Lecture 6: Aggregate Demand and Aggregate Supply Analysis

Instructor: Fei Tan

@econdojo   @BusinessSchool101   Saint Louis University

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## The Road Ahead

Aggregate Demand Revisited

Goods market equilibrium

$$\underbrace{Y}_{\text{GDP}} = \underbrace{C + I + G + NX}_{\text{aggregate demand (AD)}}$$

- How AD depends on price level (P)

  - **wealth effect:** $P \uparrow \Rightarrow$ real value of wealth $\downarrow \Rightarrow C \downarrow$

  - **interest-rate effect:** $P \uparrow$ with unchanged $M^s \Rightarrow i \uparrow \Rightarrow I \downarrow$

  - **international-trade effect:** $P \uparrow \Rightarrow$ EX $\downarrow$, IM $\uparrow \Rightarrow NX \downarrow$

- Inverse relation b/w price level and real GDP (AD curve)

Aggregate Demand Curve Revisited

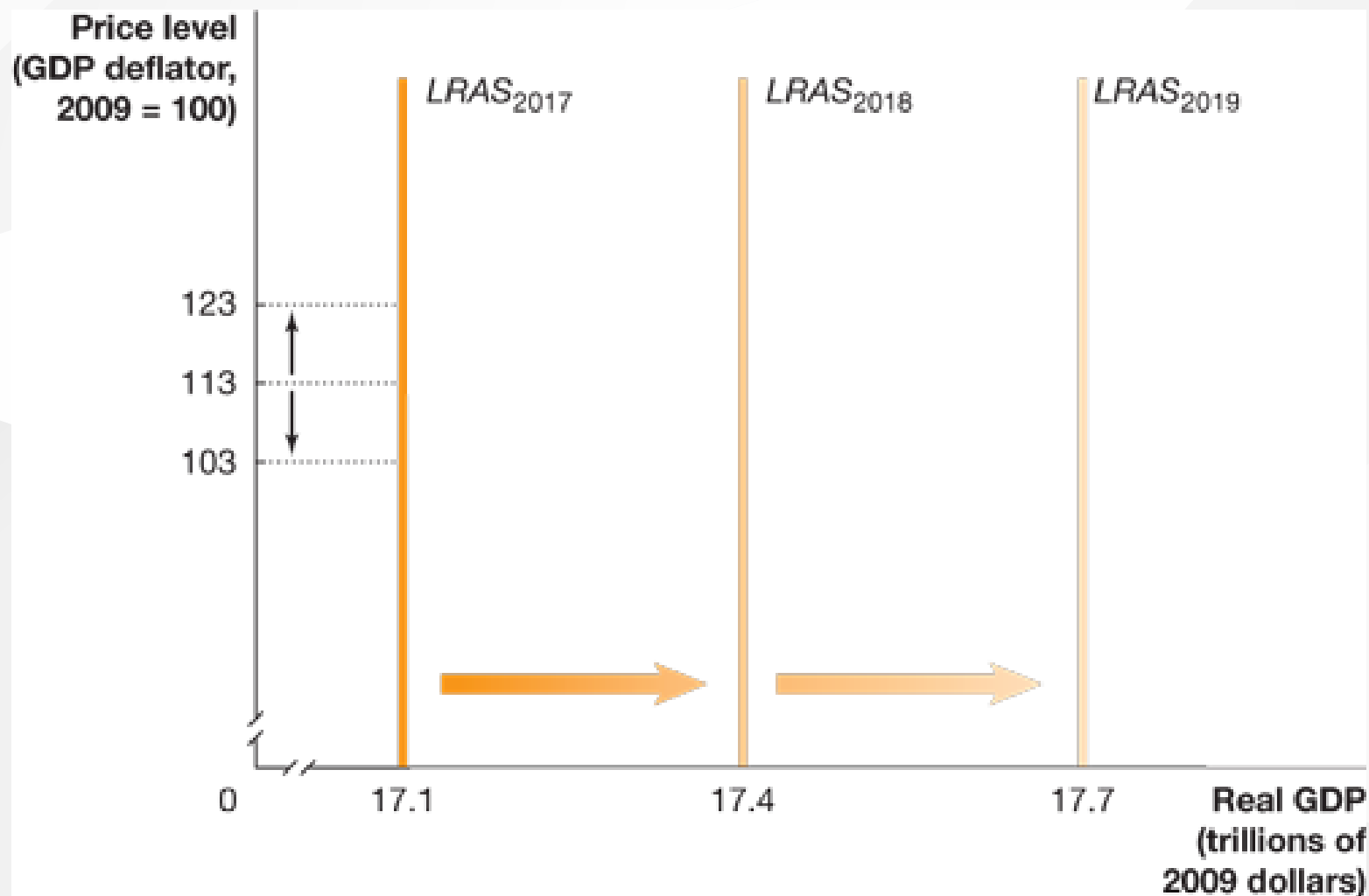| Price Level	Equilibrium Real GDP
97	$10.2 trillion
100	10.0 trillion
103	9.8 trillion
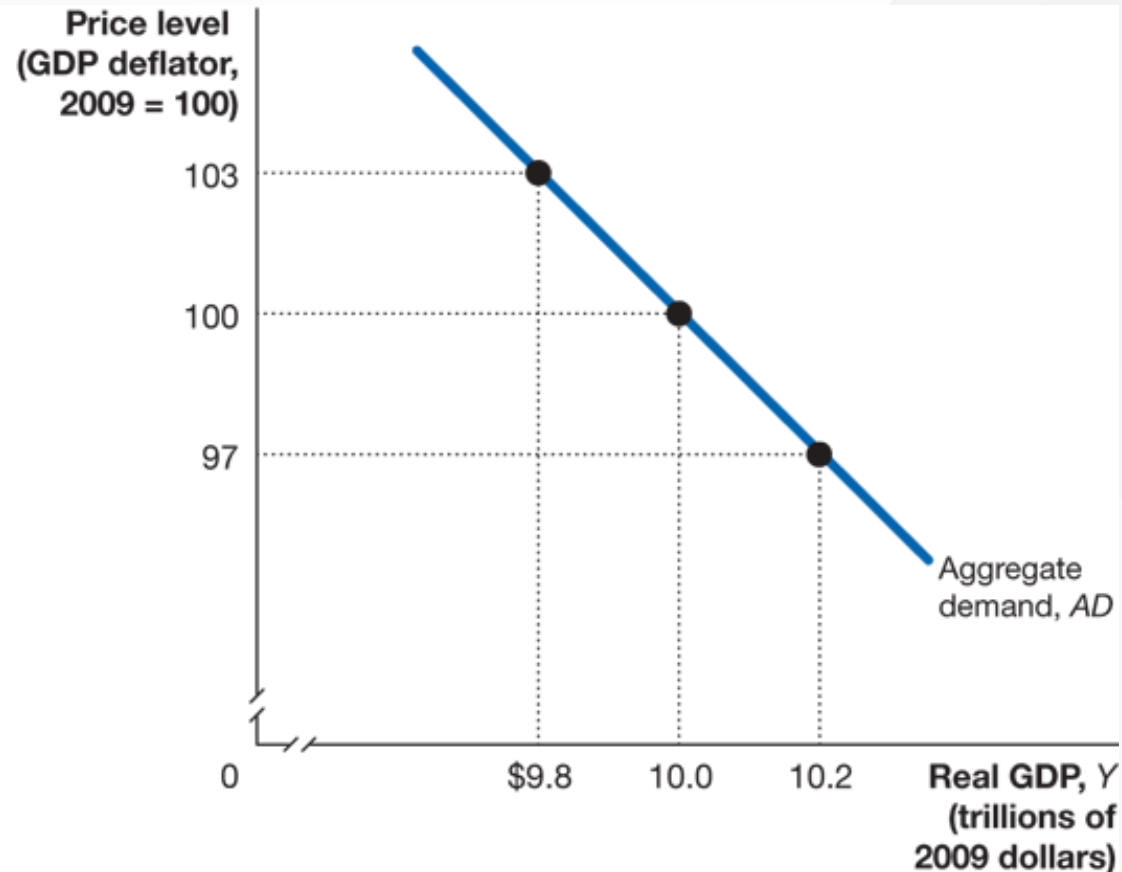
- Shifters of AD curve: monetary-fiscal policy, expectations of households/firms, foreign variables

