# Economics
# 3rd Edition
## Part I
## Professor Timothy Taylor

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## Timothy Taylor

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Timothy Taylor is managing editor of the *Journal of Economic Perspectives*, an academic journal published quarterly by the American Economic Association. He was originally hired to help launch the journal in 1986, and it has since matured into the most widely distributed and widely read journal in academic economics. The purpose of the journal is to encourage communication and cross-fertilization across the many fields of economics.

He was born in Urbana, Illinois, and grew up in Bethlehem, Pennsylvania, and Saint Paul, Minnesota. He received his bachelor of arts degree from Haverford College in Pennsylvania in 1982 and a master's degree in economics from Stanford University in California in 1984. He then worked as an editorial writer for the *San Jose Mercury News* for two years, before taking the job of starting the *Journal of Economic Perspectives* in 1986.

He has taught economics in a number of contexts. In 1992, he was winner of the award for excellent teaching in a large class (more than 30 students) given by the Associated Students of Stanford University. At the University of Minnesota, he was named a Distinguished Lecturer by the Department of Economics in 1996 and voted Teacher of the Year by the master's degree students at the Hubert H. Humphrey Institute of Public Affairs in 1997. Professor Taylor has also been a guest speaker for groups of teachers of high school economics, visiting diplomats from Eastern Europe, radio talk shows, and community groups. The U.S. Department of State sent him to Japan in 1999 and to South Africa in 2003 to discuss trade and globalization issues with government and business leaders.

From 1989 to 1997, he wrote an economics opinion column for the *San Jose Mercury News*, and many of his columns were disseminated nationally over the Knight-Ridder-Tribune wire. In 2000, he co-authored *Updating America's Social Contract: Economic Growth and Opportunity in the New Century*, with Rudolph G. Penner and Isabel V. Sawhill. He has also written articles for *The Public Interest*, *Milken Institute Review*, and other publications. He has recorded several courses for The Teaching Company, including *Economics: An Introduction*, *Legacies of Great Economists*, *A History of the U.S. Economy in the 20th Century*, and *Contemporary Economic Issues*.

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# Economics, 3rd Edition

**Scope:**

The wisdom of economists is nearly proverbial, but in a negative sort of way, rather like the honesty of politicians, the verbal fluency of sports heroes, or the lips of chickens. Yet in the face of this prejudice, I maintain that economics does have useful lessons for understanding the world around us. My wife claims that I only hold to this belief because I am an evangelist, with economics as my religion. Perhaps so.

But I have also been asked many times, at conferences and cocktail parties, to recommend "just one book" that would explain economics. These requests often come from people who have just met me, but they have discovered that I edit an academic economics journal or that I teach economics classes. They aren't looking for a conservative lecture that defends the beauty of markets, nor for a liberal lecture about the need for government intervention in certain parts of the economy.

They are seeking a basic level of sophistication in economic matters. They have their own views on politics and policy, but they are self-aware enough to recognize that at least some of those views are built on a shaky or nonexistent understanding of economics. They want an overall view of what the U.S. economy looks like and how it is interconnected. They want to know how economists perceive the advantages of free markets and how economists reconcile a belief in markets with the problems of the world around them, such as poverty and pollution. They want to know why a budget deficit matters and what the Federal Reserve is and does. They want to know what economists think about international trade, how the exchange rate works, and what the "current account balance" actually is. They are skeptical about accepting all that economists have to say, as they would be skeptical about anyone who claims to have lots of answers. But they have not surrendered to cynicism; they are willing to accept that the study of economics does have some insights to offer.

The cynical view, I suppose, is that these people found themselves trapped at a dinner party with an economist (the horror! the horror!) and simply pretended an interest in the subject, hoping that I would go away. But I have an understandable preference for a more optimistic interpretation. These lectures are given in the firm belief that a body of concerned and interested citizens would like to know more about the subject of economics.

The conceptual pattern of this course follows the standard pattern of the introductory economics course offered at most colleges and universities. However, while the college course would present much of this material in a graphical and mathematical form, with an emphasis on solving the kinds of problems that will be on the exam, these lectures will focus instead on intuitive and verbal explanations of the underlying concepts.

The first 18 lectures of this course focus on *microeconomics*, which is the analysis of the economic behavior of individuals and firms. Thus, microeconomics encompasses how individuals and firms interact in markets for buying and selling goods, in markets for working and hiring labor, and in markets for saving and investing financial capital.

After Lecture One introduces the topic of economics, Lectures Two through Five discuss how the forces of supply and demand determine the prices charged and the quantities produced in markets for goods. Lecture Six applies this same structure of supply and demand to markets for labor, while Lectures Seven and Eight consider, first, the demand for financial capital by firms that want to make investments in new plant and equipment, followed by the supply of financial capital from households that are thinking about how to invest their savings.

The course then turns to a number of practical and policy issues that arise in microeconomics. Lectures Nine through Eleven discuss the competitive environment for firms, ranging from situations with many competitive firms to situations with a single monopoly producer. Government may have a role to play in encouraging competition or in regulating industries in which little competition exists.

Lectures Twelve through Fourteen turn to the policy problems that arise when a good or service is produced and sold—but the production of the good has effects on third parties who were not involved in the transaction. These external effects, or *externalities*, may be negative effects, such as pollution, or positive effects, such as the benefits of new technology or a better educated workforce.

Lectures Fifteen and Sixteen consider policy problems that arise in labor markets, including issues related to poverty and welfare reform, inequality of incomes, labor unions, and discrimination.

Lectures Seventeen and Eighteen consider issues that arise in financial capital markets, with a particular focus on the issue of who controls the decision-makers in large corporations and why markets for insurance—such as health or car insurance—often seem so costly and controversial.

In the second half of the course, starting with Lecture Nineteen, the focus shifts to *macroeconomics*. If microeconomics is the bottom-up view of the economy, looking at the actions of individuals and firms, then macroeconomics is the top-down view of the economy. Lectures Twenty through Twenty-Three introduce the most important patterns to describe an overall economy, which include gross domestic product (GDP), the rate of economic growth, periods of recession and economic upswing, unemployment, inflation, and the balance of trade.

Lectures Twenty-Four and Twenty-Five then introduce the aggregate demand and aggregate supply model of macroeconomics. Aggregate demand includes all demand in the economy for consumption, investment, government, and foreign trade. Aggregate supply focuses on total production of goods and services. The forces of aggregate demand and aggregate supply, and how they shift over time, will provide a framework for understanding the commonly observed macroeconomic patterns.

Lectures Twenty-Six through Twenty-Eight turn to government taxing and spending. These lectures describe the common patterns of taxes and spending, then discuss how government tax and spending policies will affect aggregate demand and aggregate supply and, thus, affect economic growth, unemployment, inflation, and the balance of trade.

Lectures Twenty-Nine through Thirty-One then turn to monetary policy, which in the U.S. economy, is conducted by the Federal Reserve. These lectures describe the economic role of money and the banking system, how the Fed controls the supply of money and credit in the economy, and how Fed policy affects the macroeconomy.

The course then closes with a set of lectures on international economics. Lectures Thirty-Two and Thirty-Three explain why most economists strongly believe that international trade offers benefits to all nations—but also review the arguments and counterarguments for limiting such trade. Lectures Thirty-Four and Thirty-Five discuss international financial movements, including issues that arise from exchange rates and even national financial crashes. Finally, Lecture Thirty-Six offers an overview of the global economy and where it is headed.

Skeptical listeners may wonder whether the economics in these lectures is slanted toward the policy conclusions of liberal Democrats or conservative Republicans. The answer is that professional economists of all political leanings use the tools and concepts taught in this course. The subject of economics is not a clear-cut set of answers but, rather, a structured framework for pursuing answers. Thus, although I hope the lectures will at some points challenge your own political beliefs, whatever they are, I also hope that the lectures will give you language and structure for articulating your own beliefs more clearly—and for becoming a more sophisticated participant in the economic disputes of our time.

## Lecture One
## How Economists Think

**Scope:** Economics is a structured and disciplined way of looking at the world. This lecture begins by addressing some of the doubts and suspicions that critics have long expressed about this economic perspective. The discussion identifies some of the ways in which economists have trained themselves to think differently than the typical person on the street about human motivations, tradeoffs, and the workings of markets. For example, economics insists that people seek to gain benefits and avoid costs. It insists on acknowledging that even desirable alternatives may have some unpleasant tradeoffs. Along the way, this lecture lays out the overall structure of this course and introduces a number of terms that will be useful: *microeconomics*, *macroeconomics*, *opportunity cost*, *marginal analysis*, and more.

## Outline

**I.** The fundamental subject matter of economics is often misunderstood.

- **A.** A variety of jokes and serious commentary have condemned economics over time.
- **B.** Nonetheless, studying economics can be highly useful. At a minimum, it lets you understand what economists are talking about. In fact, much of the economic analysis used for public policy is at the level of basic principles that can be discussed in this course.

**II.** Economics takes as its subject material some basic questions about how a society produces and consumes, then explores how society answers those questions.

- **A.** Any society must address three basic questions that involve coordinating the actions of producers and consumers: What should be produced? How should it be produced? Who gets to consume what is produced?
- **B.** The answers to these questions fall along a range. At one end, there is complete individual autonomy; at the other end, the government decides the answers to all three questions. Most societies fall in an intermediate range, where both government and individual decisions play a role.
- **C.** Economics is not about forecasting the future, nor is it about taking sides with business or labor or with either political party.
- **D.** Economics isn't about which answers you prefer; it's a method or a framework for thinking about problems.

**III.** As an entrée into how economists think, consider some statements that most economists would consider obvious but with which many non-economists would often disagree.

- **A.** Economists insist on taking tradeoffs seriously. Most people are queasy about admitting any downside if they believe in an idea overall.
- **B.** Economists believe in "statistical people," not real people. Anecdotes tell about one person or situation, but they can't reveal whether that particular example is typical or a rare exception. Economics requires that decisions about social policy need to be made on the basis of overall judgments about effects across society, not individual cases.
- **C.** Self-interest can be an effective principle of social organization. People often engage in productive economic behavior (working, saving, conducting comparison shopping, providing high-quality goods) out of selfish motives. An "invisible hand" can lead selfishness to be socially productive.
- **D.** Incentives matter. When people or firms are confronted by changes in prices or other conditions, they find ways to react. Economic policy is based on the notion that if incentives change, behavior will often change, too.
- **E.** Don't believe that individual people or businesses set prices. Prices are the outcome of interactions between all the buyers in the market and all the sellers in the market. Prices are not about morality or justice.

**F.** All costs should be thought of as opportunity costs—that is, if you hadn't acted in one way, what might you have done instead? Money can sometimes capture opportunity cost, but it's important to remember that time and lost opportunities are also a cost.

**IV.** The study of economics is commonly divided into *microeconomics* and *macroeconomics*.

**A.** *Microeconomics* is the study of how households and firms make decisions in goods, labor, and capital markets and the study of how and why those markets sometimes fail.

**B.** *Macroeconomics* takes an overall view of the economy, focusing on policies with regard to such issues as unemployment, inflation, economic growth, and the balance of trade and how the policies of governments can affect outcomes in a global economy.

**C.** The study of economics requires a willingness to combine many elements: theories and logical deductions, facts and statistical evidence, lessons of history and politics, even philosophy.

**Essential Reading:**

Steven Kerr, "On the Folly of Rewarding A, While Hoping for B," *Academy of Management Journal*, 18, 1975, pp. 769–783.

George Leonard, "Competition," *Esquire*, May 1984, pp. 134–136.

Lionel Robbins, *An Essay on the Nature and Significance of Economic Science*.

**Supplementary Reading:**

Gregory N. Mankiw, *Principles of Economics*.

Campbell R. McConnell and Stanley L. Brue, *Economics*.

**Questions to Consider:**

**1.** Consider the good and bad sides of competitive urges. Begin by considering how an event such as the Olympics may bring out the best or the worst in the competitors. Then think about how these same good or bad character traits may occur among people running a business.

**2.** Identify some of the key assumptions that economists make about how people think. Compare them with how non-economists think. What might be the ramifications brought about by the two different modes of thought?

## Lecture Two
## Division of Labor

**Scope:** The term *division of labor* refers to the fact that in a modern economy, almost no one produces all or most of what they personally consume. People don't grow their own food, treat their own illnesses, build their own homes, and make their own tools. Instead, with the division of labor, most individual workers perform highly focused tasks, earn income, and use what they have earned to purchase goods and services produced by others who also perform highly focused tasks. Going back to Adam Smith more than 200 years ago, economists have explained how the combination of a division of labor and exchange of goods and services increases productivity and output, and those lessons continue to apply to modern trade in the global economy.

### Outline

**I.** The division of labor refers to the process by which an economy divides the production of a certain good or service into a related group of smaller tasks, with each worker focusing on a limited part of the overall process

- **A.** Adam Smith, the founder of the systematic study of economics, used the division of labor in a pin factory into 18 separate jobs as one illustration and argued that the division of labor dramatically increased production.
- **B.** In a classic 1958 essay, "I, Pencil," Leonard Read wrote as a pencil telling the story of how all its parts were produced through the division of labor in the economy.

**II.** The division of labor creates substantial economic gains, both at the level of the firm and at the level of a national economy.

- **A.** An economy that takes advantage of the division of labor will increase productivity per worker for three reasons.
  - **1.** Specializing in a certain job allows workers with different characteristics to focus on the types of production in which they have an advantage.
  - **2.** Workers who specialize typically become more productive with learning, practice, and innovation.
  - **3.** Specialization allows taking advantage of economies of scale; that is, the situation in which a larger firm can produce at a lower average cost of production than a smaller firm, at least up to some level of output.
- **B.** A high-income economy typically has a greater division of labor—which means that most people are quite out of touch at any personal level with how the items that they consume are produced.
- **C.** The division of labor between producers located in different countries increases total production in the global economy, too.

**III.** The division of labor leads inevitably to a situation in which people specialize in what they produce and trade with others for what they wish to consume. A storehouse metaphor can be used to understand the basic framework of this economy.

- **A.** Imagine that all the production of the economy could be collected in one storehouse. When you produce something, you deposit your production in the storehouse. When you consume something, you collect it from the storehouse.
- **B.** The mixture of goods and services that is produced and put into the storehouse needs to be the same as the mixture of goods and services that is taken out and consumed.
- **C.** The honor system isn't a practical solution for determining what will enter and leave the storehouse. Appropriate incentives or coordination are needed so that what is brought to the storehouse and what is taken out will match up.
- **D.** Society will need to reach some decision about how to value what people bring to the storehouse and what people take out of the storehouse and to have linkage between the two.

**E.** A decentralized economy with its division of labor works so marvelously well at meeting social needs that for practical purposes, people often just assume that it will work and ignore it. For example, do you ever go to sleep worrying that no food will arrive in supermarkets and restaurants tomorrow and many people will go hungry?

**Essential Reading:**

Frederic Bastiat, *Economic Sophisms*, www.econlib.org/library/Bastiat/ basSoph.html. (The description of feeding Paris is in chapter 18.)

Leonard E. Read, "I, Pencil," *The Freeman*, December 1958, www.econlib.org/ library/Essays/rdPncl1.html.

Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, http://www.econlib.org/library/Smith/smWN.html. (For discussion of the division of labor, see book 1, chapters 1–3.)

**Supplementary Reading:**

"Men and Machines: Technology and Economics Have Already Revolutionized Manufacturing. White-Collar Work Will Be Next," *The Economist*, November 11, 2004.

**Questions to Consider:**

1. Discuss the power of markets in bringing together ingredients and creating products. Think about the products that you use that come from far away or that have components or ingredients that come from far away. Also think about everyday products that you would have an especially hard time making for yourself.
2. What are the strengths and shortcomings of the storehouse metaphor for the economy?

## Lecture Three

## Supply and Demand

**Scope:** Any market involves both buyers and sellers, who must agree on a price if an exchange is to occur. Economists refer to the combined force of the buyers as *demand* and the combined force of the sellers as *supply*. Economists insist on seeing and explaining prices as outcomes of the process of supply and demand in these various markets. The supply and demand framework predicts that markets will tend toward an equilibrium price, where the quantity supplied and the quantity demanded are equal. Changes in prices are explained as movements of the forces of supply and demand—an approach that has proven remarkably accurate and useful in describing price movements in economies all over the world.

## Outline

**I.** The circular flow diagram shows the economy as consisting of three markets, and it shows how households and firms interact in those markets.

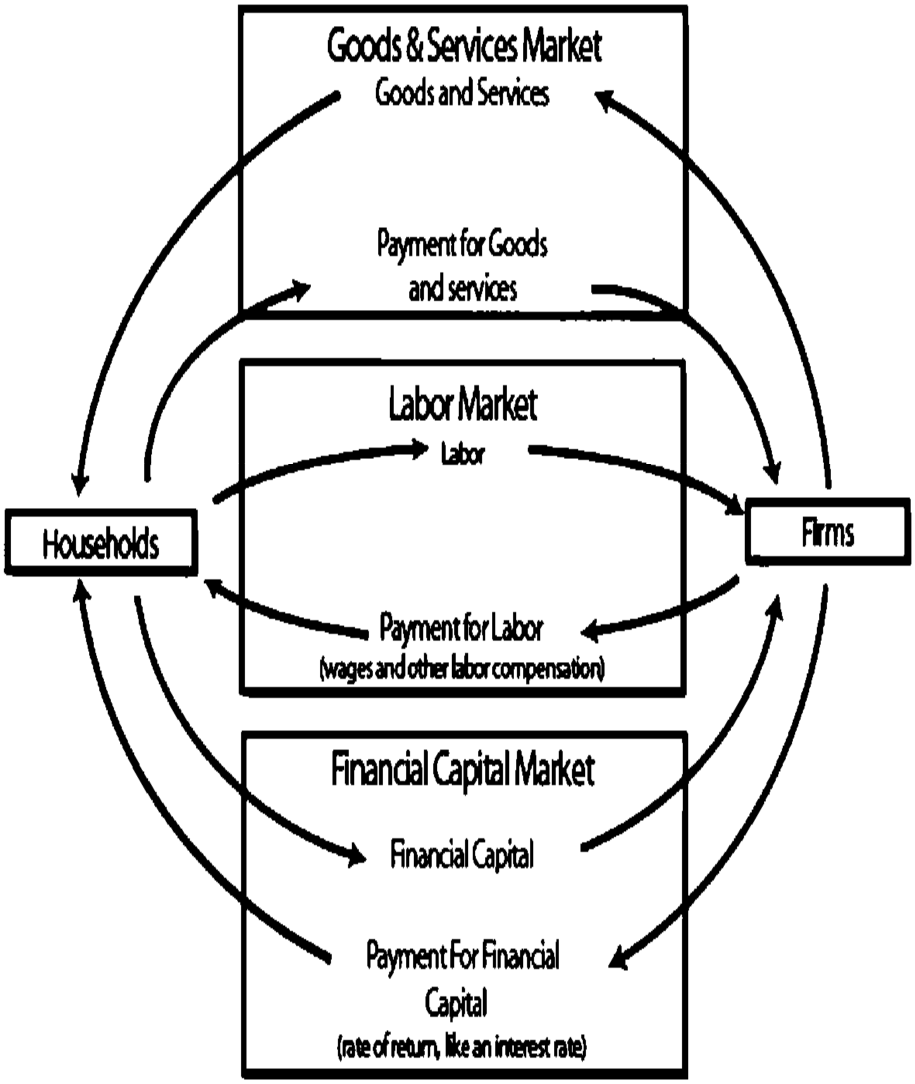
- **A.** The market for goods and services features households as the demanders and businesses as suppliers.
- **B.** The labor market features households as suppliers of labor and businesses as demanders. Wages are the prices in the labor market.
- **C.** In the financial capital market, all savers are suppliers of capital, whether they are individuals or businesses, while all borrowers are demanders of capital. Interest rates are the prices in the capital market.

**II.** When economists refer to price in a market, they attempt to keep such values as fairness and justice out of the picture and, instead, analyze price as an outcome of the forces of supply and demand.

- **A.** Many non-economists refer to prices being “too high” or “too low” as a judgment about the way they think the world ought to be. To an economist, this is like saying that the weather on a given day is “too cold” or “too hot.” Such judgments reveal something about the preferences of the person expressing the opinion, but they don’t tell you why the price (or the temperature) is actually at the level that it is.
- **B.** Adam Smith used the diamond-water paradox to describe a difference between what he called “value in exchange” and “value in use.” Diamonds have high value in exchange but little value in use. Water has little value in exchange but high value in use. To economists ever since, prices are about value in exchange.
- **C.** For an economist, prices are *nothing* but supply and demand.

# The Circular Flow Diagram



**III.** For economists, *demand* and *supply* have quite specific meanings. Understanding these meanings will help you to understand how these forces work.

**A.** *Demand* is a relationship between quantity demanded and any given price. Demand curves slope down, which shows that quantity demanded tends to fall as price rises.

**B.** Demand is *not* the same as quantity demanded. Demand is a relationship between quantity demanded and the range of possible prices; *quantity demanded* refers to a specific amount demanded at a certain price.

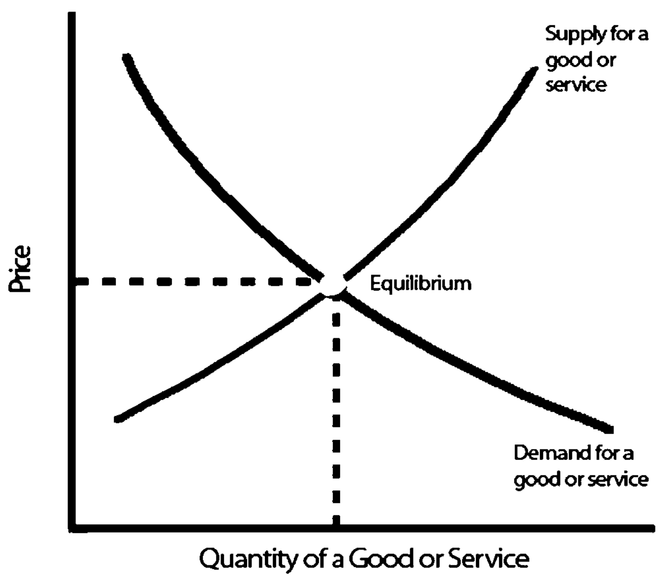
**C.** Demand for a certain good can shift for a variety of reasons: changes in income, population, tastes, or prices of complement or substitute goods.

**D.** *Supply* is the relationship between quantity supplied and any given price. Supply curves slope up, which means that quantity supplied tends to increase as price rises.

**E.** Supply is *not* the same as quantity supplied. Supply is a relationship between quantity supplied and the range of possible prices; *quantity supplied* refers to a specific amount supplied at a certain price.

**F.** Supply can shift for a variety of reasons, including changes in technology, weather, and prices of key inputs.

**IV.** The equilibrium price is where quantity demanded is equal to quantity supplied.




**A.** Demand and supply determine the equilibrium price, where quantity demanded is equal to quantity supplied. If the price is temporarily above equilibrium, then quantity supplied exceeds quantity demanded, which tends to drive the price down to equilibrium. If price is temporarily above equilibrium, then quantity demanded exceeds quantity supplied, which tends to drive price up to equilibrium.

**B.** The equilibrium price and quantity are efficient in the sense that extra quantities are not up on shelves, nor are buyers waiting in line.

**C.** A shift in demand or supply will lead to a new point of equilibrium. In this way, shifts in demand and supply can explain movements in prices and quantities of goods observed in markets.

**V.** The supply and demand model is intended as a framework for discussing how prices and quantities are determined in markets and why they change. It is not intended to argue that people will be happy with this outcome, nor that people carry around a demand and supply framework in their minds.

**A.** Not everyone will be happy at equilibrium. In fact, buyers will typically prefer the price to be lower, while sellers would prefer the price to be higher.

B. Real people don't think in terms of the demand and supply model—or do they? Yes, most people don't have the specific model in mind. But if consumers look for the goods they prefer at the lowest possible price and firms adjust their production in response to changes in price, then people and firms are acting in accordance with the supply and demand model.

C. The test of the supply and demand model is whether it works as a method of understanding the determination of prices and quantities. It does work for all sorts of products, in markets all over the world, and at all different times of history.

**Essential Readings:**

Milton Friedman and Rose Friedman, "Chapter 1: The Power of the Market," in *Free to Choose*.

