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

- What factors affect buyers’ demand for goods?
- What factors affect sellers’ supply of goods?
- How do supply and demand determine the price of a good and the quantity sold?
- How do changes in the factors that affect demand or supply affect the market price and quantity of a good?
- How do markets allocate resources?

Markets and Competition

- A market is
- A competitive market is one with many buyers and sellers, each has
- In a perfectly competitive market:
  - 
  - 

- In this chapter, we assume markets are perfectly competitive.
Demand

- The quantity demanded of any good

Law of demand: the claim that

The Demand Schedule

- Demand schedule:

<table>
<thead>
<tr>
<th>Price of lattes</th>
<th>Quantity of lattes demanded</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
<td>16</td>
</tr>
<tr>
<td>1.00</td>
<td>14</td>
</tr>
<tr>
<td>2.00</td>
<td>12</td>
</tr>
<tr>
<td>3.00</td>
<td>10</td>
</tr>
<tr>
<td>4.00</td>
<td>8</td>
</tr>
<tr>
<td>5.00</td>
<td>6</td>
</tr>
<tr>
<td>6.00</td>
<td>4</td>
</tr>
</tbody>
</table>

- Example:
  Helen’s demand for lattes.

- Notice that Helen’s preferences obey the Law of Demand.

Helen’s Demand Schedule & Curve

<table>
<thead>
<tr>
<th>Price of Lattes</th>
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<th>Quantity of lattes demanded</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
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<td></td>
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<td>2.00</td>
<td>12</td>
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<td>10</td>
<td></td>
</tr>
<tr>
<td>4.00</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>5.00</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>6.00</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
Market Demand versus Individual Demand

The quantity demanded in the market

Suppose Helen and Ken are the only two buyers in the Latte market. (Qd = quantity demanded)

<table>
<thead>
<tr>
<th>Price</th>
<th>Helen’s Qd</th>
<th>Ken’s Qd</th>
<th>Market Qd</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
<td>16</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>1.00</td>
<td>14</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>2.00</td>
<td>12</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>3.00</td>
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<td></td>
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<tr>
<td>4.00</td>
<td>8</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5.00</td>
<td>6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>6.00</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

The Market Demand Curve for Lattes

Demand Curve Shifters

The demand curve shows how price affects quantity demanded, other things being equal.

These “other things” are non-price determinants of demand (i.e.,

Changes in them shift the D curve…
Demand Curve Shifters: # of Buyers

- Increase in # of buyers

Suppose the number of buyers increases. Then, at each $P$, $Q^d$ will increase (by 5 in this example).

Demand Curve Shifters: Income

- Demand for a normal good is ______________ related to income.
- Increase in income causes

(Demand for an inferior good is __________ related to income. An increase in income shifts $D$ curves for inferior goods to the _______.)
**Demand Curve Shifters: Prices of Related Goods**

Two goods are **substitutes** if

**Example:**

**Other examples:**

**Demand Curve Shifters: Prices of Related Goods**

Two goods are **complements** if

**Example:**

**Other examples:**

**Demand Curve Shifters: Tastes**

Anything that causes a shift in tastes **toward** a good

**Example:**

The Atkins diet became popular in the ’90s, caused an increase in demand for eggs, shifted the egg demand curve to the right.
Demand Curve Shifters: Expectations

Expectations affect consumers’ buying decisions.

Examples:

A. The price of iPods falls
B. The price of music downloads falls
C. The price of CDs falls

ACTIVE LEARNING 1

Demand Curve

Draw a demand curve for music downloads. What happens to it in each of the following scenarios? Why?

A. The price of iPods falls
B. The price of music downloads falls
C. The price of CDs falls

ACTIVE LEARNING 1

A. Price of iPods falls
**ACTIVE LEARNING 1**

**B. Price of music downloads falls**

<table>
<thead>
<tr>
<th>Price of music downloads</th>
<th>Quantity of music downloads</th>
</tr>
</thead>
</table>

**ACTIVE LEARNING 1**

**C. Price of CDs falls**

<table>
<thead>
<tr>
<th>Price of music downloads</th>
<th>Quantity of music downloads</th>
</tr>
</thead>
</table>

**Supply**

- The **quantity supplied** of any good

- **Law of supply:**
The Supply Schedule

Supply schedule:  

<table>
<thead>
<tr>
<th>Price of lattes</th>
<th>Quantity of lattes supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
<td>0</td>
</tr>
<tr>
<td>1.00</td>
<td>3</td>
</tr>
<tr>
<td>2.00</td>
<td>6</td>
</tr>
<tr>
<td>3.00</td>
<td>9</td>
</tr>
<tr>
<td>4.00</td>
<td>12</td>
</tr>
<tr>
<td>5.00</td>
<td>15</td>
</tr>
<tr>
<td>6.00</td>
<td>18</td>
</tr>
</tbody>
</table>

Example:  

Starbucks’ supply of lattes.