Aggregate Supply

- **Aggregate supply curve:** relation b/w price level and quantity of products firms are willing and able to supply

- **Long-run aggregate supply (LRAS) curve**

  - long-run real GDP depends on number of workers, technology level, capital stock, etc.

  - none of above are affected by price level

- **Short-run aggregate supply (SRAS) curve**

  - contracts make some wages "sticky"

  - menu costs make some prices "sticky"

  - SRAS curve slopes upward
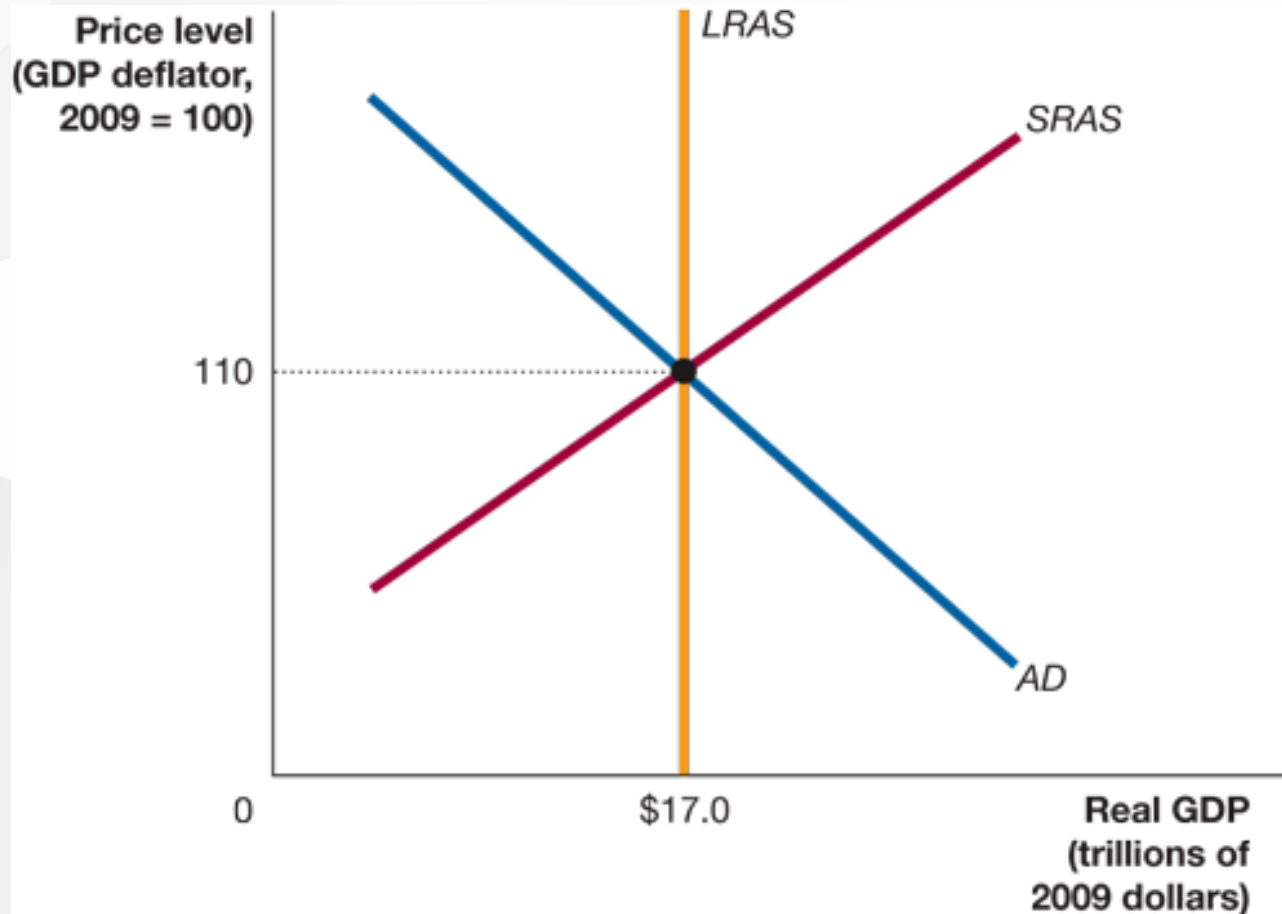
Long-Run Aggregate Supply Curve