**Supplementary Reading:**

J. Radcliff-Richards, A. S. Daar, R. D. Guttmann, R. Hoffenberg, I. Kennedy, M. Lock, R. A. Sells, and N. Tilney, "The Case for Allowing Kidney Sales," *The Lancet*, June 27, 1998, pp. 1950–1952.

Bruce Gottlieb, "How Much Is That Kidney in the Window?" *New Republic*, May 22, 2000.

**Questions to Consider:**

1. Farmers sometimes make the following complaint: "Why is it that in a bad growing year, when I can't grow much, the price of crops always seems to be high, but in a good growing year, when I can grow a lot, the price of crops seems to be low?" Is this just ironical, or is there some reason, in a supply and demand framework, to have an understandable pattern here? Explain in a way the farmer should be able to understand. (Hint: Think about how good and bad growing years affect supply.)

2. Economists often toy with ideas of using supply and demand principles in new and different places. The supplementary articles suggest the possibility of letting people sell one of their kidneys for an organ transplant. Brainstorm about who would benefit from a market in human kidneys, and who might be harmed. Even if you do not favor a full market in kidneys, can you see a case for a regulated and partial market?

## Lecture Four
## Price Floors and Ceilings

**Scope:** *Price floors* are laws that set a level below which prices are not allowed to fall, while *price ceilings* set a level above which prices are not allowed to rise. Both types of laws can hold the price away from the equilibrium level and, thus, create a situation in which the quantity demanded is not equal to the quantity supplied. Instead of using price floors or price ceilings, a range of alternative policies place taxes or offer subsidies to the demand side or the supply side of the market. These policies have the effect of shifting the entire demand or supply curve to a new location. Thus, these alternative policies will affect equilibrium price and quantity, but they will allow the market to reach a new equilibrium. Although price regulations don't have a cost in terms of tax dollars, they do impose costs on consumers or producers and create inefficiency.

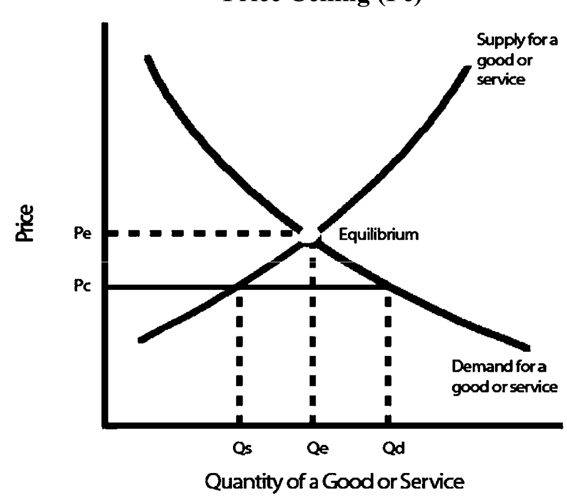
## Outline

**I.** Disagreements over the price and quantity outcomes in markets are inevitable. Even if a price is at equilibrium, suppliers will typically want a higher price, while demanders will typically prefer a lower price.

**II.** What happens when politicians react to unhappiness over prices by imposing price controls?

- **A.** When demanders win the political battle, politicians impose price ceilings—a case where the price is not allowed to rise above a certain level. Rent control is an example of a price ceiling.
- **B.** Price ceilings prevent the market price from rising to equilibrium. As a result, quantity demanded is greater than quantity supplied, and a shortage results.
- **C.** When quantity demanded exceeds quantity supplied, and price cannot adjust upward because of a price ceiling, market forces will struggle to express themselves in other ways. For example, long lines may form. In the case of rent control, apartments may be allowed to run down, they may be converted to condominiums, or hidden fees and charges may be imposed.

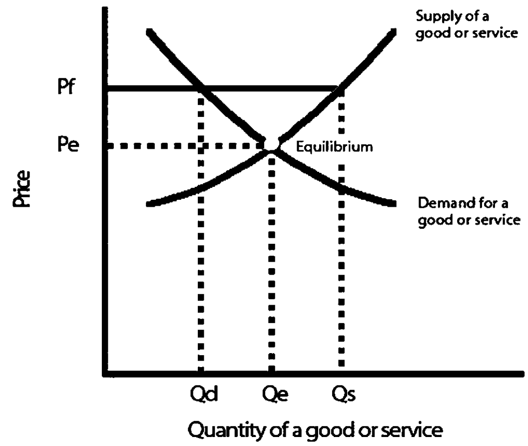
**Price Ceiling (Pc)**



**D.** When suppliers win the political battle, politicians impose price floors—a case where the price is not allowed to fall below a certain level. Government supports for farmers often take the general form of a price floor.

**E.** If government sets a price floor that is above equilibrium, and the price cannot fall to equilibrium, then quantity supplied will be greater than quantity demanded. A surplus will result.

**Price Floor (Pf)**




**F.** When quantity supplied exceeds quantity demanded and price cannot adjust downward because of a price floor, market forces will struggle to express themselves in other ways. For example, government may need to purchase the surplus commodity or prices may be cut in indirect ways.

**III.** Price floors and ceilings are intended to help specific groups. However, price regulation inevitably affects everyone who buys or sells in a market, not just the targeted group.

**A.** Price regulation is an untargeted subsidy—it applies to everyone in the market, whether they need assistance or not.

**B.** In a few historical cases, such as the old Soviet Russia, government attempted to simultaneously help suppliers with higher prices and demanders with lower prices. The result was whopping government deficits and economic chaos.

**C.** The market is too powerful to ignore. Governments can alter prices, but as long as individuals and businesses have the freedom to act in a self-interested way, they will react to the new price incentives by supplying or demanding more or less, in predictable ways.

**IV.** There is a range of more transparent and straightforward ways to provide assistance to a targeted group than to try using price floors or price ceilings.

**A.** If the goal is to provide affordable housing, there are a number of ways to do so other than rent control. For example, government could give income or housing vouchers to the poor or subsidize the building of low-income housing.

**B.** If the policy goal is to ensure a decent standard of living for farmers with small and medium operations, there are a variety of ways to do so other than price floors, including income subsidies for farmers or subsidies for certain buyers of food.

**C.** Politicians often have reasons to prefer price floors and ceilings, because they have no direct budgetary cost and because they often make it unclear who is bearing the costs and benefits of the policy.

**1.** Politicians often prefer to hide the costs if possible. Tax and subsidy policies make the costs and benefits more transparent than does price regulation of the policy.

**2.** Economists like to be clear about who is being helped and who is paying. Politicians like to be fuzzy about who is paying and would rather not draw too many distinctions about helping only some, because they fear alienating others.

3. Economists believe in taking account of all costs, not just budgetary costs—including hidden opportunity costs.

**Essential Reading:**

Milton Friedman and George J. Stigler, "Roofs or Ceilings? The Current Housing Problem," in *Rent Control: A Popular Paradox*, pp. 87–103.

Hugh Rockoff, "Price Controls," in *The Concise Encyclopedia of Economics*, www.econlib.org/library/Enc/pricecontrols.html.

**Supplementary Reading:**

Oxfam International. "Food Aid or Hidden Dumping? Separating Wheat from Chaff," Oxfam Briefing Paper 71, March 2005, http://www.oxfam.org.uk/ what_we_do/issues/trade/bp71_foodaid.htm.

R. A. Radford, "The Economic Organization of a POW Camp," *Economica*, November 1945, New Series, 12:48, pp. 189–201.

**Questions to Consider:**

1. Can you think of situations where a friend, co-worker, or politician said that the price of something was "too low" or "too high" or when you felt that way yourself? Try to come up with examples of situations in which someone might advocate price floors and price ceilings. What would you predict would happen if such rules were actually enacted into law?
2. When society does not choose to solve the problem of scarcity using the price mechanism, it must find some other way. Three possibilities are a system where everyone receives a fixed ration (as in wartime); making people wait in line; or having the government decide how the desired good will be distributed. Consider, for each of these three situations in turn, what would happen if one moved from a price mechanism to one of these other approaches. Who would benefit from such a move and who would be hurt? (Remember, be honest. Don't just say what you hope would happen in a perfect world, if everyone were pleasant, reasonable, and cooperative, but what your observation of the real world tells you is likely to happen!)

## Lecture Five
## Elasticity

**Scope:** When price rises, an economist would expect the quantity demanded to fall and the quantity supplied to rise. If demand or supply has a relatively high elasticity, then the changes in quantity in response to a change in price will be relatively large. However, if demand or supply has a low elasticity—that is, it is *inelastic*—then the changes in quantity in response to changes in price will be relatively small. It turns out that whether demand and supply are elastic or inelastic will determine whether economic changes will have a greater effect on price or on quantity produced—which, in turn, can be quite useful in evaluating how public policies will work.

## Outline

**I.** *Elasticity* refers to how much quantity demanded or supplied changes in response to a change in price.

**A.** The elasticity of demand is defined as

(% change in quantity demanded)/(% change in price).

**B.** Similarly, the elasticity of supply is defined as

(% change in quantity supplied)/(% change in price).

**C.** *Inelastic demand* refers to a situation where elasticity is less than 1, so that the percentage change in quantity demanded is less than the percentage change in price. *Elastic demand* refers to a situation where elasticity is greater than 1, so that the percent change in quantity demanded exceeds the change in price. *Unitary elasticity of demand* is the case where elasticity is 1, and the percentage change in quantity is equal to the percentage change in price.

**D.** *Inelastic supply* refers to a situation where elasticity is less than 1, so that the percentage change in quantity supplied is less than the percentage change in price. *Elastic supply* refers to a situation where elasticity is greater than 1, so that the percent change in quantity supplied exceeds the change in price. *Unitary elasticity of supply* is the case where elasticity is 1, and the percentage change in quantity supplied is equal to the percentage change in price.

**E.** Calculations of elasticity are based on percentage changes because it makes comparisons much more straightforward across markets in which the quantities may be measured in different units and the prices may be measured in different currencies.

| ***If…*** | ***Then…*** | ***It's Called*** |
|---|---|---|
| % change in in quantity > % change price | $\frac{\text{\% change in quantity}}{\text{\% change in price}} > 1$ | **elastic** |
| % change in in quantity = % change price | $\frac{\text{\% change in quantity}}{\text{\% change in price}} = 1$ | **unitary elasticity** |
| % change in in quantity < % change price | $\frac{\text{\% change in quantity}}{\text{\% change in price}} < 1$ | **inelastic** |

**II.** Knowing whether demand or supply is elastic or inelastic has a wide range of applications for how prices will be set and how a market will react to shifts in demand and supply.

**A.** Raising prices will bring in more revenue if demand is inelastic but not if demand is elastic.

**B.** Both supply and demand are more inelastic in the short term and more elastic in the long term. That is, quantity demanded changes less in response to changes in price in the short run than in the long run, and quantity supplied also changes in response to prices less in the short run than in the long run.

C. When demand is inelastic, increases in cost of production can be passed along to consumers. But when demand is elastic, then sellers cannot pass along cost increases to buyers, and increases in cost of production must be borne by producers.

III. The general concept of elasticity can be stretched to cover many situations in which behavior is changing in response to changes in a price, including situations involving how the quantity of labor responds to changes in income, how the quantity of saving responds to changes in rates of return, and many others.

**Essential Reading:**

Congressional Budget Office, *The Economic Costs of Fuel Economy Standards versus a Gasoline Tax*, December 2003, www.cbo.gov. (See the discussion of elasticities of demand and supply for gasoline in chapter 2.)

———, *Reducing Gasoline Consumption—Three Policy Options*, November 2002, www.cbo.gov. (See "The Effect of Price Changes on Gasoline Consumption," p. 17.)

**Supplementary Reading:**

Mike Moffatt, "A Beginner's Guide to Elasticity," economics.about.com/cs/ micfrohelp/a/elasticity.htm.

**Questions to Consider:**

1. Can you name some goods and services for which demand is more elastic or more inelastic? What's the key difference between these two groups? Similarly, can you name some goods and services for which supply is more elastic or less elastic? Why does this difference exist?
2. Consider the possible impact of a "junk food" tax, which would tax the production of foods with high sugar or salt content. Would you expect such a tax to raise a lot of money for the government if demand for such foods is elastic? What if demand for such foods is inelastic?

## Lecture Six
## The Labor Market and Wages

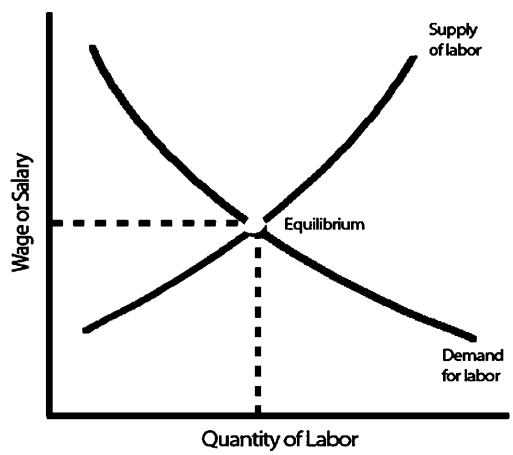
**Scope:** In the labor market, individuals are the suppliers of labor, while businesses are the demanders of labor. Wages are the price. Just as markets for goods include many goods with different characteristics, so the market for labor is really many different markets, with many different characteristics for workers. This lecture seeks to build an understanding of labor markets by discussing some prominent issues, including the minimum wage and how payroll taxes for social insurance (such as Social Security) affect the wages that people are paid. Labor market issues, such as welfare reform and unemployment, will be discussed in later lectures.

## Outline

**I.** The economy is typically described by what is produced, but it is equally valid to think of it as the patterns of working people who carry out that production.

**II.** Supply and demand is the key to understanding labor markets, just as it is with markets for goods. However, in goods markets, firms are suppliers and individuals are demanders. But in the labor market, individuals are the suppliers of labor, while businesses are the demanders of labor.

**A.** Demand for labor is a relationship: in this case, between the wage and the quantity of work desired by employers. A higher wage will make businesses demand a lower quantity of labor in the same way that a lower price will make consumers demand less of a good.




**B.** What shifts the demand for labor? Not wages! Changes in technology are one major factor shifting the demand for labor, along with changes in demand for certain outputs.

**C.** Labor demand is determined by the productivity of workers. That is, workers will be hired only up to the point where the business is confident that they will produce more than their wages.

**D.** Supply is a relationship: in this case, between the wage and the quantity of work provided by households. One might think that a higher wage should tend to lead to a higher supply of labor, and that is certainly true is some cases. However, many full-time workers have little ability to adjust their hours of labor, so for those workers, higher wages don't change the quantity of labor supplied by much.

**E.** What shifts the supply of labor? *Not* the wage. Factors that affect the supply of labor include changes in population demographics and shifts in social expectations about who is expected to work.

**F.** There are many different markets for different kinds of labor with different skills and characteristics. In each market, the equilibrium wage will be determined by the point where the quantity of labor supplied is equal to the quantity demanded.

**III.** The labor market framework offers some insights into economic issues, such as the minimum wage, the effects of labor unions, discrimination in labor markets, and who really pays for employee benefits.

**A.** There are perennial arguments over whether or how much to raise the minimum wage.

1. A minimum wage is a price floor and, thus, should be expected to lead to a shortage of employers willing to offer low-skilled jobs. However, there are reasons to believe that at current U.S. levels, this effect is fairly small.
2. Minimum wage policy, like most public policy questions, is complex because it involves costs, benefits, and tradeoffs. For example, is the gain in income to those who receive a higher minimum wage worth some workers losing their jobs?
3. Alternative policies are available for boosting the income of low-wage workers that work with the forces of supply and demand and do not risk the same problems as raising the minimum wage. Examples of such policies include government training programs, subsidized hiring of low-skill workers, and tax credits for low-income workers.

**B.** Labor unions can serve two functions: One is to keep wages high by threatening employers with strikes; the other is to help in building better communication in the workplace and, ultimately, a more productive workforce. In the United States, unions have been weak by international standards.

**C.** Labor market discrimination occurs when an equally qualified person is turned down for a job or paid less because of his or her gender or race. However, lower wages do not always prove that employers are discriminating. Instead, it may be that society is discriminating at an earlier stage, which leads some workers to have lower or different skills, and the lower pay offered by employers reflects this pre-market discrimination. Useful solutions to discrimination may depend on what sort of discrimination is occurring.

**D.** Employees sometimes seek to shift some costs to their employers; for example, by having employers pay for their health-care benefits, or contribute to their Social Security, or offer other benefits. But when employers think about the wage that they pay, they don't much care whether it is paid in the form of take-home pay or other benefits. In 2004, average total compensation was $23.29 an hour: wages and salaries were only 71 percent ($16.64) of that total. Almost 30 percent, was in the form of different kinds of benefits. Usually, when employees seek higher benefits from their employers, they end up with lower take-home pay.

**Essential Reading:**

Council of Economic Advisers, "Chapter 3: Policies for Dynamic Labor Markets" in *Economic Report of the President*, February 2003, www.gpoaccess.gov/eop.

U.S. Department of Labor, *Working in the 21st Century*, www.bls.gov/opub/ working/home.htm.

**Supplementary Reading:**

William Bridges, "The End of the Job," *Fortune*, September 19, 1994, pp. 62–74.

"Debating the Minimum Wage," *The Economist*, February 1, 2001.

**Questions to Consider:**

1. Top professional athletes can earn salaries of several million dollars per year. Taking a narrowly economic perspective, explain how such high salaries could be justified. Do you find this economic argument persuasive? Do you find the argument more or less persuasive if applied to the high income of a bestselling author? What about a top corporate executive?
2. Speculate about supply and demand in the U.S. labor market of the future. For what jobs do you think there will be a growing demand? A shrinking demand? What sort of workers will be in growing supply?

# Lecture Seven
## Financial Markets and Rates of Return

**Scope:** There is a longstanding prejudice against capital markets in Western culture—after all, charging interest used to be considered a sin of usury, but it was never a sin to charge for selling goods or for workers to charge for their labor. This lecture focuses on the demand side of the capital markets, which primarily means the demand for financial capital from businesses that seek to invest it in plant and equipment. The idea of *present discounted value* is used to explain how businesses consider the profitability of investment projects, when the costs of such projects must be spent in the present, while the returns are received in future years. Firms can raise money in several ways, through retained earnings, borrowing, and stock, with each choice offering advantages and disadvantages.

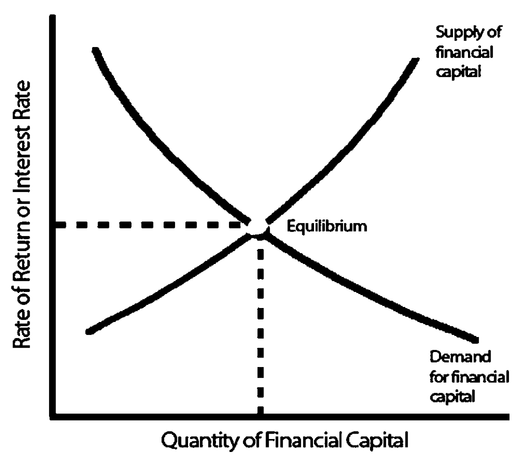
## Outline

**I.** People may sometimes feel that the price in a goods market or the wage in the labor market isn't fair, but they rarely feel that the entire market should be treated as illegitimate. However, many people have a nagging sense that the payment of interest—the price in the capital market—is somehow wrong. Why might this be?

- **A.** Goods are tangible. Labor is something we experience or can easily visualize. Interest payments and return on capital seem harder for many to grasp.
- **B.** There is a longstanding Western tradition of being suspicious of money-lenders and interest payments. Usury, or the payment of interest, used to be considered a sin in the Middle Ages. In the modern world, interest payments are still considered a sin among some believers in Islam.
- **C.** There is a common semantic confusion about *investment*. *Investment* sometimes refers to financial investment in stocks and bonds, but it is also sometimes used to refer to physical investment in new plants or equipment. The potential confusion here is that financial investment is the supply side of the capital market, while physical investment is the demand side.

**II.** Financial capital markets can be interpreted in the same basic supply and demand framework as markets for goods and for labor.

- **A.** Supply of financial capital is (as always) a relationship: in this case, between the quantity of capital supplied from households (and firms) and the interest rate. One might expect the quantity of capital supplied to rise with the interest rate; in fact, it seems that it doesn't rise much and that saving instead depends more on habits and cultural patterns.
- **B.** Demand for financial capital is (as always) a relationship: in this case, between the quantity of capital demanded by borrowers (and households) and the interest rate. As the interest rate rises, prospective borrowers will be less enthusiastic about taking out loans and the quantity of financial capital demanded will fall.



**C.** As always, equilibrium is where quantity demanded equals quantity supplied. In the capital market, this will happen at a particular rate of return (or interest rate). There will be many different capital markets, as there are many different labor markets, defined by the different characteristics of the available investments.

**D.** Each rate of return is made up of three factors: compensation for expected inflation, compensation for the level of risk, and compensation for the time value of money.

1. In a world with inflation, where, on average, goods cost more over time, you need to get a positive nominal rate of return on invested funds just to keep up with inflation. The interest rate minus the inflation rate is referred to as the *real* interest rate.
2. Part of the rate of return is compensation for the level of risk you are taking and whether you are likely to be repaid on time or at all.
3. Part of the rate of return is the time value of money—a payment for being willing to postpone consumption for a time.

**III.** The key tradeoff in capital markets occurs across time: Those who want the use of funds now but don't have enough on hand pay those who have enough on hand and are willing to postpone the use of their funds.

**A.** Getting a certain dollar amount of money now is better than getting that same dollar amount a few years in the future. Having a certain level of dollar expenses now is worse than having that same level of dollar expenses in the future.

**B.** *Present discounted value* is a way of directly comparing costs or benefits that occur at different points in time. The trick is to think about what any future expense would be worth in the present; that is, how much money in the present, if it were invested at the prevailing available interest rate for the appropriate amount of time, would be needed to equal the desired future amount? The formula for changing a future value into a present discounted value (PDV) is

$$PDV = (FV)/(1 + r)^t$$

where FV is the future value, r is the interest rate, and t is the number of years.

**C.** In business investment decisions, PDV is used to compare investment expenses incurred in the present with returns to be received in the future. PDV also explains the difference between the accounting and the economic idea of profits. But PDV has many other applications, including thinking about home mortgages, lottery payments, and government regulatory expenses.

**IV.** Firms that wish to invest for the future need to find a source of money after they have paid their current expenses.

**A.** Retained earnings, more commonly known as *profits*, are one source of financial investment capital for firms. The word *retained* means that the firm decided to hold onto the money and reinvest it, rather than paying it out to shareholders as dividends.

**B.** Companies can borrow in two ways: either from a bank or by using bonds. In either case, the company must make predetermined interest payments to its investors. Of course, the company will borrow only if it believes that the return on its investment will allow it to make these interest payments and still have money left over as a profit.

**C.** Raising money through equities—more commonly known as *corporate stock*— gives the owners of the stock part ownership of the firm. Thus, if the firm pays dividends or is sold, the owner of stock receives money in proportion to his or her ownership of the firm's stock. However, unlike bonds with their predetermined interest payments, there is no guarantee that the owner of stock will receive anything in a given year or anything at all. Stock is more often used as a way to raise money for younger and smaller companies, rather than for more established companies.

**Essential Reading:**

"The Lender's Long Lament," *The Economist*, December 25, 1993, pp. 103−105.

Ronald A. Wirtz, "Will That Be Cash, Check or Debtor's Hell?" "Buyer Beware." "A Helping Hand, or New Age Loan Sharking?" *FedGazette: Federal Reserve Bank of Minneapolis*, October 2000, minneapolisfed.org/pubs/fedgaz/00-10/index.cfm.

**Supplementary Reading:**

Timur Kuran, “Islam and Mammon,” *Milken Institute Review*, 3rd quarter 2004, pp. 61–81, www.milkeninstitute.org.

**Questions to Consider:**

1. Do you feel that someone who receives a high amount of interest payments has “earned” the money? Do you feel that someone who charges interest is behaving fairly? Consider both your own feelings and how economists would look at these questions. As part of this discussion, it may be helpful to read the article in *The Economist* listed under Essential Reading.
2. Look in the tables at the back of the *Economic Report of the President*, available at www.gpoaccess.gov/eop/, and become familiar with some of the different sorts of interest rates. Carry out the following exercises:
   - **a.** Find the table on “Bond Yields and Interest Rates.”
   - **b.** Get a feeling for what “high” and “low” interest rates have been over the last few decades and whether rates today are “high” or “low.”
   - **c.** Notice that there are many different types of interest rates and that they tend to rise and fall together.
   - **d.** Notice that borrowing by the U.S. government usually pays a lower interest rate than the other investments in the table. The reason is that the federal government is far less likely to default; thus, investors don’t need to be compensated for the extra risk with higher rates.
   - **e.** Compare the interest rates to the inflation rates in an earlier table and notice that interest rates and inflation tend to be high at roughly the same time (as in 1974–1975 or 1981–1982), showing the connection between nominal and real interest rates.

