Chapter 11

• The goal of this chapter is to create a macro model of how the economy works. Specifically:
  – What are the major determinants of macro outcomes?
  – How do the forces of supply and demand fit into the macro picture?
  – Why are there disagreements about causes and cures of macro ailments?
Learning Objectives

After completing this chapter, you should know:
1. The major macro outcomes and their determinants.
2. How classical and Keynesian macro views differ.
3. What factors shape aggregate demand and supply curves.
Learning Objectives

After completing this chapter, you should know:

4. How macro failure occurs.

5. The major options for macro government intervention.
Macro Outcomes

• *Macroeconomics* is the study of the aggregate economy

• Macro outcomes include:
  
  – *Output*: the total volume of goods and services produced (real GDP).
  
  – *Jobs*: the levels of employment and unemployment.
  
  – *Prices*: the average prices of goods and services.
Macro Outcomes

• Macro outcomes include:
  – **Growth**: the year-to-year expansion in production capacity.
  – **International balances**: the international value of the dollar; trade and payment balances with other countries.
Figure 11.1

Determinants:
- Internal market forces
- External shocks
- Policy levers

Macroeconomy

Outcomes:
- Output
- Jobs
- Prices
- Growth
- International balances
• The determinants of macro performance include:
  – *Internal market forces*: population growth, spending behavior, invention and innovation, and the like.
  – *External shocks*: wars, natural disasters, terrorist attacks, trade disruptions, and so on.
• The determinants of macro performance include:

  – *Policy levers*: tax policy, government spending, changes in interest rates, credit availability and money, trade policy, immigration policy, and regulation.
Classical Theory

• Self-adjustment:
  – According to the classical view, the economy \textit{self-adjusts} to deviations from its long-term growth trend.
  – Classical theory was the predominant theory prior to the 1930s.
The cornerstones of the classical theory were flexible prices and flexible wages.

Flexible prices:
- Virtually guarantee that all output can be sold.
- No one would lose a job because of weak consumer demand.
Classical Theory

• The cornerstones of the classical theory were flexible prices and flexible wages.

• Flexible wages:
  – ensure that everyone who wants a job would have a job.
• Say’s law:
  – According to *Say’s law*, “supply creates its own demand.”
  – Unsold goods will ultimately be sold when buyers and sellers find an acceptable price.
  – Government intervention in the self-adjusting economy was unnecessary.
The Great Depression was a stunning blow to Classical economists.

John Maynard Keynes provided an alternative to the classical theory.

Keynes argued that the Great Depression was not a unique event.

It would recur if reliance on the market to “self-adjust” continued.
Keynesian Revolution

• No self-adjustment:
  – Keynes asserted that the private economy was inherently *unstable*.
  – The inherent instability of the marketplace required government intervention.
  – Policy levers were both effective and necessary.
Aggregate Demand

• Any influence on macro outcomes must be transmitted through supply or demand.

• **Aggregate demand** is the total quantity of output demanded at alternative price levels in a given time period, *ceteris paribus.*
Aggregate Demand

• Real GDP (output):
  – Real GDP is the inflation-adjusted value of GDP – the value of output in *constant* prices; it is the horizontal axis of the macro model.
Aggregate Demand

• Price level:
  – The AD curve illustrates how the volume of purchases varies with average prices.
  – With a given (constant) level of income, people will buy more goods and services at lower prices, and vice versa.
  – Price level is the vertical axis of the macro model.
Figure 11.3

The diagram illustrates the relationship between the price level and real output. It shows that as higher prices lead to lower aggregate demand, there is less output demanded. Conversely, lower prices encourage more spending, resulting in more output demanded. The graph represents this relationship with a downward-sloping curve on the 'price level (average price)' axis and an upward-sloping curve on the 'real output (quantity per year)' axis.
The aggregate demand curve is downward sloping for three reasons:

- Real balances effect.
- Foreign trade effect.
- Interest-rate effect.
Aggregate Demand