- LRAS curve occurs at potential/full-employment GDP, advancing each year
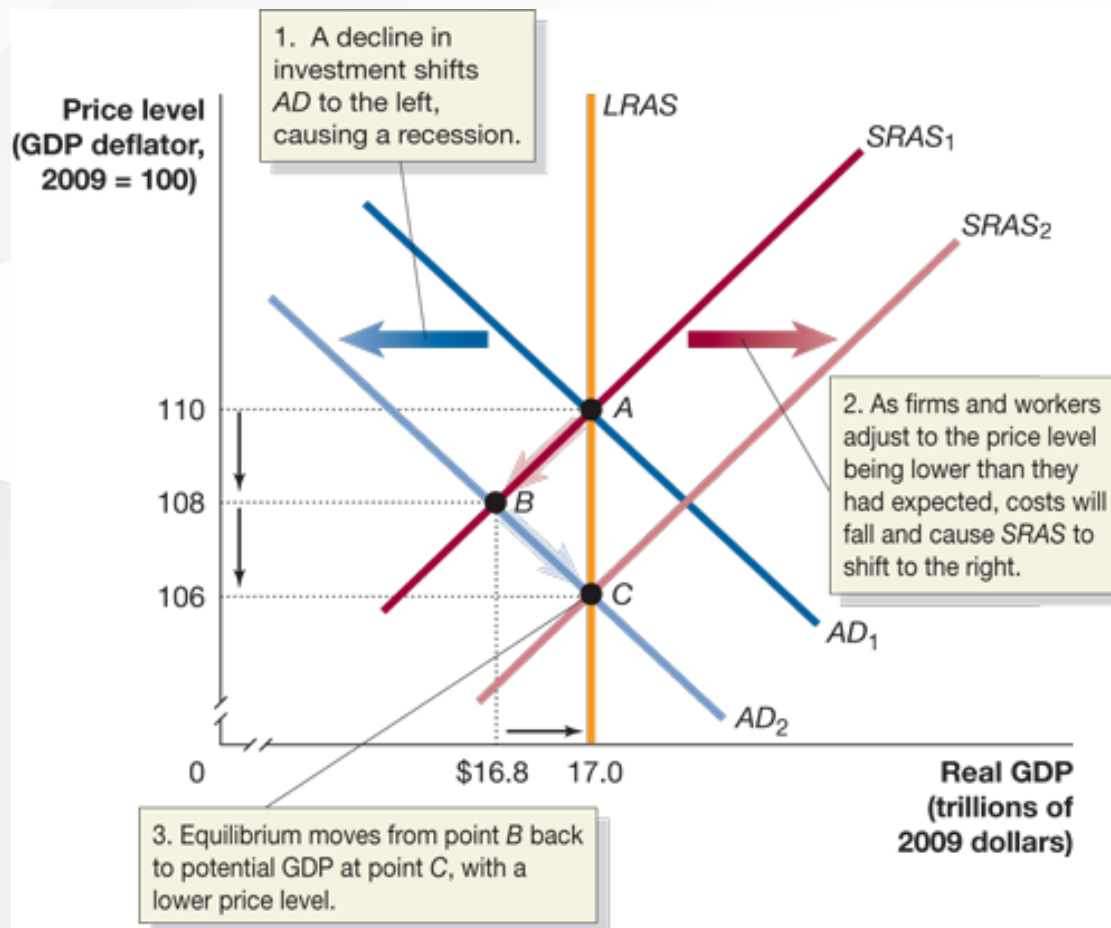
Short-Run Aggregate Supply Curve
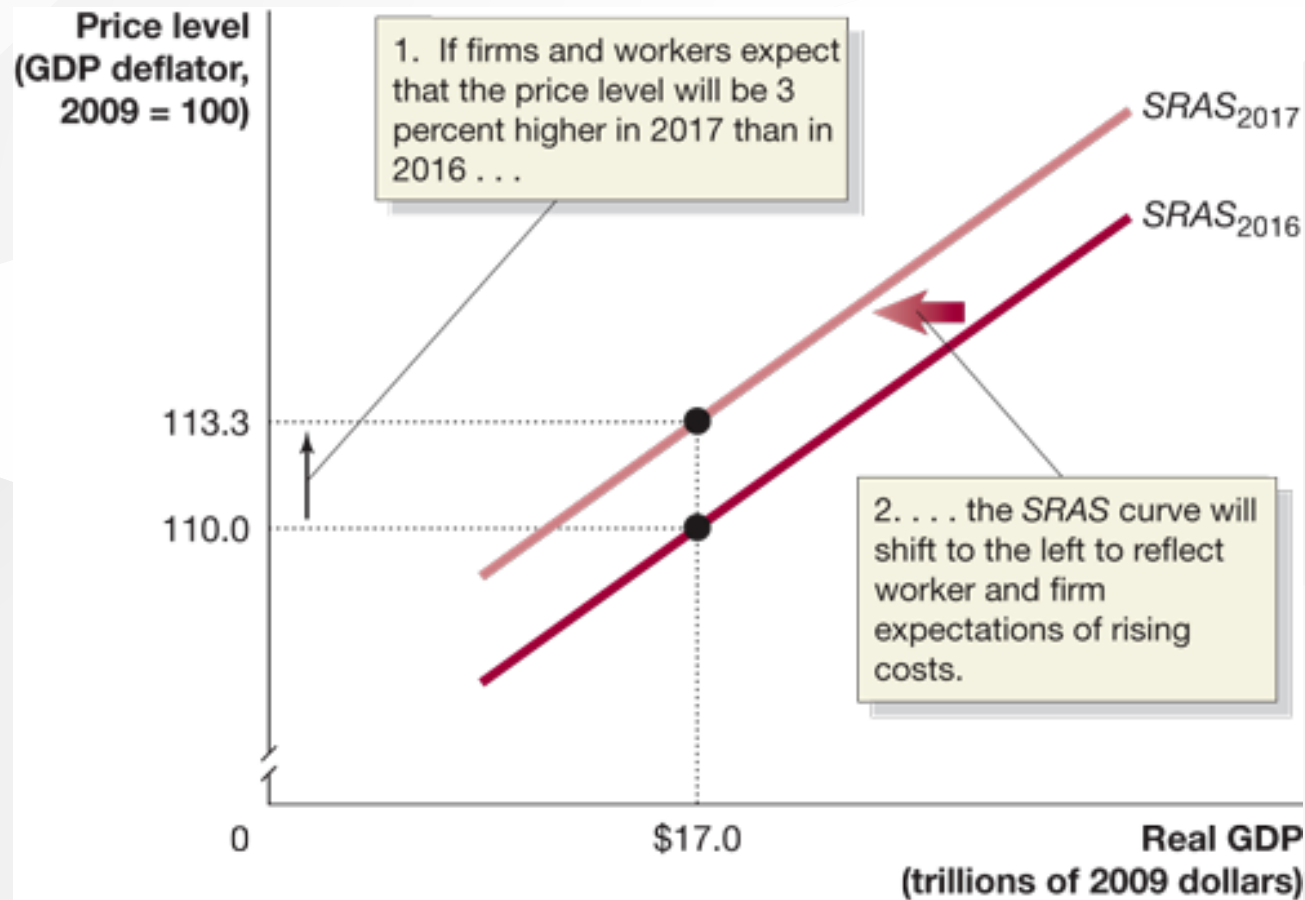