# Lecture Eight
# Personal Investing

[**Note:** *This course is not intended to provide financial or investment advice. All investments involve risk: Past performance does not guarantee future success. You acknowledge that any reliance on any information from the materials contained in this course shall be at your own risk.*]

**Scope:** The supply side of the capital market is an ornate name for a more basic question: How can I get rich through financial investments? One answer, of course, is to be very, very lucky. But a more useful answer for the purposes of financial planning is to take advantage of the power of compound interest to multiply one's money. This lecture lists the four major aspects of an investment that should be of concern: return, risk, liquidity, and tax status. It then considers a range of possible investments and the tradeoffs that are involved. Choosing between the available financial investments will also require thinking about time horizons.

## Outline

**I.** Interest is calculated based on the amount in the account at the start of the year. Thus, if money has been saved for a number of years, interest for the current year is paid not only on the original amount invested but also on the previously accumulated interest! The term used to describe interest being paid on earlier interest is *compound interest*.

- **A.** The formula for showing what a present value will turn into over a number of years at a certain interest rate is $PV (1 + r)^t = FV$, where PV is the present value, r is the (annual) interest rate, t is the number of years, and FV is the value in the future.
- **B.** Over sustained periods of time, compound interest can lead to very large returns on saving. For example, if you put aside $1,000, let it accumulate for 40 years, and get a 10% real rate of return, the original amount will be equal to $45,259 at age 65. Start by investing $1,000, for different periods of time with different annual rates of return. Use the compound interest formula: $PV (1 + r)^t = FV$.

| | 5% annual return | 10% annual return | 15% annual return |
|---|---|---|---|
| 10 years | $ 1,628 | $ 2,593 | $ 4,045 |
| 25 years | $ 3,386 | $10,834 | $ 32,918 |
| 40 years | $ 7,039 | $45,259 | $267,863 |

**II.** Any investment needs to be considered along four dimensions: rate of return, risk, liquidity, and tax status.

- **A.** Rate of return is usually expressed in percent per year. But remember that seemingly small differences in annual rate of return will compound to much larger differences over longer periods of time.
- **B.** Risk expresses the probability and amount by which the return for a certain investment could be higher or lower than its average expected value.
  - **1.** Such investments as U.S. Treasury bonds have low risk; you know pretty much what you're going to get. Investments in new technology companies or junk bonds have higher risk.
  - **2.** Other things equal, more risk is a bad thing; that is, a financial investor wants to take risk only if he or she is compensated for it, perhaps by a higher expected return on average.
  - **3.** The risk of investing in any single company can be reduced by diversifying one's investments and investing in a large number of companies in different sectors. Odds are that even if some decline in value, others will rise. Investing in a mutual fund is a relatively easy way for the individual investor to diversify in this way.

- **C.** Liquidity refers to how easy it is to sell an investment. A bank account is quite liquid; a house is not so liquid. More liquidity is generally thought of as good.
- **D.** Some investments are favored by the tax code. Some bonds are exempt from federal income tax; interest payments on home mortgages are deductible from taxable income; and taxes on capital gains on stocks can be postponed until the stock is sold.

**III.** A wide variety of financial investment choices are available, including bank accounts, stock market mutual funds, and others. In choosing how to allocate funds among these investment choices, it's important to consider their expected return, risk, liquidity, and whether they have preferred tax status.

- **A.** Bank accounts provide a very low rate of return, with no tax breaks, but they are very safe and very liquid.
- **B.** Money market funds offer a better return than bank accounts and are still quite liquid and quite safe, although not quite as good in these ways as a bank account.
- **C.** Certificates of deposit offer a better return than money market funds and are very low-risk. However, they are not liquid, because they usually have a "substantial penalty for early withdrawal."
- **D.** A diversified portfolio of corporate bonds provides a better return than certificates of deposit. If bought through a mutual fund, bonds are fairly liquid. However, the risk is somewhat higher.
- **E.** A diversified portfolio of corporate blue-chip stocks provides a better return than a bond portfolio but with more risk.
- **F.** A diversified portfolio of risky "growth stocks" offers a better return than a portfolio of big companies but with more risk.
- **G.** For most people, their real estate investment is their home. The return can be highly variable, and liquidity is low, but there are some tax advantages.
- **H.** Investments in gold and precious metals are very risky, and for the individual investor, these are a gamble that not may be worthwhile.

**IV.** Picking an investment strategy needs to be an individual choice, based on such considerations as where you are in your life and your tolerance for risk.

- **A.** Some risks may be greater in the short term, but the potential ups and downs may cancel out over the long run. If you're planning to use money in 20 years for retirement, for example, you may worry less about daily ups and downs of the market and more about long-term averages.
- **B.** Why not just pick the stocks that will pay the highest return? No one knows what they are! The *random walk* theory of stock prices holds that all past information that is available about a stock is part of the current price; thus, what moves stock prices is new information—which, by definition, is unpredictable.
- **C.** All personal investment advice is based on one starting point: You need to start putting some money aside sooner in your life rather than later.

**Essential Reading:**

Congressional Budget Office, *Baby Boomers' Retirement Prospects: An Overview*, November 2003, www.cbo.gov.

"The Economics of Saving: The Shift away from Thrift," *The Economist*, April 7, 2005.

"Asset Management: Other People's Money," *The Economist*, July 3, 2003.

**Supplementary Reading:**

Paul B. Farrell, *The Lazy Person's Guide to Investing: A Book for Procrastinators, the Financially Challenged, and Everyone Who Worries About Dealing with Their Money*.

Burton Malkiel, *A Random Walk Down Wall Street*.

**Questions to Consider:**

1. Make a list of how your money is invested. Don't limit yourself just to financial investments, but include real estate or "collectibles" that may grow in value. Identify which assets are likely to have the highest and lowest return, which are risky or safe, which are most liquid, and when you have to pay taxes on the gains. (If you don't have any savings, you can do this for the list of assets given under item III of the lecture outline.) Are there some investments you have not made that you should consider making in the future?
2. You receive a brochure in the mail advertising investment advice. It promises that if you pay for a subscription to a newsletter, you will make the money back many times over in higher profits on your investments. Have you ever received such a brochure or seen advertisements of this sort? Why might you be skeptical of such advice?

## Lecture Nine

## From Perfect Competition to Monopoly

**Scope:** Competition between firms falls into four categories. In *perfect competition*, many firms produce identical products and, thus, can only offer a lower price as an incentive to buy. In *monopolistic competition*, many firms produce differentiated products; thus, they offer a combination of product characteristics and price to buyers. In an *oligopoly*, a relatively small number of firms can use a variety of price and production strategies to compete against each other. In a *monopoly*, there is only one seller of a product. This lecture discusses each of these paradigmatic forms of competition, with examples, and describes how prices, output, and profits are likely to differ with different forms of competition.

## Outline

**I.** The U.S. economy has a wide range of firms, from small, single-person operations to enormous corporations.

- **A.** There are three broad types of firm ownership: *Proprietorships* are owned by an individual; *partnerships* are owned by the partners; and *corporations* are stand-alone organizations run by their ownership.
- **B.** About half of all U.S. workers are employed by organizations with 500 or more employees, but about a fifth work for small firms with 19 or fewer employees.

**Employment by Size of Firm in 2001**
(A single firm can have multiple locations.)

| *Firms with this number of employees* | *Share of total employment* |
|---|---|
| 1–9 employees | 10.7% |
| 10–19 employees | 7.2% |
| 20–99 employees | 17.7% |
| 100–499 employees | 14.3% |
| 500 or more employees | 50.1% |

Source: U.S. Small Business Administration

- **C.** In any given year, about half a million businesses start, and half a million die. Most business births and deaths are small firms, but several hundred of the startups each year that start or die have more than 500 employees apiece.
- **D.** Industries in the economy can involve one of four types of competition, which can be set along a spectrum from perfect competition, to monopolistic competition, to oligopoly, to monopoly.

**II.** *Perfect competition* is the highest level of competition, in which many producers of goods compete to sell at the lowest price.

- **A.** The definition of perfect competition emphasizes small firms (relative to the size of the market) selling identical products.
- **B.** Some key characteristics of perfectly competitive firms are that they are price-takers, entry and exit are easy, profits are low, and prices closely reflect costs of production.
  1. In a perfectly competitive market, with many firms and identical products, each firm is a price-taker that must accept the market price and sell at the market price.
  2. With many small firms and a product that many firms can make, it is easy for existing perfectly competitive firms to expand production or reduce it.
  3. With easy entry and exit and firms all charging the same price, firms in a perfectly competitive industry will earn low profits.
  4. Price will closely reflect cost of production, because profits are low and all firms are charging the same price.

- **C.** Perfect competition is rarely as "perfect" as the definition literally implies, but when firms face many competitors and are forced to act as price-takers, the industry is close to perfect competition.

**III.** *Monopoly* is the opposite extreme from perfect competition, because it is the case of little or no competition.

- **A.** Monopoly occurs when a single seller has all or most of the sales in a given market.
- **B.** For a monopoly to last over time, it requires a barrier to entry by other firms.
  - **1.** A patent for an invention can be a barrier to entry of other firms.
  - **2.** Some monopolies are created by law, such as the U.S. Postal Service or the firms that pick up garbage in many cities.
  - **3.** Monopoly can arise if large firms merge together or if they agree to act together in their pricing and output decisions.
  - **4.** A *natural monopoly* arises when production of the good has economies of scale relative to the size of market demand, giving the large, established firm an advantage over any new entrants.
- **C.** Monopolies have some power to set prices and to earn consistently above-average profits.
  - **1.** A monopoly will set its price according to the elasticity of demand for its product, with the price being higher the more inelastic the demand.
  - **2.** Because a monopoly can charge a higher price and not fear entry from other firms, it can earn consistently above-average profits.

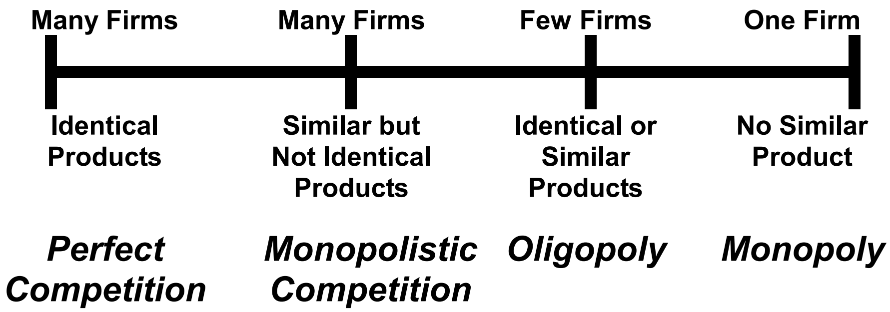
**IV.** On the spectrum of competition, *monopolistic competition* is closer to perfect competition than to monopoly.

- **A.** Monopolistic competition occurs when many small firms compete by selling differentiated products.
- **B.** A monopolistically competitive firm has some power to choose its price, but because entry and exit are possible, it cannot earn above-average profits in the long run.
  - **1.** Like a monopoly, a monopolistically competitive firm will have some power to choose its price, based on elasticity of demand. But it will have less power to raise price than an actual monopoly.
  - **2.** Monopolistically competitive firms are in industries that do not face substantial barriers to entry.
  - **3.** In the long run, new firms will enter a market if profits are exceptionally high and existing firms will exit a market if profits are exceptionally low. Because of this entry and exit, monopolistically competitive firms can make higher-than-normal profits in the short run but not in the long run.
  - **4.** Monopolistic competition gives a strong incentive for spotting trends, trying to make lots of innovations, and offering different styles, looks, and features. The major social question is whether these gains from variety exceed the costs of higher prices to consumers.

**V.** An *oligopoly* is closer to monopoly than to perfect competition—but in some cases, oligopolists may compete in tough ways against each other.

- **A.** Oligopoly exists when a small number of large firms have most or all of the sales in a given market.
- **B.** Firms in an oligopoly may compete against each other in a tough way, in which case, they may act like perfect competitors and have low profits, or they may seek to act together as if they were a monopoly and earn higher-than-normal profits.

# The Spectrum of Competition




**Essential Reading:**

"Cracking Down on the Cartels," *The Economist,* April 3, 2003.

"The Diamond Cartel: The Cartel Isn't Forever," *The Economist*, July 15, 2004.

**Supplementary Reading:**

Go to Wikipedia, the free encyclopedia that anyone can edit (en.wikipedia.org/ wiki/Main_Page). Look up *perfect competition*, *monopolistic competition*, *oligopoly*, and *monopoly*. Wikipedia is an interesting venture, because the quality of the entries depends on who wants to work on them. For the four terms given here, which entry seems to you the strongest and which the weakest? At the time these lectures were given, *monopolistic competition* was clearly the weakest entry of the four terms. By the time you check, who knows? You might also compare these entries in Wikipedia to any other encyclopedia.

**Questions to Consider:**

**1.** Think of some examples of firms in each of the four main categories: perfect competition, monopolistic competition, oligopoly, and monopoly.

**2.** If you observed a firm that earned high profits, what partial conclusions can you reach about its competitive environment? If you observed a firm that earned high profits over a sustained time, what further conclusions can you draw about its competitive environment?

## Lecture Ten

## Antitrust and Competition Policy

**Scope:** Antitrust refers to government policies to prevent monopoly or near-monopoly and to encourage competition. These policies include: conducting oversight and, possibly, blocking proposed mergers between firms; sometimes forcing firms to change unfair competitive practices; and in some cases (such as AT&T in 1984), requiring large firms to be split into smaller firms. The Federal Trade Commission and the U.S. Department of Justice administer antitrust policy. This lecture explores the rules and doctrines of antitrust enforcement.

### Outline

**I.** The federal government has the power to prevent monopoly and to encourage competition.

- **A.** The primary federal agencies that carry out antitrust and competition policy are the Federal Trade Commission and the U.S. Department of Justice.
- **B.** One main task of the competition authorities is to check that firms aren't merging their way into monopoly. Proposed mergers must be reported to the government and considered for anticompetitive potential.
- **C.** Firms may also engage in anticompetitive behavior without merging. The Federal Trade Commission has the task of deciding whether certain business strategies are anticompetitive, then acting as an enforcement agency to prevent these strategies from being used.

**II.** Antitrust enforcement requires, first, defining how much competition exists in a market, then figuring out how (or whether) to respond if competition seems to be lacking.

- **A.** A four-firm concentration ratio is calculated by adding up the market shares of the four largest firms in an industry.
- **B.** The Herfindahl-Hirschman index is another measure of the concentration of a market, calculated by summing the square of the market share of each firm.
- **C.** Defining a *market* can be difficult.
  - **1.** Firms will often claim that they are a fairly small player in a very broad market, while competition authorities may argue that firms are bigger players in a more narrowly defined market.
  - **2.** If the market is defined as global competition, firms will tend to look less dominant than if the market is defined as competition only within a country.
- **D.** An alternative method to measure competition between firms with multiple locations is to look at prevailing prices in areas where they compete more directly with each other versus prevailing prices in areas where they do not compete so directly.
- **E.** Is breaking up a monopoly the right thing to do? Some classic examples of breaking up monopolies include Standard Oil and AT&T, but the government is often not eager to pursue such a drastic remedy.

**III.** Some behavior by comparison falls short of outright monopoly or merger, but nonetheless seems anticompetitive.

- **A.** In a price-fixing cartel, producers form a group, retaining their independence but agreeing to set output and prices jointly to seek monopoly-level profits.
- **B.** A variety of restrictive business practices may limit competition and bring enforcement action from the Federal Trade Commission. These include *price maintenance agreements*, *exclusive dealing*, *tie-in sales* (or *bundling*), and *predatory pricing*.
  - **1.** If a product manufacturer is selling to a group of dealers that then sells to the general public, it is an illegal price maintenance agreement for the manufacturer to demand that the dealers sell for at least a certain minimum price.
  - **2.** An exclusive dealing agreement between a manufacturer and a dealer, which requires that the dealer sell only products from one manufacturer, can be legal or illegal.

3. Tie-in sales (sometimes called bundling) involve a situation in which a customer is allowed to buy one product only if the customer also buys a second product.
4. Predatory pricing occurs when the existing firm (or firms) reacts to a new firm by dropping prices very low for a short time, until the new firm is driven out of the market; then the incumbent firm or firms raise prices again.

**IV.** A lively ongoing intellectual debate considers whether markets are highly inventive in creating additional competition or whether aggressive government intervention is necessary to ensure competition.

**A.** Those who favor stronger competition policy believe that more mergers should be blocked and that anticompetitive practices should be challenged more vigorously. Those who favor weaker competition policy argue that competition works better than government intervention in determining which mergers and business practices should succeed.

**B.** Here's an intellectual test for those of you who think of yourself as strong supporters of antitrust and more competition: Would you break up the U.S. Post Office?

**Essential Reading:**

Federal Trade Commission, *Promoting Competition, Protecting Consumers: A Plain English Guide to Antitrust Laws*, ftc.gov/bc/compguide/index.htm.

U.S. Department of Justice, *Antitrust Enforcement and the Consumer*, www.usdoj.gov/atr/overview.html.

———, *Timeline of Antitrust Enforcement Highlights at the U.S. Department of Justice*, www.usdoj.gov/atr/timeline.pdf.

**Supplementary Reading:**

President's Commission on the United States Postal Service, *Embracing the Future: Making the Tough Choices to Preserve Universal Mail Service*, 2003, www.treas.gov/offices/domestic-finance/usps.

James B. Stewart, "Whales and Sharks," *The New Yorker*, February 15, 1993, pp. 37–43.

**Questions to Consider:**

1. Would you favor breaking up Microsoft into several different competing companies? Would you favor breaking up the Post Office into several different competing companies? Does it bother you when cartels act together to raise prices? Do your answers support greater competition in all of these cases? If not, why not?
2. How would you distinguish, in theory and in practice, between predatory pricing (presumably bad) and tough price-cutting market competition (presumably good)?

# Lecture Eleven

# Regulation and Deregulation

**Scope:** In some industries, where competition between firms has, for some reason, seemed difficult, government has sought to regulate prices charged and/or quantities produced. In the 1970s, there was a wave of deregulation of many of these industries, including airlines, trucking, and banking. In the 1990s, a second wave of deregulation started, focused on telecommunications and electricity. This lecture discusses the conditions when the case for government regulation of prices and quantities is strongest or weakest and how regulation can perform better or worse.

## Outline

**I.** Certain industries don't seem well-suited to competition. Either the firms repeatedly push each other into suffering large losses or the production technology of the industry makes competition difficult to imagine.

- **A.** Some examples of industries where the firms seem to push each other into suffering large losses on a repeated basis include railroads in the late 19th century and airlines in the late 20th century.
- **B.** Public utilities, the companies that have traditionally provided water and electrical service across much of the United States, seem to be an example of a situation in which it would not be cost-effective to have competition between multiple firms. It would make little sense to argue that, say, a local water company should be broken up into several competing companies, each with its own separate set of pipes and water supplies.
- **C.** These industries where competition may seem (at least at first glance) not to work well have some common underlying economic characteristics. They involve networks. Also, they tend to have high fixed costs of building the network and relatively lower costs of running the network.

**II.** Society has various options for regulating an industry in which competition does not seem to work well or a natural monopoly may exist. The different types of regulation have different incentives for producers.

- **A.** In this situation, trying to break large existing firms into multiple competitors typically doesn't work well. Smaller firms will have higher costs, and competition between the smaller firms will either be ruinous or will tend to reproduce the original monopoly.
- **B.** *Cost-plus regulation* is a method of regulating an industry in which the regulator considers the costs of the industry, then sets prices so that the firm will earn a normal, average rate of profit. This method of regulation has the problem that firms have little incentive to innovate, because the regulators will not allow them to earn higher profits.
- **C.** Under *price-cap regulation*, the regulator sets a price that the regulated firm can charge over the next few years, and if the firm can cut costs by more than expected, it can earn additional profits.
- **D.** Any method of regulation faces the risk of *regulatory capture*, which is the danger that regulators will believe their job is to protect industry profits and workers rather than competition and consumers.

**III.** The U.S. economy experienced a wave of deregulation in a number of industries in the late 1970s and early 1980s in airlines, banking, trucking, oil, intercity bus travel, phone equipment and long-distance phone service, and railroads.

- **A.** Consumers have benefited greatly from deregulation, both in lower prices and in new goods and services.
- **B.** Deregulation definitely made the business environment less stable for the firms in formerly regulated industries and for their workers. But in a market economy, it's not clear why a few groups of firms and workers deserve special government treatment to gain higher profits and wages at the expense of consumers.

**IV.** Even in those cases where some regulation is needed, regulated industries may have one or more parts that can be carved off and left to competitive market forces.

   **A.** One successful example of carving off some competitive pieces is the breakup of the former telephone monopolist AT&T into a long-distance firm, an equipment firm, and several local phone companies.

   **B.** Electricity has long been thought of as a natural monopoly and regulated as a public utility, but maybe it is time for limited deregulation.

      **1.** The argument that electricity is a natural monopoly focuses on the grid of wires that brings electricity to homes. It does not focus on how the electrical power is generated.

      **2.** Thus, a deregulation movement has grown up in which the electrical grid would continue to be publicly owned or regulated, but the business of producing electrical energy would become competitive.

      **3.** Limited deregulation of electricity production has been quite successful in the United Kingdom and in some U.S. states, such as Pennsylvania, but it was a disaster in California.

   **C.** Broadband Internet access has some of the traits of a natural monopoly: It can be provided by setting up a network that has high fixed costs. This trait has led some cities to argue that it should be provided by a regulated monopoly—but the industry also holds some potential for competition.

**V.** Government has a necessary role as referee of economic competition. The forces of competition accomplish a great deal that is socially beneficial. But in certain well-defined circumstances, when competition isn't working well or can't work well, government can have a useful role to play.

   **A.** Deregulation doesn't mean no regulation at all. When government allows firms to determine their own prices and quantities, it can still set standards in such areas as safety and accurate financial reporting.

   **B.** When the outcomes of market forces seem undesirable, it's important to identify the underlying problem and design the policy response accordingly, for example, price-cap regulation for a natural monopoly.

**Essential Reading:**

Council of Economic Advisers, "Chapter 8: Regulating Energy Markets," in *Economic Report of the President*, February 2004, www.gpoaccess.gov/eop.

———, "Chapter 6: Innovation and the Information Economy," in *Economic Report of the President*, February 2005, www.gpoaccess.gov/eop.

"Open Skies and Flights of Fancy," *The Economist*, October 2, 2003.

"Low-Cost Airlines: Turbulent Skies," *The Economist*, July 8, 2004.

**Supplementary Reading:**

Richard A. Posner, *Natural Monopoly and Its Regulation*.

**Questions to Consider:**

**1.** Do you think broadband Internet services should be left to the competitive market (perhaps with government subsidies to those with low incomes), provided by a local regulated monopoly, or provided by regulated competitive firms?

**2.** How can a regulator encourage a regulated industry to seek out innovative new technologies for providing its good or service?

## Lecture Twelve

## Negative Externalities and the Environment

**Scope:** One well-founded concern about an unfettered free market is that it may damage the environment. Indeed, environmental damage is part of a broader class of concerns that economists have labeled *negative externalities*. These are situations in which, in the buying and selling of goods, there are consequences—such as pollution—felt by third parties who are not part of the original transaction. Regulation is one way of responding to negative externalities such as pollution, but it can be inflexible and costly. Economists have instead proposed market-oriented environmental policies, including taxes on pollution or permits for pollution that can be bought and sold.

## Outline

**I.** Strong environmentalists sometimes see the "free market" as the enemy. Some connection is undeniable, but the connection may be less obvious than it at first appears.

- **A.** Poor countries with weak markets often have environmental problems that are even worse than rich countries.
- **B.** Countries that have tried to eliminate market forces, such as the former Soviet Union and some nations in Eastern Europe, have had terrible pollution problems.
- **C.** Despite its existing environmental problems, the U.S. environment has been getting cleaner for the last several decades.

**II.** Externalities arise when a voluntary exchange between two parties directly affects a third party who was not a buyer or a seller in the exchange.

