In this chapter, look for the answers to these questions:

- What are price ceilings and price floors? What are some examples of each?
- How do price ceilings and price floors affect market outcomes?
- How do taxes affect market outcomes? How do the effects depend on whether the tax is imposed on buyers or sellers?
- What is the incidence of a tax? What determines the incidence?

Government Policies That Alter the Private Market Outcome

- Price controls
  - Price ceiling:
  - Price floor:

- Taxes
  - The government can make buyers or sellers pay a specific amount on each unit bought/sold.

  We will use the supply/demand model to see how each policy affects the market outcome (the price buyers pay, the price sellers receive, and equilibrium quantity).
**EXAMPLE 1: The Market for Apartments**

- **Demand Curve (D)** and **Supply Curve (S)**
- **Economic Equilibrium (Eq'm w/o price controls)**: $800 rental price, 300 quantity of apartments

**How Price Ceilings Affect Market Outcomes**

- **Price Ceiling** above the **Economic Equilibrium Price** ($800)
- Quantity of apartments limited to 300

**How Price Ceilings Affect Market Outcomes**

- **Economic Equilibrium Price** ($800)
- **Price Ceiling** at $800
How Price Ceilings Affect Market Outcomes

In the long run, supply and demand are more price-elastic.

Shortages and Rationing

- With a shortage, sellers must ration the goods among buyers.
- Some rationing mechanisms:
  - These mechanisms are often unfair, and inefficient:
  - In contrast, when prices are not controlled, the rationing mechanism is

Example 2: The Market for Unskilled Labor

- Wage paid to unskilled workers
- Eq'm w/o price controls
- Quantity of unskilled workers
How Price Floors Affect Market Outcomes

A price floor below the eq’m price

The eq’m wage ($4) is

The floor is

The Minimum Wage

Min wage laws do not affect highly skilled workers.
They do affect teen workers.
Studies:
The market for hotel rooms

Determine effects of:
A. $90 price ceiling
B. $90 price floor
C. $120 price floor

A. $90 price ceiling

B. $90 price floor

C. $120 price floor
Evaluating Price Controls

- Recall one of the Ten Principles from Chapter 1: 
  *Markets are usually a good way to organize economic activity.*

- Price controls often intended to help the poor, but often hurt more than help.

Taxes

- The govt levies taxes on many goods & services to raise revenue to pay for national defense, public schools, etc.

- The govt can make buyers or sellers pay the tax.

- The tax can be a % of the good’s price, or a specific amount for each unit sold.
  - For simplicity, we analyze per-unit taxes only.
EXAMPLE 3: The Market for Pizza

**Eq’m w/o tax**

$$P$$

![Graph](image)

- $10.00
- 500

**A Tax on Buyers**

The price buyers pay is now $1.50 higher than the market price $P$.

E.g., if $P$ falls from $10.00 to $8.50, buyers still willing to purchase 500 pizzas.

**Effects of a $1.50 per unit tax on buyers**

$$Q$$

New eq’m:

$$Q =$$
The Incidence of a Tax:

A Tax on Sellers

Sellers will supply 500 pizzas only if

New eq’m:

\[ Q = \]
The Outcome

ACTIVE LEARNING 2
Effects of a tax
Suppose govt imposes a tax on buyers of $30 per room. Find new Q, Pb, Ps, and incidence of tax.

The market for hotel rooms

ACTIVE LEARNING 2
Answers
Incidence

The market for hotel rooms
CASE 1: Supply is more elastic than demand

Elasticity and Tax Incidence

CASE 2: Demand is more elastic than supply

Elasticity and Tax Incidence

CASE STUDY: Who Pays the Luxury Tax?

1990: Congress adopted a luxury tax on yachts, private airplanes, furs, expensive cars, etc.

Goal of the tax: raise revenue from those who could most easily afford to pay – wealthy consumers.

But who really pays this tax?
CASE STUDY: Who Pays the Luxury Tax?

The market for yachts

\[
\begin{array}{c}
\text{Demand is price-elastic.} \\
\text{In the short run, supply is inelastic.}
\end{array}
\]

CONCLUSION: Government Policies and the Allocation of Resources

- Each of the policies in this chapter affects the allocation of society's resources.
- Example 1: A tax on pizza
- Example 2: A binding minimum wage causes
- So, it's important for policymakers to apply such policies very carefully.