Chapter 22: Aggregate Supply and Aggregate Demand

ECO 301: Money and Banking

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1.1 Goals

Goals

- Specific Goals
  - Be able to explain GDP fluctuations when the price level is also flexible.
  - Explain how real GDP and the price level are related in the short run.
- Learning Objectives
  - LO2: Understand the role money plays in the interaction with markets for other assets.
  - LO5: Analyze macroeconomic problems and prescribe appropriate monetary policy solutions.

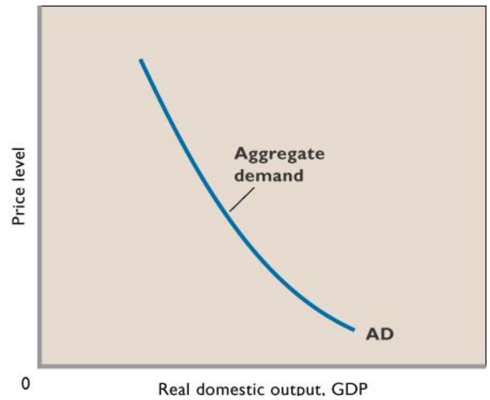
2 Aggregate demand

Aggregate Demand

- **Aggregate demand**: schedule or curve that shows the quantities of real GDP that buyers collectively desire to purchase at each price level.
- Aggregate demand is downward sloping - *but not for the same reason the demand curve for a single product is downward sloping.*
- Recall demand curves for single goods slope downward because of the substitution effect and the income effect.

2.1 Downward sloping

Aggregate Demand



Downward sloping AD

- **Real balances effect**: when the price level increases, the purchasing power of the consumers' accumulated savings balances decreases.
  - With a lower real savings balance, consumers decrease consumption.
- **Foreign purchases effect**: When the price level rises relative to the price level in foreign countries, the foreign demand for U.S. products decreases. Similarly, the demand for imports increases.
  - This causes exports to fall and imports to rise.

2.2 Determinants of AD

Determinants of AD

- When something *the price level* affects the AD, this causes the AD curve to shift.
- The following affect *consumption* and therefore shift AD.
  - Consumer wealth: financial assets such as savings accounts, stocks, and bonds, and physical assets that consumers can borrow against like houses and land.
    - When consumer wealth increases, aggregate demand increases, causing it to shift to the *right*.
  - Household indebtedness: if household debt increases, AD shifts to the left.
  - Taxes: Increase in taxes decreases consumption, AD shifts to the left.

- Consumer expectations: expectations about future income or future taxes can shift AD.
- Real interest rate: an increase in the real interest rate decreases consumption which shifts AD to the left.

Determinants of AD

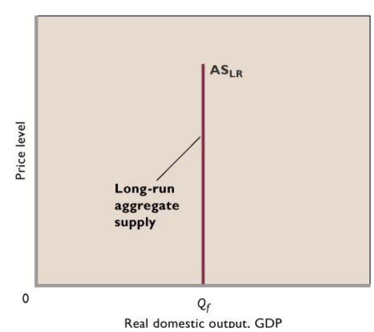
- The following affect investment and therefore shift AD.
  - Real interest rate: increases the cost of investment, therefore shifts AD to the left.
  - Expectations: expectations about the return on an investment shift investment demand and therefore shift AD.
- Change in government purchases.
- The following affect exports or imports and therefore shift AD.
  - Foreign incomes: higher foreign incomes increase exports, shifts AD to the right.
  - Exchange rates: when the value of U.S. currency depreciates, this causes imports to _____ and exports to _______.

