
The *IS-LM/AD-AS* Model: A General Framework for Macroeconomic Analysis, Part 2

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Agenda

- Aggregate Demand and Aggregate Supply

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Aggregate Demand and Aggregate Supply

- 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.

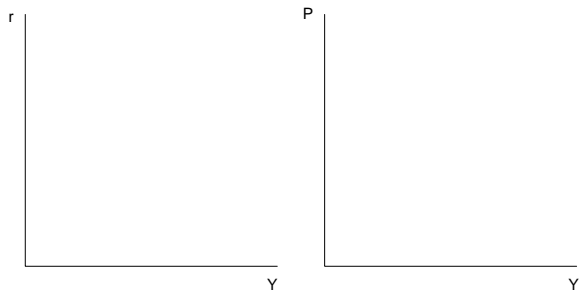
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The *AD* Curve

- 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.

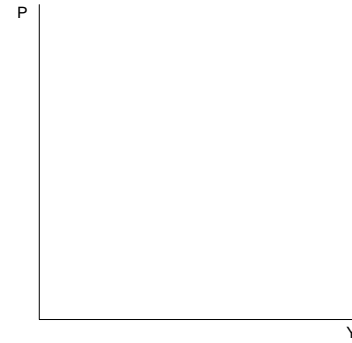
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Derivation of the *AD* Curve



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The *AD* Curve



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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.

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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.

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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,

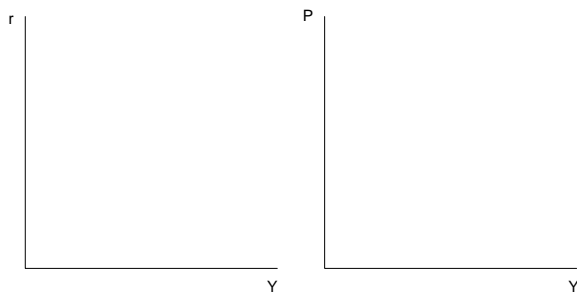
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The AD Curve

- Factors that shift the AD curve:
 - Both the IS and AD curves shift to the right with:
 - Increases in the expected MPK' ,
 - Decreases in taxes,
 - Assuming Ricardian equivalence does not hold, or
 - Decreases in the effective tax rate on capital.

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An increase in government purchases



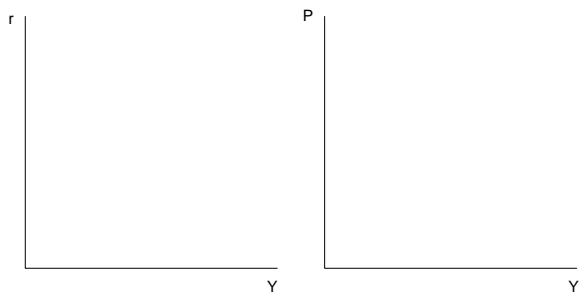
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The AD Curve

- Factors that shift the AD curve:
 - Both the LM and AD curves shift to the right with:
 - Increases in the nominal money supply,
 - Increases in expected inflation,
 - Decreases in the real demand for money, and/or
 - Decreases in the nominal interest rate on money.

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An increase in the money supply



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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.

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The AS Curve

- The aggregate supply curve:
 - 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.

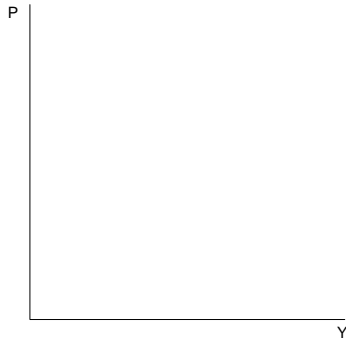
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The AS Curve

- The aggregate supply curve:
 - 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.

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The *SRAS* and *LRAS* Curves



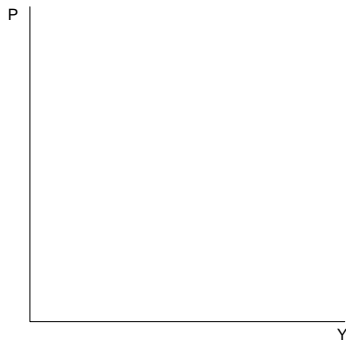
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The *SRAS* Curve

- 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.

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An increase in imported goods prices



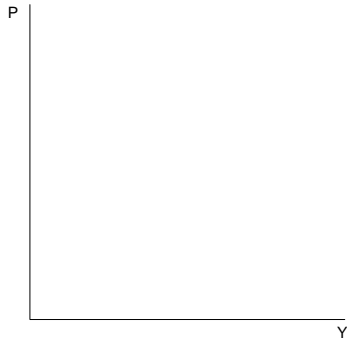
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The *LRAS* Curve

- 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.

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An increase in productivity



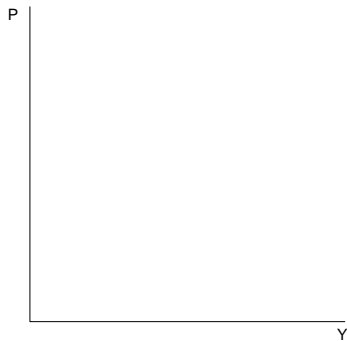
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The AD-AS Model

- 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.

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Equilibrium in the AD-AS model



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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.

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