

Equilibrium in Aggregate Economy

Equilibrium in the Aggregate Economy

- Changes in the *SAS*, *AD*, and *LAS* curves affect short-run and long-run equilibrium.

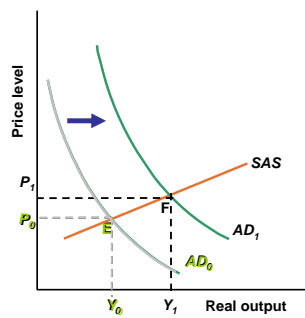
Short-Run Equilibrium

- Short-run equilibrium is where the *AS* and *AD* curves intersect.

Short-Run Equilibrium

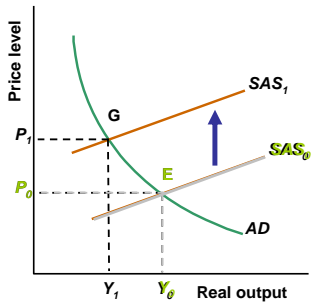
- Increases (decreases) in aggregate demand lead to higher (lower) real output and higher (lower) price level.
- Upward (downward) shift the SAS curve lead to lower (higher) real output and higher (lower) price level.

Short-Run Equilibrium



- Short-run equilibrium is where $SAS = AD_0$ (point E). Equilibrium output is Y_0 and the price level is P_0 .
- If AD increases to AD_1 , equilibrium output increases to Y_1 and the price level increases to P_1 .

Short-Run Equilibrium



- Short-run equilibrium is where $SAS_0 = AD$ (point E). Equilibrium output is Y_0 and the price level is P_0 .
- If SAS increases to SAS_1 , equilibrium output decreases to Y_1 and the price level increases to P_1 (point G).

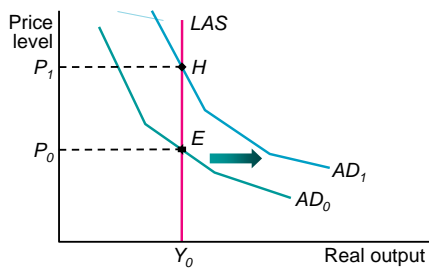
Long-Run Equilibrium

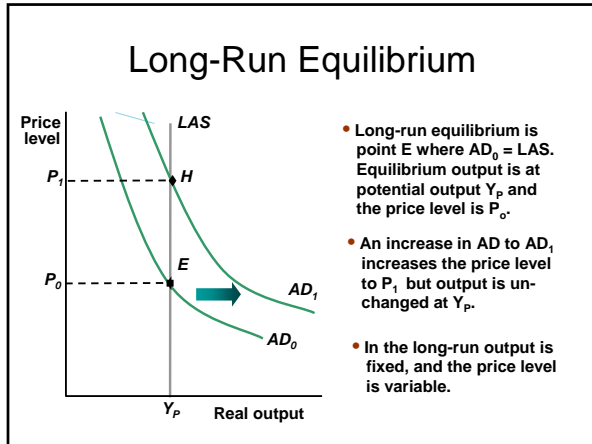
- Long-run equilibrium is where the *AD* and long-run aggregate supply curves intersect.
- In the long run, output is fixed and the price level is variable.

Long-Run Equilibrium

- Aggregate demand determines the price level.
- Increases (decreases) in aggregate demand lead to higher (lower) prices.

Long-Run Equilibrium: Shift in Aggregate Demand





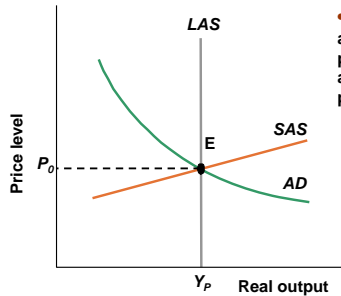
Integrating the Short-Run and Long-Run Frameworks

- The economy is in both short-run and long-run equilibrium when all three curves intersect in the same location.

Integrating the Short-Run and Long-Run Frameworks

- The ideal situation is for aggregate demand to grow at the same rate as aggregate supply and potential output.
- Unemployment and growth are at their target rates with no inflation.

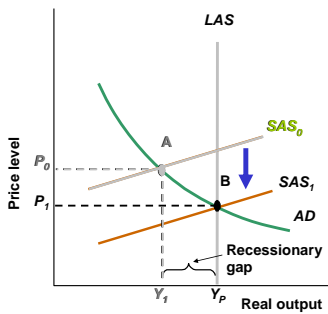
Integrating Short-Run and Long-Run Equilibrium



- The economy is in long-run and short-run equilibrium at point E where $AD=SAS=LAS$ and output is Y_P and the price level is P_0 .

