



Understanding Economics

2nd edition

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Chapter 11

Economic Fluctuations

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Chapter Focus

In this chapter you will:

- learn about aggregate demand and the factors that affect it
- analyze aggregate supply and the factors that influence it
- study the economy's equilibrium and how it differs from its potential

Aggregate Demand (a)

- Aggregate demand (AD)
 - is the relationship between the general price level and real expenditures (i.e. total spending) in an economy
 - is shown using a schedule or curve

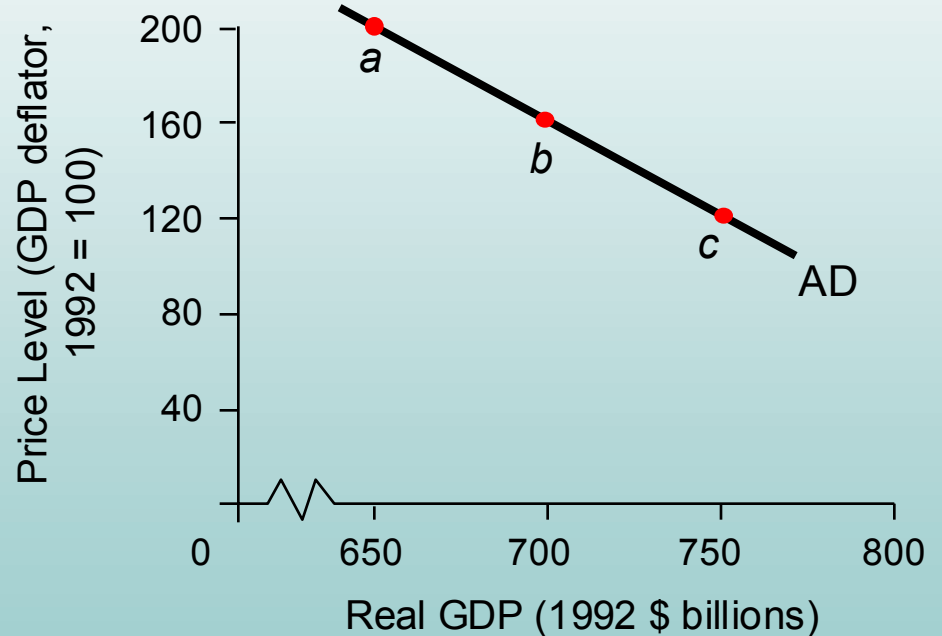
Aggregate Demand (b)

Figure 11.1, Page 260

Aggregate Demand Schedule

Price Level	Real GDP (1992, \$ billions)	Point on Graph
200	650	a
160	700	b
120	750	c

Aggregate Demand Curve



The Aggregate Demand Curve

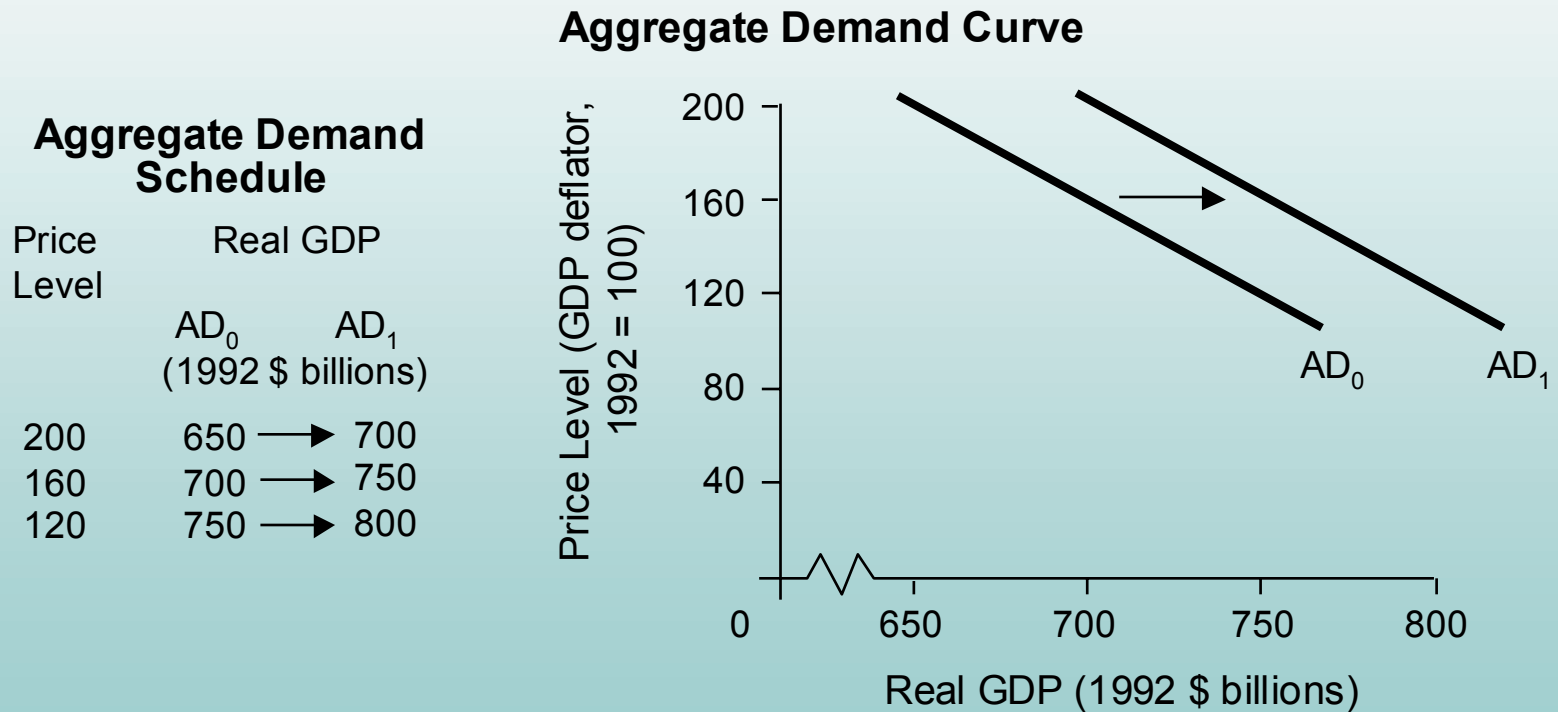
- Two factors cause the aggregate demand curve to be downward sloping
 - the wealth effect means that higher prices decrease the real value of financial assets and decrease consumption, since households feel poorer (and vice versa for lower prices)
 - the foreign trade effect means that higher prices decrease exports and increase imports (and vice versa for lower prices)