3 Aggregate supply

3.1 Long run AS

Long run aggregate supply

Long run aggregate supply: in the long run the economy uses all factors of production efficiently, therefore long run aggregate supply is a vertical line at **potential GDP**

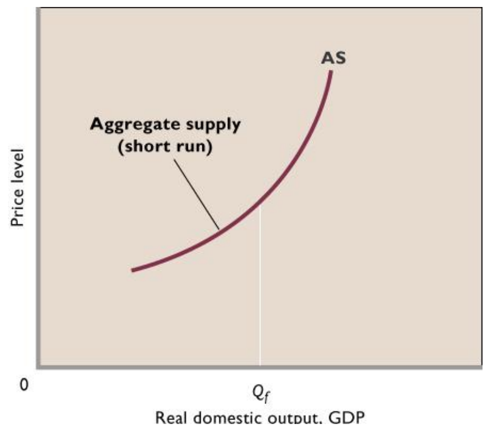


3.2 Short run AS

Short run aggregate supply

- In the short run, factor markets are slow to adjust. Wages are slow to adjust and there may unemployment or even excess employment.
- Therefore in the short run, the aggregate supply curve is upward sloping.
  - Increases in the price level without increasing wages create larger profits for firms, creates incentive to produce more.

Short run aggregate supply



3.3 Determinants of AS

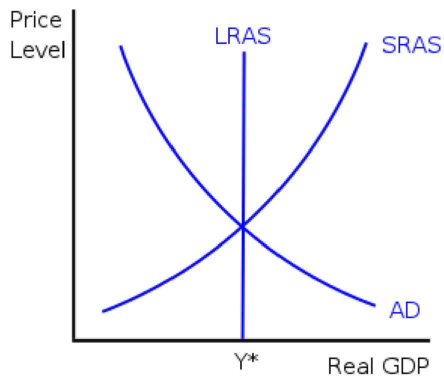
Determinants of AS

- When something *besides the price level* affects AS, this shifts AS.
- Prices of factors of production: when the price of labor, capital, or land increase, this shifts AS to the left.
- Exchange rate: if the value of the U.S. currency decreases, this increases the cost of importing foreign factors of production.
- Technology: an increase in technology shifts AS to the right.
- Business taxes can affect output decisions of firms and shift AS.
- Other government regulation.

4 Equilibrium

Equilibrium

In equilibrium, real GDP and the price level are determined by the intersection of AS and AD



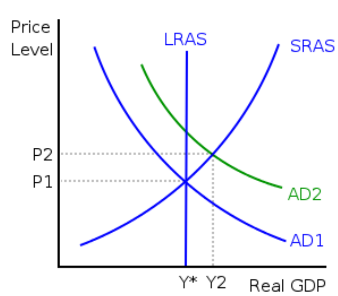
4.1 Inflation

Inflation

- Inflation can come from two sources, excess demand or increases in production costs.
- **Demand pull inflation**: when increases in demand cause inflation.
- **Cost push inflation**: when increases in production cost cause inflation.

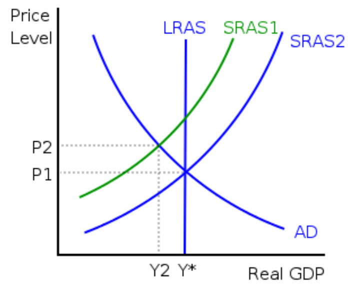
Demand pull inflation

- Demand pull inflation begins when AD increases.
- Causes real GDP to increase and the price level to rise.
- Recall: **inflationary gap**: when aggregate expenditures is equal to real GDP above potential GDP.



Cost push inflation

- Cost-push inflation begins when an increase in production cost shifts SRAS to the left.
- Causes real GDP to fall and price level to rise.
- **Stagflation**: when there is unemployment and high inflation at the same time.