Notice that Starbucks’ supply schedule obeys the Law of Supply.

Starbucks’ Supply Schedule & Curve

<table>
<thead>
<tr>
<th>Price of lattes</th>
<th>Quantity of lattes supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
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<tr>
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<td>3</td>
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<td>2.00</td>
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</tr>
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<td>3.00</td>
<td>9</td>
</tr>
<tr>
<td>4.00</td>
<td>12</td>
</tr>
<tr>
<td>5.00</td>
<td>15</td>
</tr>
<tr>
<td>6.00</td>
<td>18</td>
</tr>
</tbody>
</table>

Market Supply versus Individual Supply  

The quantity supplied in the market is

Suppose Starbucks and Jitters are the only two sellers in this market.  

<table>
<thead>
<tr>
<th>Price</th>
<th>Starbucks</th>
<th>Jitters</th>
<th>Market Q^S</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1.00</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>2.00</td>
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<td>8</td>
<td>20</td>
</tr>
<tr>
<td>5.00</td>
<td>15</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>6.00</td>
<td>18</td>
<td>12</td>
<td>30</td>
</tr>
</tbody>
</table>
**Supply Curve Shifters**

- The supply curve shows how price affects quantity supplied, *other things being equal*.

**Supply Curve Shifters: Input Prices**

- Examples of input prices:
  - A fall in input prices
Suppose the price of milk falls. At each price, the quantity of Lattes supplied will increase (by 5 in this example).

Supply Curve Shifters: Technology

Technology determines how much inputs are required to produce a unit of output.

Supply Curve Shifters: # of Sellers

An increase in the number of sellers
Supply Curve Shifters: Expectations

Example:

- Events in the Middle East lead to expectations of higher oil prices.
- In response, sellers may adjust supply when their expectations of future prices change.

("If good not perishable")

ACTIVE LEARNING 2

Supply Curve

Draw a supply curve for tax return preparation software. What happens to it in each of the following scenarios?

A. Retailers cut the price of the software.
B. A technological advance allows the software to be produced at lower cost.
C. Professional tax return preparers raise the price of the services they provide.

ACTIVE LEARNING 2

A. Fall in price of tax return software

Price of tax return software

Quantity of tax return software
ACTIVE LEARNING 2
B. Fall in cost of producing the software

Price of tax return software

Quantity of tax return software

ACTIVE LEARNING 3
C. Professional preparers raise their price

Price of tax return software

Quantity of tax return software

Supply and Demand Together
Equilibrium:

THE MARKET FORCES OF SUPPLY AND DEMAND
### Surplus

Example: If \( P = \$5 \),

### Shortage

Example: If \( P = \$1 \),
Three Steps to Analyzing Changes in Eq’m

To determine the effects of any event,

EXAMPLE 1: A Shift in Demand

EVENT TO BE ANALYZED:
Increase in price of gas.

STEP 1:

STEP 2:

STEP 3:

Terms for Shift vs. Movement Along Curve

- Change in supply: occurs when a non-price determinant of supply changes (like technology or costs)
- Change in the quantity supplied:
  occurs when
- Change in demand: occurs when
- Change in the quantity demanded:
a movement along a fixed $D$ curve occurs when
EXAMPLE 2: A Shift in Supply

EVENT: New technology reduces cost of producing hybrid cars.

STEP 1: 

STEP 2: 

STEP 3: 

EXAMPLE 3: A Shift in Both Supply and Demand

EVENTS: price of gas rises AND new technology reduces production costs

STEP 1: Both curves shift.

STEP 2: Both shift to the right.

STEP 3: Q rises, but 

EXAMPLE 3: A Shift in Both Supply and Demand

EVENTS: price of gas rises AND new technology reduces production costs

STEP 3, cont.
**ACTIVE LEARNING 3**  
**Shifts in supply and demand**

Use the three-step method to analyze the effects of each event on the equilibrium price and quantity of music downloads.

Event A: A fall in the price of CDs

Event B: Sellers of music downloads negotiate a reduction in the royalties they must pay for each song they sell.

Event C: Events A and B both occur.

---

**ACTIVE LEARNING 3**  
**A. Fall in price of CDs**

The market for music downloads

---

**ACTIVE LEARNING 3**  
**B. Fall in cost of royalties**

The market for music downloads
C. Fall in price of CDs and fall in cost of royalties

CONCLUSION: How Prices Allocate Resources

One of the Ten Principles from Chapter 1: Markets are usually a good way to organize economic activity.

In market economies,