Chapter 4
Demand
Economics and You

In Chapter 4, you will learn that demand is more than a desire to buy something: it is the ability and willingness to actually buy it.
Introduction

• People sometimes think of demand as the desire to have or to own a certain product. 

• In this sense, anyone who would like to own a swimming pool could be said to “demand” one. 

• In order for demand to be counted in the marketplace, however, desire is not enough; it must coincide with the ability and willingness to pay for it. 
Introduction (cont.)

• Only those people with demand—the desire, ability, and willingness to buy a product—can compete with others who have similar demands. 

• Demand, like many other topics in Unit 2 is a microeconomic concept.

• Microeconomics is the area of economics that deals with behavior and decision making by small units, such as individuals and firms.
Introduction (cont.)

• Collectively, these concepts of microeconomics help explain how prices are determined and how individual economic decisions are made.
An Introduction to Demand

- Demand is the desire, ability, and willingness to buy a product.

- An individual demand curve illustrates how the quantity that a person will demand varies depending on the price of a good or service.

- Economists analyze demand by listing prices and desired quantities in a demand schedule (chart). When the demand data is graphed, it forms a demand curve with a downward slope.
An Introduction to Demand (cont.)

Figure 4.1
The Demand for Compact Discs

<table>
<thead>
<tr>
<th>Price</th>
<th>Quantity Demanded</th>
</tr>
</thead>
<tbody>
<tr>
<td>$30</td>
<td>0</td>
</tr>
<tr>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
</tr>
</tbody>
</table>
An Introduction to Demand (cont.)

Figure 4.1
The Demand for Compact Discs

![Demand Curve Graph](image-url)

- **Demand Curve**
- **Price**
  - $30
  - $25
  - $20
  - $15
  - $10
  - $5
  - $0
- **Quantity**
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
- **Points on the Graph**:
  - Point **a**
  - Point **b**

Larry's demand curve is illustrated on the graph.
The Law of Demand

- The Law of Demand states that the quantity demanded of a good or service varies inversely with its price. When price goes up, the quantity demanded goes down; when price goes down, the quantity demanded goes up.

- A market demand curve illustrates how the quantity that all interested persons (the market) will demand varies depending on the price of a good or service.
The Law of Demand (cont.)

Figure 4.2
Individual and Market Demand Curves

<table>
<thead>
<tr>
<th>Price</th>
<th>Larry</th>
<th>Curly</th>
<th>Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>$30</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>25</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>7</td>
<td>15</td>
</tr>
</tbody>
</table>
Demand and Marginal Utility

- Marginal utility is the extra usefulness or satisfaction a person receives from getting or using one more unit of a product.

- The principle of diminishing marginal utility states that the satisfaction we gain from buying a product lessens as we buy more of the same product.
• The demand curve is a graphical representation of the quantities that people are willing to purchase at all possible prices that might prevail in the market.

• Occasionally something happens to change people’s willingness and ability to buy.

• These changes are usually of two types: a change in the quantity demanded, and a change in demand.
Change in Quantity Demanded

• The change in quantity demanded shows a change in the amount of the product purchased when there is a change in price. ✅

• The income effect means that as prices drop, consumers are left with extra real income. ✅

• The substitution effect means that price can cause consumers to substitute one product with another similar but cheaper item.
Change in Quantity Demanded (cont.)

Figure 4.3
A Change in Quantity Demanded

The graph shows a decrease in quantity demanded from point a to point b, and an increase in quantity demanded from point a to point b. The price range is from $30 to $0, and the quantity range is from 0 to 15 units.
Change in Demand

- A change in demand is when people buy different amounts of the product at the same prices. 

- A change in demand can be caused by a change in income, tastes, a price change in a related product (either because it is a substitute or complement), consumer expectations, and the number of buyers.
Change in Demand (cont.)

Figure 4.4
A Change in Demand

<table>
<thead>
<tr>
<th>Price</th>
<th>Old (DD)</th>
<th>New (D'D')</th>
</tr>
</thead>
<tbody>
<tr>
<td>$30</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>25</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>20</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>15</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>20</td>
</tr>
</tbody>
</table>

The table above shows the change in quantity demanded at different prices. The graph illustrates the change in demand, with an increase in demand from point a to point a' and a decrease in demand from point b to point b'.
Introduction

- Cause-and-effect relationships are important in the study of economics.
- For example, we often ask, “if one thing happens, how will it affect something else?”
- An important cause-and-effect relationship in economics is elasticity, a measure of responsiveness that tells us how a dependent variable such as quantity responds to a change in an independent variable such as price.
Elasticity is also a very general concept that can be applied to income, the quantity of a product supplied by a firm, or to demand.
Demand Elasticity

• Elasticity measures how sensitive consumers are to price changes. 

• Demand is elastic when a change in price causes a large change in demand. 

• Demand is inelastic when a change in price causes a small change in demand. 

• Demand is unit elastic when a change in price causes a proportional change in demand.
The Total Expenditures Test

• Price times quantity demanded equals total expenditures. 

• Changes in expenditures depend on the elasticity of a demand curve—if the change in price and expenditures move in opposite directions on the curve, the demand is elastic, if they move in the same direction, the demand is inelastic; if there is no change in expenditures, demand is unit elastic.

• Understanding the relationship between elasticity and profits can help producers effectively price their products.
The Total Expenditures Test (cont.)

Figure 4.5
The Total Expenditures Test for Demand Elasticity

A. Elastic Demand

B. Inelastic Demand

C. Unit Elastic Demand

D. Determining Elasticity

<table>
<thead>
<tr>
<th>Type of Elasticity</th>
<th>Change in Price</th>
<th>Change in Expenditure</th>
<th>Movement of Price and Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elastic</td>
<td>↓</td>
<td>↑</td>
<td>Opposite</td>
</tr>
<tr>
<td>Unit Elastic</td>
<td>↓</td>
<td>no change</td>
<td>Same</td>
</tr>
<tr>
<td>Inelastic</td>
<td>↓</td>
<td>↓</td>
<td>Same</td>
</tr>
</tbody>
</table>
Determinants of Demand Elasticity

- Demand is elastic if the answer to the following questions are “yes”.

  - Can the purchase be delayed? Some purchases cannot be delayed, regardless of price changes.
  - Are adequate substitutes available? Price changes can cause consumers to substitute on product for a similar product.
  - Does the purchase use a large portion of income? Demand elasticity can increase when a product commands a large portion of a consumer’s income.
Determinants of Demand Elasticity (cont.)

Figure 4.6 Estimating the Elasticity of Demand

<table>
<thead>
<tr>
<th>Determinants of elasticity</th>
<th>Fresh tomatoes, corn, or green beans</th>
<th>Table salt</th>
<th>Gasoline from a particular station</th>
<th>Gasoline in general</th>
<th>Services of medical doctors</th>
<th>Insulin</th>
<th>Butter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can purchase be delayed?</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Are adequate substitutes available?</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Does purchase use a large portion of income?</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Type of elasticity</td>
<td>Elastic</td>
<td>Inelastic</td>
<td>Elastic</td>
<td>Inelastic</td>
<td>Inelastic</td>
<td>Inelastic</td>
<td>Elastic</td>
</tr>
</tbody>
</table>