
Agenda

• Aggregate Demand and Aggregate Supply

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• The $AD-AS$ model is derived from the $IS-LM$ model.
  ➢ The two models are equivalent.
  ➢ Depending on the particular issue, one model may prove more useful than the other model.
  • The $IS-LM$ model relates the real interest rate to output.
  • The $AD-AS$ model relates the price level to output.

The $AD$ Curve

• The aggregate demand curve:
  ➢ The $AD$ curve shows the relationship between the quantity of goods demanded and the price level when the goods market and the asset market are in equilibrium.
  • So the $AD$ curve represents the price level and output level at which the $IS$ and $LM$ curves intersect.
The AD Curve

- The aggregate demand curve:
  - The AD curve is unlike other demand curves, which relate the quantity demanded of a good to its relative price.
  - The AD curve relates the total quantity of goods demanded to the general price level, not a relative price.

The AD Curve

- The aggregate demand curve:
  - The AD curve slopes downward because a higher price level is associated with lower real money supply, shifting the LM curve up, raising the real interest rate, and decreasing output demanded.
The AD Curve

- Factors that shift the AD curve:
  
  ➢ Both the IS and AD curves shift to the right with:
    
    • Increases in expected future output,
    • Increases in wealth,
    • Increases in government purchases,
An increase in the money supply

The AS Curve

- The aggregate supply curve:
  - The aggregate supply curve shows the relationship between the price level and the aggregate amount of output that firms supply.
  - In the short run, prices remain fixed, so firms supply whatever output is demanded.
    - The short-run aggregate supply curve is horizontal.
  - This does NOT mean that P is exogenous.
    - Prices are pre-determined by events in prior time periods.
    - The assumption is based on the observation that in the short-run both prices and wages are sticky.
  - In the long run, firms supply the full-employment level of output, which is not affected by the price level.
    - The long-run aggregate supply curve is vertical.
The **SRAS** and **LRAS** Curves

The **SRAS** Curve

- **Factors that shift the SRAS curve:**
  - The **SRAS** curve shifts **up** (higher) with:
    - Excess demand in the prior time period, and/or
    - Increased costs of production (that cause higher prices).
      - Sharp changes in input costs:
        » Exogenous increases in wages,
        » Increases in commodity prices,
        » Increases in imported goods prices, especially oil, and/or
        » Decreases in productivity.

The **LRAS** Curve

- **Factors that shift the LRAS curve:**
  - The **LRAS** curve shifts **right** with:
    - Increases in productivity,
    - Increases in labor supply, and/or
    - Increases in the capital stock.
    - that increase the full-employment level of output.
An increase in productivity

The $AD-AS$ Model

- Equilibrium in the $AD-AS$ model:
  - Short-run equilibrium: $AD$ intersects $SRAS$.
  - Long-run equilibrium: $AD$ intersects $LRAS$.
  - General equilibrium: $AD$, $LRAS$, and $SRAS$ all intersect at same point.

Equilibrium in the $AD-AS$ model

Aggregate Demand and Aggregate Supply

- Equilibrium in the $AD-AS$ model:
  - If the economy is not in general equilibrium, economic forces work to restore general equilibrium both in $AD-AS$ diagram and $IS-LM$ models.