CHAPTER 1. PRELIMINARIES

Read Pindyck and Rubinfeld (2013), Chapter 1

Microeconomics, 8th Edition by R.S. Pindyck and D.L. Rubinfeld
Adapted by Chairat Aemkulwat for Econ I: 2900111

CHAPTER 1 OUTLINE

1.1 The Themes of Microeconomics
1.2 What Is a Market?
1.3 Real versus Nominal Prices
1.4 Why Study Microeconomics?
Preliminaries

- **microeconomics**  Branch of economics that deals with the behavior of individual economic units—consumers, firms, workers, and investors—as well as the markets that these units comprise.

- **macroeconomics**  Branch of economics that deals with aggregate economic variables, such as the level and growth rate of national output, interest rates, unemployment, and inflation.

### 1.1 THE THEMES OF MICROECONOMICS

#### Trade Offs

**Consumers**
Consumers have limited incomes, which can be spent on a wide variety of goods and services, or saved for the future.

**Workers**
Workers also face constraints and make trade-offs. First, people must decide whether and when to enter the workforce. Second, workers face trade-offs in their choice of employment. Finally, workers must sometimes decide how many hours per week they wish to work, thereby trading off labor for leisure.

**Firms**
Firms also face limits in terms of the kinds of products that they can produce, and the resources available to produce them.
1.1 THE THEMES OF MICROECONOMICS

Prices and Markets

Microeconomics describes how prices are determined.

In a centrally planned economy, prices are set by the government.

In a market economy, prices are determined by the interactions of consumers, workers, and firms. These interactions occur in markets—collections of buyers and sellers that together determine the price of a good.

Theories and Models

In economics, explanation and prediction are based on theories. Theories are developed to explain observed phenomena in terms of a set of basic rules and assumptions.

A model is a mathematical representation, based on economic theory, of a firm, a market, or some other entity.

Positive versus Normative Analysis

- **positive analysis** Analysis describing relationships of cause and effect.

- **normative analysis** Analysis examining questions of what ought to be.
2. Which of the following two statements involves positive economic analysis and which normative? How do the two kinds of analysis differ?

1. Gasoline rationing (allocating to each individual a maximum amount of gasoline that can be purchased each year) is a poor social policy because it interferes with the workings of the competitive market system.

2. Gasoline rationing is a policy under which more people are made worse off than are made better off.

1.2 WHAT IS A MARKET?

- **market**: Collection of buyers and sellers that, through their actual or potential interactions, determine the price of a product or set of products.
WHAT IS A MARKET?

Competitive versus Noncompetitive Markets

- **perfectly competitive market**  Market with many buyers and sellers, so that no single buyer or seller has a significant impact on price.

Market Price

- **market price**  Price prevailing in a competitive market.

- **arbitrage**  Practice of buying at a low price at one location and selling at a higher price in another.

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market definition  Determination of the buyers, sellers, and range of products that should be included in a particular market.

Market Definition—The Extent of a Market

- **extent of a market**  Boundaries of a market, both geographical and in terms of range of products produced and sold within it.
Market definition is important for two reasons:

- A company must understand who its actual and potential competitors are for the various products that it sells or might sell in the future.

- Market definition can be important for public policy decisions.

**Example 1.2 The Market for Sweeteners**

In 1990, the Archer-Daniels-Midland Company (ADM) acquired the Clinton Corn Processing Company (CCP).

The U.S. Department of Justice (DOJ) challenged the acquisition on the grounds that it would lead to a dominant producer of corn syrup with the power to push prices above competitive levels.

ADM fought the DOJ decision, and the case went to court. The basic issue was whether corn syrup represented a distinct market.

ADM argued that sugar and corn syrup should be considered part of the same market because they are used interchangeably to sweeten a vast array of food products.
1. Decide whether each of the following statements is true or false and explain why:

a) Fast-food chains like McDonald’s, Burger King, and Wendy’s operate all over the United States. Therefore the market for fast food is a national market.

b) People generally buy clothing in the city in which they live. Therefore there is a clothing market in, say, Atlanta that is distinct from the clothing market in Los Angeles.

c) Some consumers strongly prefer Pepsi and some strongly prefer Coke. Therefore there is no single market for colas.

1.3 REAL VERSUS NOMINAL PRICES

- **nominal price** Absolute price of a good, unadjusted for inflation.

- **real price** Price of a good relative to an aggregate measure of prices; price adjusted for inflation.

- **Consumer Price Index** Measure of the aggregate price level.