Changes in Aggregate Demand (a)

- AD changes are shown by shifts in the AD curve
 - an increase in spending causes a rightward shift in the AD curve
 - a decrease in spending causes a leftward shift in the AD curve

Changes in Aggregate Demand (b)

Figure 11.2, Page 262



Aggregate Demand Factors (a)

- AD changes are caused by aggregate demand factors related to each of the four main spending components
 - consumption (C)
 - disposable income
 - wealth (other than wealth changes caused by a varying price level)
 - consumer expectations
 - interest rates

Aggregate Demand Factors (b)

- investment (I)
 - interest rates
 - business expectations
- government purchases (G)
- net exports (X-M)
 - foreign incomes
 - exchange rates

Investment Demand (a)

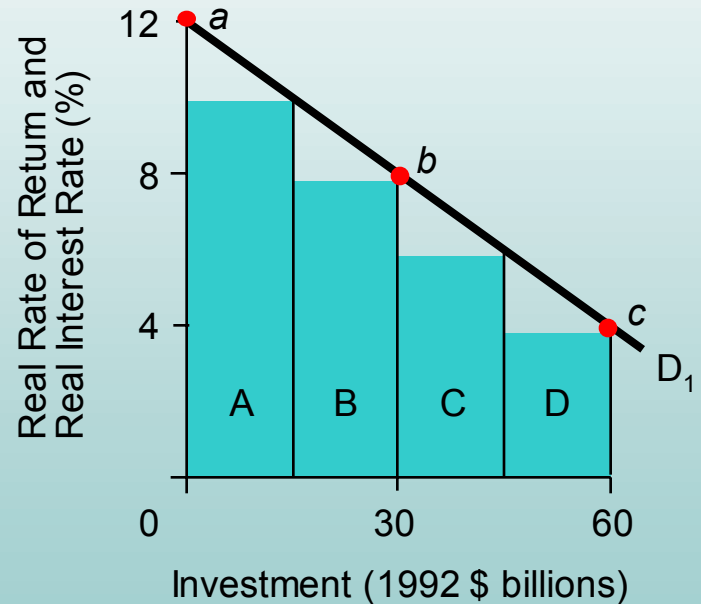
- Investment demand is a relationship between the interest rate and investment and depends on the real rate of return and the real interest rate
- Businesses pursue projects whose real rate of return at least equals the real interest rate, which means the investment demand curve is downward-sloping (since more projects are profitable at lower interest rates)

Investment Demand (b)

Figure 11.3, Page 263

Real Interest Rate (%)	Total Investment (1992 \$ billions)	Point on Graph	Projects Undertaken
12	0	a	--
8	30	b	A, B
4	60	c	A, B, C, D

Investment Demand Curve



Shifts in the Aggregate Demand Curve

Figure 11.4, Page 265

Aggregate demand increases and the AD curve shifts to the right, with the following:

- (1) An increase in consumption due to
 - (a) a rise in disposable income
 - (b) a rise in wealth unrelated to a change in price level
 - (c) an expected rise in prices or incomes
 - (d) a fall in interest rates
- (2) An increase in investment due to
 - (a) a fall in interest rates
 - (b) an expected rise in profits
- (3) An increase in government purchases
- (4) An increase in net exports due to
 - (a) a rise in foreign income
 - (b) a fall in value of the Canadian dollar

Aggregate demand decreases and the AD curve shifts to the left, with the following:

- (1) A decrease in consumption due to
 - (a) a fall in disposable income
 - (b) a fall in wealth unrelated to a change in price level
 - (c) an expected fall in prices or incomes
 - (d) a rise in interest rates
- (2) A decrease in investment due to
 - (a) a rise in interest rates
 - (b) an expected fall in profits
- (3) A decrease in government purchases
- (4) A decrease in net exports due to
 - (a) a fall in foreign income
 - (b) a rise in value of the Canadian dollar

Aggregate Supply (a)

- Aggregate supply (AS)
 - is the relationship between the general price level and real output in an economy
 - is shown using a schedule or curve

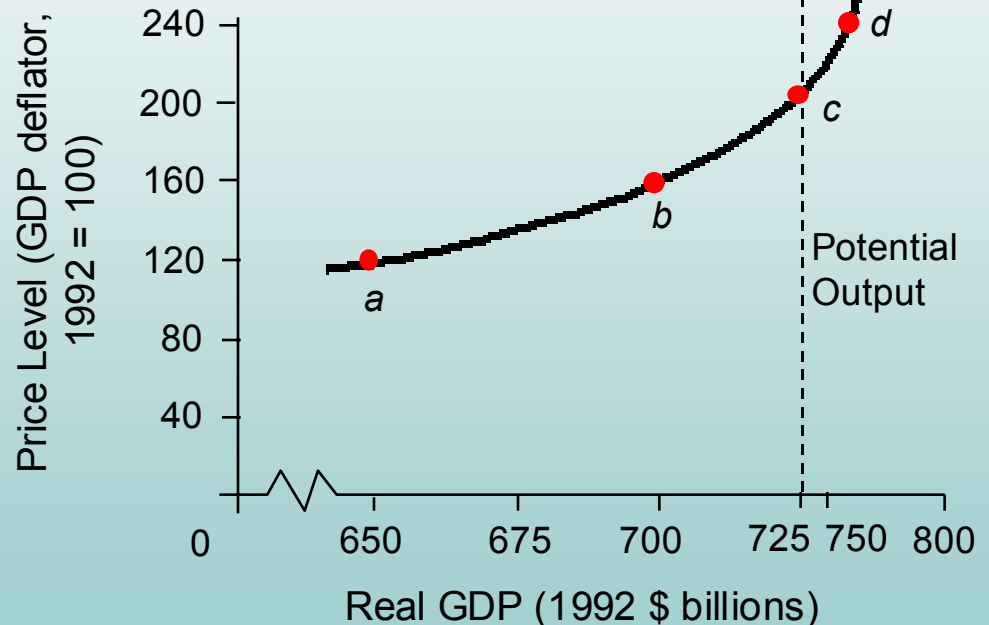
Aggregate Supply (b)

Figure 11.5, Page 267

Aggregate Supply Schedule

Price Level	Real GDP (1992, \$ billions)	Point on Graph
120	650	a
160	700	b
200	725	c
240	730	d

Aggregate Supply Curve



The Aggregate Supply Curve

- The AS curve is upward-sloping because higher prices encourage businesses to produce more while at lower prices businesses are forced to reduce output
- The AS curve becomes steep above potential output because a relatively large increase in the price level is required if businesses are to increase output in this range

Short-Run Changes in Aggregate Supply

- Short-run AS changes are shown by shifts in the AS curve and a constant potential output for the economy
 - a short-run increase in AS occurs when the AS curve shifts rightward while potential output stays constant
 - a short-run decrease in AS occurs when the AS curve shifts leftward while potential output stays constant