- **A.** The argument for free markets is based in part on the notion that when a buyer and seller voluntarily agree on a purchase, then in their own judgment, the deal must benefit them both. But when a market transaction affects a third party who was not consulted and did not have to pay as a buyer or receive money as a seller, then the argument for how markets work does not hold.
- **B.** For an example of an externality that can be positive and negative, consider an apartment complex where one household hires a loud band for a party. If you like the music, you experience a positive externality; if you don't like it, then you suffer a negative externality.
- **C.** Pollution is a negative externality; that is, pollution is a case where third parties are affected by spillovers from production or consumption but are not part of the market transaction.

**III.** Goods with negative externalities have social costs higher than their private costs; thus, they will be overproduced.

- **A.** In a typical market transaction, the costs to the seller are privately felt by the seller and the benefits are privately received by the buyer.
- **B.** However, in the case of pollution, not all the costs are private ones; instead, some additional costs are imposed on others.
- **C.** Because producers of pollution don't have to take these social costs into account, they will tend to produce too much of it.

**IV.** A range of public policies is available to bring private and social costs into line.

- **A.** *Command and control* is the name given to the set of regulatory policies that specifies an amount of pollution that can legally be emitted but prohibits any larger amount.
  - **1.** Command-and-control anti-pollution policies have been effective in the past.

**U.S. Air Pollution in 1970 and 2001, millions of tons**

| | *1970* | *2001* | *% change* |
|---|---|---|---|
| particulates | 13.0 | 3.1 | -76% |
| sulfur dioxide | 31.2 | 17.5 | -44% |
| nitrogen oxides | 20.9 | 24.0 | +15% |
| volatile organic compounds | 31.0 | 19.2 | -38% |
| carbon monoxide | 129.4 | 104.8 | -19% |
| lead | 0.22 | 0.0044 | -98% |

Source: Environmental Protection Agency (2003).

2. However, the industry being regulated may seek to influence the pollution standard through the regulatory process.
3. Command-and-control pollution standards are inflexible and often do not reward innovative ways of avoiding pollution or ways of reducing pollution beyond the legal standard.

**B.** A pollution tax can be used to make sure that polluters face up to the social costs of their pollution.

1. A pollution tax gives polluters an incentive to reduce the amount of pollution, and just like a command-and-control regulation, it can be set at whatever level society desires.
2. Of course, a pollution tax is also more visible than command-and-control regulation, and because it's called a *tax*, it may not be as politically attractive.
3. A pollution tax gives a reason for continuous innovation, because as long as the firm can reduce pollution, it can reduce its tax.
4. A pollution tax provides cash for the government.
5. A pollution tax provides complete freedom in how pollution is reduced; no particular pollution-control technology is mandated.

**C.** Marketable permits work by giving polluters a set of permits to emit a certain amount of pollution.

1. Often, the amount of pollution allowed with a marketable permit is scheduled to decrease over time.
2. These permits may be traded: If a polluter can reduce pollution by more than the amount of permit, then the permit can be sold to another. Or if a new producer wants to produce, that producer must purchase a pollution permit from another.
3. The United States has had some success with marketable permits in certain areas, such as the reduction in sulfur dioxide emissions under the 1990 Clean Air Act.

**D.** Property rights can often affect the incentives to produce or reduce pollution.

1. One way of thinking about the problem of pollution is that in an unregulated market, no one has a property right to clean air—so, no one needs to pay the costs of dirtying the air.
2. But if property rights are clear and enforceable, then one party or another will have the appropriate incentives to avoid negative externalities.
3. In the economist Ronald Coase's classic example, imagine a train that passes a farmer's field and emits sparks that start a fire. Does the train have the property right to emit sparks? If so, the farmer must find a solution. Does the farmer have a property right to be free from the threat of sparks? If so, the railroad must find a way to reduce the chance of fire.
4. In general, there has been some movement away from pure command and control and toward more use of these market-oriented mechanisms.

**V.** To illustrate how these choices might work, consider the range of options for reducing the risk of greenhouse warming.

**A.** There is scientific controversy over whether global warming is likely to happen and political controversy over whether the Kyoto protocol is a sensible policy. Here, I will assume only that there is uncertainty over whether global warming might happen, and when there is a risk, it can be worth taking out insurance.

**B.** Carbon emissions could be reduced through a range of tools: command-and-control rules on, say, car mileage; a pollution tax, such as a carbon tax; or marketable permits for carbon emissions.

**VI.** Zero pollution is not a realistic policy goal.

**A.** In a literal sense, zero pollution would have to mean that people don't exhale carbon dioxide or create sewage. It would also mean shutting down most of industry and the economy. This just isn't sensible.

**B.** Much pollution has benefits—in terms of what it allows to be produced—as well as costs, and the reasonable policy goal for pollution is to think about balance.

**Essential Reading:**

Council of Economic Advisers, "Chapter 9: Protecting the Environment," in *Economic Report of the President*, February 2004.

"The Global Environment: The Great Race," *The Economist*, July 4, 2002.

**Supplementary Reading:**

Environmental Protection Agency, *Draft Report on the Environment*, 2003, www.epa.gov/indicators/roe/index.htm.

Resources for the Future, *Resources*, www.rff.org/rff/Publications/ Resource_Articles.cfm.

**Questions to Consider:**

1. Many people with strong environmentalist feelings find it difficult to like or to trust market forces. Why might this be so? Explain how a person might combine strong environmentalist sentiment and a belief in the power (if not the righteousness) of market forces.
2. Can you imagine a situation in which society aims at "too little" pollution, in the sense that the costs of having so little pollution are uncomfortably high? As an extreme example, consider a proposal to ban all automobile travel as a way of reducing air pollution.

## Glossary

**absolute advantage**: one nation can produce a certain good with higher productivity (or fewer inputs)

**adverse selection**: the problem that relatively safe risks will not desire to buy insurance, while relatively unsafe risks will, which unless dealt with, will make it impossible to offer insurance

**appropriability**: the ability of a producer to reap the benefits of an investment or an invention

**automatic stabilizers**: the property of taxes and certain government spending that they help stimulate aggregate demand when the economy is declining and hold down aggregate demand as the economy is expanding

**balanced budget**: when government taxes are equal to spending; see also **budget deficit** and **budget surplus**

**barter**: exchanging one good or service directly for another, without the use of money

**bilateral trade balance**: the balance of trade between two specific countries, as opposed to the trade balance between one nation's economy and the rest of the world economy

**bond**: a way for a government or private firm to borrow money from private investors, then to repay the money with interest

**budget deficit**: when annual government spending exceeds taxes

**budget surplus**: when annual government taxes exceed spending

**business cycle**: the rise and fall of the economy from troughs of recessions to peaks in periods of growth and back again

**capital market**: the exchanges between lenders of capital, those who have money to save, and borrowers of capital, who will pay interest for the use of that money

**cartel**: a group of producers who agree to act together in setting prices and output

**central bank**: the agency in any country that conducts monetary policy; the U.S. Federal Reserve, the Bank of Japan, and the European Central Bank are examples

**certificate of deposit**: a certificate where the investor agrees to leave the money with a bank for a preset time, and the bank, in exchange, pays a higher interest rate

**command-and-control regulations**: regulations that specify the quantities and/or prices of what will be produced

**comparative advantage**: when a nation has either the largest productivity advantage in producing a certain good or service, compared to other nations, or if it has no area of productivity advantage, the smallest productivity disadvantage in producing a certain good or service

**compound interest**: interest paid both on the original amount saved and on other interest that has accumulated over time

**concentration ratio**: adding up the market share of the largest firms in an industry, typically the largest four firms

**contractionary policy**: when fiscal or monetary policy is used to reduce aggregate demand; also called *tight* policy

**copyright**: a form of legal protection against copying original works of authorship, including literary, musical, and other works

**cost-plus regulation**: setting a regulated price that a firm is allowed to charge by first calculating its costs of production (allowing for a low normal level of profit), then setting the price to cover that amount

**countercyclical policy**: going against the cycle of the economy; that is, increasing aggregate demand when the economy is producing below potential GDP and holding down on aggregate demand if the economy threatens to exceed potential GDP

**current account balance**: the broadest measure of the trade balance, looking at imports and exports of goods, services, investment income, and unilateral transfers

**cyclical unemployment**: unemployment caused because the economy is in a recession

**demand**: the relationship between market price and the quantity demanded; it is a line, not a single quantity

**discount rate**: the interest rate charged by the central bank on loans to individual banks

**diversification**: buying a number of investments to reduce risk, so that those investments that do unexpectedly poorly will be offset to some extent by those doing unexpectedly well

**division of labor**: dividing the production of a certain good or service into a related group of smaller tasks, with each worker focusing on a limited part of the overall process

**double coincidence of wants**: a situation in which two people each want some good or service that the other person can provide, thus making it possible for them to trade without the use of money

**dumping**: the practice of selling at below cost to drive out the competition, then being able to charge higher prices; also called *predatory pricing*

**economies of scale**: when a larger firm can produce at a lower average cost of production than a smaller firm, at least up to some level of output

**efficiency**: when a market operates without wasted effort; that is, no excess quantity supplied and no excess quantity demanded at the prevailing price

**elastic**: elasticity (in absolute value) greater than 1

**elasticity of demand**: (% change in quantity demanded)/(% change in price)

**elasticity of supply**: (% change in quantity supplied)/(% change in price)

**equilibrium**: the price at which quantity supplied is equal to quantity demanded

**equity**: part ownership of a firm; also called *stock*

**exchange rate**: the rate at which one currency can be traded for another

**expansionary policy**: when fiscal or monetary policy is used to increase aggregate demand; also called *loose* policy

**externality**: when a party outside of the buyer and seller is directly affected by the transaction

**Federal Reserve**: the somewhat public, somewhat private agency that conducts monetary policy

**fiscal policy**: government tax and spending policy

**free-rider problem**: when some people can receive benefits from public goods without a need to pay their fair share of the costs

**frictional unemployment**: unemployment caused by the ebb and flow of some companies losing money in a dynamic market economy

**goods market**: the exchanges between sellers of goods and services (which are usually businesses) and buyers of goods and services (usually consumers)

**gross domestic product (GDP)**: the total value of final goods and services produced in an economy in a year

**Herfindahl-Hirschman index**: a measure of the concentration of a market, calculated by summing the square of the market share of each firm

**Hyperinflation**: very rapid inflation; say, 40% per *month* or more

**import quota**: a quantitative limit on how much of a certain good can be imported

**indexing**: adjusting a price, wage, or interest rate automatically for changes in inflation

**inelastic**: elasticity (in absolute value) less than 1

**infant industry**: an industry that, it is argued, needs temporary government subsidies so that it can expand and be able to compete effectively

**inflation**: a rise in the overall level of prices

**inflation-targeting**: when the central bank is legally required to focus only on keeping inflation low

**in-kind**: when payment is made in the form of goods or services, not in the form of cash

**labor market**: the exchanges between sellers of labor, workers, and buyers of labor, which are firms and other employers

**liquidity**: whether an investment is easy to sell (that is, to liquidate)

**log-rolling**: when two politicians agree to each support provisions that are especially important to the other, with the result that many bills important to individual legislators but perhaps not important to the broad social welfare become law

**macroeconomics**: the aggregated top-down view of the economy, focused on such issues as unemployment, inflation, economic growth, and the balance of trade

**marketable permits**: a right to produce a certain amount of something; if not used or desired, this right can be sold to others; often applied to pollution control, as a right to produce a certain amount of pollution

**medium of exchange**: the property of money that it can be traded for almost all goods, services, and debts

**merchandise trade balance**: the balance between imports and exports of goods only; for contrast, see **current account balance**

**microeconomics**: the study of how individual households and firms make decisions in markets

**monetary policy**: policies of the Federal Reserve that affect interest rates and credit

**money market mutual fund**: a mutual fund that invests in very liquid, low-risk bonds

**monopolistic competition**: when many firms compete by selling differentiated products

**monopoly**: when a single seller has all or most of the sales in a given market

**moral hazard**: the problem that when insurance is provided against a risk, the incentives to prevent the danger from happening are diminished

**mutual fund**: an investment fund that makes a number of different investments; investors receive returns according to how the fund performs as a whole

**natural monopoly**: when a monopoly exists because the industry has economies of scale, giving a large, established firm an advantage over any new entrants

**natural rate of unemployment**: the level of unemployment generated by the institutional structures in an economy that encourage hiring and firing

**negative externality**: when a party outside the transaction between buyer and seller is negatively affected, as in the case of pollution

**negative income tax**: when the government reduces welfare benefits as the recipient earns additional income

**nominal interest rate**: the actual interest rate charged or paid

**nonexcludable**: when a seller cannot exclude those who did not pay from using the good; for example, clean air

**nonrivalrous**: the good itself is not diminished as more people use it; for example, national defense

**non-tariff barriers (NTBs)**: bureaucratic and regulatory steps that have the effect of restricting imports

**oligopoly**: when a small number of large firms have most or all of the revenues in a given market

**open-market operations**: when a central bank buys or sells bonds with the goal of decreasing or increasing the money supply

**opportunity costs**: true cost is measured by the opportunities given up, including possible alternative purchases and uses of time

**patent**: an exclusive legal right granted by the government to make, use, or sell an invention for a specific and limited time

**per capita**: divided by the population

**perfect competition**: small firms making identical products that must act as price-takers in their market

**Phillips curve**: a diagram showing the tradeoff (or lack of a tradeoff) between inflation and unemployment

**pollution taxes**: a tax added to the price of products, according to the social cost of the pollution produced by that product

**pork-barrel spending**: spending in which the benefits are focused on one politician's district, while the costs are spread across the country

**portfolio**: a group of investments

**positive externality**: when a party outside the transaction between buyer and seller is positively affected, as in the case in which new technology is developed but others benefit from it

**potential GDP**: the economic output that is achievable with full employment of labor and other productive resources

**predatory pricing**: the practice of selling at below cost to drive out the competition, then being able to charge higher prices; also called *dumping*

**present discounted value (or present value)**: the amount that future payments are worth in the present if they were to be received immediately and could then be invested at the prevailing interest rate

**price-cap regulation**: the regulator sets a price that the regulated firm can charge over the next few years, and if the firm can cut costs by more than expected, it can earn additional profits

**price ceiling**: when government sets a price above which more cannot be charged

**price floor**: when government sets a price below which less cannot be charged

**price index**: a way of showing how the overall price level changes over time, which involves setting the price level in a base year equal to 100, then calculating all other years respective to the base year

**progressive tax**: a tax requiring the rich to pay a higher share of income than the poor; opposite of **regressive tax**

**protectionism**: laws or rule that reduce or shut out imports

**public goods**: goods that are nonexcludable and nonrivalrous, so that a seller cannot exclude people from using the good, and the good itself is not diminished as people use it

**public utility**: a firm that is privately owned but regulated by the government and that provides a commodity used by almost every home, such as water, electricity, or communication

**purchasing power parity**: the exchange rate that equalizes the prices of internationally traded goods across countries

**quantity demanded**: the actual amount demanded at a specific price

**quantity supplied**: the actual amount supplied at a specific price

**random walk**: the mathematical name for a pattern in which the direction of the previous movement doesn't tell you anything about the direction of the next movement

**real**: adjusted for inflation

**real gross domestic product**: gross domestic product adjusted for inflation

**real interest rate**: the nominal interest minus the rate of inflation

**recession**: a significant and lasting downturn in GDP

**regressive tax**: a tax requiring the poor to pay a higher share of income than the rich; opposite of **progressive tax**

**reserve requirement**: a percentage of its deposits that a bank is not allowed to lend out

**Ricardian equivalence**: the theory that a rise (or fall) in government borrowing will cause an offsetting rise (or fall) in private saving

**risk**: the probability and extent by which the actual result may differ from the expected result

**stock**: part ownership of a firm; also called *equity*

**store of value**: the property of money that it retains most or all of its value over a period of time

**structural unemployment**: unemployment caused by the taxes and regulations in the economy that discourage working and/or hiring

**supply**: the relationship between market price and the quantity supplied; it is a line, not a single quantity

**tariff**: another word for tax, commonly applied to a tax on imported goods

**trade balance**: a measure comparing total imports and exports; see also **merchandise trade balance** and **current account balance**

**trade deficit**: when imports exceed exports

**trade secret**: a formula, process, device, or item of information that gives a business an advantage over competitors, that is not generally known or easily discovered, and that the business makes reasonable efforts to keep secret

**trade surplus**: when exports exceed imports

**trademark**: a word, name, symbol, or device that indicates the source of the goods

**unemployment**: when people who are willing to work at the prevailing wage level can't find jobs

**unit of account**: the property of money that is used as a yardstick for measuring all economic values across the economy

**unitary elasticity**: elasticity (in absolute value) equal to 1

**voluntary export restraints (VERs)**: when a nation agrees, usually under diplomatic pressure, to reduce its exports to another nation

## Bibliography

**Essential Reading:**

"American Productivity: The New 'New Economy.'" *The Economist*, September 11, 2003. This article discusses whether the U.S. gains in productivity in the early 2000s are likely to be sustained and argues that ultimately, the information technology revolution may have as big an impact on productivity as did electricity—a previous mega-innovation.

Asch, Peter, and Gigliotti, Gary A. "The Free Rider Paradox—Theory, Evidence, and Teaching." *Journal of Economic Education*, 22:1, Winter 1991. An interesting article that points out that people don't free ride in many situations, at least not completely.

"Asset Management: Other People's Money." *The Economist*, July 3, 2003. *The Economist* regularly runs excellent surveys. This one focuses on the evolution of the industry of managing other people's money.

Bastiat, Frederic. *Economic Sophisms*. Arthur Goddard, trans. and ed. Irvington-on-Hudson, NY: The Foundation for Economic Education, 1996 (1845). Available at www.econlib.org/library/Bastiat/basSoph.html. Bastiat was a talented polemicist, with a gift for showing the absurdity in certain points of view. This book is a series of short essays, good for dipping in and out. For example, I recommend Bastiat's essay on the "negative railway."

Bebchuk, Lucien, and Jesse Fried. "Pay Without Performance: The Unfulfilled Promise of Executive Compensation." *Milken Institute Review*, 2nd quarter 2005. The authors lay out the difficulties that shareholders face in monitoring corporate executives and suggest that something along the lines of a revolution in shareholder power is needed. Available at www.milkeninstitute.org. Click on "Publications" and follow the links.

Bhagwati, Jagdish. "Protectionism." *The Concise Encyclopedia of Economics*. Library of Economics and Liberty. Available at www.econlib.org/library/Enc/ Protectionism.html. Bhagwati is one of the most fierce and able defenders of free trade. This short essay will give you a taste of his arguments and style.

Cohen, Linda, and Roger Noll. "Privatizing Public Research: The New Competitiveness Strategy." In *The Mosaic of Economic Growth*. Ralph Landau, Timothy Taylor, and Gavin Wright, eds. Stanford, CA: Stanford University Press, 1996. More and more, politicians of both parties are attempting to push R&D into the private sector. The results may be good for certain companies that receive government support for their research, but this "privatized" research is not widely available, making it hard for it to have an impact throughout the economy.

Congressional Budget Office. *Baby Boomers' Retirement Prospects: An Overview*. November 2003. Available at www.cbo.gov. The nonpartisan research agency for Congress examines how well prepared the baby-boom generation is for retirement. Most will live far better than their parents did in retirement—but perhaps not as well as they are currently expecting.

———. *The Economic Costs of Fuel Economy Standards versus a Gasoline Tax*. December 2003. Available at www.cbo.gov. The nonpartisan research agency of Congress evaluates the choice between tougher fuel economy standards and a tax on gasoline as ways of reducing gasoline consumption.

———. "The Effect of Price Changes on Gasoline Consumption." In *Reducing Gasoline Consumption—Three Policy Options*. November 2002. Available at www.cbo.gov. This report discusses how to reduce gasoline consumption—with some discussion of elasticities along the way.

———. *The Budget and Economic Outlook: Fiscal Years 2006 to 2015*. January 2005. The nonpartisan research arm of Congress publishes this report each year, along with updates at several points through the year. These CBO projections assume that all current laws remain in force, and they provide a baseline for the policy-makers' discussion of fiscal policy. Available at www.cbo.gov.

———. *The Long-Term Budget Outlook*. December 2003. Available at www.cbo.gov. The nonpartisan research arm of Congress offers a number of budget scenarios out to 2050, with a particular emphasis on Social Security, health-care costs, and revenue options.

Council of Economic Advisers. *Economic Report of the President.* Each year (usually in February), the Council of Economic Advisers, an agency of academic economists appointed by the president, publishes this report. It typically includes a couple of chapters that offer an overview of macroeconomic developments in the last year or two, then has a set of chapters on specific topics in economic policy. In the back are 120 pages or so of convenient tables with different breakdowns of GDP, employment, inflation, international trade, government taxes and spending, financial

markets, and more—usually going back to about 1960. The most recent year and the past few years are available at www.gpoaccess.gov/eop.

———. "Chapter 3: Policies for Dynamic Labor Markets." In *Economic Report of the President*. February 2003. Available at www.gpoaccess.gov/eop. Discussions of movement in and out of the labor force, skill development, and other issues.

———. "Chapter 1: Lessons from the Recent Business Cycle." In *Economic Report of the President*. February 2004. This chapter draws out five lessons of the recession of 2001 and its aftermath, including lessons about why recessions happen and about countercyclical macroeconomic policy. Available at www.gpoaccess.gov/eop.

———. "Chapter 8: Regulating Energy Markets." In *Economic Report of the President*. February 2004. Available at www.gpoaccess.gov/eop. An accessible discussion of some of the ways flexible prices and markets work well in encouraging sensible consumption and production decisions and how a combination of market forces and misguided regulation can sometimes go very wrong, as in the market for electricity.

———. "Chapter 9: Protecting the Environment." In *Economic Report of the President*. February 2004. This chapter offers an introduction to market-oriented perspectives on protecting the environment, along with some discussion of current environmental issues.

———. "Chapter 14: The Link Between Trade and Capital Flows." In *Economic Report of the President*. February 2004. Available at www.gpoaccess.gov/eop. This chapter offers some basic background and trends on the trade deficit, along with a nice explanation couched in terms of the national savings and investment identity.

———. "Chapter 1: The Year in Review and the Years Ahead." In *Economic Report of the President*. February 2005. A chapter similar to this one appears at the start of the ERP each year. It runs through each of the main categories of aggregate demand—C, I, G, X, and M—and explores how they have behaved in the past few years. Available at www.gpoaccess.gov/eop.

———. "Chapter 2: Expansions Past and Present." In *Economic Report of the President*. February 2005. This chapter discusses patterns of economic expansions over the last few decades and points out what is different in the expansion that started in late 2001. The end of the chapter focuses on countercyclical fiscal policy. Available at www.gpoaccess.gov/eop.

———. "Chapter 6: Innovation and the Information Economy." In *Economic Report of the President*. February 2005. Available at www.gpoaccess.gov/eop. This chapter discusses the revolution in telecommunications and information technology, with some focus on the issues of natural monopoly, appropriate regulation, and how to achieve universal access to broadband Internet service.

———. "Chapter 8: Modern International Trade." In *Economic Report of the President*. February 2005. Available at www.gpoaccess.gov/eop. This chapter discusses various current issues in international trade, including trade in services, the growth of global supply chains, and trade negotiations with China.

"Cracking Down on the Cartels." *The Economist*, April 3, 2003. This three-page survey discusses how many oligopolistic cartels have been investigated and brought down in recent years.

Cross, Sam Y. *All About…The Foreign Exchange Market in the United States.* Federal Reserve Bank of New York, 1998. Available at www.ny.frb.org/ education/addpub/usfxm. The author offers a clear and lucid description of how the foreign exchange market works behind the scenes—that is, through a network of dealers and brokers, together with their customers and the occasional participation of central banks.

Danziger, Sheldon, and Rucker C. Johnson. "Trends: Welfare Reform Update." *Milken Institute Review*, 1st quarter 2005. This even-handed review shows how the welfare reform act of 1996 succeeded in reducing the number of welfare recipients and encouraging work effort among single mothers. It also discusses how issues of health insurance for low-income mothers and their children, along with a growing number of mothers who lack welfare and work, pose ongoing problems. Available at www.milkeninstitute.org. Click on "Publications" and follow the links.

"The Diamond Cartel: The Cartel Isn't Forever." *The Economist*, July 15, 2004. De Beers has long been a dominant force in the market for diamonds, but under competitive pressure from other producers, its position is weakening.

"The Economics of Saving: The Shift away from Thrift." *The Economist*, April 7, 2005. This three-page survey discusses the trends in national and personal saving, the potential explanations behind them, and how much to worry about them.