- Shifters of SRAS curve: labor, capital, technology, expectations of future price level, supply shock
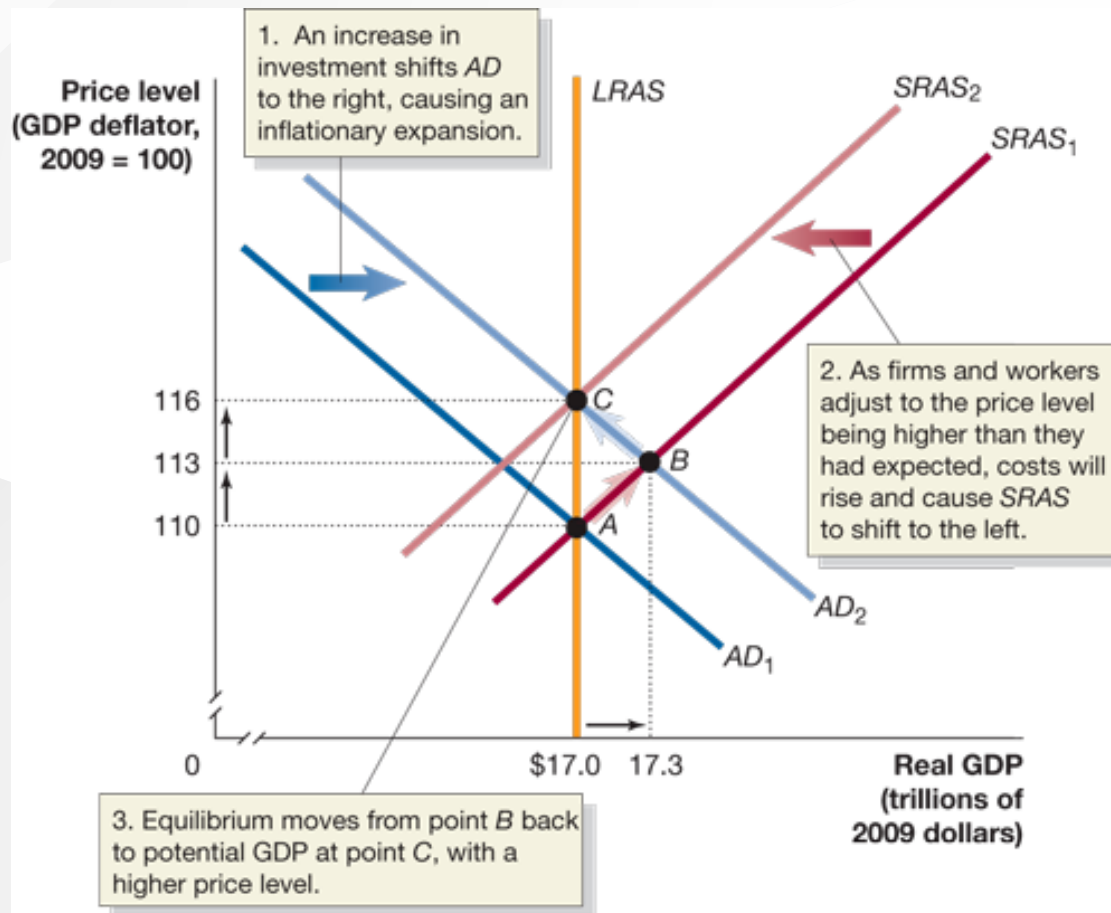
Macroeconomic Equilibrium

