

# Chapter 20

## CURRENT TOPICS

# IN APPLIED MICROECONOMICS: HEALTH CARE, IMMIGRATION, AND URBAN PROBLEMS

**THIS CHAPTER DISCUSSES THREE TOPICS** in applied microeconomics. Health care and immigration are on the front burner of domestic politics. Urban economics and the economics of urban problems will fill a hole in the microeconomic theory you have studied thus far. We have talked about many decisions that firms and households make—what to produce, how to produce, what to consume, how much labor to supply—but we have not yet examined firm and household decisions about *where to produce* and *where to live*. The rise of cities and the concentrations of urban populations are the direct consequences of firms' and households' location decisions.

## THE ECONOMICS OF HEALTH-CARE REFORM

No issue looms larger in U.S. politics than health-care reform. When elected in 1992, President Clinton listed health reform as his number-one priority. In October of 1993, he sent to Congress a 1,342-page bill that sought to restructure completely the nation's health-care system. But by the end of 1994, the 103rd Congress declared the Clinton health-reform proposal dead, even though it had come closer to making meaningful reforms than any previous Congress had. In 1998, worries about the Medicare program for the elderly were a central theme in the congressional election.

Why has health-care reform become a focal point in the United States? What is it about the market for health-care services that calls for government

### The Economics of Health-Care Reform

- Health Care in the United States:
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### The Economics of Immigration

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involvement? What proposals have been put forth to change the way health-care services are delivered and to whom they are delivered? In this section, we address these and other questions, applying the logic of economics to the market for health care.<sup>1</sup>

## HEALTH CARE IN THE UNITED STATES: THE BASIC FACTS

Three facts about health care seem to generate the most concern among those who advocate reform. First, health care is very expensive and is getting more expensive by the day. In 1994, total health-care expenditures in the United States topped \$1 trillion, about 14.5 percent of GDP. As a percentage of GDP, the United States spends twice as much on health care as the average developed country. No other country spends more than 10 percent of its GDP on health care. Yet the United States insures a much smaller fraction of its population than do most other industrial countries and ranks poorly on indicators of health outcomes like life expectancy and infant mortality. U.S. per capita spending on health—approximately \$3,600 in 1995—is expected to rise to over \$5,000 by the year 2000, and total health-care spending is expected to reach 18 percent of GDP by the year 2005. As Figure 20.1 shows, U.S. per capita spending on health care is the highest in the world. The figure for the United States is more than 50 percent higher than any other country's rate of spending.

Second, in 1996 approximately 42 million Americans, or 15.6 percent of the population, had no health insurance, and the number was growing. Many find they cannot change jobs or leave welfare for fear of losing health benefits.

Third, the government spent nearly \$460 billion on health and health-related programs including Medicaid (medical payments for the very poor) and Medicare (medical payments for the elderly). The public sector accounted for nearly half of the nation's medical care expenditures. Not only is this total enormous, but it is the fastest growing item in the federal budget. Projections show that the cost of medical-care programs will grow by nearly 10 percent annually over the foreseeable future, creating enormous budget problems at all levels of government.

## SHOULD GOVERNMENT BE INVOLVED?

Should the government be involved in the market for health-care services? If so, what role should it play? Other sectors of the economy are large and growing rapidly too, but no one is calling for government to “fix” things. The entertainment industry (music, CDs, concerts, theme parks, and so forth) is consuming a larger and larger share of U.S. spending, but it has not stimulated much public outcry.

The market for health-care services is like any other market in the economy in that most people obtain their health services from the private sector. Basically, health care is a **private good**. People can be excluded from its benefits if they do not pay, and the primary beneficiary of services provided is the patient herself. Most physicians are in private practice or work for private hospitals or health maintenance organizations (HMOs), many of which are in business to make a profit. For the most part, health-care costs are determined in markets by the interaction of supply and demand. Just as in any other market, labor costs (such as physicians' salaries) and capital costs interact with technology to determine costs of production, and willingness and ability to pay play a role in determining demand.

However, a number of characteristics of the market for health-care services suggest a role for government. First, asymmetric (imperfect) information, fee-for-service reimbursement, externalities, and imperfect market structure all suggest that the market

**private good** A product produced by firms for sale to individual households. People can be excluded from the benefits of a private good if they do not pay for it.

<sup>1</sup>This discussion owes much to a symposium on health-care reform published in the *Journal of Economic Perspectives*, Volume 8, Number 3, Summer 1994, especially “A Guide to Health Care Reform,” by David Cutler. In addition, *The Economic Report of the President, 1993*, contains an excellent summary of the arguments for reform.



**FIGURE 20.1**  
Per Capita Health Spending  
for Selected Countries, 1995

Source: OECD Health Data 1997.

may well be operating inefficiently.<sup>2</sup> Second, the fact that many citizens are without coverage is thought by many to be inequitable.

► **Asymmetric Information** For markets to be efficient, buyers must have complete information on product quality and price. Yet the health-care market is characterized by **asymmetric information**, a situation in which the participants in an economic transaction have different information about the transaction. Most of us know little about medicine. It takes years of education and on-the-job-training to become a licensed physician. In addition, the practice of medicine has become increasingly specialized, and the gap between a doctor's knowledge and his patient's knowledge has increased. Virtually all the information on product quality and price rests with the supplier—essentially, with the physician. In a private office, in a hospital, or in a health maintenance organization, the services we “buy” are chosen for us by the person who supplies them to us! Clearly, when suppliers control the information needed to make effective demand decisions, the opportunity for abuse and waste exists. One recent study documents that a substantial number of expensive medical procedures carried out were inappropriate or of limited value.<sup>3</sup>

Asymmetric information may also result in the problem of **adverse selection**, discussed in chapter 16. Adverse selection happens when insurance buyers know more about their health than the insurer. Suppose there are only two types of people: sick people and well people. If insurers could not tell the difference, they would charge the average cost of providing health-care coverage. By doing so, they would charge the sick much less than the expected costs of their coverage. The sick would be more likely to buy health insurance, while some of the well would buy no insurance. Because a larger percentage of the insured will be the sick, premiums would rise, further discouraging the well from buying insurance. This would continue until only the sick are insured at very high prices—not an ideal situation. Thus asymmetric information may lead to a need for government involvement.

► **Fee-For-Service Reimbursement** If health care meant going to the doctor's office a couple of times a year, we would not worry about having insurance. But most people

**asymmetric information** A situation in which the participants in an economic transaction have different information about the transaction.

**adverse selection** An imperfect-information problem that can occur when a buyer or seller enters into an exchange with another party who has more information.

<sup>2</sup>For a review of externalities and imperfect information, see chapter 16. For a review of efficiency and imperfect market structure, see chapter 12.

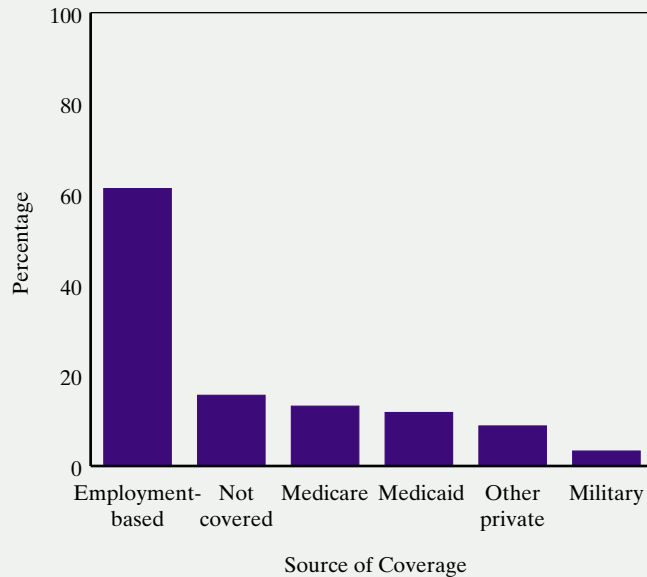
<sup>3</sup>*Economic Report of the President, 1994, Chart 4.5.*

**FIGURE 20.2**

**Health Insurance Coverage  
in the United States, 1996**

*\*NOTE: The figures add to more than 100 percent because many people are covered by two or more plans.*

Source: U.S. Bureau of the Census, Housing and Household Economic Statistics Division, September 1997.



**moral hazard** *Arises when one party to a contract passes the cost of his or her behavior on to the other party to the contract.*

**deductible** *An annual out-of-pocket expenditure that an insurance policy holder must make before the insurance plan makes any reimbursement.*

**copayment** *A fixed amount of money that an insured person pays for each visit to a doctor's office.*

**fee-for-service reimbursement** *A program in which insurance companies reimburse health-care providers for the services they've rendered.*

**experience rating** *The insurance-company practice of charging individuals or groups of individuals premiums that are linked to their current state of health or to the probability that they will become sick.*

know that the costs of a serious illness can be catastrophic. Spending a week in a hospital and having a serious operation can cost well over \$100,000. A normal childbirth with only a single day in the hospital costs several thousand dollars. Even a high-income family without health insurance could end up bankrupt if a family member sustained a serious head injury in an accident.