Federal Reserve System. *Purposes and Functions*. 1994. A public information booklet that describes the structure of the Fed and the goals and implementation of monetary policy and has some discussion of other functions, such as bank oversight and consumer protection. Available at www.federalreserve.gov/ pf/pf.htm.

———. *Monetary Policymaking: Federal Open Market Committee*. This Web site gives a quick overview of open market operations as a tool of monetary policy. But perhaps more interesting, it offers links to the announcements of the Federal Open Market Committee and to minutes from its meetings. Available at www.federalreserve.gov/FOMC/default.htm.

Federal Reserve Bank of Chicago. *Modern Money Mechanics*. 1994. This useful booklet walks through the steps of how banks work and how banks create money. It's apparently not in print from the Chicago Fed any more, but typing the title and Federal Reserve Bank of Chicago into an Internet search engine will result in a number of hits on the Web. For example, at the time of this writing, it is at www.worldnewsstand.net/money/mmm2.html.

Federal Reserve Bank of New York. *The Basics of Foreign Trade and Exchange*. Available at www.ny.frb.org/education/fx/index.html. The early chapters of this useful report review the reasons why international trade provides economic benefits and the arguments against protectionism. Then, there is a step-by-step discussion of how the foreign exchange market works and the arguments over fixed and floating interest rates.

Federal Trade Commission. *Promoting Competition, Protecting Consumers: A Plain English Guide to Antitrust Laws*. Undated. Available at ftc.gov/bc/ compguide/index.htm. A nice introduction to public policy with regard to antitrust, monopoly, mergers, and competition.

Friedman, Benjamin M. "Why the Federal Reserve Should Not Adopt Inflation Targeting." *International Finance*, 7:1, 2004. This article can be read in tandem with the article by Frederick Mishkin in the same issue.

Friedman, Milton, and Rose Friedman. "Chapter 1: The Power of the Market." In *Free to Choose*. New York: Harcourt Brace Jovanovich, 1980. Milton Friedman is one of the great economists of the 20th century. In this book aimed at a generalist readership, he describes and defends how market forces work.

Friedman, Milton, and George J. Stigler. "Roofs or Ceilings? The Current Housing Problem." Originally published in *Popular Essays on Current Problems*, 1:2. New York: The Foundation for Economic Education, 1946. Reprinted with revisions, along with many other articles on rent control, in *Rent Control: A Popular Paradox*. Vancouver: The Fraser Institute, 1975.

"The Global Environment: The Great Race." *The Economist*, July 4, 2002. This survey discusses the ongoing race between economic development and environmental dangers and how market-oriented environmental tools can help to ease the tension between the two.

Gruben, William C. *Yesterday's Crisis Countries: Where Are They Now?* Federal Reserve Bank of Dallas, January 2001. Available at www.dallasfed.org/ research/indepth/2001/id0101.pdf. The author discusses the international financial crashes in Mexico, Thailand, Indonesia, Korea, Russia, and Brazil, looking for points of similarity and difference and considering possible policy options.

Hardin, Russell. "The Free Rider Problem." *The Stanford Encyclopedia of Philosophy*, Summer 2003. Edward N. Zalta, ed. Available at plato.stanford.edu/ archives/sum2003/entries/free-rider. This useful entry walks through the topics of public goods, free-riding, collective action, and the role of democracy.

"Health-Care Finance: The Health of Nations." *The Economist*, July 15, 2004. A thoughtful survey that asks whether the health-care industry is providing value commensurate with the money spent. It offers a useful discussion of how health care is financed in countries around the world and the consequences of these different choices.

International Monetary Fund. *World Economic Outlook.* The IMF publishes this volume twice a year. The first chapter goes through the regions of the world, discussing current economic issues facing them. Later chapters then examine particular issues. For example, the April 2005 issue has chapters on the world oil market and on the role of remittances from workers abroad in the economic development of low-income countries. Current and past issues of the journal are available on the IMF Web site at www.imf.org/external/pubs/ft/weo/ weorepts.htm.

Irwin, Douglas. *Free Trade under Fire*. 2nd ed. Princeton: Princeton University Press, 2005. Irwin walks carefully through the many arguments that have been made against free trade, using his skills both as an economist and a historian. He offers a fair-minded review of the strengths and weaknesses of these arguments—but is ultimately a strong supporter of free trade.

Kerr, Steven. “On the Folly of Rewarding A, While Hoping for B.” *Academy of Management Journal*, 18, 1975. This classic essay gives a series of examples and arguments concerning situations in which various organizations hoped for outcome B, rewarded outcome A—and then were surprised when they got outcome A. Incentives matter!

Krugman, Paul. “Technology’s Revenge.” *Wilson Quarterly*, Autumn 1994. An eminent economist argues that technology is the most likely cause of growing income inequality. He then offers a provocative historical twist: Even if technology is bringing greater inequality just now, technological waves of the past have sometimes brought greater equality, as when the assembly line helped millions of workers reach upper-middle-class status during their careers. He predicts that information technology will also, eventually, bring about a wave of greater equality.

“The Lender’s Long Lament.” *The Economist*, December 25, 1993. Those who charge interest have been unpopular for centuries. Yet as this article shows, the history of public attitudes toward moneylenders over the last few centuries has been filled with ambiguity. The reader might consider a person’s likely attitudes toward a bank when his or her loan for a home mortgage has been approved and the likely attitude if the bank foreclosed on the loan and sells off the property because the mortgage payments weren’t made.

Leonard, George. “Competition.” *Esquire*, May 1984. This little essay explores the adverse reaction that some people have to the concept of competition and some ways of thinking about competition that cast it in a more positive light.

“Low-Cost Airlines: Turbulent Skies.” *The Economist*, July 8, 2004. A discussion of how low-cost airlines are challenging the established firms in both the United States and Europe, thus creating both additional competition and occasional calls for re-regulation of the airline industry.

Mishkin, Frederick S. “Why the Federal Reserve Should Adopt Inflation Targeting.” *International Finance,* 2004, 7:1. This article can be read in tandem with the article by Benjamin Friedman in the same issue.

Office of Management and Budget. “Part III: The Long Run Budget Outlook.” In *Analytical Perspectives: Budget of the United States Government, Fiscal Year 2006*. February 2005. Available at www.gpoaccess.gov/usbudget. This discussion from the proposed 2006 budget shows long-term spending and tax trends and emphasizes how Social Security and Medicare are due to drive up government spending under current law.

“Oil in Troubled Waters: A Survey of Oil.” *The Economist*, April 30, 2005. Sharp increases in oil prices are often given as a reason for negative shocks to aggregate supply. However, sharp increases in oil prices in 2004 didn’t cause a recession that year. This survey explores why and discusses the future of the oil industry.

“Open Skies and Flights of Fancy.” *The Economist*, October 2, 2003. This article gives a nice overview of what could be the next big step in airline competition: that is, letting all airlines, whatever their country of origin, compete all around the world. Along the way, it discusses the history of airline regulation and deregulation around the world.

Ortiz, Guillermo. *Recent Emerging Market Crises: What Have We Learned?* Per Jacobsson Foundation, 2002. Available at www.perjacobsson.org/lectures/2002-ortiz.pdf. Ortiz was the head of the central bank of Mexico at the time of giving this lecture; thus, he had a front-row seat for many of the financial crises of the 1990s and early 2000s. This thoughtful overview proceeds step-by-step, looking for common elements of the crises and possible policy solutions.

“Paper Money: Crisp and Even.” *The Economist*, December 20, 2001. The single biggest introduction of a new currency in history occurred at the start of 2002, when most of the countries of the European Union agreed to give up their national currencies for the euro. This article discusses the practical difficulties of introducing the euro—along with some cautionary lessons from history about failed currencies of the past.

Penner, Rudolph G., Isabel V. Sawhill, and Timothy Taylor. “Chapter 3: Inequality and Opportunity: Winners and Losers in the New Economy.” In *Updating America’s Social Contract: Economic Growth and Opportunity in the New Century*. New York: W. W. Norton, 2000. We discuss the trends in inequality, the possible explanations behind the trends, and the range of policy options for addressing them.

Read, Leonard E. “I, Pencil.” *The Freeman*, December 1958. Available at www.econlib.org/library/Essays/rdPncl1.html. The essay that describes how the components of a pencil are made, with far-reaching economic connections all around the world.

Ritter, Joseph A. “Feeding the National Accounts.” In *Review: Federal Reserve Bank of St. Louis*. 2000. Ritter offers a step-by-step and survey-by-survey account of the sources for the data behind the GDP estimates.

Robbins, Lionel. *An Essay on the Nature and Significance of Economic Science.* London: Macmillan, 1935. The short, classic philosophical essay that, especially in its opening chapters, defines how many economists see their field as the study of choices in a world of scarcity.

Rockoff, Hugh. "Price Controls." *The Concise Encyclopedia of Economics*. Library of Economics and Liberty. Available at www.econlib.org/library/ Enc/PriceControls.html. Rockoff uses a variety of historical examples to point out how government attempts to prevent prices from adjusting to their equilibrium level, through either price floors or price ceilings, run into a predictable set of unintended consequences.

Rowen, Harry. "World Wealth Expanding: Why a Rich, Democratic, and (Perhaps) Peaceful Era Is Ahead." In *The Mosaic of Economic Growth*. Ralph Landau, Timothy Taylor, and Gavin Wright, eds. Stanford, CA: Stanford University Press, 1996. In this thoughtful article, Rowen reviews the economic and political prospects of the largest developing countries around the world and explains why economic prospects for the next couple of decades are reasonably rosy. In reading, you might pay special attention to the factors that could derail this rosy scenario. Do you find yourself in agreement with Rowen that these aren't especially likely to happen?

Shaw, Jane W. "Public Choice Theory." *The Concise Encyclopedia of Economics*. Library of Economics and Liberty. Available at www.econlib.org/ library/Enc/PublicChoiceTheory.html. The public choice field of economics applies the idea that people act in their own self-interest to the actions of voters, lobbyists, and politicians and points out conditions under which governments can fail to act in the broader public interest.

Smith, Adam. *An Inquiry into the Nature and Causes of the Wealth of Nations*. 5th ed. Edwin Cannan, ed. London: Methuen and Co., 1904 (1776). Available at www.econlib.org/library/Smith/smWN.html. This book is usually credited as the first systematic work of economic analysis, and Adam Smith is usually named as the founder of the systematic study of economics. The book is generally very lucid and readable, and the table of contents is quite helpful in locating topics.

Spence, A. Michael. "Science and Technology Investment and Policy in the Global Economy." In *The Mosaic of Economic Growth*. Ralph Landau, Timothy Taylor, and Gavin Wright, eds. Stanford, CA: Stanford University Press, 1996. Spence offers one possible solution to increase R&D funding that is sure to be controversial: international arrangements for sharing the funding of science and technology.

Statistical Abstract of the United States. Annual. This desk reference pulls together government statistics, economic and otherwise, from a wide range of sources. It's the first place to look for information; if you want more detail, follow the footnotes.

Stone, Deborah A. "Making the Poor Count." *The American Prospect*, Spring 1994. This is the story of Mollie Orshansky, the woman who designed the official poverty line. The author talked with Orshansky and offers an interesting view of what Orshansky was thinking about when she designed the poverty line.

Taylor, Timothy. "Department of Misunderstandings." *Milken Institute Review*, 3rd quarter 2004. This article discusses the history of the "lump-of-labor" fallacy that the economy has a fixed number of jobs that need to be protected from women, immigrants, new technology, and long working hours. In the early 2000s, the fallacy manifested itself as the claim that high productivity was reducing the number of jobs.

———. "The Economy in Perspective." *The Public Interest*, Fall 2004. I review the macroeconomic performance of the U.S. economy from 2001 to 2004, along with how the spending and tax policies of the first George W. Bush administration affected the economy and were affected by the economy.

———. "Thinking about a New Economy." *The Public Interest*, Spring 2001. I put the current surge in productivity in some historical context and discuss what makes it different and likely to continue.

———. "The Truth about Globalization." *The Public Interest*, Spring 2002. I discuss how to measure globalization and how far globalization has proceeded, along with evaluating the arguments on how globalization brings economic gains.

———. "Untangling the Trade Deficit." *The Public Interest*, Winter 1999. I explain why a trade deficit has macroeconomic underpinnings and is not related to unfair trade barriers.

U.S. Census Bureau. "Poverty." Available at www.census.gov/hhes/ www/poverty.html. This Web site covers such issues as the definition of poverty and how it has changed over time. It also provides an annual report on the poverty rate among different groups, as well as historical data.

U.S. Department of Commerce, Bureau of Economic Analysis. *International Economic Accounts: Balance of Payments*. This Web site is the official starting point for data on the current account balance and its components. Check the most recent news release and look at some historical data. Available at bea.gov/bea/di/home/bop.htm.

———. *National Economic Accounts: Gross Domestic Product*. Available at bea.gov/bea/dn/home/gdp.htm. This Web site lists the most recent news announcements about GDP, as well as providing historical data.

U.S. Department of Justice. *Antitrust Enforcement and the Consumer*. Available at www.usdoj.gov/atr/overview.html. The DOJ, along with the FTC, is responsible for enforcing antitrust laws. Here is a brief, accessible explanation of what laws the DOJ enforces and how such enforcement benefits the consumer.

———. *Timeline of Antitrust Enforcement Highlights at the U.S. Department of Justice*. Available at www.usdoj.gov/atr/timeline.pdf. This timeline, best viewed on the Web, is a compact three-page summary of major antitrust actions going back through the 20th century.

U.S. Department of Labor, Bureau of Labor Statistics. *Consumer Price Indexes*. Available at bls.gov/cpi/home.htm. This is the official Web site for the Consumer Price Index, with current data, historical data, answers to frequently asked questions, and a wealth of background material.

———. *Labor Force Statistics from the Current Population Survey*. Available at bls.gov/cps/home.htm. This Web site is the official starting point for unemployment rates, current or historical, broken down in many different ways.

———. *Working in the 21st Century*. Available at bls.gov/opub/working/ home.htm. This Web-based presentation is a series of charts and discussion about the evolution of the U.S. labor force, covering issues from education to retirement, often with information from 1950 and projections several decades into the future.

Wirtz, Ronald A. "Will That Be Cash, Check or Debtor's Hell?" "Buyer Beware." "A Helping Hand, or New Age Loan Sharking?" *FedGazette: Federal Reserve Bank of Minneapolis*, October 2000. Available at minneapolisfed.org/ pubs/fedgaz/ffeature.cfm. These three articles explore how borrowers, especially low-income borrowers, can become trapped in a world of high-interest credit-card overruns and payday loans.

World Bank. *Global Economic Prospects.* The World Bank publishes this volume annually. Each year, it begins with a global outlook focused on the developing countries of the world, then turns to a particular theme. For example, the 2005 report focuses on how regional efforts at developing trade and markets can affect economic development. An appendix at the back of the volume goes through the regions of the world one at a time. The report is available free at the World Bank Web site, www.worldbank.org, although you will need to look in the "Publications" area or type the title into the "search" command to find it.

World Bank. World Development Indicators. Annual. This book is the place to look for tables of economic statistics that compare all countries and regions of the world.

"The World Economy: A New Economy for the New World?" *The Economist*, September 23, 1999. In the late 1990s, with the U.S. economy booming and no inflation in sight, some economists wondered if the Phillips curve tradeoff between inflation and unemployment was truly dead. This article reviews the evidence and arguments on the tradeoff and concludes that inflation is not nearly dead.

Zeckhauser, Richard. "Insurance." *The Concise Encyclopedia of Economics*. Library of Economics and Liberty. Available at: www.econlib.org/library/Enc/ Insurance.html. A solid basic explanation of insurance markets, moral hazards, and adverse selection.

**Supplementary Reading:**

Abraham, Katharine, and Christopher Mackie, eds. *Beyond the Market: Designing Non-Market Accounts for the United States.* Washington, DC: National Research Council of the National Academies, National Academies Press, 2005. Available on the Web at www.nap.edu, although it's in a format that isn't easy to read. This report examines the possibilities for expanding the concept of GDP to include leisure, health, education, environmental concerns, and other values—to make it a more complete measure of society's output broadly understood.

Advisory Commission to Study the Consumer Price Index. *Toward a More Accurate Measure of the Cost of Living: Final Report to the Senate Finance Committee*. December 4, 1996. Available at www.ssa.gov/history/ reports/boskinrpt.html. In this report, done for the Senate Finance Committee, five economists evaluate potential biases in the Consumer Price Index. Although these biases have been partially addressed over time, the background and conceptual discussion remain relevant.

Bastiat, Frederic. "Reciprocity" and "A Petition." In *Economic Sophisms*. Arthur Goddard, trans. and ed. Irvington-on-Hudson, NY: Foundation for Economic Education, 1996 (1845). Bastiat was a formidable polemicist, and these

are two of his most famous satirical essays against protectionism. In "Reciprocity" (First Series, chapter 10), two countries compete to make it harder and harder to trade with each other—because they both believe that fewer imports will make them wealthier. "A Petition" (First Series, chapter 7) is an impassioned argument from the candlestick makers for government protection from the unfair and job-killing competition posed by sunlight. Available at www.econlib.org/library/ Bastiat/basSoph.html.

Bordo, Michael D., and David C. Wheelock. "Monetary Policy and Asset Prices: A Look Back at Past U.S. Stock Market Booms." In *Review: Federal Reserve Bank of Saint Louis*. November/December 2004. The authors present an in-depth historical overview of the connections between monetary policy and asset booms. They find little evidence that monetary policy has played a major role in causing asset booms and caution hesitancy before using monetary policy to deflate an asset boom.

Bridges, William. "The End of the Job." *Fortune*, September 19, 1994. Back in the 19th century, when the bulk of the population worked on farms, the idea of a "job," in which you worked a fixed number of hours in a factory owned by someone else, was viewed with grave discontent. Today, as more and more people become independent contractors, providing services by telecommuting from a distance, the notion of a "job" is changing dramatically again. The author makes a provocative argument that the "job" as we have known it this last century "is vanishing like a species that has outlived its evolutionary time."

Buchanan, James, and Herbert Stein. "Should the Senate Pass a Balanced Budget Constitutional Amendment?" *Congressional Digest*, February 1995. See the "pro" article from James Buchanan on p. 50 and the "con" article from Herbert Stein on p. 53. Early in 1995, the U.S. Congress debated a plan for a constitutional amendment to require balancing the budget. The plan passed the House of Representatives but did not receive the two-thirds vote required in the Senate. This magazine contains a number of pro-and-con arguments. The two recommended here are from prominent economists: Buchanan is a Nobel laureate; Stein was a policy economist in Washington for decades.

Centers for Medicare and Medicaid Services. *2005 Annual Report of the Boards of Trustees of the Hospital Insurance and Supplementary Medical Insurance Trust Funds*. March 23, 2005. Each year around the end of March, the trustees of Medicare publish this readable report. The facts and analysis in this report provide the baseline for policymakers' discussion of Medicare. The current report and reports for the last few years are available at www.cms.hhs.gov/ publications/trusteesreport.

Citro, Constance F., and Robert T. Michael. *Measuring Poverty: A New Approach*. Washington, DC: National Academy Press, 1995. This report, from a group of social scientists, offers a new definition of the poverty line. This involves both a comprehensive critique of the current definition of poverty, how it might be redefined, how the new definition would change the poverty rate, and who is below the poverty line.

Clement, Douglas. "Inflation and the Phillips Curve: The Magic Is Gone." In *The Region: Federal Reserve Bank of Minneapolis*. September 2001. This article reviews several decades of evidence and argues that the short-run Phillips curve tradeoff was never as reliable as it looked and is now unsupported by evidence. The argument is the case that the economy has a fixed natural rate of unemployment, not an unemployment-inflation tradeoff. Thus, it takes the other intellectual side from the article by Jeffrey Fuhrer.

Coase, R. H. "The Lighthouse of Economics." *Journal of Law and Economics*, 17:2, October 1974. Lighthouses have often been used by economists as an example of a public good. In this classic article, Nobel laureate Coase presented evidence that many lighthouses were privately built—and that apparently the free-rider problem wasn't as severe as many economists have assumed.

Congressional Budget Office. *Budget Options*. February 2005. This report is produced annually by the CBO, the nonpartisan research arm of the Congress. It lists literally hundreds of possible spending cuts and tax increases, with projections for how they would affect the deficit over the next few years. It also offers a few paragraphs of explanation about each one. Many teachers of economics use this book as a framework for letting students design their own plan for reducing the budget deficit. Available at www.cbo.gov.

———. *Historical Effective Federal Tax Rates: 1979 to 2002*. March 2005. The nonpartisan research agency for Congress regularly publishes different breakdowns of the tax rates paid by different income groups over time. Other CBO publications also include forecasts of the rates by income group over the next decade or so. These reports are available at www.cbo.gov. Click on "Publications" and follow the links.

———. *Federal Terrorism Reinsurance: An Update*. January 2005. Can private insurance markets provide insurance against terrorism? What are the moral hazards and adverse selection problems likely to arise? In fact,

most governments around the world help to provide terrorism insurance. This report summarizes the situation in the United States. Available at www.cbo.gov.

Council of Economic Advisers. "Chapter 6: A Pro-Growth Agenda for the Global Economy." In *Economic Report of the President*. February 2003. This chapter offers some discussion of growth patterns in the world economy and emphasizes the importance of investment in people and a rule of law to economic development. Available at www.gpoaccess.gov/eop.

"Counting the Jobless." *The Economist*, July 22, 1995. Unemployment rates can be adjusted to include "discouraged" workers or "underemployed" workers. This one-page article describes a recent report that carries out such a calculation for the industrialized nations of the world. In the end, the conclusion is that the old-fashioned unemployment rate may remain the best single measure of pressure in the labor market.

"Debating the Minimum Wage." *The Economist*, February 1, 2001. This brief article sums up the state of the academic research about whether minimum wages cause job loss.

Environmental Protection Agency. *Draft Report on the Environment*. 2003. Available at www.epa.gov/indicators/roe/index.htm. This report provides a useful summary of environmental conditions and trends affecting air, water, land, pollutants, and ecology. As with many government reports, it's better at summarizing facts than at offering solutions.

Farrell, Paul B. *The Lazy Person's Guide to Investing: A Book for Procrastinators, the Financially Challenged, and Everyone Who Worries About Dealing with Their Money.* New York: Warner Business Books, 2004. A well-known columnist for CBS *MarketWatch*, Farrell does a nice job of describing for a popular readership how saving in a well-diversified portfolio with long-term horizons lets the power of compound interest increase your wealth.

Federal Reserve. "Chapter 4: The Federal Reserve in the International Sphere." In *Purposes and Functions*. 1994. Available at www.federalreserve.gov/pf/ pdf/frspf4.pdf. This chapter focuses in particular on the role of the Federal Reserve in foreign exchange markets.

Federal Reserve Bank of Atlanta. *The Story of Money*. A Web exhibit devoted to the history of money, with a number of examples. Available at www.frbatlanta.org/atlantafed/visitors_center/tour/story.cfm.

Federal Reserve Bank of New York. *The Foreign Exchange and Interest Rate Derivatives Markets: Turnover in the United States*. April 2004. Available at www.ny.frb.org/markets/triennial/fx_survey.pdf. Once every three years, the New York Fed and 51 other central banks around the world do a survey of the large participants in foreign exchange markets. The survey results are a little dry, but if you want to get a real image of how foreign exchange markets work, the triennial survey is the place to start.

Fieleke, Norman S. "International Capital Transactions: Should They Be Restricted?" *New England Economic Review*, March/April 1994. One common suggestion for addressing international financial crises is to slow down the flow of international finance through some sort of tax or other restrictions. The author evaluates these proposals and finds that they are in some ways appealing but ultimately unpersuasive.

Flamme, Karen. "A Brief History of Our Nation's Paper Money." *Annual Report: Federal Reserve Bank of San Francisco*. 1995. Available at www.frbsf.org/publications/federalreserve/annual/1995/history.html. A description of the evolution of U.S. currency from the American Revolution to the present.

Fuhrer, Jeffrey C. "The Phillips Curve Is Alive and Well." *New England Economic Review of the Federal Reserve Bank of Boston*, March/April 1995. This article reviews several decades of evidence. It argues that even after the macroeconomic experiences of the 1970s, 1980s, and early 1990s, the short-run Phillips curve properly understood is a strong empirical relationship. Thus, it takes the other intellectual side from the article by Douglas Clement.

