The Market Forces of Supply and Demand

Chapter 4

Markets

- A market is a group of buyers and sellers of a particular good or service.
- The terms supply and demand refer to the behavior of people as they interact with one another in markets.
- Macroeconomics is about how supply and demand interact in markets.

Market Types or Structures

- Competitive Markets
  - Products are the same, price takers
- Monopoly
- Monopolistic Competition
- Oligopoly

Market Demand

- Market demand refers to the sum of all individual demands for a particular good or service.
- Graphically, individual demand curves are summed horizontally to obtain the market demand curve.

Why does the Demand Curve Slope Downward?

- Law of Demand
  - Inverse relationship between price and quantity.
- Law of Diminishing Marginal Utility
  - Utility is the extra satisfaction that one receives from consuming a product.
  - Marginal means extra.
  - Diminishing means decreasing.

Demand Curve

<table>
<thead>
<tr>
<th>Price of Ice-Cream Cone</th>
<th>Quantity of Ice-Cream Cones</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3.00</td>
<td>0</td>
</tr>
<tr>
<td>$2.50</td>
<td>1</td>
</tr>
<tr>
<td>$2.00</td>
<td>2</td>
</tr>
<tr>
<td>$1.50</td>
<td>3</td>
</tr>
<tr>
<td>$1.00</td>
<td>4</td>
</tr>
<tr>
<td>$0.50</td>
<td>5</td>
</tr>
</tbody>
</table>

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Ceteris Paribus

*Ceteris paribus* is a Latin phrase that means all variables other than the ones being studied are assumed to be constant. Literally, *ceteris paribus* means “other things being equal.”

The demand curve slopes downward because, *ceteris paribus*, lower prices imply a greater quantity demanded.

Two Simple Rules for Movements vs. Shifts

- **Rule One**: When an independent variable changes and that variable does not appear on the graph, the curve on the graph will shift.
- **Rule Two**: When an independent variable does appear on the graph, the curve on the graph will not shift, instead movement along the existing curve will occur.

Let’s apply these rules to the following cases of supply and demand:

Change in Quantity Demanded versus Change in Demand

- **Change in Quantity Demanded**: Movement along the demand curve.
- **Change in Demand**: Caused by a change in the price of the product.

Changes in Quantity Demanded

- **Market price**
- **Consumer income**
- **Prices of related goods**
- **Tastes**
- **Expectations**

What are some examples?
Change in Quantity Demanded versus Change in Demand

<table>
<thead>
<tr>
<th>Variable Due to Change in</th>
<th>Effect on Demand Curve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>Shifts the demand curve</td>
</tr>
<tr>
<td>Income</td>
<td>Shifts the demand curve</td>
</tr>
<tr>
<td>Substitutes &amp; Complements</td>
<td>Shifts the demand curve</td>
</tr>
<tr>
<td>Number of Households</td>
<td>Shifts the demand curve</td>
</tr>
</tbody>
</table>

Prices of Related Goods
Substitutes & Complements
- When a fall in the price of one good reduces the demand for another good, the two goods are called substitues.
- When a fall in the price of one good increases the demand for another good, the two goods are called complements.

Law of Supply
The law of supply states that there is a direct (positive) relationship between price and quantity supplied.
Supply

**Quantity supplied** is the amount of a good that sellers are willing and able to sell.

Determinants of Supply

- Market price
- Input prices
- Technology
- Expectations
- Number of producers
- What are some examples?

Change in Quantity Supplied

Market Supply

- **Market supply** refers to the sum of all individual supplies for all sellers of a particular good or service.
- Graphically, individual supply curves are summed **horizontally** to obtain the market supply curve.

Change in Supply

<table>
<thead>
<tr>
<th>Variables That Affect Quantity Supplied</th>
<th>A Change in This Variable ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>Represents a movement along the supply curve</td>
</tr>
<tr>
<td>Input prices</td>
<td>Shifts the supply curve</td>
</tr>
<tr>
<td>Technology</td>
<td>Shifts the supply curve</td>
</tr>
<tr>
<td>Expectations</td>
<td>Shifts the supply curve</td>
</tr>
<tr>
<td>Number of sellers</td>
<td>Shifts the supply curve</td>
</tr>
</tbody>
</table>

Change in Quantity Supplied versus Change in Supply

- A change in the price of the good or service results in a **movement along the supply curve**.
- A change in some other variable results in a **shift of the supply curve**.
Equilibrium of Supply and Demand

Three Steps To Analyzing Changes in Equilibrium

1. Decide whether the event shifts the supply or demand curve (or both).
2. Decide whether the curve(s) shift(s) to the left or to the right.
3. Examine how the shift affects equilibrium price and quantity.

Excess Supply

How an Increase in Demand Affects the Equilibrium

1. Increase in demand for ice cream...
2. Above market price...
3. Increase in quantity supplied...
4. New equilibrium

Excess Demand

How a Decrease in Supply Affects the Equilibrium

1. Decrease in supply for ice cream...
2. Below market price...
3. Decrease in quantity demanded...
4. New equilibrium