- **Producer Price Index** Measure of the aggregate price level for intermediate products and wholesale goods.
Table 1.1 The Real Prices of Eggs and of a College Education

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumer Price Index</th>
<th>Nominal Prices</th>
<th>Real Prices ($1970)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Grade A large eggs</td>
<td>College education</td>
</tr>
<tr>
<td>1970</td>
<td>38.8</td>
<td>$0.61</td>
<td>$2,530</td>
</tr>
<tr>
<td>1980</td>
<td>82.4</td>
<td>$0.84</td>
<td>$4,912</td>
</tr>
<tr>
<td>1990</td>
<td>130.7</td>
<td>$1.01</td>
<td>$12,018</td>
</tr>
<tr>
<td>2000</td>
<td>172.2</td>
<td>$0.91</td>
<td>$20,186</td>
</tr>
<tr>
<td>2007</td>
<td>205.8</td>
<td>$1.64</td>
<td>$27,560</td>
</tr>
</tbody>
</table>

The real price of eggs in 1970 dollars is calculated as follows:

Real price of eggs in 1980 = \( \frac{CPI_{1970}}{CPI_{1980}} \times \text{nominal price in 1980} \)

Real price of eggs in 1990 = \( \frac{CPI_{1970}}{CPI_{1990}} \times \text{nominal price in 1990} \)

While the nominal price of eggs rose during these years, the real price of eggs actually fell.
**Example 1.3** The Price of Eggs and the Price of a College Education (continued)

<table>
<thead>
<tr>
<th>Table 1.1 The Real Prices of Eggs and of a College Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Price Index</td>
</tr>
<tr>
<td><strong>Nominal Prices</strong></td>
</tr>
<tr>
<td>Grade A large eggs</td>
</tr>
<tr>
<td>College education</td>
</tr>
<tr>
<td><strong>Real Prices ($1990)</strong></td>
</tr>
<tr>
<td>Grade A large eggs</td>
</tr>
</tbody>
</table>

The percentage change in real price is calculated as follows:

\[
\text{Percentage change in real price} = \frac{100 \times (\text{real price in 2007} - \text{real price in 1970})}{\text{real price in 1970}}
\]

\[
= 100 \times \frac{1.04 - 2.05}{2.05} = 100 \times (-0.49) = -49\%
\]

**Example 1.4** The Minimum Wage

In nominal terms, the minimum wage has increased steadily over the past 70 years. However, in real terms its expected 2010 level is below that of the 1970s.
### Monthly Wage Rate by Employment Status at Constant 2008 Price

<table>
<thead>
<tr>
<th>Work Status</th>
<th>Monthly Wages</th>
<th>Annual growth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private employee</td>
<td>4,811</td>
<td>6,506</td>
</tr>
<tr>
<td>Government employee</td>
<td>10,400</td>
<td>12,079</td>
</tr>
<tr>
<td>Public Enterprise Employee</td>
<td>14,986</td>
<td>20,644</td>
</tr>
<tr>
<td><strong>Average wage rate</strong></td>
<td>6,156</td>
<td>8,063</td>
</tr>
<tr>
<td><strong>GDP at 2008 price (million)</strong></td>
<td>4,073</td>
<td>6,276</td>
</tr>
<tr>
<td><strong>Consumer Price Index</strong></td>
<td>50.7</td>
<td>82.2</td>
</tr>
<tr>
<td><strong>Minimum Wage</strong></td>
<td>3,298</td>
<td>4,336</td>
</tr>
</tbody>
</table>

**Source:** Labor Force Survey 1990, 2000, and 2008

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2. The following table shows the average retail price of butter and the Consumer Price Index from 1980 to 2000, scaled so that the CPI = 100 in 1980.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI</td>
<td>100</td>
<td>130.58</td>
<td>158.56</td>
<td>184.95</td>
<td>208.98</td>
</tr>
<tr>
<td>Retail price of butter (salted, grade AA, per lb.)</td>
<td>$1.88</td>
<td>$2.12</td>
<td>$1.99</td>
<td>$1.61</td>
<td>$2.52</td>
</tr>
</tbody>
</table>

a) Calculate the real price of butter in 1980 dollars. Has the real price increased/decreased/stayed the same since 1980?

b) What is the percentage change in the real price (1980 dollars) from 1980 to 2000?

c) Convert the CPI into 1990 = 100 and determine the real price of butter in 1990 dollars.

d) What is the percentage change in the real price (1990 dollars) from 1980 to 2000? Compare this with your answer in (b). What do you notice? Explain.
WHY STUDY MICROECONOMICS?

Public Policy Design: Automobile Emission Standards for the Twenty-First Century

The design of a program like National Environmental Quality Act B.E. 1992 (the Clean Air Act) involves a good deal of economics.

First, the government must evaluate the monetary impact of the program on consumers.

The government must determine how new standards will affect the cost of producing cars.

Finally, the government must ask why the problems related to air pollution are not solved by our market-oriented economy.

• Financial Measures for Environment Act B.E 25xx (Draft)

CHAPTER 1 RECAP

1.1 The Themes of Microeconomics

1.2 What Is a Market?

1.3 Real versus Nominal Prices

1.4 Why Study Microeconomics?
Grade Distribution

• Grade distribution is as follows:
  90-100 is A;
  85-90, B+;
  79-85, B;
  79-69, C+;
  62-69, C;
  56-62, D+;
  50-56, D;
  Lower than 50, F

• (Note 85-90 implies that lower than 90 but higher than 85)