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Gottlieb, Bruce. "How Much Is That Kidney in the Window?" *New Republic*, May 22, 2000. This article offers a nice summary of the arguments for and against allowing the sale of kidneys.

International Financial Institutions Advisory Commission. *International Financial Institutions Reform*. May 2000. Available at. www.house.gov/jec/ imf/meltzer.pdf. In 1998, Congress appointed a commission headed by an economist named Allan Meltzer to consider the appropriate role of international financial institutions, such as the

 

International Monetary Fund and the World Bank. Meltzer is a well-known skeptic about such institutions; thus, this report suggests various ways that the role of international institutions could be more tightly defined.

International Monetary Fund. *Finance and Development*. This journal offers an authoritative and honest description of many issues in the global economy based on current economic research. The journal is not always the liveliest reading one could find, but it is intended for the general-interest reader, and the articles are typically quite accessible. Subscriptions are free, and current and past issues are available at www.imf.org/external/pubs/ft/fandd/fda.htm.

Krugman, Paul. *Peddling Prosperity*. New York: W. W. Norton & Company, 1994. For our purposes, the relevant chapters are 9 and 10 and the appendix to 10, in which Krugman offers a splendid explanation of why the argument for a "strategic" trade policy, which would favor certain key industries, is so misguided. More broadly, Krugman suggests that the rhetoric of "competitiveness" (like the rhetoric of "fair trade") will often lead to misguided economic policy.

Kuran, Timur. "Islam and Mammon." *Milken Institute Review*, 3rd quarter 2004. An expert on Islamic economics considers the potential conflict between Islamic prohibitions on the payment of interest and a modern financial sector. Available at www.milkeninstitute.org; click on "Publications" and follow the links to the MIR.

Malkiel, Burton. *A Random Walk Down Wall Street*. Updated and revised 8th ed. New York: Norton, 2004 (1973). Malkiel is a high-powered academic who offers an accessible popular treatment of the economic logic and academic work behind the random walk theory of financial markets. If you want a thorough understanding of the random walk theory, the evidence behind it, and what it implies for personal investing, this classic book is the place to get it.

Mankiw, Gregory N. *Principles of Economics*. 3rd ed. Forth Worth, TX: Thomson South-Western, 2004. Some listeners may want to supplement these lectures with an introductory economics textbook. This book, written by a top Harvard economist who also served a stint as an economic adviser for George W. Bush, is a fairly recent, highly readable, and very popular textbook.

Mann, Catherine L. *Is the U.S. Trade Deficit Sustainable?* Washington, DC: Institute for International Economics, September 1999. Available at the IIE Web site: bookstore.iie.com/merchant.mvc?Screen=PROD&Product_Code=47. As trade deficits have gotten larger in the 2000s, the question posed in the title of Mann's 1999 book has only seemed more relevant. You can also look under her name at the IIE Web site and usually find some of her more recent analyses on this subject.

McConnell, Campbell R., and Stanley L. Brue. *Economics: Principles, Problems, and Policies*. 16th ed. New York: McGraw-Hill, 2004. Some listeners may want to supplement these lectures with an introductory economics textbook. This book has been the bestseller for several decades.

"Men and Machines: Technology and Economics Have Already Revolutionized Manufacturing. White-Collar Work Will Be Next." *The Economist*, November 11, 2004. This article discusses how technology is causing the division of labor to shift, first in manufacturing and now in service industries.

Moffatt, Mike. "A Beginner's Guide to Elasticity." Available at economics.about.com/cs/micfrohelp/a/elasticity.htm. This Web site contains articles on a wide range of subjects.

Naipaul, V. S. "The End of Peronism?" *New York Review of Books*, February 13, 1992. What is it like to live with hyperinflation? No one knows better than the people of Argentina, where inflation averaged more than 400% per year during most of the 1980s. In this article, the novelist and writer Naipaul travels to Argentina and discusses the shock of this experience with a number of people. This isn't exactly an article about economics, but it is a fascinating look into the human and economic impact of letting inflation roar out of control.

National Bureau of Economic Research. *Information on Recessions and Recoveries, the NBER Business Cycle Dating Committee, and Related Topics*. Available at nber.org/cycles/main.html. A panel of experts at the NBER determines the actual months when recessions start and end. This Web site offers dates of past business cycles, the memos the agency has released (on an irregular basis) about past business cycles, answers to frequently asked questions, and an opportunity to sign up to receive future memos.

National Science Foundation. *National Patterns of Research Development Resources: 2003*. Annual report, 2005. Available at www.nsf.gov/statistics/ nsf05308/pdfstart.htm. If you want to get down and dirty with the facts on U.S. R&D spending—trends over time, divided into categories, how funded, who carries it out—this annual report is the place to turn.

Office of Management and Budget. *Budget of the United States Government*. Available at www.gpoaccess.gov/usbudget/index.html. If you really want to develop a feel for the federal budget, you need to look at the budget itself. The presentation and format of the budget seems to be a little different every year, and most readers won't be deeply interested in the detailed budget, which is a *lot* of fine print. But I recommend browsing through the "Historical Tables" for the budget, which offer a breakdown of major categories of taxes and spending, expressed in many different ways, for the last few decades. I also recommend browsing through the "Analytical Perspectives" volume, which looks at the budget from a variety of different angles.

Oxfam International. *Food Aid or Hidden Dumping? Separating Wheat from Chaff*. Oxfam Briefing Paper 71, March 2005. Available at www.oxfam.org.uk/ what_we_do/issues/trade/bp71_foodaid.htm. Oxfam is an international aid organization that, in the last few years, has published a series of reports on how aid to farmers in high-income countries can injure farmers and living standards in low-income countries. This report points out the problems that arise when farm surpluses from high-income countries are donated or sold at low cost in low-income countries—thus making it difficult for farmers in those countries to earn a decent level of income.

Posner, Richard A. *Natural Monopoly and Its Regulation*. Washington, DC: Cato Institute, 1999. Posner is one of the gurus of the law-and-economics movement and a lovely, lucid writer. Back in 1969, he wrote a book questioning whether natural monopolies needed to be regulated by the government. In 1999, the book was reissued with new material on the lessons of regulation and deregulation over the intervening years.

President's Commission on the United States Postal Service. *Embracing the Future: Making the Tough Choices to Preserve Universal Mail Service*. 2003. Available at www.treas.gov/offices/domestic-finance/usps. This report offers a sound diagnosis of the financial problems facing the U.S. Postal Service in the Internet era and an overview of how other countries have deregulated their post offices. However, its ultimate recommendations are a little timid, as those of presidential commissions tend to be.

Radcliff-Richards, J., A. S. Daar, R. D. Guttmann, R. Hoffenberg, I. Kennedy, M. Lock, R. A.Sells, and N. Tilney. "The Case for Allowing Kidney Sales." *The Lancet*, June 27, 1998. A group of doctors and specialists in ethics make a case for why kidney sales should be allowed.

Radford, R. A. "The Economic Organization of a P.O.W. Camp." *Economica*. New Series, 12:48, November 1945. A classic article describing how markets worked in an unexpected place—in prisoner-of-war camps during World War II.

Resources for the Future. *Resources.* A Washington think-tank called Resources for the Future, which has often led the way in providing economic analyses of environmental problems, has a readable magazine called *Resources*. It's available on the Web at www.rff.org/rff/Publications/Resource_Articles.cfm. If you like it, you can also order a free subscription at the Web site.

Rosenberg, Nathan. "Uncertainty and Technological Change." In *The Mosaic of Economic Growth*. Ralph Landau, Timothy Taylor, and Gavin Wright, eds.. Stanford, CA: Stanford University Press, 1996. When Marconi invented the radio, he thought it would be used only for place-to-place "narrowcasting," not broadcasting to the public. When Bell's engineers invented the laser, they saw no point in seeking a patent for it, because lasers would never have anything to do with the telephone industry. In this delightful and provocative article, Rosenberg argues that examples like these are not the result of short-sightedness or stupidity, but simply occur because new technologies are extraordinarily unpredictable. As a result, he argues that government policy should steer away from trying to channel scientific effort in a way that attempts to predict the unpredictable and, instead, should focus on ensuring strength in a broad portfolio of technologies.

Ruby, Douglas A. *The Components of Aggregate Demand*. Revised January 15, 2003. www.digitaleconomist.com/ad_4020.html. This Web site offers a textbook-style explanation of aggregate demand and its components, together with some graphical analysis.

———. *Long Run Aggregate Supply and Price Level Determination*. Revised January 18, 2003. Available at www.digitaleconomist.com/as_4020.html. This Web site offers a textbook-style explanation of aggregate supply in the long run, together with some graphical analysis.

Scheller, Hanspeter K. *The European Central Bank—History, Role and Functions*. 2004. Available at www.ecb.int/pub/pdf/other/ ecbhistoryrolefunctions2004en.pdf. The European Central Bank and the euro are the greatest new experiments in money and central banking in at least the last few decades. This book offers a comprehensive overview of the ECB goals and operations.

 

Social Security Administration. *2005 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*. March 23, 2005. Each year around the end of March, the trustees of Social Security publish this report on the immediate, short-term, and long-term outlook for the system. The report is mostly quite readable, and the introductory chapter provides a nice overview. The most recent report and the past few reports are available at www.ssa.gov/OACT/TR.

Stewart, James B. "Whales and Sharks." *The New Yorker*, February 15, 1993. Two of the most famous antitrust cases in recent decades were the attempts by the government to break up IBM (a suit that was dropped) and to break up AT&T into separate local and long-distance companies (a suit that succeeded). Paradoxically, if IBM had allowed itself to be broken up, its various parts might be stronger competitors in the computer market today. After all, greater competition in telecommunications has invigorated that entire sector of the U.S. economy.

U.S. Census Bureau. *Historical Income Inequality Tables.* Available at www.census.gov/hhes/income/histinc/ineqtoc.html. For a variety of tables illustrating the extent of inequality and trends over time, check here.

U.S. Department of Labor, Bureau of Labor Statistics. *How the Government Measures Unemployment.* Available at www.bls.gov/cps/cps_htgm.htm. Last modified October 16, 2001. This 12-page report explains basic questions about how unemployment is measured. It is aimed at a general audience, but it includes a lot more detail than appeared in the lecture. This is a good starting point for those who want to know about "seasonally adjusted" unemployment, issues concerning the unemployment survey itself, and other topics.

U.S. House of Representatives, Ways and Means Committee. *2004 Green Book: Background Material and Data on the Programs within the Jurisdiction of the Committee on Ways And Means*. The *Green Book* is published every other year, and it offers an up-to-date if somewhat dry overview of many federal programs that affect the poor. For example, Temporary Assistance for Needy Families (TANF) is in Section 7, the Earned Income Tax Credit is in Section 13, and Food Stamps and Medicaid are in Section 15. Available at www.gpoaccess.gov/wmprints/green/2004.html.

Wikipedia: en.wikipedia.org/wiki/Main_Page. Wikipedia is an interesting venture, because the quality of the entries depends on who wants to work on them.

Wolf, Charles, Jr. "The New Mercantilism." *The Public Interest*, Summer 1994. *Mercantilism* is the name given to a view of trade that was prevalent several centuries ago, before the writings of Adam Smith. In a nutshell, the mercantilists believed that exporting was good for a country and importing was bad. Modern economists believe that both sides of trade are interrelated, that trade as a whole is beneficial. Wolf accuses some opinion leaders and policymakers of succumbing to the mercantilist view.

World Trade Organization. *Understanding the WTO*. 2003. A short book that gives background on what the WTO actually is and how it operates and addresses many of the issues that arise about the WTO. The WTO Web site has a fair number of accessible publications, from pamphlets to short books, that discuss trade issues. Available at www.wto.org/english/thewto_e/ hatis_e/tif_e/tif_e.htm.

# Economics
# 3rd Edition
## Part II
## Professor Timothy Taylor

THE TEACHING COMPANY ®

## Timothy Taylor

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Macalester College, St. Paul, Minnesota

Timothy Taylor is managing editor of the *Journal of Economic Perspectives*, an academic journal published quarterly by the American Economic Association. He was originally hired to help launch the journal in 1986, and it has since matured into the most widely distributed and widely read journal in academic economics. The purpose of the journal is to encourage communication and cross-fertilization across the many fields of economics.

He was born in Urbana, Illinois, and grew up in Bethlehem, Pennsylvania, and Saint Paul, Minnesota. He received his bachelor of arts degree from Haverford College in Pennsylvania in 1982 and a master's degree in economics from Stanford University in California in 1984. He then worked as an editorial writer for the *San Jose Mercury News* for two years, before taking the job of starting the *Journal of Economic Perspectives* in 1986.

He has taught economics in a number of contexts. In 1992, he was winner of the award for excellent teaching in a large class (more than 30 students) given by the Associated Students of Stanford University. At the University of Minnesota, he was named a Distinguished Lecturer by the Department of Economics in 1996 and voted Teacher of the Year by the master's degree students at the Hubert H. Humphrey Institute of Public Affairs in 1997. Professor Taylor has also been a guest speaker for groups of teachers of high school economics, visiting diplomats from Eastern Europe, radio talk shows, and community groups. The U.S. Department of State sent him to Japan in 1999 and to South Africa in 2003 to discuss trade and globalization issues with government and business leaders.

From 1989 to 1997, he wrote an economics opinion column for the *San Jose Mercury News*, and many of his columns were disseminated nationally over the Knight-Ridder-Tribune wire. In 2000, he co-authored *Updating America's Social Contract: Economic Growth and Opportunity in the New Century*, with Rudolph G. Penner and Isabel V. Sawhill. He has also written articles for *The Public Interest*, *Milken Institute Review*, and other publications. He has recorded several courses for The Teaching Company, including *Economics: An Introduction*, *Legacies of Great Economists*, *A History of the U.S. Economy in the 20th Century*, and *Contemporary Economic Issues*.

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# Economics, 3rd Edition

**Scope:**

The wisdom of economists is nearly proverbial, but in a negative sort of way, rather like the honesty of politicians, the verbal fluency of sports heroes, or the lips of chickens. Yet in the face of this prejudice, I maintain that economics does have useful lessons for understanding the world around us. My wife claims that I only hold to this belief because I am an evangelist, with economics as my religion. Perhaps so.

But I have also been asked many times, at conferences and cocktail parties, to recommend "just one book" that would explain economics. These requests often come from people who have just met me, but they have discovered that I edit an academic economics journal or that I teach economics classes. They aren't looking for a conservative lecture that defends the beauty of markets, nor for a liberal lecture about the need for government intervention in certain parts of the economy.

They are seeking a basic level of sophistication in economic matters. They have their own views on politics and policy, but they are self-aware enough to recognize that at least some of those views are built on a shaky or nonexistent understanding of economics. They want an overall view of what the U.S. economy looks like and how it is interconnected. They want to know how economists perceive the advantages of free markets and how economists reconcile a belief in markets with the problems of the world around them, such as poverty and pollution. They want to know why a budget deficit matters and what the Federal Reserve is and does. They want to know what economists think about international trade, how the exchange rate works, and what the "current account balance" actually is. They are skeptical about accepting all that economists have to say, as they would be skeptical about anyone who claims to have lots of answers. But they have not surrendered to cynicism; they are willing to accept that the study of economics does have some insights to offer.

The cynical view, I suppose, is that these people found themselves trapped at a dinner party with an economist (the horror! the horror!) and simply pretended an interest in the subject, hoping that I would go away. But I have an understandable preference for a more optimistic interpretation. These lectures are given in the firm belief that a body of concerned and interested citizens would like to know more about the subject of economics.

The conceptual pattern of this course follows the standard pattern of the introductory economics course offered at most colleges and universities. However, while the college course would present much of this material in a graphical and mathematical form, with an emphasis on solving the kinds of problems that will be on the exam, these lectures will focus instead on intuitive and verbal explanations of the underlying concepts.

The first 18 lectures of this course focus on *microeconomics*, which is the analysis of the economic behavior of individuals and firms. Thus, microeconomics encompasses how individuals and firms interact in markets for buying and selling goods, in markets for working and hiring labor, and in markets for saving and investing financial capital.

After Lecture One introduces the topic of economics, Lectures Two through Five discuss how the forces of supply and demand determine the prices charged and the quantities produced in markets for goods. Lecture Six applies this same structure of supply and demand to markets for labor, while Lectures Seven and Eight consider, first, the demand for financial capital by firms that want to make investments in new plant and equipment, followed by the supply of financial capital from households that are thinking about how to invest their savings.

The course then turns to a number of practical and policy issues that arise in microeconomics. Lectures Nine through Eleven discuss the competitive environment for firms, ranging from situations with many competitive firms to situations with a single monopoly producer. Government may have a role to play in encouraging competition or in regulating industries in which little competition exists.

Lectures Twelve through Fourteen turn to the policy problems that arise when a good or service is produced and sold—but the production of the good has effects on third parties who were not involved in the transaction. These external effects, or *externalities*, may be negative effects, such as pollution, or positive effects, such as the benefits of new technology or a better educated workforce.

Lectures Fifteen and Sixteen consider policy problems that arise in labor markets, including issues related to poverty and welfare reform, inequality of incomes, labor unions, and discrimination.

Lectures Seventeen and Eighteen consider issues that arise in financial capital markets, with a particular focus on the issue of who controls the decision-makers in large corporations and why markets for insurance—such as health or car insurance—often seem so costly and controversial.

In the second half of the course, starting with Lecture Nineteen, the focus shifts to *macroeconomics*. If microeconomics is the bottom-up view of the economy, looking at the actions of individuals and firms, then macroeconomics is the top-down view of the economy. Lectures Twenty through Twenty-Three introduce the most important patterns to describe an overall economy, which include gross domestic product (GDP), the rate of economic growth, periods of recession and economic upswing, unemployment, inflation, and the balance of trade.

Lectures Twenty-Four and Twenty-Five then introduce the aggregate demand and aggregate supply model of macroeconomics. Aggregate demand includes all demand in the economy for consumption, investment, government, and foreign trade. Aggregate supply focuses on total production of goods and services. The forces of aggregate demand and aggregate supply, and how they shift over time, will provide a framework for understanding the commonly observed macroeconomic patterns.

Lectures Twenty-Six through Twenty-Eight turn to government taxing and spending. These lectures describe the common patterns of taxes and spending, then discuss how government tax and spending policies will affect aggregate demand and aggregate supply and, thus, affect economic growth, unemployment, inflation, and the balance of trade.

Lectures Twenty-Nine through Thirty-One then turn to monetary policy, which in the U.S. economy, is conducted by the Federal Reserve. These lectures describe the economic role of money and the banking system, how the Fed controls the supply of money and credit in the economy, and how Fed policy affects the macroeconomy.

The course then closes with a set of lectures on international economics. Lectures Thirty-Two and Thirty-Three explain why most economists strongly believe that international trade offers benefits to all nations—but also review the arguments and counterarguments for limiting such trade. Lectures Thirty-Four and Thirty-Five discuss international financial movements, including issues that arise from exchange rates and even national financial crashes. Finally, Lecture Thirty-Six offers an overview of the global economy and where it is headed.

Skeptical listeners may wonder whether the economics in these lectures is slanted toward the policy conclusions of liberal Democrats or conservative Republicans. The answer is that professional economists of all political leanings use the tools and concepts taught in this course. The subject of economics is not a clear-cut set of answers but, rather, a structured framework for pursuing answers. Thus, although I hope the lectures will at some points challenge your own political beliefs, whatever they are, I also hope that the lectures will give you language and structure for articulating your own beliefs more clearly—and for becoming a more sophisticated participant in the economic disputes of our time.

## Lecture Thirteen

## Positive Externalities and Technology

**Scope:** The previous lecture focused on negative externalities, in which the market produces too much of a negative item, such as pollution. This lecture turns the tables and discusses positive externalities, in which the market produces too little of some good things, such as scientific research, innovation, and education. Patents and copyrights have been the traditional tools for encouraging innovation. However, other policy tools would include direct government support or tax credits to industry.

## Outline

**I.** Many people tend to identify free markets with innovation. But in a truly free market, it's possible that very little innovation would exist.

- **A.** Imagine a company that thinks about investing money in research and development.
  - **1.** If the project fails, then the company will have a lower rate of return than its competitors and may be driven out of business.
  - **2.** If the project succeeds, however, in a perfectly free market, the competitors will simply steal the idea.
  - **3.** The result is a heads-you-lose, tails-I-win scenario that will discourage innovation.
- **B.** *Appropriability* is the term that economists use to describe the ability of a producer to reap the benefits of an investment or an invention. For many famous inventions, from the cotton gin to the laser, appropriability has been low.
- **C.** In conceptual terms, technology is just the opposite of pollution.
  - **1.** In the case of pollution, those who are external to the transaction, not involved in buying or selling a good, suffer the costs of pollution.
  - **2.** In the case of technology, some of those who are external to the transaction between the firm that invented the product and the eventual consumer of the product benefit from the new technology that was created, but do not pay for those benefits.

**II.** Intellectual property rights are a mechanism for giving inventors an exclusive right to use their inventions, at least for a time, and thus, to earn higher-than-normal profits as a return on those inventions.

- **A.** A *patent* is an exclusive legal right granted by government to make, use, or sell an invention for a specific and limited time.
- **B.** *Copyright* is a form of legal protection against copying original works of authorship, including literary, musical, and other works.
- **C.** A *trademark* is a word, name, symbol, or device that indicates the source of a good and, thus, helps the seller establish a reputation.
- **D.** A *trade secret* is a formula, process, device, or item of information that gives a business an advantage over competitors, that is not generally known or easily discovered, and that the business makes reasonable efforts to keep secret.
- **E.** Even with patents and copyrights in place, it is commonly estimated that an innovating company manages to get only 30–40% of the new value of what it creates, while the rest is captured by other firms. Thus, the incentive to innovate is less than the social value of innovation.

**III.** Government has a range of policies available to subsidize innovation more directly.

- **A.** One alternative is direct government funding of research through universities, private research organizations, or firms.

**Research and Development in 2003**
(by source of funds)

| | *R&D spending* | *Percent of total* |
|---|---|---|
| Industry | $180 billion | 63% |
| Federal government | $ 85 billion | 30% |
| Universities and colleges | $ 11 billion | 4% |
| Other nonprofits | $ 8 billion | 3% |
| TOTAL | $284 billion | 100% |

Source: National Science Foundation

**B.** Another approach is to provide tax credits to business for research and development. This is a less centralized approach for the government than administering particular research grants.

**C.** Government can also provide support for research and development through subsidizing the spread of information across organizations, across the country through such methods as helping to build the Internet, and across international boundaries.

**IV.** There is controversy over whether some inventors may be receiving too much protection; after all, the ultimate goal of subsidizing innovation is to benefit consumers, not to make it easier for firms to earn long-term higher-than-normal profits.

**A.** The U.S. Patent Office grants about 200,000 patents a year, many of them after only a few days of consideration.

**B.** By their nature, patents block competition. But in some cases, they can become a large and nearly permanent block to other competitors and a potential hindrance to additional innovation.

**C.** Remember, the ultimate goal here isn't to be nice to innovators; it is to encourage a steady stream of innovations that can increase the standard of living of the U.S. economy.

**Essential Reading:**

Linda Cohen and Roger Noll, "Privatizing Public Research: The New Competitiveness Strategy," in *The Mosaic of Economic Growth*, pp. 305–333.

A. Michael Spence, "Science and Technology Investment and Policy in the Global Economy," in *The Mosaic of Economic Growth*, pp. 173–190.

**Supplementary Reading:**

National Science Foundation, *National Patterns of Research Development Resources: 2003*, www.nsf.gov/statistics/nsf05308/pdfstart.htm.

Nathan Rosenberg, "Uncertainty and Technological Change," in *The Mosaic of Economic Growth*.

**Questions to Consider:**

**1.** Make a list of policies that could stimulate research and development. Consider both policies that would encourage private-sector R&D and university and public R&D. Which of these policies has the highest public cost? Can you think of ways to focus any necessary public spending in a way that will get the most R&D bang for the buck?

**2.** Can you think of some other goods or services, besides technology, that may provide positive externalities? (If you're having trouble, some will be discussed in the next lecture!)

# Lecture Fourteen

# Public Goods

**Scope:** Public goods are *nonrivalous* and *nonexcludable*, which means that a potential seller cannot exclude people from using the good and that the good itself is not used up as more people use it. Examples might be national defense or basic scientific research. Because of these two key characteristics, markets often do a poor job of producing public goods; thus, there is a case for people to band together and agree to pay for such goods through government action.