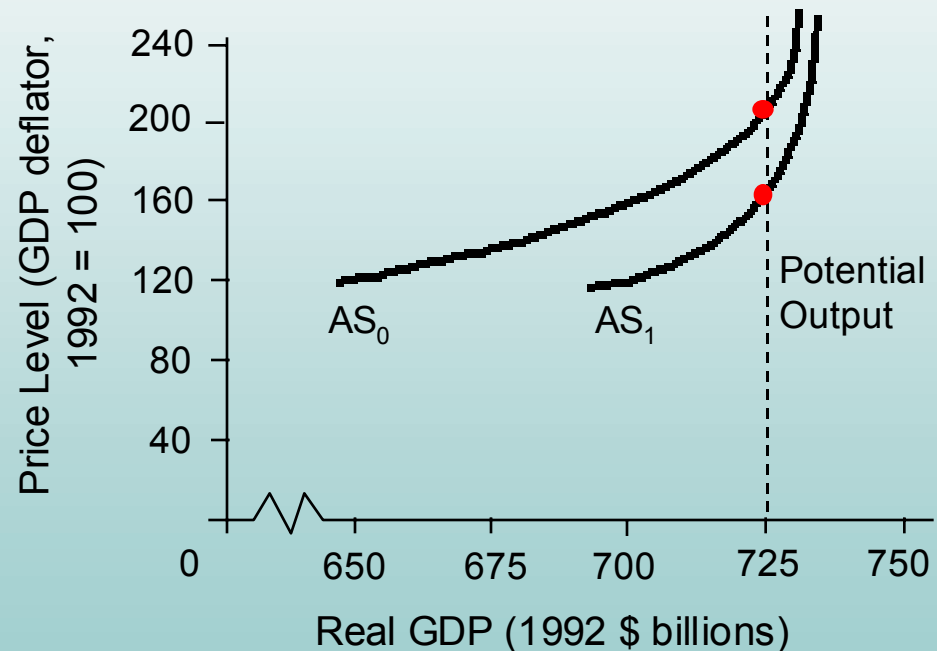
A Short-Run Change in Aggregate Supply

Figure 11.6, page 268

Aggregate Supply Schedule

Price Level	Real GDP	
	AS ₀	AS ₁
	(1992 \$ billions)	
120	650	700
160	700	725
200	725	730
240	730	731

Aggregate Supply Curve



Long-Run Changes in Aggregate Supply

- Long-run AS changes are shown by shifts in both the AS curve and in potential output
 - a long-run increase in AS occurs when the AS curve and potential output both shift rightward
 - a long-run decrease in AS occurs when the AS curve and potential output both shift leftward

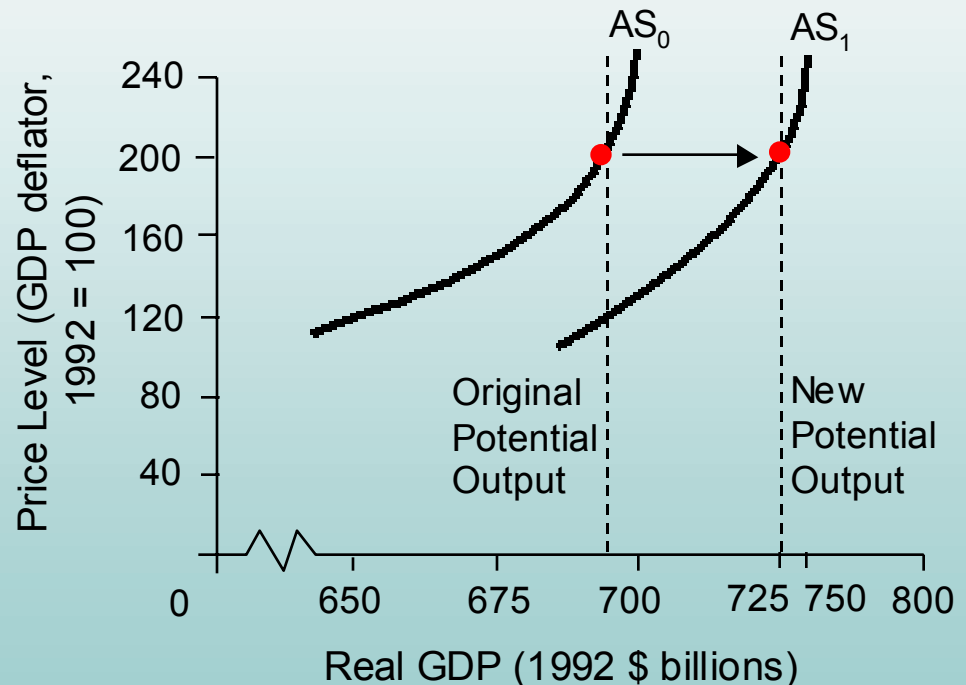
A Long-Run Change in Aggregate Supply

Figure 11.7, Page 269

Aggregate Supply Curve

Aggregate Supply Schedule

Price Level	Real GDP	
	AS ₀ (1992 \$ billions)	AS ₁
120	650	700
160	700	750
200	725	775
240	730	780



Aggregate Supply Factors

- AS changes are caused by aggregate supply factors related either to short-run or long-run trends
 - short-run changes in AS are caused by varying input prices
 - long-run changes in AS are caused by varying
 - resource supplies
 - productivity
 - government policies

Shifts in the Aggregate Supply Curve (a)

Figure 11.8, Page 270

Aggregate supply increases, with the AS curve shifting to the right, and potential output staying the same with the following:

- (1) A decrease in input prices due to
 - (a) a fall in wages
 - (b) a fall in raw material prices

Aggregate supply decreases with the AS curve shifting to the left, and potential output staying the same with the following:

- (1) An increase in input prices due to
 - (a) a rise in wages
 - (b) a rise in raw material prices

Shifts in the Aggregate Supply Curve (b)

Figure 11.8, Page 270

Aggregate supply increases, with the AS curve shifting to the right, and potential output increasing with the following:

- (1) An increase in supplies of economic resources due to
 - (a) more labour supply
 - (b) more capital stock
 - (c) more land
 - (d) more entrepreneurship
- (2) An increase in productivity due to technological progress
- (3) A change in government policies
 - (a) lower taxes
 - (b) less government regulation

Aggregate supply decreases, with the AS curve shifting to the left, and potential output decreasing with the following:

- (1) A decrease in supplies of economic resources due to
 - (a) less labour supply
 - (b) less capital stock
 - (c) less land
 - (d) less entrepreneurship
- (2) A decrease in productivity due to technological decline
- (3) A change in government policies
 - (a) higher taxes
 - (b) more government regulation

