

CHAPTER 1. PRELIMINARIES

Read Pindyck and Rubinfeld (2013), Chapter 1

Microeconomics, 8^h Edition by
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Adapted by Chairat Aemkulwat for
Econ I: 2900111

19.Remark

Instructions in the classroom 1. Do not use smartphone in the classroom at all time. 2. Do not talk with your friends during class time. 3. Sit in the first four rows in the classroom. 4. If you cannot follow the instructions, you will be instructed to exit the classroom. My office is room number 519 in Economics Building; phone number, 2218-6291 and 2218-6215; email, chairat.a@chula.ac.th; web, <http://pioneer.netserv.chula.ac.th/~achairat>.

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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.

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.

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.

Positive economic analysis is concerned with explaining what is and predicting what will be. Normative economic analysis describes what ought to be. Statement (a) is primarily normative because it makes the normative assertion (i.e., a value judgment) that gasoline rationing is “poor social policy.” There is also a positive element to statement (a), because it claims that gasoline rationing “interferes with the workings of the competitive market system.” This is a prediction that a constraint placed on demand will change the market equilibrium.

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

Statement (b) is positive because it predicts how gasoline rationing effects people without making a value judgment about the desirability of the rationing policy.

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

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.

- **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.

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.

a) People generally buy fast food locally and do not travel large distances across the United States just to buy a cheaper fast food meal. Because there is little potential for arbitrage between fast food restaurants that are located some distance from each other, there are likely to be multiple fast food markets across the country.

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.

b) Although consumers are unlikely to travel across the country to buy clothing, they can purchase many items online. In this way, clothing retailers in different cities compete with each other and with online stores such as L.L. Bean. Also, suppliers can easily move clothing from one part of the country to another. Thus, if clothing is more expensive in Atlanta than Los Angeles, clothing companies can shift supplies to Atlanta, which would reduce the price in Atlanta. Occasionally, there may be a market for a specific clothing item in a faraway market that results in a great opportunity for arbitrage, such as the market for blue jeans in the old Soviet Union.

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

c) Although some people have strong preferences for a particular brand of cola, the different brands are similar enough that they constitute one market. There are consumers who do not have strong preferences for one type of cola, and there are consumers who may have a preference, but who will also be influenced by price. Given these possibilities, the price of cola drinks will not tend to differ by very much, particularly for Coke and Pepsi.

- **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.

1.3

REAL VERSUS NOMINAL PRICES

EXAMPLE 1.3

The Price of Eggs and the Price of a College Education

Table 1.1 The Real Prices of Eggs and of a College Education

	1970	1980	1990	2000	2007
Consumer Price Index	38.8	82.4	130.7	172.2	205.8
Nominal Prices					
Grade A large eggs	\$0.61	\$0.84	\$1.01	\$0.91	\$1.64
College education	\$2530	\$4912	\$12,018	\$20,186	\$27,560
Real Prices (\$1970)					
Grade A large eggs	\$0.61	\$0.40	\$0.30	\$0.21	\$0.31
College education	\$2,530	\$2,313	\$3,568	\$4,548	\$5,196

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

$$\text{Real price of eggs in 1980} = \frac{CPI_{1970}}{CPI_{1980}} \times \text{nominal price in 1980} = \frac{38.8}{82.4} \times \$0.84 = \$0.40$$

$$\text{Real price of eggs in 1990} = \frac{CPI_{1970}}{CPI_{1990}} \times \text{nominal price in 1990} = \frac{38.8}{130.7} \times \$1.01 = \$0.30$$

While the *nominal* price of eggs rose during these years, the *real* price of eggs actually fell.

1.3 REAL VERSUS NOMINAL PRICES

EXAMPLE 1.3

The Price of Eggs and the Price of a College Education (continued)

Table 1.1 The Real Prices of Eggs and of a College Education

	1970	1980	1990	2000	2007
Consumer Price Index	38.8	82.4	130.7	172.2	205.8
Nominal Prices					
Grade A large eggs	\$0.61	\$0.84	\$1.01	\$0.91	\$1.64
College education	\$2530	\$4912	\$12,018	\$20,186	\$27,560
Real Prices (\$1990)					
Grade A large eggs	\$2.05	\$1.33	\$1.01	\$0.69	\$1.04

The *real* price of eggs in 1990 dollars is calculated as follows:

$$\text{Real price of eggs in 1970} = \frac{CPI_{1990}}{CPI_{1970}} \times \text{nominal price in 1970} = \frac{130.7}{38.8} \times \$0.61 = \$2.05$$

$$\text{Real price of eggs in 2007} = \frac{CPI_{1990}}{CPI_{2007}} \times \text{nominal price in 2007} = \frac{130.7}{205.8} \times \$1.64 = \$1.04$$

1.3 REAL VERSUS NOMINAL PRICES

EXAMPLE 1.3

The Price of Eggs and the Price of a College Education (continued)

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Real Prices (\$1990)					
Grade A large eggs	\$2.05	\$1.33	\$1.01	\$0.69	\$1.04

The percentage change in real price is calculated as follows:

$$\begin{aligned}
 \text{Percentage change in real price} &= 100 * \frac{\text{real price in 2007} - \text{real price in 1970}}{\text{real price in 1970}} \\
 &= 100 * \frac{1.04 - 2.05}{2.05} = 100 * (-0.49) = -49\%
 \end{aligned}$$