So, the majority of the U.S. population is covered by health insurance. As Figure 20.2 shows, 61 percent of the population are covered by a plan to which their employer contributes, 9 percent pay for their own private health insurance, and about 28 percent are insured by the government through Medicare, Medicaid, and other programs. About 15 percent of the U.S. population are uninsured.

Coverage by insurance leads to a number of problems. First, full coverage creates a **moral hazard** problem. If patients do not bear the costs of health care, they have an incentive to overuse medical services. Even though most insurance policies carry a **deductible** (an annual out-of-pocket expenditure that an insurance policyholder must make before the plan makes any reimbursement) and a **copayment** (a fixed amount of money that an insured person pays for each visit to a doctor's office), consumers of health services pay far less than the cost of providing the service, and most insurance policies demand no payment at all from the patient after a fairly low maximum contribution has been made.

Second, the method of reimbursement employed by most insurance companies may lead health-care providers to oversupply their services. Traditionally, health-care providers are reimbursed on a **fee-for-service** basis. As long as the price paid by the insurer is greater than the marginal cost of production, providers have an incentive to oversupply. This makes the problem of asymmetric information more serious. Suppliers have not only all the information needed to make an informed choice about what services a patient needs, but also a big incentive to oversupply.

In addition, the fact that those who get very sick are very costly to insurance companies has led most insurance providers to use experience rating. **Experience rating** means charging individuals or groups of individuals premiums linked to their current state of health or to the probability that they will become sick. Insurance companies, which are in business to make money, will not insure people at all if certain preexisting conditions (such as heart disease, cancer, or AIDS) exist when the application is filed. Because most injuries and illnesses do not result from the behavior of the insured,

experience rating does not for the most part improve the efficiency of health care. In a sense, experience rating defeats the purpose of insurance—to spread risk so that no single household faces the full cost of an illness.

► **Externalities** As we saw in chapter 16, an *externality* exists when the actions or decisions of one person or group impose a cost or bestow a benefit on some second or third parties. The result is usually inefficient. The most often-used example is pollution. One way of “internalizing” externalities is to tax activities that generate public harms and to subsidize activities that generate public benefits.

Health care may generate positive externalities. The public health is improved when individuals receive immunizations and communicable diseases are treated in a timely fashion. Poor health may lead to negative externalities. Poor health leads to lower productivity, and lower productivity leads to lower wages. Poverty, welfare dependency, and homelessness may all be linked to some extent to health.

Certainly the current structure of governmental assistance to the very poor and lack of insurance coverage for the near-poor combine to reduce the incentive to work and may lead some to stay on welfare to avoid losing their health benefits. Higher welfare payments impose an external cost on taxpayers.

► **Imperfect Structure and Market Power** Drug and biotechnology companies spend millions on research and development to create drugs and discover procedures that will cure diseases and save lives. Their incentive is provided by the patent system, which protects the producers of new drugs, equipment, and procedures for up to 20 years. This monopoly power has led to unbelievably high prices for some patented prescription drugs and equipment.

As we discussed in chapter 13, there are two sides to this story. A patent system is necessary to provide the private sector with an incentive to engage in research and development. However, should patent protection be decreased or eliminated when the product of research is a life-saving drug that can be produced at a low cost? Many have called for more funds for publicly sponsored research where the results would be available as a public good.

Another example of imperfect market structure can be found in the labor market. Since 1910, the American Medical Association (AMA) has controlled the system of medical education in the United States. Some argue that by limiting the number of trained physicians, the AMA has been able to keep the average physician’s salary high. In addition, the AMA has lobbied very hard to block the entry of potential substitutes for physicians’ services, including nurses and chiropractors.

► **Equity** Although a number of inefficiencies are associated with providing health-care services in the United States, what seems to generate the most concern is an equity issue. In 1996, 42 million Americans had no health insurance. What makes this issue cross the political spectrum is that it is not the very poor who are not covered. Welfare recipients and others who are very poor are covered under Medicaid. Rather, it is the near-poor, the working poor, and middle-income families who work for firms that do not provide health coverage. Government-funded coverage to these people would not provide them with an incentive to work less, and no one can claim that they are uncovered because of laziness.

Many view health care as a right that all citizens should have regardless of ability to pay. Several of the theories of redistribution we discussed in chapter 17 lend support to the idea of government involvement in providing universal coverage. Voters may well understand that health care produces positive externalities and support programs out of self-interest. And those who subscribe to the idea of Rawlsian justice would argue that a just set of rules, determined by members of society before they know the circumstances that their life will lead them to, would declare a set of basic entitlements for all that would include medical care.

## THE CAUSES OF THE HIGH COST OF MEDICAL CARE

Before turning to potential solutions and reform proposals, we need to summarize what we know and do not know about the causes of the high cost of health care in the United States.

At the outset we must realize that high cost is not necessarily a bad thing. For example, if the only reasons for higher costs were that (1) the average age of the U.S. population is increasing and health-care costs for the elderly are higher, and (2) modern technology has produced excellent new tools for diagnosis and treatment that are very expensive (for example, CAT scan and MRI machines), there would be little need for intervention. But most analysts believe inefficiency and waste play a large role.

Among the biggest sources of inefficiency—asymmetric information, the moral hazard problem, fee-for-service reimbursement, externalities, and imperfect market structure—exactly what percentage of the high cost of care results directly from these problems is hard to estimate. But most analysts say it is substantial.

Although the aging of the population and the introduction of Medicare (mandatory tax-financed health insurance for the elderly) have raised costs, three facts point in other directions. First, the leading edge of the baby boom generation is only now approaching 50 years of age, not yet into the “costly” years. Second, as Table 20.1 shows, many other countries have populations that are significantly older on average than that of the United States. The United States ranks at the low end of the group of developed countries in the percentage of population over the age of 65. Third, costs jumped when Medicare was introduced, but they have continued to rise very rapidly despite a reduction in the percentage of those covered and no major changes in the age distribution of the population.

There is no question that improved technology—which has been reflected in new kinds of expensive equipment, treatments, and procedures such as organ transplants—accounts for some of the increased costs, but there is little empirical evidence on precisely how much. Because only one-third of the increase in costs reflects higher expenses of hospital care, and technology accounts for only a portion of hospital-care costs, we must look to other factors for explanation.

Often cited as a factor is the high cost of malpractice lawsuits. Doctors who make mistakes are often sued, and juries have made huge damage awards to the victims. The result is expensive malpractice insurance premiums for physicians, hospitals, and other providers. Here there is some evidence because we can measure the total direct cost of malpractice, which turns out to be only about 1 percent of total health-care spending. But direct costs may be only part of the story. Because of the threat of malpractice suits, physicians may practice defensive medicine. **Defensive medicine** is the practice of ordering tests, procedures, or treatments that are not cost-effective for the patient but protect the doctor from the possibility of being sued later. A recent study estimates the cost of such additional procedures and tests at around 3 percent of total health-care spending.<sup>4</sup>

Although an aging population, increasing malpractice insurance costs, and advancing technology all play some role in explaining higher health-care costs, the bulk of the problem lies in asymmetric information, moral hazard, and inefficient reimbursement methods. Much, however, remains to be explained.

## REFORM PROPOSALS

A number of reforms have been offered to solve the growing problems of U.S. health care. The Clinton plan, presented to Congress in 1993 and rejected in 1994, contained most of the following proposals; many can be expected to resurface as the debate continues. This is by no means a comprehensive list of all reform proposals.

**TABLE 20.1**

### POPULATION OVER 65 AS A PERCENTAGE OF TOTAL POPULATION FOR SELECTED COUNTRIES, 2000

Italy	17.5
United Kingdom	15.9
France	16.4
Germany	16.5
Spain	16.4
Portugal	15.1
Japan	16.5
The Netherlands	14.1
United States	12.7
Canada	12.8

Source: U.S. Bureau of the Census, International Data Base.

**defensive medicine** *Ordering medical tests, procedures, or treatments that are not cost-effective to protect oneself from being sued for malpractice later on.*

<sup>4</sup>See Cutler, “A Guide to Health Care Reform.”

► **Encourage Managed Care** Managed care providers offer complete and comprehensive medical care plans, including physical examinations, general physician visits, specialists, and hospitalization. The most common form of managed care plan is the **health maintenance organization**, or **HMO**, a health-care plan that provides comprehensive medical services for employees and their families at a flat fee. The big advantage of managed care is that payment is received on a per capita basis rather than a fee-for-service basis. The provider gets paid one fee regardless of the actual expenses incurred on each patient's behalf. Another managed care system gaining popularity is the **preferred provider organization (PPO)**. In a PPO, an employer or insurance company establishes a network of doctors and hospitals to provide a broad set of medical services for a flat fee per participant. In return for the lower fee, the doctors and hospitals who join the PPO network expect to receive a larger volume of patients. HMOs and PPOs give the provider an incentive to order cost-effective tests and procedures and not to oversupply. (See Issues and Debates box, "The Market for Health Care Responds to Rising Costs.") The Clinton plan provided incentives for consumers to choose such plans by making the alternatives more expensive. Although managed care has many supporters, its detractors raise two main objections: It limits patients' choice of physician and may provide an incentive for health-care providers to hold back on some necessary tests or procedures that otherwise would have been done.

