Module 7

Price Controls and Quantity Controls

Section 2

Supply and Demand
Why Governments Control Prices

• The market price moves to make the quantity supplied equal the quantity demanded.

• BUT this equilibrium price does not necessarily please buyers or sellers.

• Therefore, the government intervenes to regulate prices by imposing **price controls**, which are legal restrictions on how high or low a market price may go.

• Controls can be **price ceilings** or **price floors**.
Price Ceilings

• Price ceilings are a maximum level the price can go.

• They are typically imposed during crises—wars, harvest failures, natural disasters—because these events often lead to sudden price increases that hurt many people but can produce big gains for a lucky few.

• Examples
  • Rent controls in NYC
  • Salary cap in the NBA
The Market for Apartments in the Absence of Government Controls

Monthly rent (per apartment) vs. Quantity of apartments (millions)

- **Demand (D)**: Blue line
- **Supply (S)**: Red line

<table>
<thead>
<tr>
<th>Monthly rent (per apartment)</th>
<th>Quantity of apartments demanded (millions)</th>
<th>Quantity of apartments supplied (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,400</td>
<td>1.6</td>
<td>2.4</td>
</tr>
<tr>
<td>1,300</td>
<td>1.7</td>
<td>2.3</td>
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<tr>
<td>1,200</td>
<td>1.8</td>
<td>2.2</td>
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<tr>
<td>1,100</td>
<td>1.9</td>
<td>2.1</td>
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<tr>
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<tr>
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<tr>
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</tr>
<tr>
<td>600</td>
<td>2.4</td>
<td>1.6</td>
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</table>
The Effects of a Price Ceiling

- **Monthly rent (per apartment)**
  - $1,400
  - $1,200
  - $1,000
  - $800
  - $600

- **Price ceiling**

- **Housing shortage of 400,000 apartments caused by price ceiling**

- **Graph points:**
  - A
  - B
  - E
  - S
  - D

- **Axes:**
  - Quantity of apartments (millions)
  - Price ceiling

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Slide 5
How Price Ceilings Cause Inefficiency

• Inefficient Allocation to Customers

• Wasted Resources

• Inefficiently Low Quality

• Black Markets
Price Floors

- Sometimes governments intervene to push market prices up instead of down.

- The minimum wage is a legal floor on the wage rate, which is the market price of labor.

- Just like price ceilings, price floors are intended to help some people but generate predictable and undesirable side effects.
The Market for Butter without Price Controls

<table>
<thead>
<tr>
<th>Price of butter (per pound)</th>
<th>Quantity of butter (millions of pounds)</th>
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<td>11.5</td>
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<tr>
<td>0.60</td>
<td>12.0</td>
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</table>
The Effects of a Price Floor

Butter surplus of 3 million pounds caused by price floor

Price of butter (per pound)

Quantity of butter (millions of pounds)
Quantity Controls

• The New York taxi medallion system is a form of **quantity control**, also known as a quota, limiting the number of taxis in the city.

• The **demand price** is the price at which consumers want to buy a given quantity.

• The **supply price** is the price at which producers will supply a given quantity.
The Market for Taxi Rides in the Absence of Government Controls

Without government intervention, the market reaches equilibrium with 10 million rides taken per year at a fare of $5 per ride.
Quantity Controls and their Costs

• Let’s say the NYC government limits the number of taxi cabs so there are only 8 million rides.

• The wedge between the supply price and the demand price for taxi rides has allowed a market for medallions.

• The wedge is also called quota rent.

• Quantity controls create deadweight loss inefficiency because of lost mutually beneficial transactions.