• Real balance effect:
  – The real value of money is measured by how many goods and services each dollar will buy.
  – As prices fall, money can purchase more goods and services.
Aggregate Demand

• Foreign trade effect:
  – If U.S. prices fall (relative to foreign prices), U.S. customers buy more U.S. output and foreigners buy more U.S. exports.
  – If U.S. prices rise (relative to foreign prices), U.S. customers buy less U.S. output and foreigners buy fewer U.S. exports.
Aggregate Demand

• Interest-rate effect:
  – At lower price levels, interest rates fall as consumers borrow less.
  – Lower interest rates stimulate more borrowing and loan-financed purchases.
• *Aggregate supply (AS)* is the total quantity of output producers are willing and able to supply at alternative price levels in a given time period, *ceteris paribus*.
  
  – The AS curve is upward-sloping.
  
  – We expect the rate of output to increase when the price level rises.
Figure 11.4

Higher prices encourage more production.

Higher prices

Aggregate supply

More output supplied

PRICE LEVEL (average price)

REAL OUTPUT (quantity per year)
Aggregate Supply

- Profit margins:
  - Producers’ short-run costs, like rent and negotiated wages, are relatively constant.
  - Higher product prices tend to widen their profit margins, so producers will want to produce and sell more goods.
Aggregate Supply

• Costs:
  – Production costs tend to increase as producers try to produce more.
  – They must acquire more resources and use existing plant and equipment more intensively.
The AS curve is relatively flat when capacity is underutilized.

It becomes steeper as producers approach capacity.
• The AS and AD curves summarize the market activity of the macro economy.
  – *Macro equilibrium* – the unique combination of price level and real output compatible with AD and AS.
  – It is the only price-output combination mutually compatible with both buyers’ and sellers’ intentions.
Figure 11.5

At $Q_E$, desired spending equals production.

Unsold goods

Macro equilibrium

Aggregate supply

Aggregate demand

PRICE LEVEL (average price)

$P_1$

$P_E$

REAL OUTPUT (quantity per year)

$D_1$

$Q_E$

$S_1$
Disequilibrium

• If the price level is higher than at equilibrium, buyers will want to buy less than producers want to produce and sell.

• This is a *disequilibrium* situation, in which the intentions of buyers and sellers are incompatible.
Market Adjustment

• If the price level is:
  – Too high, producers lower prices to move out unsold goods.
  – Too low, buyers bid up prices to obtain goods in shortage.

• Price adjustments will continue until the price level reaches the equilibrium value.
Macro Failure

• Two potential problems with macro equilibrium:
  – **Undesirability**: the price-output relationship at equilibrium may not satisfy our macroeconomic goals.
  – **Instability**: even if the designated macro equilibrium is optimal, it may be displaced by macro disturbances.
Undesirable Outcomes

- **Unemployment**: the inability of labor-force participants to find jobs.
- **Inflation**: an increase in the average level of prices of goods and services.
Shifts of AD

• A leftward shift of the AD curve results in lower price levels and less output.
• A rightward shift of the AD curve results in higher price levels and more output.
Shifts of AS

- A leftward shift of the AS curve results in higher price levels and less output.
- A rightward shift of the AS curve results in lower price levels and more output.
Business cycles result from recurrent shifts of the aggregate supply and demand curves.
Figure 11.7

(a) Demand shifts

(b) Supply shifts

PRICE LEVEL (average price)

REAL OUTPUT (quantity per year)
Shift Factors: Demand Shifts

The AD curve shifts right if:
• Spending increases.
• Taxes are lowered.
• Interest rates are lowered.

The AD curve shifts left if:
• Spending decreases.
• Taxes are raised.
• Interest rates are raised.
Shift Factors: Supply Shifts

The AS curve shifts right if:

- Resource costs fall.
- Taxes are lowered.
- There is less costly regulation.