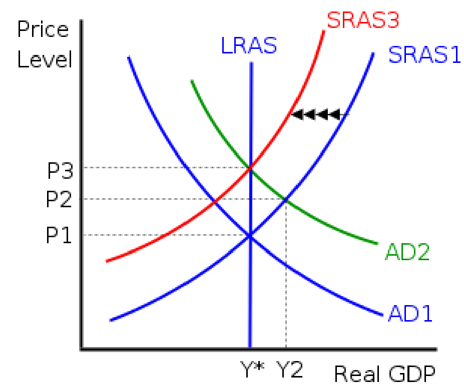


4.2 Long-run equilibrium

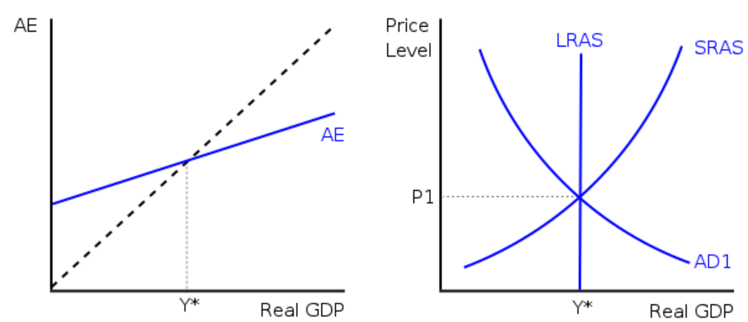
Long-run equilibrium

- Recall why the short run aggregate supply curve is upward sloping.
- Suppose AD shifts to the right.
- Firms will be able to sell more goods. Firms hire more labor and produce more goods.
- Firm's per-unit labor costs do not increase because wages are fixed in the short run.
- In the long run, there is an excess demand for labor, wages will increase.
- This shifts the SRAS curve to the left.

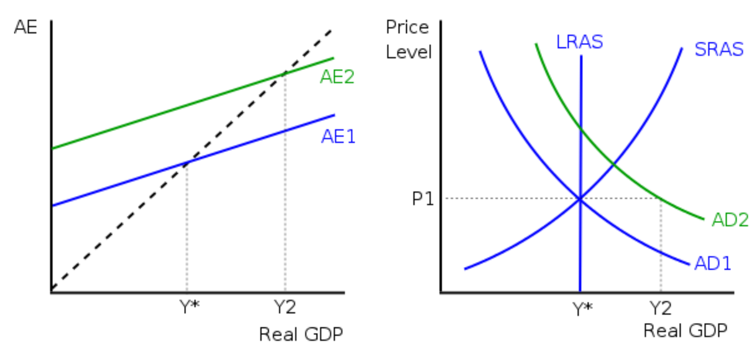
Long-run equilibrium



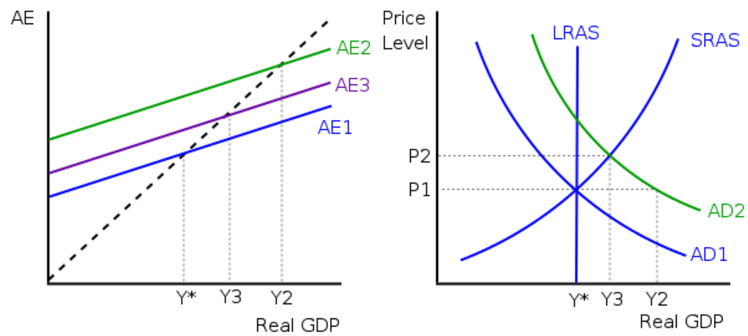
AE and AS/AD



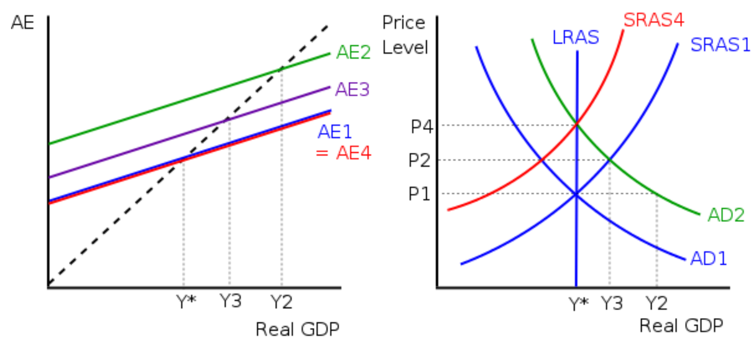
AE and AS/AD



AE and AS/AD


AE
AE2
AE3
AE1
Y*
Y3
Y2
Real GDP
Price
Level
LRAS
SRAS
P2
P1
AD2
AD1
Y*
Y3
Y2
Real GDP

AE and AS/AD


AE
AE2
AE3
AE1
= AE4
Y*
Y3
Y2
Real GDP
Price
Level
LRAS
SRAS4
SRAS1
P4
P2
P1
AD2
AD1
Y*
Y3
Y2
Real GDP