► **Require Community Rating** We have already discussed the problems associated with experience rating. By denying coverage to those with preexisting conditions and charging those in high-risk categories exorbitant premiums, little is gained in terms of efficiency because most people do not choose to be sick or to be in high-risk categories. Most reform proposals, including the Clinton plan that didn't make it through Congress, require **community rating**, a system in which insurance providers must accept all applicants and charge premiums based only on age, location, and perhaps some elements of behavior such as smoking. Everyone in each category would be charged the same premium regardless of health condition. A big benefit of such a system would be increased job mobility.

► **Finance Reform** One controversial feature of the Clinton plan was the **employer mandate**. Under this provision, all employers would be required to provide insurance for all employees and to pay on average 80 percent of the community-rated premiums. Employer contributions would be capped at 7.9 percent of payroll, and small firms (fewer than 75 employees) and firms with low average wages (below \$24,000) would receive subsidies to keep the cost below 3.5 percent of payroll.

Critics argue employer mandates will hurt small business and result in job losses. Advocates point to over half of the U.S. population currently covered by employer-sponsored health care and they say small business would receive a subsidy. But the most convincing argument to economists who support employer mandates is this: Even though firms pay for government health-care insurance through payroll taxes and for private health insurance through benefit programs, these costs are actually passed on to wage and salary workers over time in the form of lower wages and salaries in the labor market! Workers ultimately bear the burden of most health-care costs anyway.<sup>5</sup> So, the costs of an employer mandate would in the long run be passed through to workers in the form of lower wages.

Under the Clinton plan, the self-employed would have been responsible for their own coverage, but their premiums would have been based on income level.

► **Premium Caps** The most controversial part of the Clinton plan among economists was its cap on premiums. Specifically, real per capita premiums were not to increase by more than 1.5 percent annually through 1996. This would have been reduced by 0.5 percent each year to zero in 1999. The purpose was to ensure that the presumed

### health maintenance organization (HMO)

*A health-care plan that provides comprehensive medical services for employees and their families at a flat fee.*

### preferred provider organization (PPO)

*A managed health-care plan in which an employer or insurance company establishes a network of doctors and hospitals to provide a broad set of medical services for a flat fee per participant. In return for the lower fee, the doctors and hospital who join the PPO network expect to receive a larger volume of patients.*

**community rating** *A system in which insurance providers must accept all applicants and charge premiums based only on age, location, and perhaps some elements of behavior (such as smoking).*

**employer mandate** *A system of health-care insurance provision in which all employers are required to provide health insurance and to pay on average 80 percent of the community-rated premiums.*



Medicaid and Medicare financed 36.1% of all personal health care expenditures in 1995. Medicare funded \$184 billion in benefits for the nearly 37.5 million aged and disabled people enrolled in the program, 61% for the hospital care and 22% for physicians' services.

Source: Health Care Financing Administration, release January 27, 1997.

<sup>5</sup>We showed how the burden of payroll taxes paid by firms can be shifted to workers in chapter 18.

## THE MARKET FOR HEALTH CARE RESPONDS TO RISING COSTS

On January 27, 1997, Health and Human Services Secretary Donna Shalala released the latest available figures on U.S. national health expenditures. Although health-care costs have not stopped rising, the rate of increase has slowed: growth in the nation's health-care spending decelerated sharply from double-digit rates of the late 1980s and early 1990s to 6.6 percent in 1993, 5.1 percent in 1994, and 5.5 percent in 1995. The lower growth rates in 1994 and 1995 were the lowest in more than three decades.

At the root of the slowdown was an even more significant slowdown in the growth of *private* spending, which increased only 2.9 percent in 1995. Interestingly, the market seems to be moving in the direction of at least one of the proposed reforms without government involvement.

*In the two years that Congress wrangled over health care before quashing proposals for fundamental change, private market forces were acting on their own to transform the country's medical system dramatically.*

*Indeed, cost cutting, intensive competition and the growing role of large profit seeking corporations*

*in health care escalated some of the very trends that many members of Congress said they most opposed, like limitations on the choice of doctors. Among the milestones American health care reached without fanfare during 1993 and 1994 were these:*

- **A MAJORITY** of privately insured Americans were enrolled in managed-care plans that limit choice of doctors and treatments. Sixty-five percent of workers at medium and large companies were in such plans by 1994.
- **FOR-PROFIT** health maintenance organizations grew so fast that they overtook nonprofit H.M.O.'s as the dominant force in managed care. Today the majority of all people enrolled in H.M.O.'s, the most common and stringent form of managed care, are in plans run by for-profit companies.
- **AT LEAST** three-fourths of all doctors signed contracts, covering at least some of their patients, to cut their fees and accept oversight of their medical decisions. Among doctors who work in group practices, the share of such managed-care contracts was 89 percent by

1993, up sharply from 56 percent the year before.

*Run for decades more like a collection of cottage industries than a system that now accounts for one-seventh of the economy, medical care is increasingly the domain of big business, offering a rich new playing field for Wall Street. Mergers and acquisitions of hospitals; clinics; doctor groups with their patient lists; medical laboratories, and other patient-care services, have totaled \$20 billion this year, up from just \$6 billion in 1992. Combined with the \$22 billion in pharmaceutical deals, health care mergers surpassed in value those of any other industry for 1994, according to the Securities Data Company, a research firm in Newark.*

*But this restructuring has done nothing to ease the plight of the uninsured, whose numbers keep climbing, and it is also raising profound new questions about how quality care and medical ethics can be guarded.<sup>a</sup>*

Source: "Erik Eckholm, "While Congress Remains Silent, Health Care Transforms Itself," *The New York Times*, December 18, 1994, p. 1. Copyright © 1994 by The New York Times Co. Reprinted by permission.

For more on health care and the economy, see the Case and Fair Web page at <http://www.prenhall.com/casefair>.

efficiency and cost savings from managed care and reduced fee-for-service reimbursement would be realized. Economists do not like the inefficiency that comes with artificially imposed restrictions on price movements.

## THE ECONOMICS OF IMMIGRATION

Few topics have received as much play in the press in recent years as immigration. And few topics elicit as much emotional response. In December 1994, voters in California approved by a 3-to-2 margin Proposition 187, a highly controversial referendum that prevents illegal immigrants from receiving state education, welfare, and nonemergency medical benefits. In 1995, Governor Lawton Chiles of Florida declared a statewide emergency and demanded a stop to the tens of thousands of Cubans flooding into Florida. President Clinton responded by sending the Coast Guard to intercept them and take

them to a detention camp at Guantanamo Naval Base in Cuba. Later, some were sent to Panama and some were allowed to enter the United States. The recent exodus of Cubans provoked memories of the 1981 Mariel boat lift, as a result of which over 125,000 refugees arrived in Florida. Many were criminals who still are in U.S. prisons.

What impact does immigration have on a country's economy? All bad, as many would have us believe? One element of the agreement among the members of the European Union is the abolition of border controls to encourage the free flow of labor among member countries in response to wage differentials and economic conditions. The relaxation of immigration rules in Europe was done to encourage economic growth and prosperity.

## A BRIEF HISTORY OF IMMIGRATION INTO THE UNITED STATES

Immigration into the United States has come in irregular waves. The first "Great Migration" occurred between 1880 and 1924, when 25.8 million immigrants entered the country, a figure that represented more than 40 percent of the period's total population increase. During the 1920s, however, Congress established a national-origins quota system that limited the annual flow from the Eastern Hemisphere countries to 150,000. Under the new laws, visas were issued in proportion to the ethnic composition of the United States in 1920. The result was that 60 percent of the visas went to German and British immigrants. The flow of immigrants slowed to a trickle during the 1930s but has been expanding ever since. At present, immigration is approaching 800,000 per year. Many of today's immigrants are illegal. Studies indicate that during the late 1980s between 2 million and 3 million people were illegally residing in the United States and 200,000 to 300,000 new illegals were arriving each year. Though the Border Patrol intercepts and returns about 1.3 million illegals per year, many illegal immigrants enter legally through customs and simply remain in the country.

In 1986 the Congress enacted the **Immigration Reform and Control Act**, which granted amnesty to about 3 million illegals and imposed a set of strong employer sanctions designed to slow the flow of immigrants into the United States. The **Immigration Act of 1990** increased the number of legal immigrants allowed in each year by 150,000.

Prior to 1960, the largest single group of immigrants into the United States came from Europe. Between 1960 and 1990 the largest group of immigrants came from the Americas, especially Mexico, Canada, and Cuba. Beginning in 1970, the number of immigrants from Asia began to grow rapidly. Table 20.2 shows the number of foreign-born persons from the top 10 countries of origin in 1997.