- Static AD-AS model: no inflation, no growth

- Long-run equilibrium: short-run equilibrium occurs at potential GDP
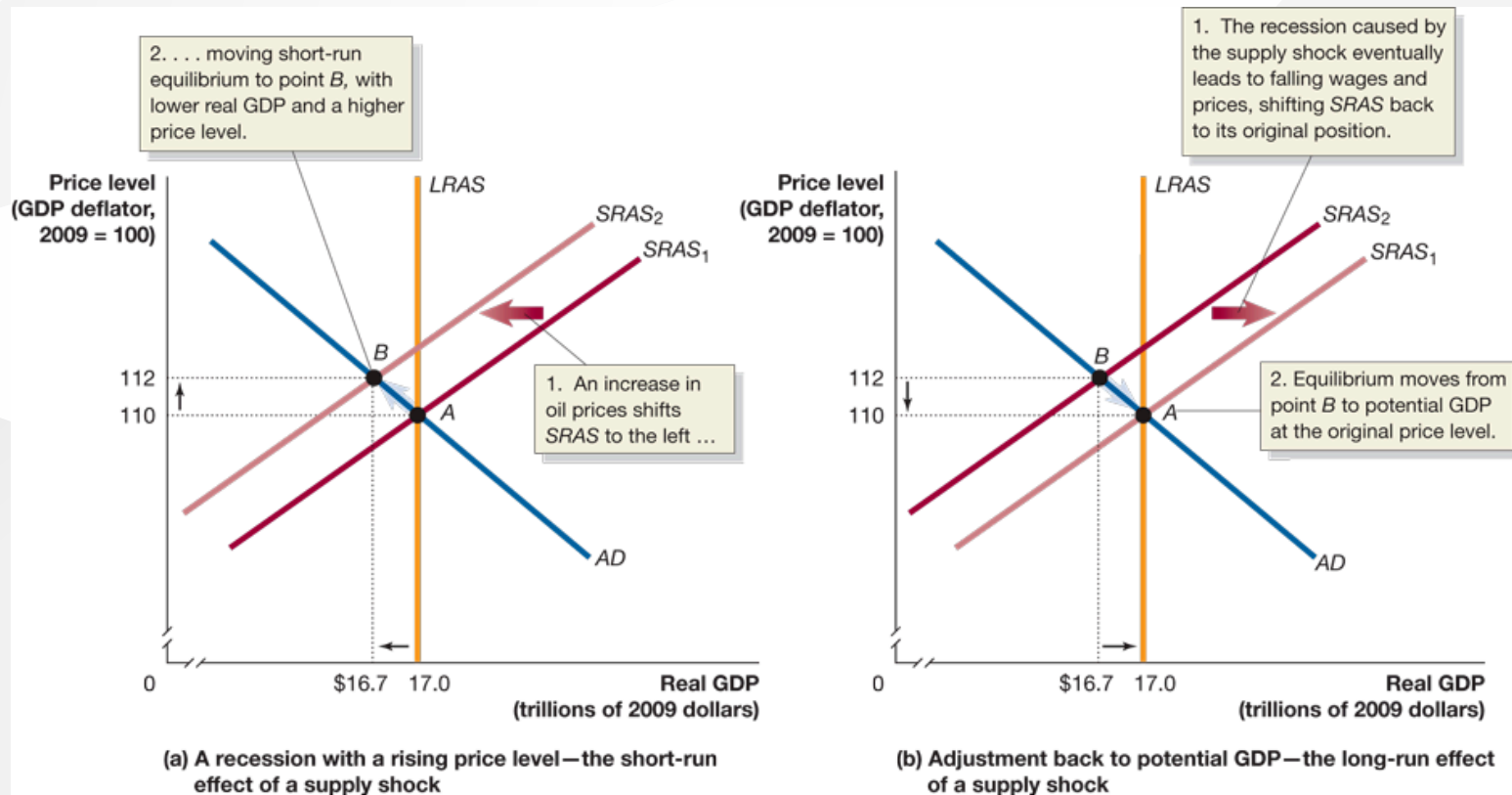
Effects of Decline in Aggregate Demand

- **Short-run:** recession (monetary & fiscal policy?)

- **Long-run:** lower price level (automatic mechanism)

# Effects of Increase in Aggregate Demand

- **Short-run:** expansion (monetary & fiscal policy?)

- **Long-run:** higher price level (automatic mechanism)

Effects of Negative Supply Shock

2. . . . moving short-run equilibrium to point B, with lower real GDP and a higher price level.

1. An increase in oil prices shifts SRAS to the left …

(a) A recession with a rising price level—the short-run effect of a supply shock

1. The recession caused by the supply shock eventually leads to falling wages and prices, shifting SRAS back to its original position.