Equilibrium in the Economy (a)

- An economy's equilibrium occurs at the intersection of the AD and AS curves
 - A price level above equilibrium means an unintended increase in inventories (or positive unplanned investment), lowering the price level towards equilibrium
 - A price level below equilibrium leads to an unintended decrease in inventories (or negative unplanned investment), raising the price level towards equilibrium

An Economy at Equilibrium

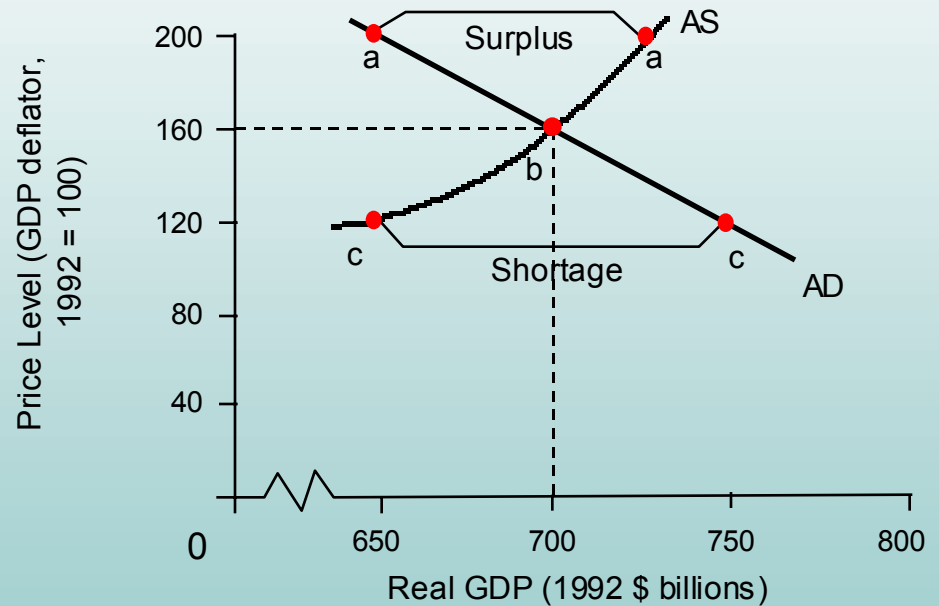
Figure 11.9, Page 272

Aggregate Demand and Supply Schedules

Price Level	AS - AD (surplus (+) or shortage (-))
200	(725 - 650) = +75
160	(700 - 700) = 0
120	(650 - 750) = -100

(1992 \$ billions)

Aggregate Demand and Supply Curves

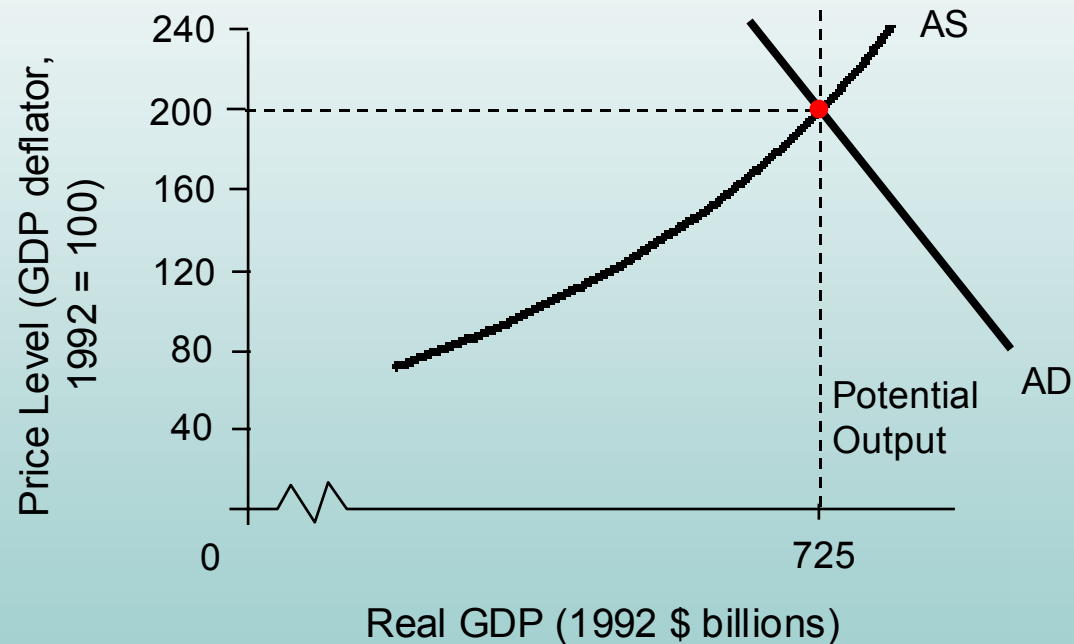


Equilibrium in the Economy (b)