MANY AGRICULTURAL FIRMS IN TEXAS AND CALIFORNIA RELY ON IMMIGRATION FROM MEXICO, CENTRAL AMERICA, AND SOUTH AMERICA TO SUPPLY THEM WITH LABOR DURING THE PEAK GROWING SEASON. HOWEVER, DOES IMMIGRATION REDUCE DOMESTIC WAGES AND INCREASE UNEMPLOYMENT NATIONALLY? THE EVIDENCE IS MIXED.

**Immigration Reform and Control Act (1986)** *Granted amnesty to about 3 million illegal aliens and imposed a strong set of employer sanctions designed to slow the flow of immigrants into the United States.*

**Immigration Act of 1990** *Increased the number of legal immigrants allowed into the United States each year by 150,000.*

**TABLE 20.2 FOREIGN BORN POPULATION OF THE UNITED STATES BY COUNTRY OF ORIGIN: 1997**

RANK	COUNTRY OF ORIGIN	NUMBER (THOUSANDS)	PERCENT OF TOTAL
1	Mexico	7,017	27.2
2	Philippines	1,132	4.4
3	China and Hong Kong	1,107	4.3
4	Cuba	913	3.5
5	Vietnam	770	3.0
6	India	748	2.9
7	Dominican Republic	632	2.5
8	El Salvador	607	2.4
9	Great Britain	606	2.4
10	Korea	591	2.3
	Elsewhere	11,655	45.2

Source: U.S. Department of Justice Immigration and Naturalization Service.

## ECONOMIC ARGUMENTS FOR FREE IMMIGRATION

Should a country permit completely free immigration into its borders? The argument for free immigration is that it increases world output. Labor flows across borders in response to wage differentials. Consider Mexico and the United States. Low-wage workers in Mexico migrate to the United States because wages are higher in the United States. If markets are basically competitive, wages reflect the workers' productivity. In other words, because the United States has more capital and uses more advanced technology than Mexico, the productivity of low-wage workers is higher in the United States than in Mexico. The same labor produces more total output after immigration, and world output rises.<sup>6</sup>

Now consider France and Italy. If a labor shortage develops in France because the demand for French wine increases, French wages will rise and attract workers from other European countries. If at the same time the demand for leather goods produced in Italy drops, Italian wages will fall, and Italian workers will move to France, where their productivity is higher.

The argument for the free movement of labor among nations is exactly the same as the argument for the free movement of labor among the sectors of the domestic economy. Suppose an economy produces only two goods, X and Y. If demand for good X picks up, the demand for labor used to produce X rises as the marginal revenue product of labor employed in the production of X increases. Labor will move out of the production of good Y if and only if its productivity is higher in X in terms of the value of output. This movement ensures efficiency. Recall the simple definition that an efficient economy produces what people want at least cost.

Those who favor a looser policy believe immigrants do not displace U.S. workers but rather take jobs that Americans do not want. Immigrants serve as domestics and low-wage farm workers producing things that the United States needs. In addition, the U.S. economy has absorbed wave after wave of immigrants while maintaining virtually full employment. Almost all U.S. citizens except Native Americans have relatively recent ancestors who were immigrants.

## THE ARGUMENT AGAINST FREE IMMIGRATION

No economist disputes the idea that the distribution of income is likely to change among countries and among groups within each country in response to immigration. Assuming that immigrants are low-wage workers, equilibrium wages in the market for low-skill labor will rise in the country of origin and fall in the country of destination. In addition, the return to capital will rise in the destination country, pushing up profits, while capital income will fall in the country of origin.

The argument for free immigration assumes all workers get jobs. However, the popular impression is certainly that immigrants (who usually work for very low wages) take jobs away from low-income Americans and drive up unemployment rates. And, many believe immigrants often end up on welfare rolls and become a burden to taxpayers. Opponents also point to crime in ethnic neighborhoods and rivalries among ethnic groups as evidence of further costs to society.

## THE EVIDENCE: THE NET COSTS OF IMMIGRATION

To determine whether the benefits of immigration outweigh its costs, we must ask: To what extent does immigration reduce domestic wages and increase unemployment? Recent studies found metropolitan areas that have greater numbers of immigrants seem to have only slightly lower wages and only slightly higher unemployment rates.<sup>7</sup>

<sup>6</sup>For a review of how the labor market works, see chapters 10 and 19.

<sup>7</sup>See George Borjas, "The Economics of Immigration," *Journal of Economic Literature*, December, 1994, for a review of the literature.

A study by David Card of Princeton University looks at wages and employment opportunities in the Miami area during and after the Mariel boat lift in 1981. Almost overnight, about 125,000 Cubans arrived and increased the labor force in Miami by over 7 percent. Card looked at trends in wages and unemployment among Miami workers between 1980 and 1985 and found virtually no effect. The data he examined mirrored the experience of workers in Los Angeles, Houston, Atlanta, and similar cities that were not hit by the same shock.<sup>8</sup>

A more recent study by Borjas, Freeman, and Katz takes issue with much of the work done to date. They argue that immigrants do not stay in the cities at which they arrive, but move within the United States in response to job opportunities and wage differentials. They say the effects of immigration on wages and unemployment must be analyzed at the national level, not at the city level. Their study points to the large decline in the wages of high-school dropouts relative to workers with more education during the 1980s. Their results suggest a third of the drop in the relative wages of high-school dropouts can be attributed to lower-skilled immigrants.<sup>9</sup>

On the issue of immigration's effects on government costs, mixed evidence also exists. It is clear earlier generations of immigrants have had a positive effect on both the economy as a whole and on government budgets specifically. Studies of early immigrants' wage patterns show that their wages on average exceed native workers' wages after 15 years. First-generation immigrants as a group might be paying more in taxes than they collect in means-tested benefits such as welfare.

But the data show that over time there has been a steep drop in the level of education, experience, and skills among immigrants. At the same time, participation in welfare programs among immigrants has jumped sharply. Borjas estimates that in 1990, immigrant households in the United States contributed between \$7.6 billion and \$10.1 billion in tax revenues while collecting \$23.8 billion in benefits from means-tested programs.<sup>10</sup>

## IS IMMIGRATION BAD OR GOOD?

Immigration is another economic issue in which no right answer clearly emerges. The evidence on the effects of immigration is mixed; theory gives us arguments on both sides of the issue. Only time will tell whether the recent wave of immigrants will assimilate as well as past waves. Meanwhile, immigration will remain a "hot button" issue politically, and the United States will be called upon to make some decisions about the treatment of recent immigrants.

## URBAN ECONOMICS AND THE ECONOMICS OF URBAN PROBLEMS

Since chapter 4, we have been discussing the economic decisions made by individual firms and households: how much to produce, what to produce, which technology to use, how much of each input to demand, what to consume, and how much to save. But we have not yet touched on one equally important decision—*where to locate*. Every household must live somewhere, and every firm must locate its facilities. Our world has been shaped by the collective location decisions of millions of households and firms. The collection of factories, office buildings, roads, houses, apartment buildings, stores, museums, and schools that we know as a city exists because people once decided those things needed to be close together.

<sup>8</sup>David Card, "The Impact of the Mariel Boat Lift on the Miami Labor Market," *Industrial and Labor Relations Review*, January 1990, pp. 245–257.

<sup>9</sup>George Borjas, Richard Freeman, and Lawrence Katz, "On the Labor Market Effects of Immigration and Trade," in *Immigration and the Work Force: Economic Consequences for the United States and Source Areas*, eds. George Borjas and Richard Freeman (Chicago: University of Chicago Press, 1992).

<sup>10</sup>Ibid.



Over 21% of immigrants admitted in 1996 intended to live in either New York City or Los Angeles. The majority were female (54%) and their median age was 28, with 54% below the age of 30. Persons aged 65 or older were just 5% of all immigrants. The leading occupations among the 25,000 immigrants reporting a professional or technical occupation in 1996 were nurses (4,154) and engineers (4,135).

Source: U.S. Department of Justice, Immigration and Naturalization Service, "Characteristics of Legal Immigrants," September 26, 1997.

Location decisions are similar to other decisions made by firms and households. For households, location decisions depend on preferences, incomes, and relative prices. A graduate of Florida State University who decides to look for a job in Atlanta may like the Atlanta area, but her decision is also likely to be influenced by factors such as job opportunities, wage rates, and the cost of living. For firms, decisions depend on potential revenues, costs, and profits. Digital Equipment Corporation opened a production facility in Ireland because it seemed profitable to do so. Honda opened a large plant in Ohio for the same reason.

## THE LOCATION OF BUSINESS FIRMS

No topic is of greater concern for state governors than employment, and employment in a state or a region depends upon location decisions made by business firms. Just as presidents rise and fall with the national economy, governors rise and fall with their states' economies. Most states have development departments responsible for attracting new firms and encouraging established firms to stay and expand. Within the last dozen years, many states have established tax reform commissions. Top on the agenda of practically every one of them has been a study of the impact of state taxes on industrial location decisions.