2. Equilibrium moves from point B to potential GDP at the original price level.

(b) Adjustment back to potential GDP—the long-run effect of a supply shock
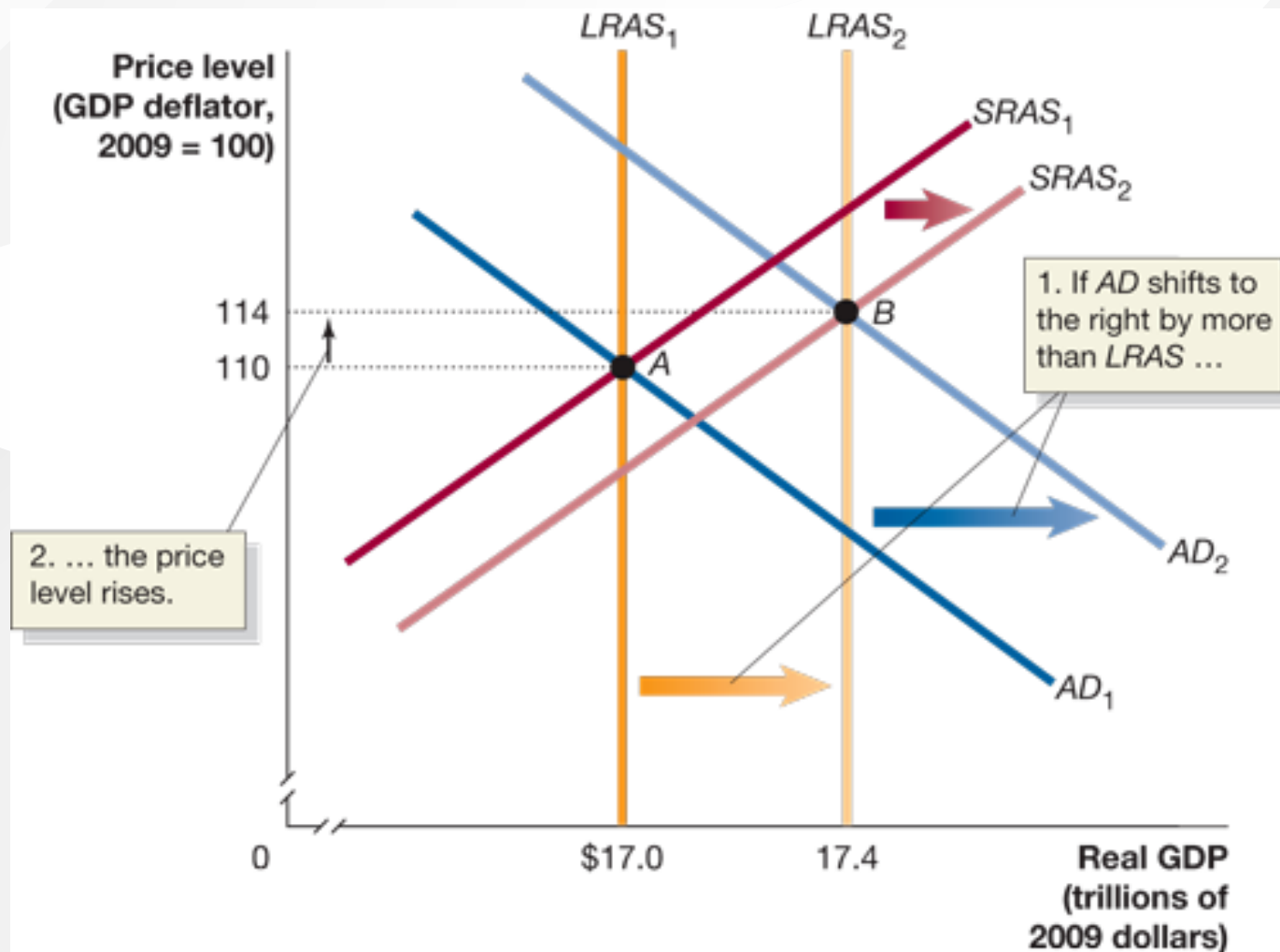
- **Short-run:** stagflation—mix of inflation and recession (monetary & fiscal policy?)
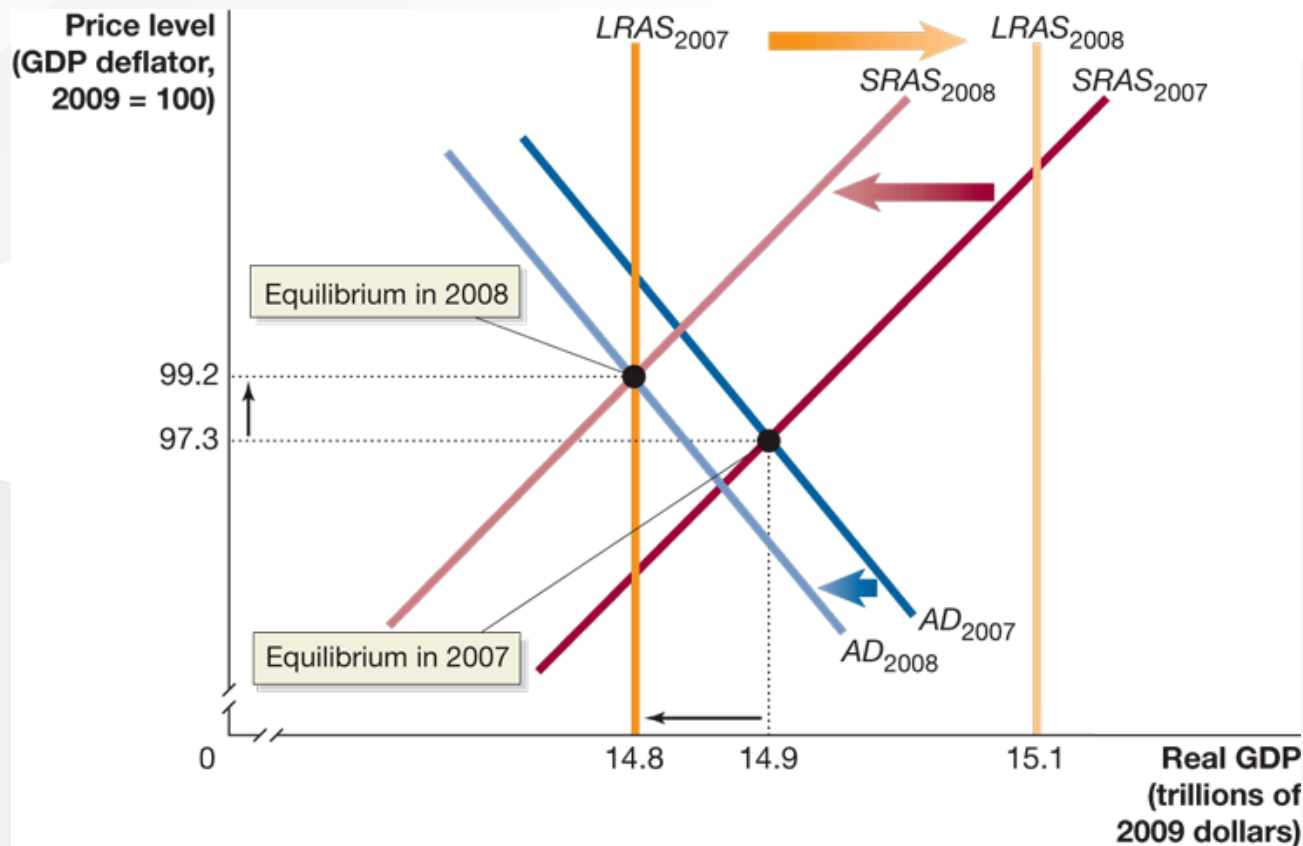- **Long-run:** same price level (automatic mechanism)

