Today’s lecture will:
- Demonstrate the effect of a price ceiling and a price floor on a market.
- Explain the effects of excise taxes and tariffs on equilibrium price and quantity.
- Explain the effect of a third-party-payer system on equilibrium price and quantity.

The Market for Advertising
- In 2001, demand for advertising fell as the U.S. economy slowed down.
- The supply/demand model would predict that price and quantity would fall.
- Instead of lowering the price, the media offered higher quality advertising at the same price.
The Price of a Foreign Currency

- The market for foreign exchange is called the foreign exchange (forex) market.
- The exchange rate is the price of one currency in terms of another one.
- People demand currencies to buy those countries' goods and assets.
- Exchange rates are determined by supply and demand.

The Supply and Demand for Euros

- The quantity of euros is on the horizontal axis.
- The price of the currency is on the vertical axis, measured in terms of dollars (how many dollars it takes to buy or sell one euro).
- The supply of euros represents people who want to sell euros and buy dollars, while the demand for euros represents people who want to buy euros and sell dollars.

The Price of a Foreign Currency

- The 12 members of the European Union began using a common currency, the euro, in 1999.
- The euro dropped from $1.17 to $0.85 in 2001.
- By 2004 the euro had risen to $1.30 because:
  - U.S. interest rates decreased and Europeans bought fewer U.S. financial assets, so the supply of euros decreased.
  - Americans increased their demand for euros in order to buy European financial assets.
**Florida Freeze**

- The crop-damaging freeze shifted the supply curve to the left.
- At $P_0$, quantity demanded > quantity supplied.
- Price rose to $P_1$ until the quantity demanded equaled the quantity supplied.

**Burkhas in Afghanistan**

- Once the Taliban was ousted, demand for burkas fell as many women quit wearing them.
- At $P_0$, quantity demanded > quantity supplied.
- Price fell to $P_1$ until quantity demanded = quantity supplied.

**Coffee Beans**

- The supply of coffee increased as new growers entered the market, technology improved, and weather was favorable. Price decreased to $P_1$.
- Coffee growers attempted to increase demand and raise price to $P_0$ with a marketing campaign.

**Review of Changes in Supply and Demand**

<table>
<thead>
<tr>
<th>Supply shifts</th>
<th>Supply shifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>No change in supply</td>
<td>No change</td>
</tr>
<tr>
<td>Demand shifts out</td>
<td>Price rises; Quantity falls</td>
</tr>
<tr>
<td>Demand shifts in</td>
<td>Price falls; Quantity could rise or fall</td>
</tr>
</tbody>
</table>
Government Intervention in the Market

- Buyers look to the government for ways to hold prices down.
- A price ceiling is a government-imposed limit on how high a price can be charged.
- Sellers look to the government for ways to hold prices up.
- A price floor is a government-imposed limit on how low a price can be charged.

Rent Controls

- Rent control is a price ceiling on rents set by the government.
- Rent control in Paris after World War I created a housing shortage.
- The shortage would have been eliminated if rents had been allowed to rise to $17 per month.

Minimum Wage

- The minimum wage, a price floor, is set by government specifying the lowest wage a firm can legally pay.
- A minimum wage, $W_{min}$, above the equilibrium wage, $W_e$, helps those who are employed, $Q_2$, but hurts those who would have been employed at $W_e$, but can no longer find employment, $Q_1 - Q_2$.

Excise Taxes

- An excise tax is a tax that is levied on a specific good.
- A tariff is an excise tax on an imported good.
- Taxes and tariffs raise prices and reduce quantity.
Excise Taxes

A $10,000 excise tax on luxury boats shifts the supply curve up by $10,000.

At $70,000, there is excess supply of 600 - 420 = 180.

The price of the boats rises by less than the tax to $65,000.

Quantity Restrictions

In 1937 New York City limited the number of taxi licenses to 12,000 to increase the wages of taxi drivers.

Because taxi medallions were limited in supply, as demand for taxi services rose, so did the demand for medallions, increasing their price to $2500 by 1947. Today, medallions sell for $300,000!

Third-Party-Payer Markets

- In third-party-payer markets, the person who receives the good differs from the person paying for the good.
- Equilibrium quantity and total spending is much higher in third-party-payer markets.
Summary

- Almost all events can be explained in terms of shifts of and movements along demand and supply curves.
- Supply and demand analysis is used to determine exchange rates – prices of currencies.
- Price ceilings, government-imposed limits on how high a price can be charged, create shortages.
- Price floors, government-imposed limits on how low a price can be charged, create surpluses.

Review Question 5-1

Use a graph to explain the likely impact on the price of gasoline of a decrease in OPEC oil production due to instability in Iraq and an increase in sales of large SUVs.

Review Question 5-2

Given the following demand and supply of pizza:

<table>
<thead>
<tr>
<th>Price per Pizza</th>
<th>Quantity Supplied</th>
<th>Quantity Demanded</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8</td>
<td>200</td>
<td>60</td>
</tr>
<tr>
<td>7</td>
<td>150</td>
<td>80</td>
</tr>
<tr>
<td>6</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>5</td>
<td>50</td>
<td>120</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>140</td>
</tr>
</tbody>
</table>

What is the effect of a price floor of $8?

A price floor of $8 will create a surplus of 200 – 60 = 140 Pizzas.