Business location decisions are complicated. The easiest way to see how complicated they are is to look at the profit function of a single firm. *Profits* are the difference between total revenue and total cost of production:

$$\text{Profit} = TR - TC = P \times q - (P_1X_1 + P_2X_2 + \cdots + P_nX_n).$$

*Total revenue* ( $TR$ ) is the price of output times the quantity of output sold ( $P \times q$ ). *Total cost* ( $TC$ ) is the total cost of all the inputs required. In the equation, we have  $n$  inputs, which include labor, capital, land, transport costs, and so forth.  $P_1$  is the price of the first input,  $X_1$  is the quantity of the first input used, and so forth.

Before we introduced the question of location to our analysis of profit-maximizing firms, we assumed that each firm knew the price of output, the price of each input required, and the technologies of production available. That information was used to pick one profit-maximizing level of output. Adding the location question brings with it a complication:

Every variable in a profit function may change from location to location.

When a firm shops around for a location, it must think about the price it can charge, the amount it might sell, the costs of transportation, wage rates, rent levels, the taxes it must pay, and so forth *at every possible location*. Once these factors are calculated, the firm will presumably pick the location where its profit will be highest.

► **The Profit Equation: Locational Variation in Revenues** Revenues depend on demand, but, more specifically, they depend on price ( $P$ ) and how much the firm can sell ( $q$ ). A gas station located on a deserted country road would not sell much gasoline. A store that sells deep-sea fishing equipment exclusively would probably not last long in Nebraska. Many firms comfortably located along major state and U.S. highways found themselves in deep trouble when the interstate highway system diverted traffic away from them.

► **The Profit Equation: Locational Variation in Costs** Some costs vary from location to location, some do not. For many firms, the cost of transporting inputs to the point of production and outputs to the point of sale make up a large component of final cost. Transport costs depend on what needs to be transported where!

Consider automobiles: Components must be produced, then assembled, and the final product must be shipped to dealers all over the world. Many of an automobile's component parts are produced from steel and aluminum. Moving iron ore, bauxite, and coal to

the sites of aluminum and steel production, transporting the raw materials to production facilities, moving finished parts to assembly plants, and shipping assembled automobiles to dealers is an enormously complex set of tasks. The costs of all these tasks depend on the sites of ore sources, production facilities, assembly plants, and dealers.

Wage rates also vary across the country. The highest average wages are in the Pacific Northwest and in the north central industrial states of Michigan, Ohio, Indiana, and Iowa. The lowest-priced labor is in the deep South and in northern New England.

The cost of capital to a firm depends to a great extent on the cost of financing. Neither the cost of borrowing nor the cost of raising funds through bond or stock offerings varies significantly across cities and regions, because the banking industry is highly integrated. If interest rates in Phoenix increase, Phoenix banks can obtain funds from outside the region, or firms themselves may turn directly to credit markets outside the area.

► **Location and Public Policy** As we already noted, public officials seek to influence firms' locational choices. Both tax and expenditure policies have been designed to encourage businesses. Several years ago, New York State included in its corporate franchise tax provisions designed to promote the expansion of firms within the state. The "jobs-incentive-credit" program, for example, reduced a firm's taxes if it expanded its employment in the state by a minimum of 1 percent during the year. More recently, the federal government has designated a number of "enterprise zones" in which locating firms receive special tax treatment.

Some states and cities negotiate property tax rates with new firms, offering juicy abatements and other perquisites. Others build access roads or new freeway interchanges that benefit new firms. During the 1960s, when urban renewal was seen as the salvation of run-down inner cities, city governments paid for most of the land and site-improvement costs before development began.

For years, economists have debated whether state tax and expenditure policies have a significant effect on business location decisions. The evidence is mixed. Those who find no effect argue that state and local taxes represent a very small portion of total costs for most firms, and that tax rates vary less across states than most people think. When decision makers are asked in surveys about the factors that played a key role in their location decisions, taxes and other special incentives do not score high. Many statistical studies have found that state and local taxes and expenditure policies are insignificant in location decision. The factors that do seem to play a role include the availability of a trained labor force, wage rates, and transport costs. But the view that state taxes and expenditures have little or no effect on location decisions is not universally held by economists. Other studies have found statistical evidence that site choice *is* sensitive to tax rates. Others point to specific examples of firms that claim to have been influenced by tax incentives.

There is another side to this story. The fact that firms may react either positively or negatively to differences in tax rates and state spending policies forces state officials to be more responsible. Interstate tax competition, some economists argue, forces public officials to look long and hard at potentially wasteful tax and expenditure policies.

## THE LOCATION OF HOUSEHOLDS

Everyone needs a place to live. And at least one person in almost every household is employed. This means residential locations depend a lot on workplace locations. Because of the costs associated with getting from home to work and back, the tendency is for households to cluster around areas of high employment.

► **Monocentric City Models** The earliest models constructed to analyze residential location assumed all employment was located at the center of the city and households bid against each other for the locations most accessible to the central city.

These models argued that those who end up living close to the center city bear lower transportation costs because their commute is shorter. This desirability of location is

**monocentric models** *Models of residential location that assume central employment. As people move farther from the center, their costs of commuting increase. Equilibrium in the housing market exists only where land prices just offset the lower transport costs closer to the center.*

**racial covenants** *Provisions spelled out in property deeds that prohibit sale of that property to members of specific racial or ethnic groups.*

**ghetto premiums** *Evidence suggests that during the 1960s and 1970s housing in sections of U.S. cities inhabited predominantly by African Americans was more expensive than comparable housing in white neighborhoods. The price difference came to be called a ghetto premium.*

reflected in bids for land. But as people relocate from the center, their transportation costs increase. Location therefore becomes less desirable and bids for housing fall. An equilibrium can exist only where the land prices just offset the lower transport costs closer to the center. If, at current land prices, a household on the periphery could increase its welfare by moving closer to the center, it would bid the closer land away from its current occupant.

With higher land prices at the center, theory predicts we will find substitution of capital for land. High-rise apartment buildings do appear most frequently in downtown areas, while garden apartments and single-family homes are usually found farther out. Despite the simplicity of the assumptions, these **monocentric**, or “single-center,” **models** that assume central employment are a good way to gain an understanding of residential location.

But job location is not the only factor that affects residential location decisions. Housing is an enormously complicated “product.” It has many different dimensions, and people have different preferences, which also shift over time. Some families have a taste for space; others feel lost in it. Some love urban living; others are afraid of crime. Some want to be near water; others prefer mountains. Many people never leave their hometowns; others can’t wait to get away. Some people have high incomes and others are poor. This heterogeneity of tastes and incomes is reflected in the diversity of the housing stock in the United States—from huge, single-family country estates to million-dollar downtown condominiums, from small urban apartments to rural shacks.

➤ **Discrimination in the Housing Market** Bidding for accessible locations tells only a small part of the residential location story. Census data reveal that African Americans and white Americans still live, by and large, in separate neighborhoods, both in urban and rural parts of the country. The South has many rural African Americans, and there is virtually complete segregation in its small towns. In the North, African Americans tend to live in the cities. While more mixed neighborhoods exist today than existed 20 years ago, they are few and far between.

Many theories to explain why these groups tend to live apart from each other have been offered. African Americans earn lower average incomes than whites. However, income differences explain only a small fraction of actual segregation. The hypothesis that African Americans live separately by choice and do not want to live in predominantly white neighborhoods is not supported by evidence. Ample evidence does support a third hypothesis, however—that African Americans are denied equal access to the housing market through discrimination.

Racial discrimination in the housing market has been documented in many forms. Until recent years, many property deeds carried provisions that restricted an owner’s ability to sell to African Americans. These **racial covenants** were enforceable until the 1950s, when the courts found them unconstitutional. Even with such agreements declared illegal, homeowners and real estate agents in all-white neighborhoods often do everything possible to prevent selling or renting to African Americans or to those who belong to ethnic groups that form the underclass of a given region.

During the 1950s and 1960s, many African Americans moved from the rural South to the urban North. When they arrived, they found their access to the housing market limited. Certain neighborhoods were designated for their occupancy, and few were able to buy or rent elsewhere. As demand for housing increased in the designated areas, prices rose. Dozens of studies during the 1960s and early 1970s documented the existence of **ghetto premiums**. African Americans were paying more to live in the ghetto than whites of comparable means were paying to live in virtually identical housing in white neighborhoods.

Ghetto premiums seemed to disappear during the 1970s, probably more because African Americans stopped moving to the city in great waves than because discrimination had ended. A number of studies have shown that racial and ethnic discrimination in housing continues to be widespread today, despite decades of efforts to stop it. One

study using matched pairs of “auditors,” one from each group, revealed that African Americans seeking apartments are invited to inspect 36.3 percent fewer units than their white counterparts.<sup>11</sup>

► **The Filtering Process and Housing for the Poor** Most poor people today live in old housing once occupied by higher-income people, housing that has declined in quality and value. Virtually all unsubsidized new housing in the United States is built for those at the upper- and middle-income levels. As rich people buy the new homes, their old homes become available to those in lower-income brackets.