Dynamic AD-AS Model
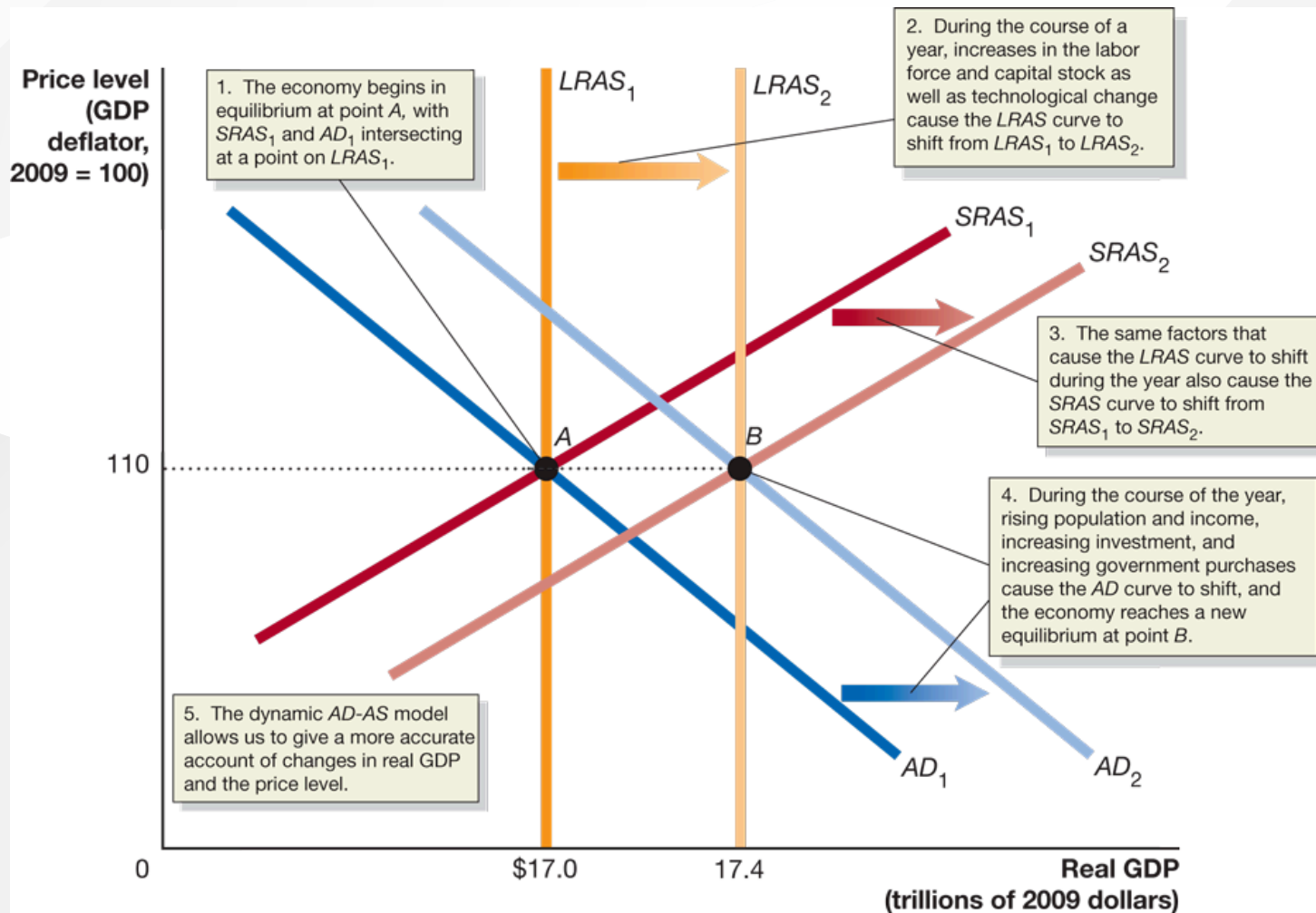
- Dynamic model allows for long-run growth

Dynamic AD-AS Model (Cont'd)

- Dynamic model allows for inflation

Recession of 2007-2009

- **Financial crisis:** housing bubble bursts ⇒ default on mortgage loan ⇒ credit crunch ⇒ C ↓, I ↓ ⇒ AD ←

- **(-) supply shock:** rising oil prices ⇒ SRAS ←

Readings & Exercises

- Readings

  - HO: chapter 13

  - BJ: lecture 6

- Exercises

  - HO: problem 1.5, 2.5, 2.9, 3.5, 3.10, 4.6, D13.1