- An economy's equilibrium occurs at a point where total injections ($I+G+X$) equal total withdrawals ($S+T+M$)
- When total injections exceed total withdrawals then real output and spending expand until a new balance is achieved
- When total withdrawals exceed total injections then real output and spending contract until a new balance is achieved

An Economy at Its Potential Output

Figure 11.10, Page 274



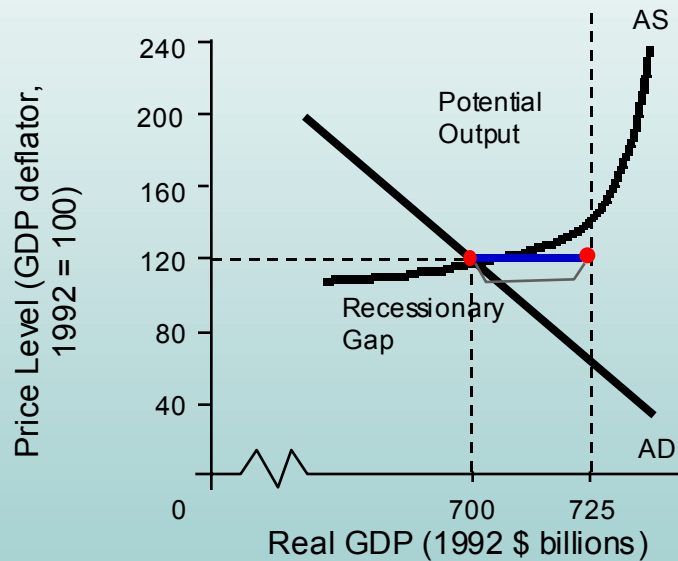
Recessionary and Inflationary Gaps

- A recessionary gap
 - occurs when equilibrium output falls short of potential output and is associated with an unemployment rate above the natural rate
- An inflationary gap
 - occurs when equilibrium output exceeds potential output and is associated with an unemployment rate below the natural rate as well as increased pressure on prices