As housing “filters” down the income-distribution ladder, it depreciates. The cheapest housing, the housing available to poor people, is often housing that is the oldest or has depreciated the fastest from lack of upkeep. Housing subsidies and tax advantages offered to middle- and upper-income households and to new construction are often justified on the grounds that such programs speed up the **filtering** process. If the filtering chain works faster than the rate at which the older housing stock deteriorates, everyone will end up in better housing.

The central parts of cities are usually the oldest parts. Because the oldest housing falls to the poorest people, low-income housing has in many places become concentrated in the inner city.

For years, rent control in major U.S. cities has been a way of providing affordable housing. Rent control remains a controversial issue; the Application “Affordable Housing and Rent Control” discusses the debate in more detail.

**filtering** *The process whereby the newest and best housing goes to the wealthy, whose former housing passes down to those of middle income, whose former housing passes down to those of low income. Thus housing “filters” down the income-distribution ladder.*

## THE ECONOMICS OF URBAN DECLINE AND RECOVERY

Many large U.S. cities endured a host of troubles during the 1960s and 1970s. Firms began moving to the suburbs, creating unemployment in the central cities. Buildings were abandoned. Crime rates rose. City governments found themselves with a declining tax base at the same time that the demand for public services was increasing. Many cities faced serious fiscal crises; many lost their bond ratings and came close to defaulting on their debts.

► **The Sources of Urban Decline** **Urban decline** results directly from lack of investment. In one sense, a city is a huge agglomeration of capital: factories, houses, office buildings, warehouses, government buildings, roads, water and sewer systems, bridges, and so forth. Some is private capital, and some is public capital. But all capital depreciates, and unless it is maintained, repaired, and periodically replaced, it deteriorates.

Abandoned housing is housing that has not been maintained. Roofs need to be replaced every 10 years or so, walls must be painted, and plumbing and heating systems need to be repaired and replaced. When owners stop investing, deterioration accelerates, and the building succumbs to the scrap dealer and the rats.

Social capital decays when governments do not continuously invest in maintaining it. In many cities, water systems, sewer systems, roads and bridges, and transit systems are in a bad state of repair. Maintaining public capital is staggering. The New York City subway system, which carries over 1 billion passengers per year, consists of more than 231 miles of track, 461 stations, and 6,700 cars. The New York City water system contains 6,150 miles of main water lines, 95 percent of which is made of old cast iron pipe of various ages, strengths, and sizes. Anyone who has driven in New York knows what the streets are like. One 1979 estimate put the costs of needed replacement and repair to New York’s streets, water systems, and subways at nearly \$12 billion,<sup>12</sup> undoubtedly much higher now.

**urban decline** *The deterioration of the private and social capital stock of a city that results from the lack of investment by both private and public sectors.*

<sup>11</sup>See John Yinger, “Measuring Racial Discrimination with Fair Housing Audits: Caught in the Act,” *American Economic Review*, December 1986.

<sup>12</sup>David Grossman, *The Future of New York City’s Capital Plant* (Washington, D.C.: The Urban Institute, 1979).

## AFFORDABLE HOUSING AND RENT CONTROL

Several U.S. cities have confronted the problem of affordable housing by passing *rent control laws*, which impose a price ceiling on the monthly rent that landlords can charge. Although these laws have been almost universally criticized by economists, they remain in force in many cities, including New York.

One of the most bitterly contested legislative battles over rent regulation occurred in the New York State Legislature in 1997. Just hours after the law that regulated rents on more than 70,000 apartments in New York City expired on June 15, a compromise between rent control advocates and opponents was reached. The compromise preserved rent control, but it allowed landlords to raise rents by 20 percent whenever a vacancy occurred; it decontrolled units that rent for more than \$2,000 per month or that were occupied by tenants earning more than \$175,000 annually; and it limited a tenant's ability to pass on controlled units to relatives.

The argument against rent control is illustrated in Figure 1. The quantity

of housing services is measured along the horizontal axis; monthly rent per unit is measured along the vertical axis. Without rent control, the market is in equilibrium at a rent of  $R^*$ . At that price,  $Q^*$  units of housing services are supplied and the same number of units ( $Q^*$ ) of housing services are demanded.

The imposition of a ceiling on rents ( $\bar{R}$  in Figure 1) causes excess demand as the quantity of housing services demanded increases (from  $Q^*$  to  $Q_D$ ) and the quantity supplied decreases (from  $Q^*$  to  $Q_S$ ). The lower rents, critics argue, reduce landlords' incentives to maintain their property and to invest in new units. And even if new units are not subject to rent control (as in New York City), detractors claim, the existence of rent control deters would-be developers from building new units for fear of being subject to control later. Far from increasing the supply of affordable housing, rent control *reduces* the stock of affordable housing. Furthermore, because the occupancy of rent-controlled units is not limited to the poor, rent control laws

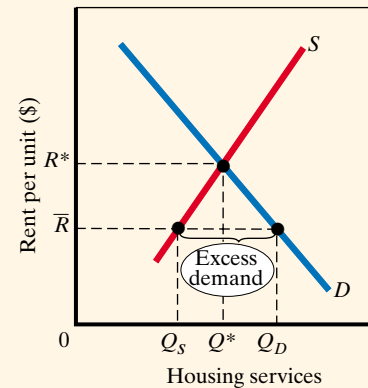


FIGURE 1

may end up providing a subsidy to upper-income households.

But there is another side to this story. Those who favor rent control argue that it brings about a transfer from landlords to tenants, and that such laws do not change the behavior of landlords very much. Because state and federal budgets for direct housing subsidies are limited, many see rent control as the only alternative to increased homelessness.



For more on the economics of housing and rent control, see the Case and Fair Web page at <http://www.prenhall.com/casefair>.

Urban economists point to a number of factors that explain the lack of investment in social capital during the last quarter century. Since the end of World War II, firms have been gradually moving out of the central cities and into the suburban ring. Improvement in both transportation and communications technology has made the suburbs a more attractive location. Of course, people wanted to be close to their jobs, so they began to move out of the cities toward the new suburban business centers. As a result, suburban housing investment boomed, while inner-city housing began to decay. Then, during the 1950s and 1960s, poor rural African Americans moved to northern cities in record numbers. Discrimination limited their housing choices, and they became concentrated in central cities. Because very little low-income family housing, subsidized or unsubsidized, is located in the suburbs of America, the urban poor have had little choice but to live in central cities.

All of this had a devastating effect on city budgets. First, the tax base declined because business firms were moving to the suburbs. Inner-city housing filtered down the depreciation ladder, property values decreased, and some properties fell off the tax rolls altogether. Second, the expenditures required to run city government increased. Old, poorly maintained buildings are more likely to catch fire, increasing the need for fire protection.

Because crime rates are higher in poor areas than in high-income areas, more police and courts are needed. In addition, poor and homeless people need more social services.

With the squeeze on city budgets, it is not surprising that the social capital stock in many cities is inadequately maintained. Roads, water systems, and government buildings are all in various states of disrepair.

► **The Property Tax Problem** Property tax policies, with local responsibility for public services, education, and a substantial portion of the social welfare system, have led to increasing segregation by income and have exacerbated urban decay.

Local government has always been responsible for elementary and secondary education and for most local public services, such as police and fire protection. Nationally, about three-quarters of all local tax receipts come from the *property tax*, a proportional tax on the assessed value of all property. This can have important implications for the economic development of localities.

Consider two towns, A and B. A is the older town with depreciating housing occupied by lower-income people. Because more of A's population is poor, social welfare expenditures and the need for social services will be high. These needed services put added pressure on the tax system. If property *values* are lower in A, the tax *rates* required to support the higher level of service may be extraordinary.

Suppose the average house in A is valued at \$30,000 and the average house in B is valued at \$120,000. Citizens of both towns have an average of one school-age child per household. A property tax rate of 2 percent in town A would yield enough to finance \$600 per student per year, while the same rate in town B would yield \$2,400 per student per year. In many U.S. cities, suburban school districts boast much lower tax rates *and* higher expenditures for education.<sup>13</sup>

The higher tax rate *and* lower quality of education and public services in cities put added pressure on those who can afford it to move to the suburbs. The increased income segregation that results further exacerbates the problem of decline.

## THE PROBLEMS OF CRIME

It is estimated that the economic cost of crime in the United States was over \$500 billion in 1997, including the costs of police, courts, prisons, private protection, stolen goods, damage, injury, and death. Of the 13.5 million reported crimes in the United States in 1996, 88 percent took place in metropolitan areas. That same year 19,645 people, more than 10 percent of whom were under 18 years of age, were murdered. The economics of urban areas includes the economics of crime!

► **Crime as "Rational Behavior"** One economic way to view criminal activity is as a negative externality; consider the incentives facing criminals and potential victims. A crime may be committed when the expected gains exceed the expected costs. A thief will break into a house if and only if the stolen property is expected to be worth more than the "expected cost" of the break-in. In this sense, breaking into the house might be considered "rational behavior."