## Outline

**I.** What is a *public good*?

**A.** A public good has two characteristics: It is *nonrivalrous* and *nonexcludable*.

**1.** *Nonrivalrous* means that the good itself is not diminished as more people use it.

**2.** *Nonexcludable* means that a seller cannot exclude those who did not pay from using the good.

**B.** Examples of public goods include national defense, education, public health, physical infrastructure, and basic research and science.

**C.** A *free rider* problem emerges when some people can receive benefits from public goods without a need to pay their fair share of the costs. If there are many free riders, the public good will not be produced.

**II.** The pursuit of self-interest can, in some cases, bring undesired results to all parties.

**A.** The Prisoners' Dilemma is a classic example in game theory of how the pursuit of rational self-interest can make all parties worse off.

**1.** The starting point of the game is that two prisoners are arrested. They are then separated. Both prisoners are told that the other is going to confess and that if they don't confess, they will be worse off.

**2.** If the two prisoners cooperate and neither one confesses, they will be better off. But if both prisoners act in their own self-interest, they will both confess, because confessing can make them better off whether the other prisoner confesses or not.

**3.** The analytical structure of the Prisoners' Dilemma is that if the two prisoners can cooperate and remain silent, they will be better off. But given the structure of the game, each individual has an incentive not to cooperate and to confess, and if they both follow this incentive, they will both be worse off.

<table>
<tr><td colspan="2" rowspan="2"></td><td colspan="2">PRISONER<br>B</td></tr>
<tr><td>Remain silent (cooperate with other prisoner)</td><td>Confess (don't cooperate with other prisoner)</td></tr>
<tr><td rowspan="2">PRISONER<br>A</td><td>Remain silent (cooperate with other prisoner)</td><td>A gets 2 years<br>B gets 2 years</td><td>A gets 8 years<br>B gets 1 years</td></tr>
<tr><td>Confess (don't cooperate with other prisoner)</td><td>A gets 1 years<br>B gets 8 years</td><td>A gets 5 years<br>B gets 5 years</td></tr>
</table>

**4.** Players in the Prisoners' Dilemma may be able to use various mechanisms to ensure cooperation, such as threats for those who fail to cooperate or promises of cooperation in future plays of the game.

**B.** The free rider problem is a version of a Prisoners' Dilemma.

**1.** Imagine that there are two players, who are deciding whether to make an investment in a public good. Each player must decide whether to cooperate, which means making a contribution to the public good, or not to cooperate.

2. If the two players cooperate, and both make a contribution to the public good, they will both be better off. But if each player acts in his or her own self-interest, they will both decide not to contribute to the public good, because not contributing can make one player better off whether the other player contributes or not.
3. The free rider problem becomes greater if expanded to include many people.

**C.** The Prisoners' Dilemma game, in which both parties benefit from cooperation but have an individual incentive not to cooperate, arises in many different settings.

1. In an oligopolistic cartel, every firm has an incentive to increase its own profits by expanding output, but all firms in the cartel will be better off if they cooperate to hold output low and act like a joint monopoly.
2. An arms race can be a situation in which no country has an incentive to cut back on its own accumulation of weapons, but everyone would be better off if all countries cooperated in cutting back.
3. Conspicuous consumption can be a situation in which no household dares to cut back on its own, but everyone would be better off if everyone cooperated in cutting back.
4. Overuse of natural resources can also be a case in which no individual has an incentive to cut back, but everyone would be better off if everyone cooperated in cutting back.

**D.** The Prisoners' Dilemma is of great importance to economic analysis, because it illustrates a fundamental situation in which the pursuit of self-interest by each individual party leads to outcomes that no one would ultimately desire if all players could find a way to cooperate.

**III.** How can public goods be provided?

**A.** A variety of social mechanisms can help to solve the public good problem, including personal recognition and shaming.

**B.** Public goods can also be financed through the political system, by imposing taxes and using the proceeds to pay for the public good.

**Essential Reading:**

Peter Asch and Gary A. Gigliotti, "The Free Rider Paradox—Theory, Evidence, and Teaching," *Journal of Economic Education*, Winter 1991, pp. 33–38.

Russell Hardin, "The Free Rider Problem," in *The Stanford Encyclopedia of Philosophy*, plato.stanford.edu/archives/sum2003/entries/free-rider.

**Supplementary Reading:**

R. H. Coase, "The Lighthouse of Economics," *Journal of Law and Economics*, October 1974, pp. 357–376.

**Questions to Consider:**

1. Explain why a producer in a market will hesitate to enter production of public goods. Use some concrete examples of public goods in your explanation.
2. What is the Prisoners' Dilemma game and why is it important to economists?

## Lecture Fifteen

## Poverty and Welfare Programs

**Scope:** A free market can create great wealth for some while leaving others in poverty. This lecture begins with how the government defines the poverty line and notes the strengths and weaknesses of that definition. Various policies are available to address poverty; not unexpectedly, economists have tended to favor cash subsidies and wage subsidies over trying to set prices low or wages high for the poor. However, the recent trend in welfare reform emphasizes another feature—a requirement that people on welfare take jobs as soon as possible.

## Outline

**I.** Discussing poverty requires defining a poverty line and figuring out how to adjust that line both for families of different sizes and over time.

**A.** The concept behind the U.S. poverty line was invented by Mollie Orshansky, who was assigned the task of defining an official poverty line in the mid-1960s.

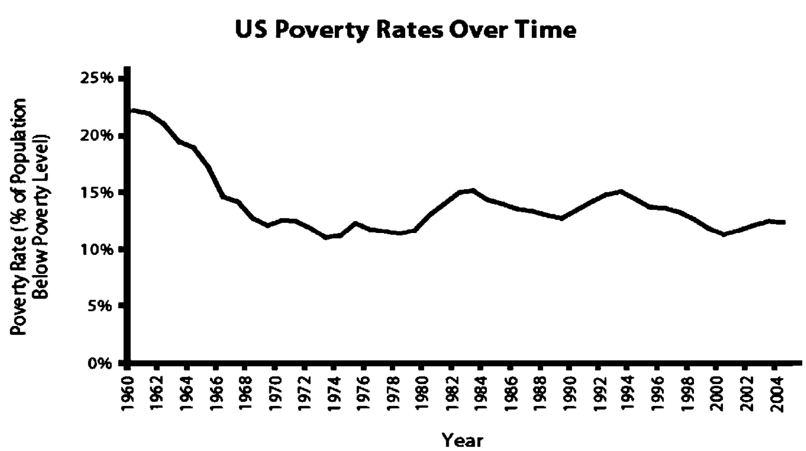
1. In the early 1960s, thinking about poverty was very much on the public agenda, but there was no official government definition of poverty or even any clear way to think about what *poverty* meant.
2. Mollie Orshansky based her definition on two notions: how much it cost to buy a basic diet (which allowed an adjustment for different family sizes) and the notion that food was one-third of a family budget.
3. That poverty line has remained basically the same, although it has been adjusted upward over time according to the inflation rate.

**B.** Any measure of poverty, including this one, will be subject to a range of potential criticisms—but some line is better than none.

1. The average family now spends much less than one-third of its income on food; thus, a key assumption behind the poverty line is incorrect.
2. The poverty line is adjusted upward for inflation but not for the economy becoming richer.
3. The standard of living can be very different in different areas.
4. In-kind government benefits, such as food stamps or Medicaid, aren't included in the measure of poverty.

**C.** The U.S. poverty rate has been projected back to the 1950s, then measured each year since then by the Census Bureau.

1. The poverty rate fell dramatically in the 1950s and early 1960s, rose a bit in the early 1970s, and has stayed at more or less the same level since then.



2. The composition of the group classified as poor has shifted. It used to be that the elderly were disproportionately poor; today, single mothers and children are disproportionately poor.

**II.** Any policy aimed at helping those with low incomes will also create incentive problems.

**A.** If you give a person a fish, do you discourage him from learning to fish? But if you don't give him a fish, he may starve to death while learning to fish.

**B.** To illustrate the problem, consider a proposal in which any families with less than poverty-level income will receive government assistance to reach the poverty level. The difficulty with this reasonable-sounding proposal is that a low-income family will not receive any net gain for any work it does up to the poverty level of income.

**C.** A negative income tax arises when the government reduces welfare benefits as the recipient earns additional income. A negative income tax of 100%, or even more, creates a poverty trap in which the poor have a greatly reduced incentive to earn income.

**III.** Government has a range of policies available that seek to reduce the negative income tax and address the poverty trap.

**A.** One choice is to reduce the rate at which welfare payments are reduced as income is earned.

**B.** The earned income tax credit gives low-income families additional income when they earn money, which helps offset the withdrawal of other government benefits.

**C.** Work requirements are an attempt to overcome any disincentives to work.

**D.** In-kind benefits, such as Medicaid and food stamps, still create issues of a negative income tax, because such benefits are reduced as income increases.

**E.** There are about 80 federal programs to help those with low incomes. Some prominent ones not already mentioned here include housing assistance, Supplemental Security Income for the elderly, and subsidized school lunches.

**Essential Reading:**

Sheldon Danziger and Rucker C. Johnson, "Trends: Welfare Reform Update," *Milken Institute Review*, 1st quarter 2005, pp. 9–15, www.milkeninstitute.org.

Deborah A. Stone, "Making the Poor Count," *The American Prospect*, Spring 1994, pp. 84–88.

U.S. Census Bureau. "Poverty," www.census.gov/hhes/www/poverty.html.

**Supplementary Reading:**

Constance F. Citro and Robert T. Michael, *Measuring Poverty: A New Approach*.

U.S. House of Representatives, Ways and Means Committee, *2004 Green Book: Background Material and Data on the Programs within the Jurisdiction of the Committee on Ways and Means*, www.gpoaccess.gov/wmprints/green/2004.html.

**Questions to Consider:**

1. Poverty can be measured in at least two ways. The current method uses an absolute standard, which is based on the amount needed to purchase a certain standard of living. An alternative would use a relative method; for example, the poverty line could be set at half the average-level income. Which approach do you prefer?
2. How would you like to see government assistance to those with low income structured so that it both helps those in need and provides incentives to work? How costly would your proposal be?

# Lecture Sixteen
# Inequality

**Scope:** *Inequality* refers to the gap between those with high incomes and those with low incomes. Starting in the late 1970s, inequality has increased in the U.S. economy. A variety of explanations have been proposed for this rise in inequality, but the most likely explanation is that changes in information and communications technology have favored high-skilled workers and raised their wages while substituting for low-skilled workers and thus not helping their wages. This lecture discusses other possible causes of inequality: government tax and spending policies, globalization, unionization, and the minimum wage. The rise in inequality raises the question of whether some government response is appropriate—and, if so, what kind of response.

## Outline

**I.** Poverty and inequality aren't the same thing.

- **A.** *Poverty* refers to being below a certain line. *Inequality* describes the gap between the poor and the rich.
- **B.** If the rich get much richer while the poor get a little richer, then inequality can go up and the poverty rate can go down at the same time! Or if the poor do a little worse and the rich do much worse, poverty can increase at the same time that inequality is falling.
- **C.** The concern over poverty is based on a fear that people are not receiving basic necessities of life. Concern over inequality has more to do with fairness in how the rewards and disparities in society are justly distributed.

**II.** Measuring inequality requires capturing the overall distribution of income, including both poor and rich.

- **A.** A standard approach is to split the income distribution into parts, such as fifths or tenths or even single percents, and determine what share of income is being received by each part. For simplicity, this lecture will stick with dividing up the income distribution into *quintiles*, or fifths, with some mention of the top 5%.
- **B.** The level of inequality in the U.S. income distribution can be measured by looking at the share of income received by different quintiles. For example, in 2000, the bottom fifth of the income distribution received 4.3% of total income; the second fifth received 9.8%; the middle fifth received 15.4%; the fourth fifth received 22.7%; and the top fifth received 47.7%. The top 5% received 21.1% of all income.

**U.S. Income Distribution: Share of Total Income Received**

| | Lowest fifth | Second fifth | Middle fifth | Fourth fifth | Highest fifth | Top 5% |
|---|---|---|---|---|---|---|
| 1970 | 5.4 | 12.2 | 17.6 | 23.8 | 40.9 | 15.6 |
| 1975 | 5.6 | 11.9 | 17.7 | 24.2 | 40.7 | 14.9 |
| 1980 | 5.3 | 11.6 | 17.6 | 24.4 | 41.1 | 14.6 |
| 1985 | 4.8 | 11.0 | 16.9 | 24.3 | 43.1 | 16.1 |
| 1990 | 4.6 | 10.8 | 16.6 | 23.8 | 44.3 | 17.4 |
| 1995 | 4.4 | 10.1 | 15.8 | 23.2 | 46.5 | 20.0 |
| 2000 | 4.3 | 9.8 | 15.4 | 22.7 | 47.7 | 21.1 |
| 2002 | 4.2 | 9.7 | 15.5 | 23.0 | 47.6 | 20.8 |

Source: U.S. Bureau of the Census

- **C.** The shares received by the top fifth and the top 5% have risen over recent decades. In 1975, for example, the top fifth received 40.7% of all income; by 2002, the top fifth was receiving 47.6% of total income.
- **D.** It's difficult to say whether this level of inequality is a bad thing. After all, there are many reasons for some degree of inequality: People tend to have lower incomes when they are young, higher incomes in middle

age, and lower incomes when elderly. Even year to year, there are shifts between rich and poor; some people make earning money a top priority in their lives, while others do not.

**E.** Mobility across the income distribution has not been increasing in a way that would offset the increased level of inequality.

**III.** The most plausible reason for the rise in inequality is the change in information and communications technology, but other possible reasons include globalization and changes in labor market institutions, such as unions and the minimum wage.

**A.** The single biggest reason for the rise in inequality appears to be the changes in information and communications technology, which have favored the productivity of high-skill workers.

**B.** Globalization is often accused of contributing to the rise in inequality, but most analyses show that it has had a fairly minor role, because trade with low-wage countries is a fairly small share of overall trade.

**C.** U.S. labor markets have seen some institutional changes that have tended to add to inequality, such as weaker unions and lower minimum wages.

**D.** Household incomes have also become more unequal because of changes in family patterns: specifically, the rise of single-parent families and the rise of high-earners marrying each other.

**IV.** What public policies are available to reduce inequality?

**A.** Higher taxes on the rich can be used to diminish inequality. The share of federal taxes paid by those with high incomes is fairly high by the standard of recent decades in the early 2000s.

**Share of Total Federal Taxes Paid by Each Group**

| | 1980 | 1985 | 1990 | 1995 | 2000 | 2002 |
|---|---|---|---|---|---|---|
| Lowest quintile | 2.0 | 2.3 | 1.9 | 1.3 | 1.1 | 0.9 |
| Second quintile | 7.0 | 7.2 | 6.8 | 5.8 | 4.8 | 4.8 |
| Third quintile | 13.3 | 13.2 | 12.6 | 11.4 | 9.8 | 10.2 |
| Fourth quintile | 21.3 | 21.3 | 20.7 | 19.3 | 17.4 | 19.1 |
| Top quintile | 56.3 | 55.8 | 57.9 | 61.9 | 66.7 | 64.8 |
| Top 10% | 40.0 | 39.5 | 41.7 | 46.6 | 52.2 | 49.0 |
| Top 5% | 28.7 | 28.4 | 30.6 | 35.4 | 41.4 | 37.3 |
| Top 1% | 14.2 | 14.8 | 16.2 | 20.1 | 25.6 | 21.1 |

Source: Congressional Budget Office, "Effective Federal Tax Rates: 1979–2002," March 2005

**B.** An alternative method of reducing inequality would be to increase government spending that especially benefits those with low and middle incomes.

1. One approach is to expand direct payments to the working poor, such as the earned income tax credit.
2. An alternative is to spend money on public goods and services that especially benefit those with low and middle incomes, such as schools, mass transit, libraries, and parks.

**C.** Taking actions to strengthen labor market institutions that lead to more equal wages, such as establishing stronger unions and a higher minimum wage, would reduce inequality somewhat—although such policies could also involve tradeoffs.

**D.** Part of the American dream is that everyone has a reasonable ladder of opportunity, so that those who complete their education and work full-time and do their best with the hand they are dealt have a good chance to achieve a satisfactory middle-class life.

**Essential Reading:**

Paul Krugman, "Technology's Revenge," *Wilson Quarterly*, Autumn 1994, pp. 56–64.

Rudolph G. Penner, Isabel V. Sawhill, and Timothy Taylor, "Chapter 3: Inequality and Opportunity: Winners and Losers in the New Economy," in *Updating America's Social Contract: Economic Growth and Opportunity in the New Century*, pp. 88–121.

**Supplementary Reading:**

Congressional Budget Office, *Historical Effective Federal Tax Rates: 1979 to 2002*, March 2005, www.cbo.gov.

U.S. Census Bureau, *Historical Income Inequality Tables*, www.census.gov/ hhes/income/histinc/ineqtoc.html.

**Questions to Consider:**

1. Does the existing level of inequality seem like a social problem to you? If it does seem like a problem, how much inequality seems reasonable? If it doesn't seem like a problem, how much more inequality would need to occur before you felt that it was a problem?
2. Of the available policies to reduce inequality, which ones (if any!) are most attractive to you?

## Lecture Seventeen

## Imperfect Information and Insurance

**Scope:** Imperfect information can raise havoc with markets. A simple example is when a firm misleads consumers. More subtle questions arise in figuring out how much to pay a worker when information about job performance is imperfect or how much to charge for auto insurance when information about the risks of auto accident is imperfect. Imperfect information typically raises two issues: the problem of *moral hazard*, in which those with better information try to take advantage of those with worse information, and the problem of *adverse selection*, which is that high risks will eagerly buy insurance while low risks may not buy it; this is a problem if the seller of insurance has imperfect information about who is a high and a low risk. The ongoing arguments over the provision of health insurance in the United States are fundamentally issues of moral hazard, adverse selection, and imperfect information.

## Outline

**I.** The standard example of a market, with a willing buyer and willing seller, presumes that each party makes a voluntary trade because each knows what he or she is getting. However, the real world is full of situations of imperfect information, which can create real problems for markets.

- **A.** Would you buy a used car that was only about one-third of the price you would have expected it to be? Or would you reason that there must be something wrong with such a good deal and steer clear? The economic argument is to buy what's cheapest. But when you don't have complete information about the quality of the car, you may hesitate.
- **B.** Similar problems arise in labor and capital markets. For example, imagine a business trying to judge the quality of potential workers. A worker who is willing to work for much less may be a low-quality worker; thus, businesses may be unwilling to hire those who are willing to work for less pay.
- **C.** Markets have a variety of methods for attempting to reduce the problem of information.
  - **1.** Warrantees, guarantees, and service contracts can reduce the risk of imperfect information in the goods market.
  - **2.** Licenses and certificates can reduce the risk of imperfect information in the labor market.
  - **3.** In financial capital markets, requiring disclosure of financial records and history, along with collateral and cosigners, can reduce the risk of imperfect information.
  - **4.** Reputation can reduce the risk of imperfect information if economic interactions are repeated.
- **D.** When government sets rules for disclosing information on the ingredients of products or the financial records of companies or when government requires that claims made in advertising be supported, it is seeking to ameliorate the problem of imperfect information.

**II.** Insurance markets rely on information: Sellers must estimate the risk that buyers will be involved in an event—such as an accident—that requires compensation. But information about who will suffer what events can be quite imperfect, and insurance markets often break down as a result.

- **A.** An insurance market spreads risk over a group.
  - **1.** An undesirable event will happen to certain members of a group. The risk of the event happening is known, but exactly who will suffer is not known.
  - **2.** In this situation, everyone in the group can pay into a common pool of funds, which is then used to compensate those who suffer the negative event.
  - **3.** A fundamental rule of insurance markets is that what the average person pays into insurance over time must be very similar to what the average person gets out, with relatively minor variations caused by the investment income of the insurance company and the costs of running the system.
- **B.** The payouts that insurance companies make are often concentrated on a relatively small share of large claims.
- **C.** But now, consider what happens if the chance of a bad event happening is not randomly distributed. Instead, people's risk is determined to some extent by the actions that they take, and people know their own level of risk better than an insurance company ever can.

1. *Moral hazard* is the problem that insurance markets face when the fact that people have insurance leads them to take fewer steps to avoid or prevent accidents in the first place.
2. *Adverse selection* is the problem that insurance markets face when those who are especially likely to have an accident are more likely to buy insurance, while those who aren't likely won't find insurance a good deal—and the insurance company has only imperfect information about who is in which group.

**D.** Insurance plans try to address moral hazard and adverse selection in various ways: using copayments and deductibles and finding ways to pool many people of different risks together (such as through an employer).

1. One method to reduce moral hazard is to require the injured party to pay a share of the costs, which is done through deductibles, copayments, and coinsurance.
2. If insurance plans can draw upon a large pool of customers, then they can worry less about adverse selection, because a large pool is more likely to have a large number of low-risk participants to offset those who represent high risks.

**E.** Health insurance is a vivid example of an industry plagued by information problems of moral hazard and adverse selection. Other industrialized nations have addressed these problems with nationalized systems, but this has often brought problems of its own. The challenge is to build a system in which competitive forces push for better and cheaper health care, while minimizing the incentives to provide low-quality service to patients.

**International Comparisons of Health-Care Spending in 2002**

| Country | Health-care spending per person | Health-care spending as a share of GDP |
|---|---|---|
| United States | $5,274 | 14.6% |
| Canada | $2,222 | 9.6% |
| France | $2,348 | 9.7% |
| Germany | $2,631 | 10.9% |
| Japan | $2,476 | 7.9% |
| United Kingdom | $2,031 | 7.7% |

Source: World Health Organization, *World Health Report 2005*

**Essential Reading:**

Richard Zeckhauser, "Insurance," in *The Concise Encyclopedia of Economics*, www.econlib.org/library/Enc/Insurance.html.

"Health-Care Finance: The Health of Nations," *The Economist*, July 15, 2004.

**Supplementary Reading:**

Congressional Budget Office, *Federal Terrorism Reinsurance: An Update*, January 2005, www.cbo.gov.

**Questions to Consider:**

1. Can you think of a market transaction you would be willing to make—a good or service you would be willing to buy—if only you had better information about the quality you would receive of that good or service?
2. The federal government provides flood insurance in certain areas. Using the ideas of adverse selection and moral hazard, explain why private insurance markets may be unwilling to provide flood insurance to all.

# Lecture Eighteen

# Corporate and Political Governance

**Scope:** Large corporations are typically headed by a chief executive officer, who reports to a board of directors, who are elected by shareholders. Economists call this situation a *separation of ownership* (the shareholders) *and control* (the chief executive officer). Democratic governments are headed by an elected official, who reports to a group of voters. For similar reasons, shareholders may have a hard time constraining the actions of top managers and voters may have a hard time constraining the actions of politicians. Thus, some skepticism is warranted about whether firms will seek profits and efficient production and whether politicians will act in the best interests of society.

## Outline

**I.** Issues of political and corporate governance can be analyzed with the analytical structure of what economists call a *principal-agent problem*. In a political context, citizens are the principals and politicians are their agents. In the corporate context, shareholders are the principals and top executives are their agents.

- **A.** In a principal-agent problem, one party, the *principal*, wants another party, the *agent*, to do something. The relationship between an employer and an employee is a common example of a principal-agent problem.
- **B.** Principal-agent problems typically involve imperfect information. The principal often has a hard time knowing whether the agent is working hard or efficiently or producing a high quality of output.
- **C.** The principal-agent problem in corporate and political governance involves many principals—either voters or shareholders—and few agents. In this situation, the principals face a free rider problem: Their individual efforts to monitor the agent is likely to make little difference, and they would all prefer that someone else take on the time and costs of monitoring the agent. As a result, the agent—that is, the politician or corporate manager—may end up not being monitored very much at all.

**II.** Large firms have a separation of ownership and control; that is, they are owned by shareholders but controlled by their top managers. What or who will monitor and constrain the managers?