EXAMPLE 1.4

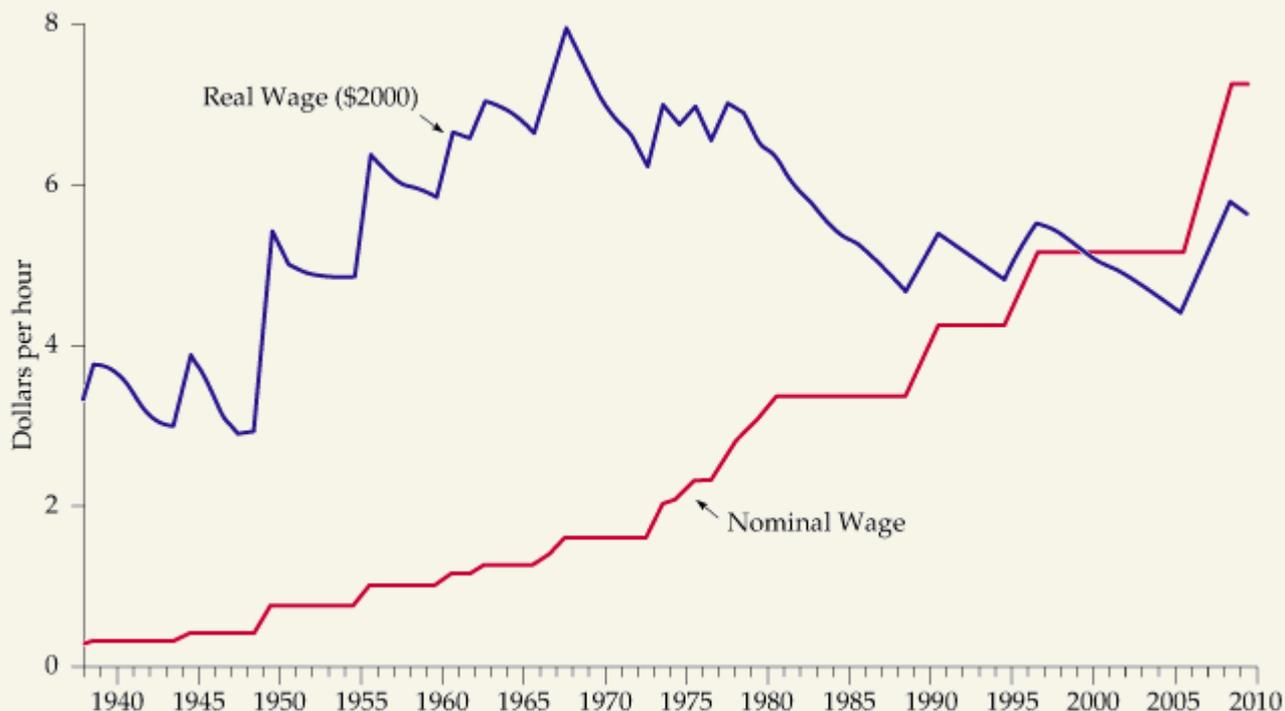
The Minimum Wage

Figure 1.1

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

Work Status	Monthly Wages			Annual growth rate		
	1990	2000	2008	1990-2000	2000-2008	1990-2008
Private employee	4,811	6,506	7,449	3.1%	1.7%	2.5%
Government employee	10,400	12,079	14,065	1.5%	1.9%	1.7%
Public Enterprise Employee	14,986	20,644	22,449	3.3%	1.1%	2.3%
Average wage rate	6,156	8,063	9,020	2.7%	1.4%	2.1%
GDP at 2008 price (million)	4,073	6,276	9,105	4.4%	4.8%	4.6%
Consumer Price Index	50.7	82.2	100	5.0%	2.5%	3.8%
Minimum Wage	3,298	4,336	4,268	2.8%	-0.2%	1.4%

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

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.

	1980	1985	1990	1995	2000
CPI	100	130.58	158.56	184.95	208.98
Retail price of butter (salted, grade AA, per lb.)	\$1.88	\$2.12	\$1.99	\$1.61	\$2.52

- Calculate the real price of butter in 1980 dollars. Has the real price increased/decreased/stayed the same since 1980?
- What is the percentage change in the real price (1980 dollars) from 1980 to 2000?
- Convert the CPI into 1990 = 100 and determine the real price of butter in 1990 dollars.
- 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.

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

$$\text{Real price of butter in year } t = \frac{CPI_{1980}}{CPI_t} * (\text{nominal price of butter in year } t).$$

	1980	1985	1990	1995	2000
Real price of butter (1980 \$)	\$1.88	\$1.62	\$1.26	\$0.87	\$1.21

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

Real price decreased by \$0.67 ($1.88 - 1.21 = 0.67$). The percentage change in real price from 1980 to 2000 was therefore $(-0.67/1.88) * 100\% = -35.6\%$.

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

To convert the CPI into 1990 = 100, divide the CPI for each year by the CPI for 1990 and multiply that result by 100. Use the formula from part (a) and the new CPI numbers below to find the real price of milk in 1990 dollars.

	1980	1985	1990	1995	2000
New CPI	63.07	82.35	100	116.64	131.80
Real price of butter (1990 \$)	\$2.98	\$2.57	\$1.99	\$1.38	\$1.91

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.

Real price decreased by \$1.07 ($2.98 - 1.91 = 1.07$). The percentage change in real price from 1980 to 2000 was therefore $(-1.07/2.98) * 100\% = -35.9\%$. This answer is the same (except for rounding error) as in part (b). It does not matter which year is chosen as the base year when calculating percentage changes in real price

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

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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)