The AS curve shifts left if:

- Resource costs rise.
- Taxes are raised.
- There is more costly regulation.
Demand-Side Theories

- Keynesian theory
- Monetary theory
• Keynes argued that if people demand a product, producers will supply it.
• If aggregate spending isn't sufficient, some goods will remain unsold and some production capacity will be idled.
Keynesian theory urges increased government spending or tax cuts as mechanisms for increasing aggregate demand (shifting the AD curve back to the right).
Monetary Theory

• Monetary theories focus on the control of money and interest rates as mechanisms for shifting the aggregate demand curve.
• Money and credit affect the ability and willingness of people to buy goods and services.
Monetary Theory

• If the right amount of money is not available, aggregate demand may be too small.
• High interest rates also decrease AD.
• To shift AD to the right, lower the interest rates and increase the money supply.
• A decline in aggregate supply causes output and employment to decline.
• The focus of supply-side theory is to get more output by shifting the AS curve to the right.
  – Lower input costs.
  – Lower business taxes.
  – Remove costly regulation.
Figure 11.8
Eclectic Explanations

• Shifts in *both* supply and demand curves may occur.
• Implementing policy for political reasons may cause AS to shift left and AD to shift left.
• Essentially, the government has three policy options:
  – Shift the aggregate demand curve.
  – Shift the aggregate supply curve.
  – Do nothing.
Classical Theory

• Classical theory embraces the “do nothing” policy.
• Let the economy self-adjust to full employment.
• **Fiscal policy**: the use of government taxes and spending to alter macroeconomic outcomes.
  — Conducted by Congress and the president.
  — Shifts the AD curve.
Monetary Policy

• **Monetary policy**: the use of money and credit controls to influence macroeconomic activity.
  – The Federal Reserve is the regulatory body that controls the supply of money.
  – Shifts the AD curve.
• **Supply-side policy:** the use of tax rates, (de)regulation, and other mechanisms to increase the ability and willingness to produce goods and services.
  – Conducted by the Congress and the president.
  – Shifts the AS curve.
Which Policy Lever to Use?

• The “do nothing” approach prevailed until the Great Depression.
• The Great Depression spurred a desire for a more active government role.
• After World War II, fiscal policy dominated.
• Fiscal policy lost luster as both inflation and unemployment dominated in the 1970s.
Which Policy Lever to Use?

- Monetary policy dominated macro policy in the 1970s.
- The heavy reliance on monetary policy ended with a recession in the late 1970s.
- Supply-side policies prevailed in the 1980s with President Ronald Reagan.
Which Policy Lever to Use?

• The fiscal restraint of the late 1990s helped the federal budget move from deficits to surpluses briefly.

• In 2001, 2002, and 2003, Congress cut taxes in an attempt to deal with a recession (shifting AD curve to the right).

• Starting in 2007, the Fed cut interest rates, and in 2009 President Obama pushed hard on the fiscal-policy lever.
• The George H. Bush administration pursued a less activist approach in the early 1990s.
• Bill Clinton pursued a contractionary fiscal policy in the mid-1990s.
• This fiscal policy retreat cleared the way for the reemergence of monetary policy.
• Obamanomics:
  – President Obama prefers increased government spending and increased taxes.
  – Budget deficit growth became a political liability.
  – Republicans in Congress want less government spending and lower taxes.
  – Both want to decrease the budget deficit, disagreeing on timing and amount.
What We Learned

1. The major macro outcomes are output, prices, jobs, and international balances, resulting from the interplay of internal market forces, external shocks, and policy levers.
2. The classical macro view is that the economy will self-correct to full employment; the government needs to “do nothing.” The Keynesian macro view is that government needs to stimulate spending to move the economy to full employment.
What We Learned

3. AD represents the collective behaviors of buyers. AS represents the collective behaviors of sellers.

4. Macro failure occurs when macro equilibrium is not optimal – when unemployment or inflation is too high.
5. In addition to the “do nothing” option, macro government intervention can use fiscal policy, monetary policy, or supply-side policy.