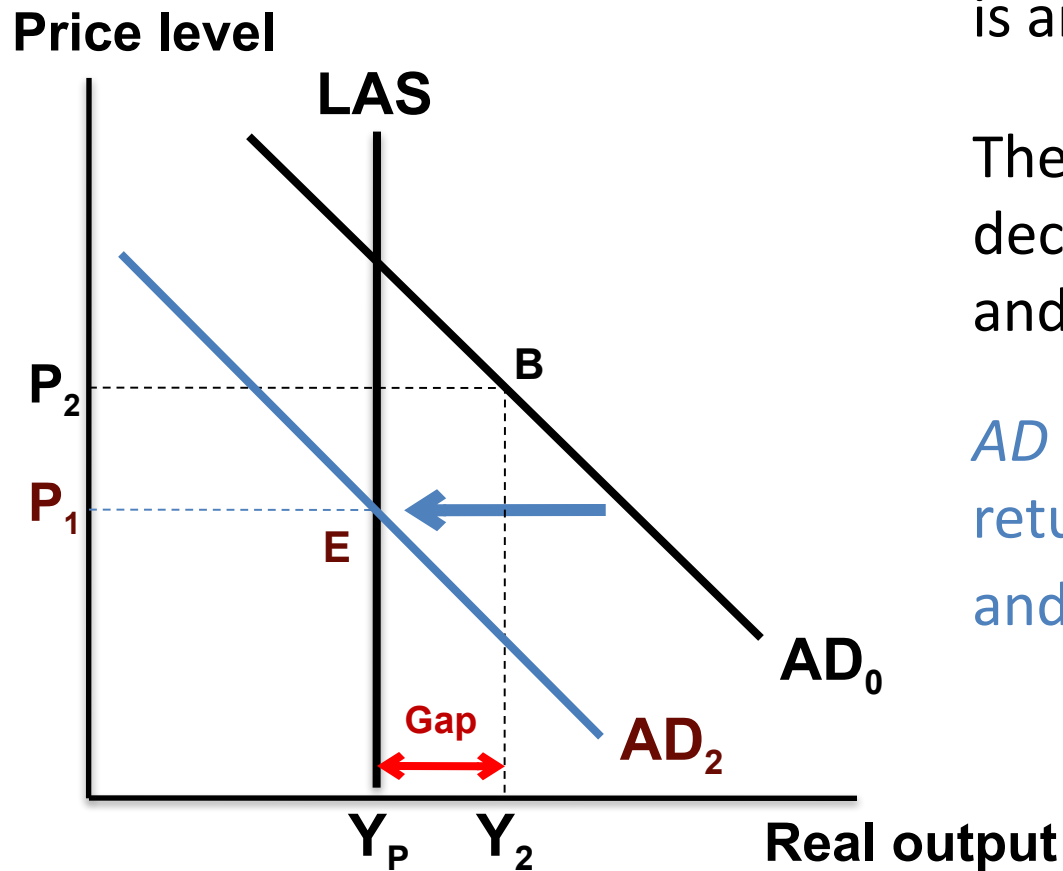


If the economy is at point A, there is a recessionary gap equal to $Y_P - Y_0$.

The appropriate fiscal policy is to increase government spending and/or decrease taxes.

AD shifts to the right and output returns to potential output Y_P and prices increase to P_1 .

Application: Contractionary Fiscal Policy in the *AD/AS* Model



If the economy is point B, there is an inflationary gap $Y_2 - Y_P$.

The appropriate fiscal policy is to decrease government spending and/or increase taxes.

AD shifts to the left, output returns to potential output Y_P and inflation is prevented.

Limitations of the *AS/AD* Model

- The *AS/AD* model assumes away many possible feedback effects that can significantly affect the macroeconomy and lead to quite different conclusions.
- Implementing fiscal policy through changing taxes and government spending is a slow legislative process.
- There is no guarantee that government will do what economists say is necessary.

Limitations of the *AS/AD* Model

- Potential output (the level of output that the economy is capable of producing without generating inflation) is difficult to estimate.
- We do have ways to get a rough idea of where it is.
- There are many other possible interrelationships in the economy that the model does not take into account.
- The aggregate economy can become dynamically unstable, so a shock can set in motion changes that will not automatically be self-correcting.

Limitations of the *AS/AD* Model

There are two ways to think about the effectiveness of fiscal policy: in the model and in reality.

The effectiveness of fiscal policy depends on the government's ability to perceive and to react appropriately to a problem.

Countercyclical fiscal policy is fiscal policy in which the government offsets any change in aggregate expenditures that would create a business cycle.

Fine-tuning is used to describe such fiscal policy designed to keep the economy always at its target or potential level of income.

Chapter Summary (1 of 3)

The key idea of the Keynesian *AS/AD* model is that in the short run the economy can deviate from potential output.

The *AS/AD* model consists of the aggregate demand curve, and the short-run aggregate supply curve, and the long-run aggregate supply curve.

The aggregate demand curve slopes downward because of the interest rate effect, the international effect, the money wealth effect, and the multiplier effect.

The short-run aggregate supply (*SAS*) curve is upward- sloping because, while for the most part firms in the United States adjust production to meet demand instead of changing price, some firms will raise prices when demand increases.

Chapter Summary (2 of 3)

The long-run aggregate supply (*LAS*) curve is vertical at potential output.

The *LAS* curve shifts out when available resources, capital, labor, technology, and/or growth-compatible institutions increase.

Short-run equilibrium is where the *SAS* and *AD* curves intersect; Long-run equilibrium is where the *AD* and *LAS* curves intersect

Aggregate demand management policy attempts to influence the level of output in the economy

Chapter Summary (3 of 3)

Fiscal policy works by providing a deliberate countershock to offset unexpected shocks to the economy.

Macroeconomic policy is difficult to conduct because:

- Implementing fiscal policy is a slow process.
- We don't really know where potential output is.
- There are interrelationships not included in the model.
- The economy can become dynamically unstable.

We must estimate potential output by looking at past levels of potential output and by looking at where the price level begins to rise.