- AD grows at the same rate as potential output, so that unemployment and inflation are very low.

Recessionary Gap



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

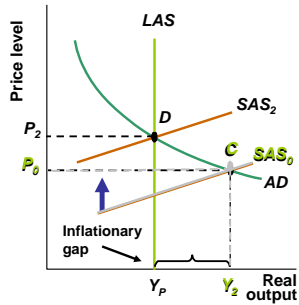
- If the economy is at point A, some resources are unemployed and the recessionary gap is $Y_P - Y_1$.

- If resources are unemployed for a long time, eventually wages and prices decrease. SAS shifts down to SAS_1 , and the economy is in long-run and short-run equilibrium at B.

The Recessionary Gap

- If the economy remains at this level for a long time, there would be an excess supply of factors of production.
- Costs and wages would tend to fall.

Inflationary Gap



- An **inflationary gap** is the amount by which equilibrium output is above potential output.
- If the economy is at point C, resources are being used beyond their potential and the inflationary gap is $Y_P - Y_2$.
- If resources are used beyond their potential, eventually wages and prices increase. SAS shifts up to SAS_2 , and the economy is in long-run and short-run equilibrium at D at a higher price level, P_2 .

The Inflationary Gap

- The **inflationary gap** occurs when the economy is above potential that exists at the current price level.
- Factor prices rise causing the SAS curve to shift up.
- The price level rises, and the inflationary gap is eliminated.

The Economy Beyond Potential

- When the economy operates below its potential, firms can hire additional factors of production without increasing production costs.
- Once the economy reaches its potential output, that is no longer possible.

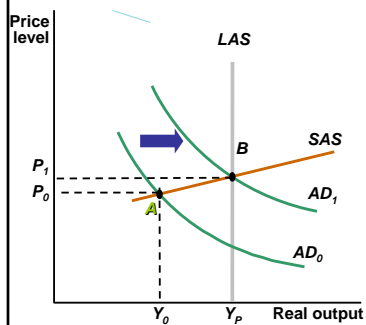
The Economy Beyond Potential

- As firms compete for resources, costs rise beyond productivity increases.
- The short-run AS curve shifts up and the price level rises.

The Economy Beyond Potential

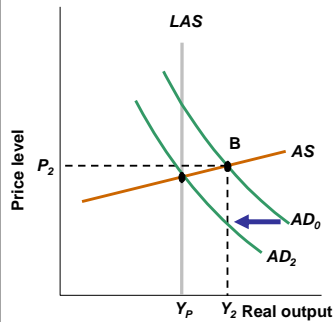
- The economy will slow down by itself or the government will step in with a policy to contract output and eliminate the inflationary gap.

Expansionary Fiscal Policy



- If the economy is at equilibrium at point A, there is a recessionary gap $Y_0 - Y_p$.
- The appropriate fiscal policy is to increase government spending and/or decrease taxes.
- AD increases to AD_1 and output returns to potential output Y_p and prices increase slightly to P_1 .

Contractionary Fiscal Policy



- If the economy is at equilibrium at 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 decreases to AD_2 and output returns to potential output Y_p and inflation is prevented.

Macro Policy Is More Complicated Than It Looks

- Using the AS/AD model to analyze the economy is more complicated than it looks.
 - Implementing fiscal policy.
 - Estimating potential output.
 - Effectiveness of fiscal policy.

The Problem of Implementing Fiscal Policy

- There is no guarantee that government will do what the economy needs to be done.
 - Implementing government spending and tax changes is a slow legislative process.
 - Government spending and tax decisions are made for political rather than for economic reasons.

The Problem of Estimating Potential Output

- Increasing *AD* when the economy is operating at its potential will accelerate inflation by shifting up the *SAS* curve.

The Problem of Estimating Potential Output

- One way of estimating potential output is to estimate the target rate of unemployment.
- **Target rate of unemployment** – the rate below which inflation began to accelerate in the past.

The Problem of Estimating Potential Output

- Unfortunately, the target rate of unemployment fluctuates and is difficult to predict.
- For example, there is structural but no cyclical unemployment at potential output – it is difficult to differentiate between the two.

The Problem of Estimating Potential Output

- Another way to determine potential output is to add the normal growth factor (3%) the economy's previous level.
- Estimating the economy's potential from past growth rates is complicated.

The Questionable Effectiveness of Fiscal Policy

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

The Questionable Effectiveness of Fiscal Policy

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