In most cases of criminal activity, outcomes are uncertain. A robber who breaks into a house doesn't know for sure what he will find and what it will be worth. By choosing a house in a wealthy neighborhood, he increases the likelihood of finding valuable goods that can be resold. He is also not sure whether he will be caught, and if caught whether he will be convicted. For example, thieves who prowl rich neighborhoods are more likely to find high-tech alarm systems, and wealthy towns may have better police forces. The greater probability of a good heist can be offset by a greater probability of being caught.

<sup>13</sup>The system of financing education using local property tax revenues has been challenged in the courts on numerous occasions. The best-known cases were *Serrano v. Priest* in the California Supreme Court in 1971 and the *San Antonio Independent School District v. Rodriguez*, which went to the U.S. Supreme Court in 1972. In 1987 the same issue was raised in New Jersey when Camden, a relatively poor, declining city, brought suit against the state, pointing to nearby Cherry Hill, where property tax rates were lower and school expenditures higher.



## FAST FACTS

In its annual crime report for 1996 released in October 1997, the FBI reported a drop in the number of crimes to 13.5 million, or 5,079 per 100,000 in the population. This is the fifth consecutive drop and the lowest crime rate since 1984. The murder rate of 7.4 per 100,000 was the lowest rate since 1969. The drop was attributed to the aging of the baby boom generation, an improving economy, and the effects of a harsher judicial system.

From society's point of view, those who impose external costs should have an incentive to consider those costs in their decisions. To force firms to internalize the costs of pollution, for example, a government can impose a tax equal to the marginal damage costs. In the case of a crime, the "expected" penalty should equal the social cost of the crime. For crimes like double parking, the penalties are minor. For armed robbery, the penalties are more severe.

Just as criminals weigh the cost of getting caught against the potential value of their crime, potential victims weigh the costs of becoming a victim against the costs of risk avoidance. Rich people who live in accessible city neighborhoods usually have expensive alarm systems because the likelihood of being robbed is high. People who live in small towns, where most people know each other, rarely have alarms. When you decide to go to the theater in a rough part of town, you weigh the potential costs of being a victim against the benefits of seeing the show. Law enforcement, paid for by tax dollars, also has a cost. Police officers, courts, and prisons all are expensive. The job of an efficient government is to fund criminal justice activities as long as their marginal social benefit in the form of reduced crime is greater than their marginal cost.

Research indicates that criminal behavior can be explained using this logic. It is a well-established fact, for example, that higher unemployment rates during economic downturns cause crime rates to rise. Why? Because the expected costs (including opportunity costs) of crime are very low and the expected benefits are high to a poor unemployed person. If the potential gain from selling drugs is great and the likelihood of being caught is low, the result is a lot of drug dealing.

Is it surprising that a lot of crimes take place in high-density urban areas? No. Most cities have low-income residents and high levels of unemployment. Courts are crowded, as are prisons, and apprehension and conviction rates are low. In addition, the city's high density means many opportunities for crime and a better chance of escaping into the crowd.

According to a recent Roper College Track poll, U.S. college students see crime as the number-two issue facing the country today. This concern is reflected in the larger society. It is not surprising that crime has become a major topic of debate in recent political campaigns. Most candidates propose two types of policy to reduce crime. The first would increase the probability of catching criminals, because a higher probability of being caught increases criminals' "expected penalty." With no chance of being caught, the expected penalty is zero. Hire more police officers and train them better, install alarm systems, do wiretaps, and so forth, the argument goes, and more criminals will be caught. When apprehension rates rise, crime rates will decrease because criminals will fear being caught more than they do now.

The second type of policy calls for increasing the penalties for criminal activity. This is the reason behind mandatory jail terms for those who commit certain crimes. People behind bars cannot commit crimes, and the fear of being in jail for long periods may deter people.

► **"Irrational" Crime** Not all criminal activity is rational. Crimes of passion, domestic violence, murder, and rape are often acts committed in a moment of rage or despair, rather than conscious rational acts. A very large number of assaults and murders are committed by spouses and friends of the victim.

Needless to say, such crimes are not committed after a rational weighing of expected costs and benefits. Many criminals regret their crimes at the moment they are committed. This has led many to advocate strict gun-control laws to minimize the probability that a person in a fit of rage would find himself or herself with easy access to weapons.

The economic analysis of legal rules and institutions is fast becoming a well-developed field of study. We have hardly scratched the surface of what economics has to offer in analyzing criminal behavior.

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## SUMMARY

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### THE ECONOMICS OF HEALTH-CARE REFORM

1. No issue looms larger in U.S. politics than health-care reform: health care is expensive and getting more expensive. 15 percent of the U.S. population has no health insurance, health-care expenditures make up an increasing portion of the federal budget.
2. Efficiency- and equity-related factors appear to favor government involvement in providing health-care services. *Asymmetric information* and *fee-for-service reimbursement* programs give health-care providers an incentive to oversupply expensive services. Oversupply is inefficient from society's point of view, and poor health can be considered a negative externality that imposes costs on society. Market power allows companies to charge high prices for drugs and technology they've developed—prices the working poor and the uninsured cannot afford. Many believe health care should be provided to all, regardless of ability to pay.
3. An aging population, increasing malpractice insurance costs, and advancing technology all play roles in high health-care costs, but the problem lies in asymmetric information, moral hazard, and inefficient reimbursement methods.
4. Proposals offered to solve the growing problems of the U.S. health-care sector include: (1) managed care programs, such as *health maintenance organizations (HMOs)* and *preferred provider organizations (PPOs)*, (2) *community rating systems*, in which insurance providers must accept all applications and charge premiums based only on age, location, and some elements of behavior, (3) *employer mandates*, which would require all employers to provide insurance for all employees, and (4) caps on insurance premiums.

### THE ECONOMICS OF IMMIGRATION

5. Immigration into the United States has come in irregular waves since the "Great Migration" of 1880 to 1924. Today, legal immigration is about 800,000 per year.
6. Those who argue for free immigration say that it increases world output and that the United States has absorbed many waves of immigrants while maintaining virtually full employment. Those against free immigration believe immigrants take jobs away from low-income Americans and end up on

welfare. The economic literature shows mixed results. Some studies find that immigration has no effect on wage rates; other studies indicate that recent immigrants collect more in means-tested benefits than they provide in tax revenue.

### URBAN ECONOMICS AND THE ECONOMICS OF URBAN PROBLEMS

7. The world has been shaped by the location decisions of millions of households and firms. For firms, location decisions depend on potential revenues, costs, and profits, which are likely to be different at every potential location. Public officials have sought for decades to influence firms' locational choices. For households, location decisions depend on preferences, incomes, and relative prices.
8. *Monocentric city models* assume that as people move farther from the center city, their costs of commuting increase. Thus residential land closest to the center of the city is likely to be the most expensive, with land values decreasing farther and farther from the center. Equilibrium in the housing market exists only when land prices just offset the lower transport costs closer to the center.
9. African Americans and white Americans still live, by and large, in separate neighborhoods, in part because discrimination has denied African Americans equal access to the housing market.
10. Most poor people today live in old housing, once occupied by higher-income people, that has declined in quality and value. Virtually all unsubsidized new housing is built for upper- and middle-income. As rich people buy the new homes, their old homes *filter* down to lower-income people.
11. Many large U.S. cities experienced decline and decay during the 1960s and 1970s. *Urban decline* results directly from lack of investment, both public and private. Housing stocks have deteriorated, businesses have moved to the suburbs, and social capital—bridges, roads, and transit systems—have fallen into disrepair. Property tax policies, together with local responsibility for public services, education, and a substantial portion of the social welfare system, have exacerbated urban decay.
12. Efforts to reduce rational crime focus on (1) policies that increase the probability of catching criminals, and (2) policies that increase the penalties for criminal activity.

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## REVIEW TERMS AND CONCEPTS

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## PROBLEM SET

- Medicare reform is an increasingly hot topic in politics. How did the debate unfold during the 1998 congressional campaign? What are the reasons for concern? What solutions have been offered by the various candidates? To find the answers you may want to search the Web or an index to a major newspaper.
- What is the likely effect of each of the following on health-care costs? Explain your answers briefly.
  - A shift from fee-for-service reimbursement to a fixed fee per member in group plans.
  - Universal coverage with community rating.
  - An increase in copayments by patients in HMOs.
- The Issues and Debates box in this chapter documents the rise in the use of managed care providers of health services. What sets a managed care plan apart from other providers? Why do you suppose that managed care providers arose naturally in the marketplace in 1994 to 1995? What are the disadvantages of managed care?
- What is the current status of Proposition 187, the immigration law passed in 1994 in California? Has it been challenged in the courts? If so, what was the decision? Do you agree or disagree with the basic aims of Proposition 187? Why?
- In the early 1980s the Mariel boat lift brought 120,000 Cubans to Miami. This represented a 7 percent increase in the workforce of the Miami metropolitan area. However, work by David Card found no impact on employment or wages in Miami. How can you explain this finding? Does your answer depend on whether you think of a metropolitan area as a closed economy or an open economy? Does Card's research mean that immigration has no impact on wages?
- Recently retired from academic life, Emily is considering opening a gas station. Her research suggests the following:

	LOCATION A	LOCATION B
Expected annual sales	1 million gallons	2 million gallons
Price of lot	\$250,000	\$1,000,000

Gasoline sells for \$1.10 per gallon at all locations (there is only one grade of gasoline).