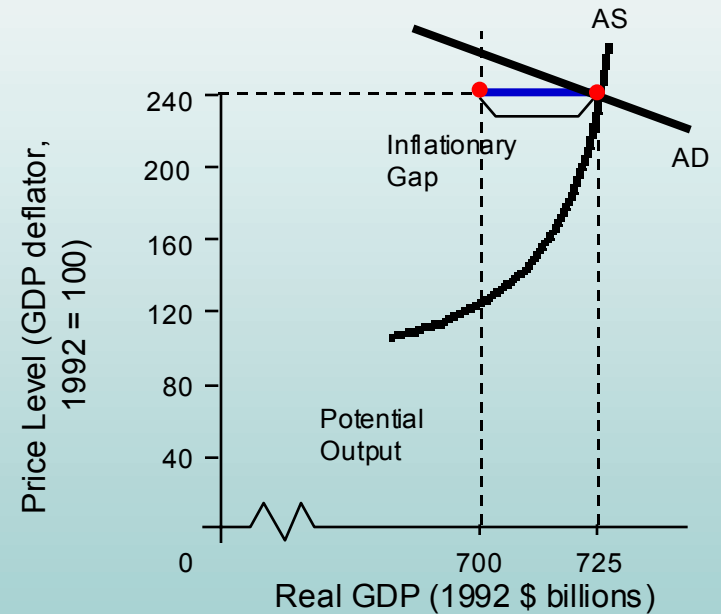
Recessionary and Inflationary Gaps

Figure 11.11, Page 275

Recessionary Gap



Inflationary Gap

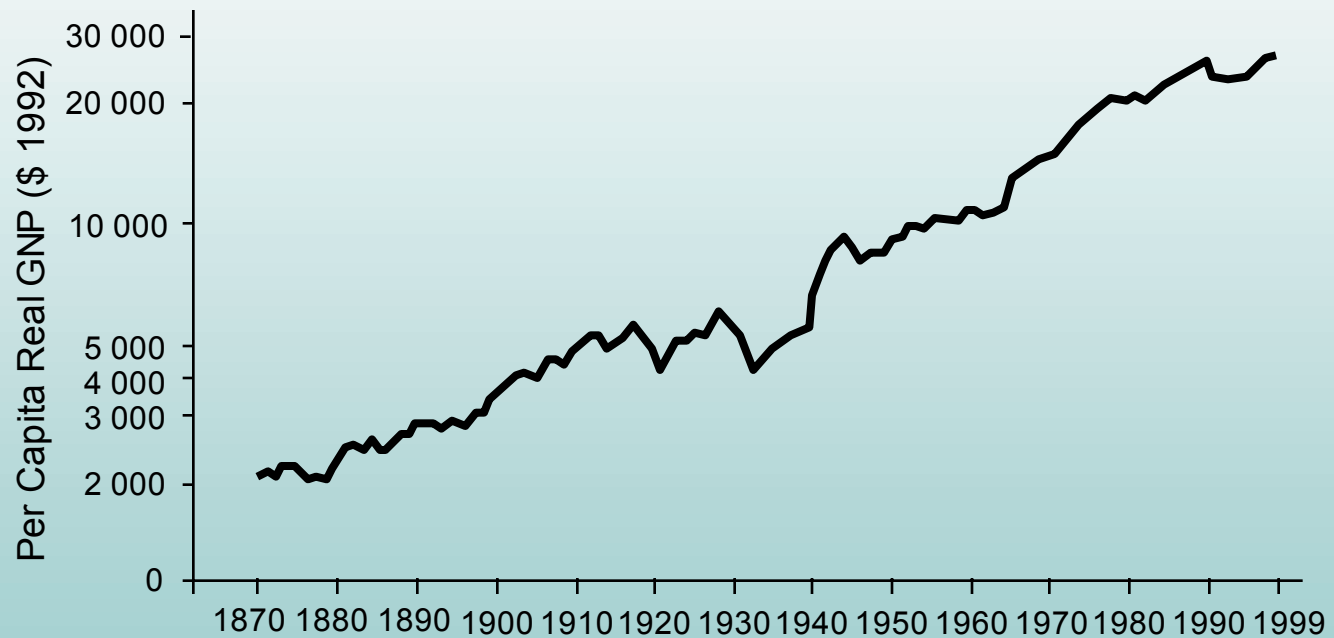


Economic Growth

- Economic growth can be defined in two ways
 - the percentage increase in an economy's total output (e.g. real GDP) is most appropriate when measuring an economy's overall productive capacity
 - the percentage increase in per capita output (e.g. per capita real GDP) is most appropriate when measuring living standards

Canada's Economic Growth (a)

Figure 11.12, Page 276



Economic Growth in Canada

- Before World War I (1870-1914), Canada's per-capita output (in 1992 dollars) more than doubled from \$2143 to \$4896.
- In the interwar period (1914-1945), the country's per-capita real output almost doubled from \$896 to \$8953.
- In the postwar period (1945-), per-capita real output more than tripled to \$27982 by 1999.

Economic Growth and Productivity

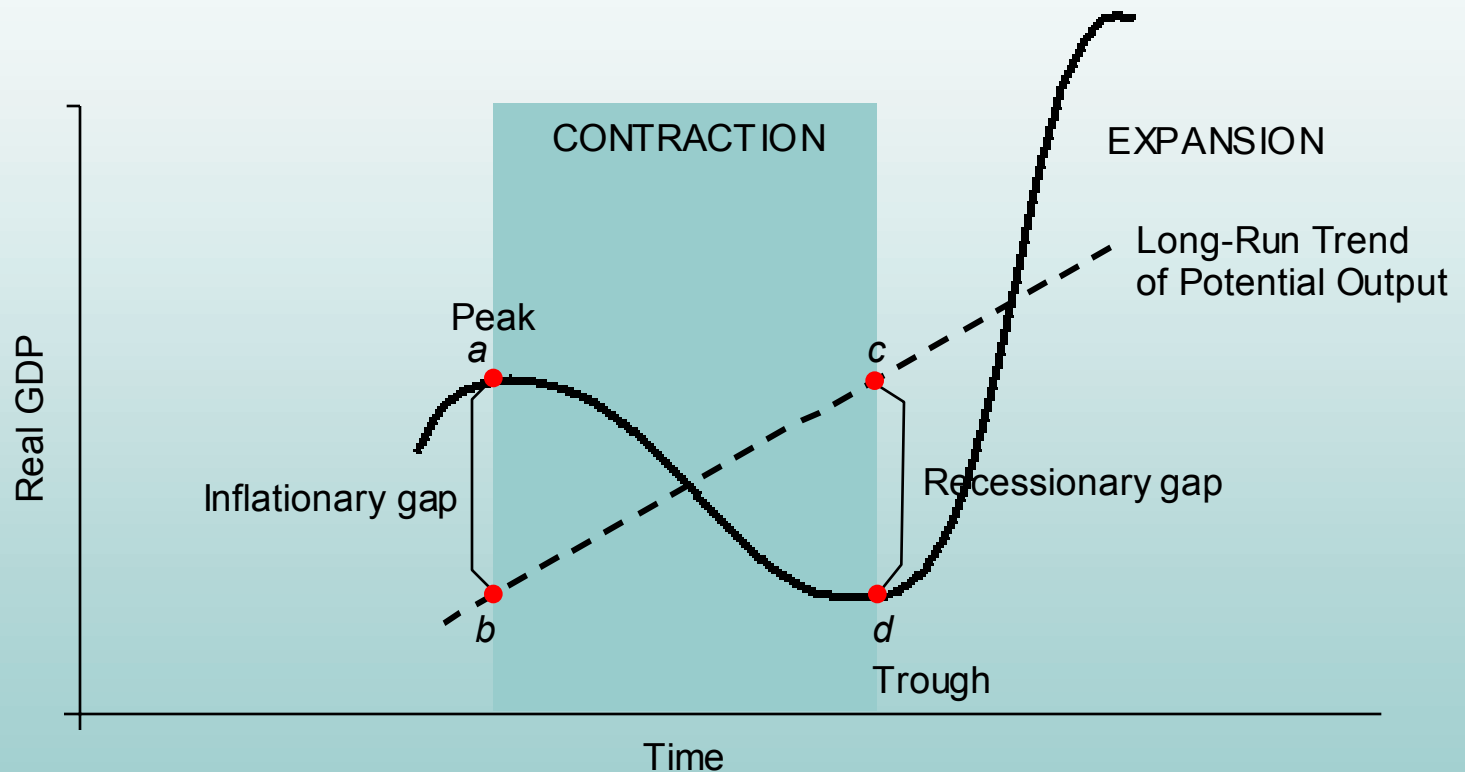
- Growth in per capita output is closely associated with growth in labour productivity which depends on factors such as
 - the quantity of capital
 - the quality of labour
 - technological progress

Business Cycles (a)

- The business cycle is the cycle of expansions and contractions in an economy
 - an expansion is a sustained rise in real output
 - a contraction is a sustained fall in real output
 - a peak is the point in the business cycle at which real output is at its highest
 - a trough is the point in the business cycle at which real output is at its lowest

The Business Cycle

Figure 11.13, Page 278



Contractions

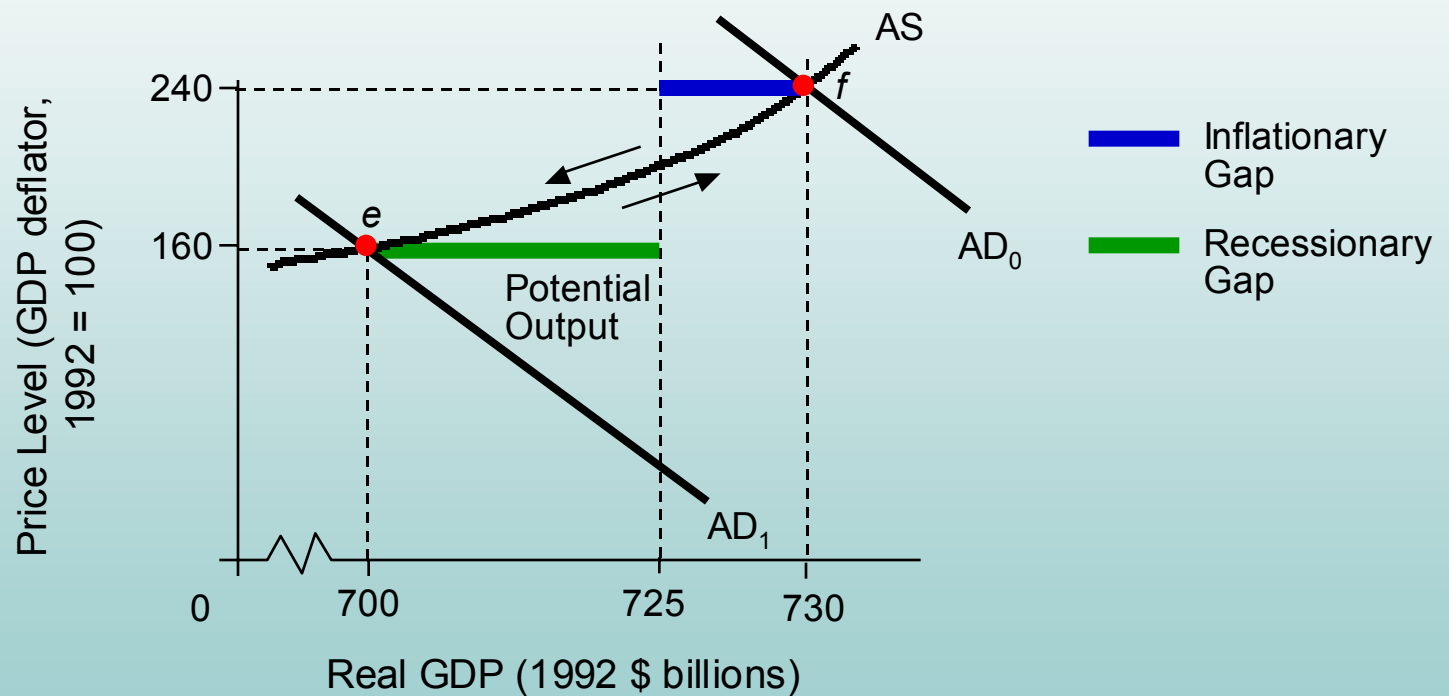
- A contraction
 - is usually caused by a decrease in AD magnified by the reactions of both households and businesses, who spend less due to pessimism about the future
 - may be a recession, which is a decline in real output for six months or more
 - may be a depression, which is a particularly long and harsh period of reduced real output

Expansions

- An expansion is usually caused by an increase in AD magnified by the reactions of both households and businesses as they spend more due to more optimistic expectations of the future

Expansion and Contraction

Figure 11.14, Page 279



Making an Economy Grow

- Paul Romer

- has devised a new growth theory which emphasizes the role of knowledge as an integral factor of production along with labour and capital
- argues that new ideas should be given a low price to stimulate further discoveries



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The End

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