Gasoline can be purchased from wholesalers for \$1 per gallon. It would cost \$300,000 to build a gasoline station, regardless of location.

- Annual costs of running a station are \$50,000, regardless of how much gasoline is sold—this includes maintenance and full upkeep on the building.
- The interest rate is 10 percent.
- Emily is considering locations A and B. Each is a one-acre lot. Would you advise Emily to go into business? If so, where should she locate?
- The largest single federal housing subsidy is the provision of the individual income tax that allows homeowners to deduct property taxes and mortgage interest payments from their income for tax purposes. Describe in detail how a subsidy that accrues almost exclusively to middle- and upper-income families might raise the quality of housing occupied by lower-income families. (*Hint:* Recall the filtering process.) What specific assumptions would one have to make to predict such a result?
  - H. Ross Perot, in his unsuccessful run for the presidency, proposed a 50-cent-per-gallon gasoline tax. If gasoline prices remained high for a long time, in what ways might you expect a stiff gasoline tax to affect the spatial arrangement of households and firms?
  - Some cities in the United States have experienced renewed development in their central business districts. High-rise office buildings were built at a record pace in the early 1980s in some older U.S. cities that had earlier experienced decline. That growth has been denounced by some community leaders on the grounds that the benefits do not accrue to city residents, but rather to suburban residents. Make a list of all the benefits and costs you can think of that might result from a modern office tower in an older city. What groups benefit? What groups lose out? Be sure to include some discussion of the housing market.
  - What externalities, both positive and negative, are most frequently encountered by city dwellers? By suburb dwellers?
  - Some people point to an improving economy and the aging of the baby boom generation as the reasons for a decreasing crime rate between 1992 and 1998. Others point to an increasingly harsh judicial climate. How does the aging of the baby boom generation tend to influence the crime rate? Using the model of "rational crime" in the chapter, explain how stricter law enforcement with harsh penalties and an improving economy might affect the costs and benefits of crime.

## TAKE IT TO THE NET



We invite you to visit the Case and Fair page on the Prentice Hall Web site:

<http://www.prenhall.com/casefair>

for this chapter's World Wide Web exercise.

## LABOR MARKET DISCRIMINATION AND PROFESSIONAL SPORTS

On April 15, 1947, Jackie Robinson became the first African American player in major league baseball. Robinson opened the door for other African American and Latin American players who had previously been barred from participation in the major leagues. Five decades after his first appearance in a Brooklyn Dodger uniform, African Americans have experienced significant economic gains as many racial barriers have fallen. Despite these well-documented gains, the effects of race and ethnicity on economic outcomes remain an issue of concern for policy makers and an area of research for economists.

Economists generally define labor market discrimination as “unequal treatment (for example, on the basis of race, gender, or age) of equally productive workers.” To test whether discrimination exists, economists must first construct measures of productivity. In many occupations, however, objective measures of worker productivity are difficult to obtain. For this reason some economists have studied discrimination in professional sports. In baseball, for example, a number of easily obtained and “precise measures of productivity” exist. Once the effects of worker productivity have been taken into account, economists can estimate the effects of race and ethnicity on economic outcomes. If we find that race and/or ethnicity have a significant effect on economic outcomes, we can conclude that discrimination exists.

There are three possible sources of discrimination.

1. Employer discrimination can, for example, explain the existence of major league baseball’s color line prior to 1947.
2. Co-workers can also be a source of discrimination. For example, some white workers might require a higher wage to work with minorities. One Brooklyn Dodger player asked to be traded when Jackie Robinson joined the team, and players on at least one competing team threatened to strike if Robinson played against them.
3. Customers can be a source of discrimination. For example, some white fans might prefer to attend games (i.e., purchase the product) in which a greater number of white players participate.

Labor market discrimination can take on several forms.

Salary discrimination is unequal pay to equally productive workers. To estimate the effects of race and ethnicity on players’ salaries, economists first develop a salary equation where a player’s salary is, for example, an increasing function of the player’s productivity. Researchers then estimate whether the salary functions are affected by the player’s race or ethnicity. In cases where race and ethnicity negatively affect player salaries, the difference in the salaries of equally productive white and, for example, African American players represents an estimate of the salary discrimination.

Hiring discrimination would occur if, for example, African American players must achieve higher performance levels to be hired or promoted from, say, the minor leagues to the major leagues.

Positional discrimination (or, equivalently, positional segregation) would occur when African Americans

are underrepresented at particular playing positions on the fields.

A number of studies have examined whether these different sources and different forms of discrimination exist. While there is evidence of some salary discrimination against African American and Latin American baseball players in the 1960s and 1970s, there is no evidence of salary discrimination in the more recent 1980s and 1990s.

In contrast to baseball, there is evidence of salary discrimination against African American players in the National Basketball Association during the 1980s. The estimated negative effects of a professional basketball player’s race in these salary equations suggest that the salary of an African American player was 11 percent to 25 percent less than that of an equally productive white player.

There is also some evidence of hiring discrimination and positional segregation in professional sports. In hockey, during the 1982 to 1984 seasons French-Canadians needed to achieve higher levels of performance to be chosen as high in the amateur draft as did English-Canadians. Researchers have also observed that African Americans are underrepresented at, for example, the pitcher and catcher positions in baseball and at the quarterback, kicker, and linebacker positions in football (during the 1960s and 1970s). And despite the very recent increases in the number of African Americans and Latin Americans in managerial positions, there remains concern that barriers to entry continue to exist for minorities. Former National Football League coach Bill Walsh argues that “those with the most influence have not necessarily been actively addressing the social

undercurrent. I do not believe that any present owner is consciously racist. . . . But the core problem remains at the head coaching level.”

Analysis of the effects of race and ethnicity on attendance at games and on team revenues indicates that customer discrimination also exists. In the 1960s, there was evidence that the presence of African American players had a negative effect on major league baseball teams’ revenues. These negative effects no longer existed by the end of the 1970s. In basketball, a different picture emerges in the 1980s. There is evidence that African American players had a negative effect on fan attendance and that the racial composition of the team’s geographic area affected the racial composition of the team during the 1980 to 1986 seasons. And finally, analysis of the market for baseball cards indicates that the player’s race or ethnicity affects the price a card collector is willing to pay for that card.

### Questions for Analytical Thinking

1. The average salary of African American players in the National Basketball Association (NBA) is higher than the average salary of white players in the NBA. To what extent does this difference in average salaries suggest that player race no longer affects player salaries in professional basketball? Explain.
2. Suppose you were asked to examine whether salary discrimination based on gender exists among faculty members at your college or university.
  - a. Explain what type of information you would need to conduct such a study.
  - b. What difficulties might you encounter in attempting to measure the productivity of faculty members? Explain.
  - c. How might any difficulties you describe in part b hinder your ability to examine the existence of salary discrimination by gender? Explain.
3. A number of recent studies have examined whether racial discrimination exists in mortgage lending by banks. Discuss what type of information you would need to examine whether the race of loan applicants affects the lending behavior of banks.
4. A recent study indicates that a baseball player’s race or ethnicity can negatively affect whether some members of the Baseball Writers’ Association of America—the electors—vote for that player’s induction into the National Baseball Hall of Fame. If this is true, how might the racial or ethnic biases of these writers represent an additional source of discrimination? Explain.

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*Sources:* Torben Andersen and Sumner J. La Croix, “Customer Racial Discrimination in Major League Baseball,” *Economic Inquiry*, October 1991, Vol. 29, pp. 665–677; Lynn Browne and Geoffrey Tootell, “Mortgage Lending in Boston—A Response to the Critics,” *New England Economic Review*, Federal Reserve Bank of Boston, September/October 1995, pp. 53–78; David W. Findlay and Clifford E. Reid, “Voting Behavior, Discrimination and the National Baseball Hall of Fame,” *Economic Inquiry*, Vol. 35, July 1997, pp. 562–578; Lawrence Kahn, “Discrimination in Professional Sports: A Survey of the Literature,” *Industrial and Labor Relations Review*, April 1991, Vol. 44, No. 3, pp. 395–418; Clark Nardinelli and Curtis Simon, “Customer Racial Discrimination in the Market for Memorabilia: The Case of Baseball,” *Quarterly Journal of Economics*, August 1990, Vol. 105, pp. 575–595; Bill Walsh, “Reaching Across the N.F.L. ‘Color Line,’” *New York Times*, January 23, 1998.