- **A.** In a classic 1932 book, *The Modern Corporation and Private Property*, Adolf Berle and Gardiner Means identified an immense gap between ownership and control.
- **B.** Executives at top companies do have a variety of parties watching them.
  - **1.** Shareholders elect a board of directors, who hire and fire top executives. However, the top executives often decide who will be running for the available slots on the board of directors.
  - **2.** Publicly owned firms are required to be audited and to report public financial statements. However, in recent years, some auditors haven't been as aggressive in questioning financial arrangements as shareholders might have liked.
  - **3.** Large outside investors, such as those who invest large mutual funds or pension funds, have some incentive to monitor top executives because they have a large enough ownership share to give them some power.
  - **4.** The financial community, including stock market analysts who give advice to financial investors, banks that make loans to firms, and even journalists who write for the business press, all have some power to monitor top executives.
- **C.** Corporate takeovers and mergers can be a way for financial markets to discipline top management. But sometimes, they also provide a way for existing management to build their own empires.
- **D.** Stock options for top executives are touted as a way of aligning the incentives of top executives and their shareholders.
  - **1.** Stock options succeeded in getting top executives to hold a lot of stock.
  - **2.** Stock options also cost quite a lot and provide some incentives for imprudent management.
- **E.** The Sarbanes-Oxley Act of 2002 imposes a number of new rules on the institutions of corporate governance, including boards of directors, auditors, and stock market analysts, along with a new government accounting oversight board. But it remains uncertain how much difference the new rules will actually make.

**III.** Many of the difficulties in markets identified in the preceding lectures, including monopoly; negative externalities of pollution, poverty, and welfare; imperfect information; and others, have suggested a possible role for government to act in a way that might improve social welfare. But government is a complex organization of elected and appointed officials, and such organizations may not always be focused on the greatest good for the greatest number.

- **A.** In the simple theory of democracy, voters monitor elected officials. But many people don't vote, and a strictly rational person may decide that his or her vote doesn't much matter.
- **B.** *Special-interest groups* are groups that are numerically small but quite well organized. A focused special-interest group can pressure legislators to enact public policies that benefit the group at the expense of the broader population.
- **C.** When legislators are negotiating over whether to support a piece of legislation, a common request is to include *pork-barrel spending*, which is defined as legislation that benefits mainly a single political district. *Log-rolling* occurs when two or more politicians agree to each support provisions that are especially important to the other, with the result that many bills important to individual legislators but perhaps not important to the broad social welfare become law.
- **D.** When multiple choices exist, the majority vote can have a hard time choosing the best outcome, and the eventual choice may depend on the order in which the choices are presented.
- **E.** In the private sector, a firm that fails to satisfy customers will go out of business. But government has no equivalent mechanism to provide incentives for good performance.

**IV.** Economic wisdom requires understanding several seemingly contradictory factors at the same time. Markets are useful but imperfect—and so is government.

- **A.** Markets are extraordinarily useful institutions through which society can allocate its scarce resources.
- **B.** Markets may sometimes produce unwanted results: monopoly, negative externalities, inequality, and more.
- **C.** Governments can sometimes act to reduce the problems of markets, but government failures can also sometimes make matters worse.

**Essential Reading:**

Lucien Bebchuk and Jesse Fried, "Pay Without Performance: The Unfulfilled Promise of Executive Compensation," *Milken Institute Review*, 2nd quarter 2005, pp. 75–89, www.milkeninstitute.org.

Jane W. Shaw, "Public Choice Theory," in *The Concise Encyclopedia of Economics*, www/econlib.org/library/Enc/PublicChoiceTheory.html.

**Supplementary Reading:**

Robert Gibbons, "Incentives in Organizations," *Journal of Economic Perspectives*, Fall 1998, pp. 115–132.

**Questions to Consider:**

1. Explain in your own words what checks and balances can limit the discretion of corporate managers to enrich themselves and, instead, to act in the best interests of their shareholders. How might these checks and balances break down?
2. Explain in your own words how checks and balances might encourage politicians to focus on the broad public good, rather than just on their own reelection. How might these checks and balances break down?

## Lecture Nineteen
## Macroeconomics and GDP

**Scope:** With this lecture, the focus shifts from microeconomics to macroeconomics; that is, instead of discussing issues involving market behavior of consumers, workers, and investors, the emphasis will turn to overall aspects of the economy. It is useful to think of macroeconomics as involving four policy goals and two main tools. The four goals are economic growth, low unemployment, low inflation, and sustainable trade deficits. The tools are federal budget policy and the monetary policies conducted by the Federal Reserve. Several different ways of measuring GDP are explained; these are useful not only in their own right, but also because they represent alternative ways of thinking about the economy.

## Outline

**I.** The study of introductory economics is typically divided into microeconomics and macroeconomics, and this section inaugurates the macroeconomics section of this course.

**A.** Macroeconomics is the aggregated top-down view of the economy, focused on such issues as unemployment, inflation, economic growth, and the balance of trade.

**B.** A macroeconomic perspective isn't just a bigger version of microeconomics.

**1.** Microeconomics discusses what happens in individual markets, but it has no language for talking about overall problems of the economy, such as growth, inflation, unemployment, and trade deficits.

**2.** Behavior that is rational for individuals leads to unexpected conclusions when everyone in a group acts in that way, so that the logic of individual behavior in microeconomics can lead to unexpected outcomes at the macroeconomic level.

**II.** Gross domestic product (GDP) is the standard measure for the size of a nation's macroeconomy.

**A.** *Gross domestic product* is defined as the total value of final goods and services produced in an economy in a year.

**B.** GDP can be measured in different ways, either according to the value of what is produced or according to the value of what is demanded. Because the quantity supplied in an economy must equal the quantity demanded, these measures must be equal.

**1.** One way to measure GDP is to count up what is produced in the economy, which is typically divided into durable goods, nondurable goods, services, and structures.

**Measuring GDP by What Is Produced (2004 data)**

| | In trillions of dollars | Share of total GDP |
|---|---|---|
| Durable goods | $ 1.7 trillion | 14.5% |
| Nondurable goods | $ 2.1 trillion | 17.9% |
| Services | $ 6.7 trillion | 57.3% |
| Structures | $ 1.2 trillion | 10.3% |
| TOTAL GDP | $11.7 trillion | 100% |

Source: U.S. Bureau of Economic Analysis

**2.** GDP can also be measured from the demand side and divided up into what is demanded for consumption, investment, and trade.

$$C + I + G + X - M = GDP$$

**Measuring GDP by Sources of Demand**

| | In dollars | Share of GDP |
|---|---|---|

| | | |
|---|---|---|
| Consumption | $8.2 trillion | 70.1% |
| Investment | $1.9 trillion | 16.2% |
| Government | $2.2 trillion | 18.8% |
| Exports | $1.2 trillion | 10.2% |
| Imports | $1.8 trillion | 15.4% |
| TOTAL GDP | $11.7 trillion | 100% |

Source: U.S. Bureau of Economic Analysis

3. U.S. GDP statistics are measured by a branch of the U.S. Department of Commerce called the Bureau of Economic Analysis.

**C.** Per capita GDP refers to dividing GDP by the population. Looking at real GDP per capita is a simple, rough way of comparing standards of living across times and places.

**D.** To economists, the word *real* means "adjusted for inflation." Thus, a change in real GDP between two years is adjusted for inflation so that only the underlying change in the actual size of the economy is captured.

**III.** GDP has its share of conceptual imperfections, like all economic statistics, but it remains a useful measure of macroeconomic activity.

**A.** Many factors that affect human well-being are not directly included in GDP: "home production," leisure, the environment, health, and the presence of poverty or inequality.

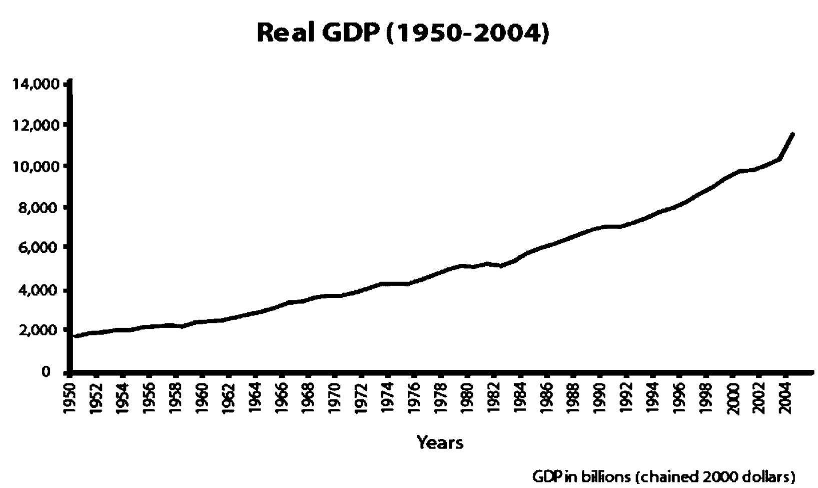
**B.** GDP measures *final product*, which includes the production of intermediate products and avoids a risk of double-counting.

**C.** Transfers of ownership do not show up in GDP, unless they involve new production. When an existing item, such as a house or a used car, is bought or sold or when a share of stock is bought and sold, the transaction does not show up in GDP.

**D.** Even with these concerns, GDP remains a useful measure, in part because societies with higher per capita GDP do tend to be better off in a number of dimensions, including personal consumption, clean air and water, and personal security.

**IV.** The historical pattern of GDP shows a long-term upward trend over time, but with occasional short-term dips for recessions.

**A.** From a long-term perspective, GDP increases substantially over time. After adjusting for inflation, GDP in the mid-2000s was 5.5 times as large as in 1950.




**B.** GDP also shows short-term fluctuations when recessions happen.

C. The starting and ending points of recessions are defined by a committee of academic economists at a nonprofit research institution called the National Bureau of Economic Research.

**V.** Macroeconomic policy can be summarized with four goals and two main sets of tools for accomplishing those goals.

**A.** Four goals for macroeconomic analysis are economic growth, low unemployment, low inflation, and a sustainable balance of trade.

**B.** The two main sets of tools for macroeconomic policy are fiscal policy and monetary policy.

**C.** The basic macroeconomic model for describing the relationships and tradeoffs among the four goals and how the two main sets of policies can affect those goals is the *aggregate supply-aggregate demand model*.

**Essential Reading:**

Joseph A. Ritter, "Feeding the National Accounts," in *Review: Federal Reserve Bank of St. Louis*, 2000, pp. 11–20.

U.S. Department of Commerce, Bureau of Economic Analysis, *National Economic Accounts: Gross Domestic Product*, bea.gov/bea/dn/home/gdp.htm.

**Supplementary Reading:**

Katharine Abraham and Christopher Mackie, eds., *Beyond the Market: Designing Non-Market Accounts for the United States*, www.nap.edu.

National Bureau of Economic Research, *Information on Recessions and Recoveries, the NBER Business Cycle Dating Committee, and Related Topics*, nber.org/cycles/main.html.

**Questions to Consider:**

1. Make a list of considerations that might be important to public well-being but are not directly included in GDP.
2. In your own idea of what makes society better off, how much weight would you give to growth of the GDP?

# Lecture Twenty
# Economic Growth

**Scope:** Although economic growth happens at a seemingly slow rate of a few percent a year, over periods of a generation or more, different growth rates accumulate into extremely large differences in a nation's standard of living. In the long run, the rate of economic growth is by far the most important factor in determining the average standard of living. The most straightforward way to think about economic growth is as the percentage change in the real per capita GDP. The key factors behind economic growth are increases in physical capital, human capital, and technology, taking place within a supportive market environment; these all require investing resources now for a return in the future.

## Outline

**I.** Would you prefer to be a rich person in 1925, with access only to the technologies and lifestyle available in 1925, or to be a person with an average standard of living today, with access to all the modern technologies?

- **A.** The case for living as a rich person in 1925 would be that you have the best of everything at that time: house, servants, and status.
- **B.** The case for choosing the present is that 1925 lacked many modern technologies, from antibiotics to consumer electronics, which many people value highly in their lives.
- **C.** This question has no right or wrong answer, but it tends to draw out some of the reasons why people value economic growth and how much they value it.

**II.** The economic growth of nations compounds over time, so that small differences in annual growth rates work out to enormous differences over a generation or two.

- **A.** The formula is $PV(1 + g)^t = FV$, where PV is the present value of the economy, g is the percentage growth rate, t is the number of years the growth occurs, and FV is the future size of the economy.
- **B.** Seemingly small differences in annual growth rates make an enormous difference in a nation's standard of living over several decades.

**III.** How do differences in growth rates matter?

- **A.** GDP starts at 100.
- **B.** Given growth rate g (shown in the rows) and time t (shown in the columns), the future size of the economy F can be calculated as:

$$100(1+g)^t = F.$$

**How Large Will an Economy Starting at 100 Grow Over Time?**

| Annual growth rate of per capita GDP | 10 years | 25 years | 40 years |
|---|---|---|---|
| 1% | 110 | 128 | 149 |
| 3% | 134 | 209 | 326 |
| 5% | 163 | 339 | 704 |
| 8% | 216 | 685 | 2172 |

- **C.** The big lesson is that seemingly small differences in growth rates of a few percent per year, sustained over time, make a *huge* difference in the standard of living
- **D.** Countries that start out at lower levels of productivity may be able to take advantage of a period of catch-up growth—which implies that over time, lower-income nations should be able to close the gap in per capita income with higher-income nations.
  1. The world economy has seen divergence between the richest and poorest economies of the world over the last century or so, not convergence.

2. However, this divergence is largely due to the fact that the lowest-income economies have barely budged in the last century or so. Once economies do start growing, they tend to make progress more rapidly for a time.
3. The wealth of high-income countries hasn't been built on keeping Africa poor or India poor or western China poor. Those places aren't poor because of trade or globalization; instead, their lack of trade is a sign of their lack of development.
4. If the 20th century was a time of divergence among the high-income and low-income countries, might the 21st century be a time of convergence?

**E.** If a nation falls far behind in per capita GDP, it can take many decades to catch up. There are no quick fixes for economic development.

**F.** In the long run, internally generated growth is by far the single most important factor in a nation's standard of living, far outstripping the impact of redistribution from those with high incomes to those with low incomes.

**IV.** What are the sources of economic growth?

**A.** Productivity growth, measured as real output per hour worked, is a useful measure of economic growth.

**B.** Productivity growth is rooted in growth in physical capital, human capital, and especially new technology, which for economists, includes all methods of reorganizing and changing production, as well as new ways of applying scientific discoveries to production.

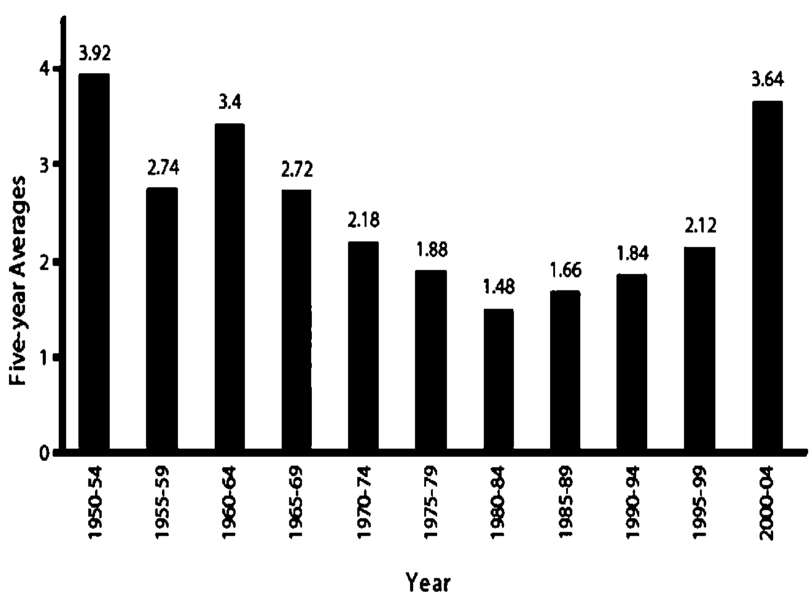
**V.** The U.S. economy experienced a great productivity slowdown through the 1970s and 1980s, but it may be on the verge of a long-term productivity upswing in the late 1990s and early 2000s.

**A.** U.S. productivity growth often hovered near 3% per year in the 1950s and 1960s. But from the 1970s into the early 1990s, it was more often in the range of 1.5–2.0% per year.

**B.** Starting in the late 1990s, the U.S. economy began to see a boost in productivity, amid a lot of talk about the "new economy," built on dramatic advances in information and communications technology. But many economists wondered at the time if the change was sustainable.

**C.** By the mid-2000s, the productivity boost of the new economy appears to be a real phenomenon, in which new information and communications technology are boosting productivity in a wide array of jobs.

**Productivity Growth in the Business Sector**
**(Measured by Output Per Hour)**




**Essential Reading:**

Timothy Taylor, "Thinking about a New Economy," *The Public Interest*, Spring 2001, pp. 3–19.

"American Productivity: The New 'New Economy,'" *The Economist*, September 11, 2003.

**Supplementary Reading:**

Council of Economic Advisers, "Chapter 6: A Pro-Growth Agenda for the Global Economy," in *Economic Report of the President*, February 2003, www.gpoaccess.gov/eop.

**Questions to Consider:**

1. Do you prefer the standard of living of a salary of $30,000 salary in 1925 or today? Remember, an annual salary of $30,000 would have made you a very rich person in the 1920s, but you have to live with the technology of the 1920s.
2. What are some examples of how the technological developments in information and communications technology in the last 10–15 years have changed how you live and work? Have they improved your productivity? What about the productivity of firms that you deal with in a business or personal context? Can you imagine how these technologies might produce further productivity improvements, or do you think they have already provided a large share of the benefits they will provide?

# Lecture Twenty-One
## Unemployment

**Scope:** Unemployment harms both the individuals who are out of work and the rest of society because of the lost potential output and lower government social spending if a greater share of the unemployed had been working. The official unemployment rates come from a government survey, which focuses on whether a person has a job and, if not, if that person is looking for one. The economist's view of unemployment is a little different; it focuses on the question of why supply and demand in the labor market are producing unemployment. The underlying causes of unemployment can be split into two broad categories. Cyclical unemployment rises during a recession or depression. The structural or natural rate of unemployment arises because of the incentives for hiring and working embedded in the labor market, even when the economy is not in recession.

## Outline

**I.** What is unemployment? The answer may seem obvious, but those who are not working voluntarily, such as a spouse who is staying home with children, are surely in a different category than someone who is looking for a job to pay the rent.

- **A.** The official unemployment rate is based on a government survey.
  - **1.** To be counted as unemployed, you must respond to the survey by saying that you don't have work but are looking for work.
  - **2.** Those not looking for work are counted as "out of the labor force," not as unemployed.
  - **3.** Defining unemployment in this way is at least consistent over time, but it can also be controversial. What about part-timers and discouraged workers, for example?
- **B.** Economists see unemployment in terms of the labor market.
  - **1.** In a labor market, quantity demanded must equal quantity supplied at equilibrium. Thus, the only way that someone can be willing to supply labor at the going market wage and not find a willing employer is if the wage is stuck above the equilibrium level.
  - **2.** Wages might be stuck above the equilibrium level for a time for a number of reasons: minimum wages, explicit and implicit labor contracts, and fear of effects on morale—especially the morale of better workers.

**II.** A question only an economist could ask is: Why is unemployment bad?

- **A.** Unemployment harms the individuals who are unemployed.
- **B.** Unemployment also reduces the size of the economy, because the economy loses the potential output of the unemployed workers, and raises the need for government spending on welfare and social services.

**III.** Unemployment can be divided into two broad categories: the natural rate of unemployment and cyclical unemployment.

- **A.** The natural rate of unemployment describes the unemployment that occurs in an economy as a result of the dynamic ebb and flow of workers and industries, which occurs in the context of the laws and regulations that affect the incentives of employers to hire or affect the incentives of the unemployed to take jobs.
  - **1.** Examples of laws that affect incentives to hire might be rules preventing businesses from forming or expanding in certain areas, taxes on employment, and rules prohibiting layoffs.
  - **2.** Examples of the laws that affect incentives to work might be generous welfare or unemployment benefits with no particularly imminent cutoff date.
  - **3.** The natural rate of unemployment isn't a "natural" law like the freezing point of water but, rather, an expected outcome given social institutions.
  - **4.** The way to reduce the natural rate of unemployment is to think about ways to provide the desired social protections but to retain incentives to work and hire.

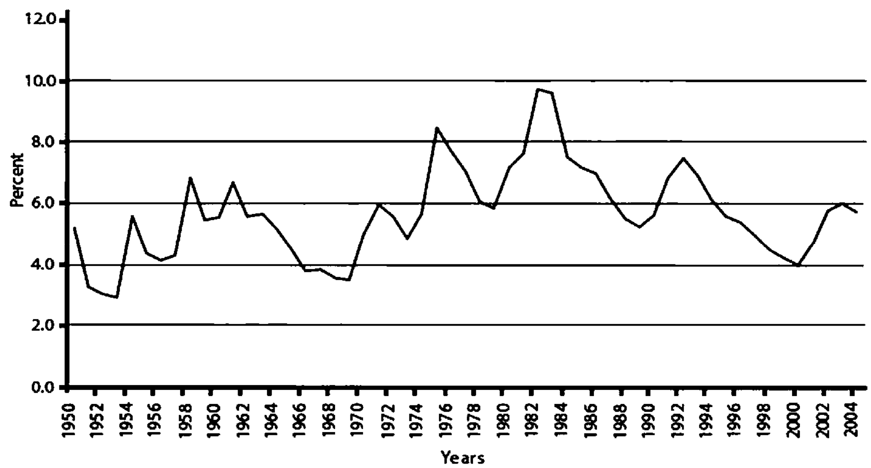
**B.** Cyclical unemployment results from recessions, when many businesses all at once just don't see enough demand for their services to justify hiring.

1. In a recession, firms are not able to sell as much as they had expected; thus, they reduce their workforce or cut back on hiring.
2. The policy solution for cyclical unemployment is for government to pump up demand with temporary spending increases or tax cuts or with reductions in interest rates. These tools will be discussed in more detail in later lectures on fiscal and monetary policy.

**IV.** Unemployment rates in the United States and Europe in recent decades have reflected different natural rates of unemployment, as well as patterns of cyclical unemployment.

**A.** U.S. unemployment rates were relatively low from the 1950s and 1960s, then rose in the 1970s, and peaked at almost 10% in 1982; they have since dropped back to the earlier range, around 5%.

**U.S. Annual Unemployment Rate**




**B.** European unemployment rates rose dramatically in the 1970s and early 1980s, as did rates in the United States, but in Europe, the rates never came back down. Most economists think that some combination of structural factors, rather than cyclical or frictional ones, is at the heart of Europe's higher unemployment rate.

**V.** Society may face some tension between attempts to increase the number of jobs and efforts to increase wages.

**A.** Since the 1980s, the United States has had relatively low unemployment compared to Europe but also relatively low wage growth. There may be a tradeoff here: a greater supply of labor (low unemployment) leading to a lower price (in the labor market, lower wages).

**B.** Ultimately, wages are based on productivity of workers. Thus, the best long-term policy for high wages is to improve productivity.

**Essential Reading:**

Timothy Taylor, "Department of Misunderstandings," *Milken Institute Review*, 3rd quarter 2004, pp. 82–87, www.milkeninstitute.org.

U.S. Department of Labor, Bureau of Labor Statistics, *Labor Force Statistics from the Current Population Survey*, bls.gov/cps/home.htm.

**Supplementary Reading:**

"Counting the Jobless," *The Economist*, July 22, 1995, p. 74.

U.S. Department of Labor, Bureau of Labor Statistics, *How the Government Measures Unemployment*, www.bls.gov/cps_htgm.htm.

**Questions to Consider:**

1. Make a list of the costs of unemployment. Your list should include personal costs (thinking about your own experience or the experience of unemployed friends may be useful here), budgetary costs to the government, and costs for society.
2. Discuss what the concept of *unemployment* means and why not every adult without a job should be classified as part of the official unemployment rate.

## Lecture Twenty-Two
## Inflation

**Scope:** Inflation refers to an overall sustained increase in the level of prices, not to the increase in any particular price. The inflation rate is obtained by defining a basket of goods that represents typical consumption levels, then tracking how the overall cost of that basket changes over time. The original source of inflation can be higher costs in the economy being passed on in prices or a high level of demand in the economy. Mild inflation is not a great policy concern, but a higher level of inflation can cause problems: It imposes an arbitrary pattern of gains and losses across the economy; it creates a lack of clarity about what prices really are, which makes it hard for markets to work well; and people and firms must spend their time worrying about inflation, rather than about real economic factors.

## Outline

**I.** Inflation represents an overall increase in price level, measured over a combination of all goods and services. But how is such an average to be calculated?

- **A.** Measuring inflation is done by defining a basket of goods, with the quantity of each good in the basket chosen to represent typical consumption levels, then tracking how the overall price of the basket changes with time.
- **B.** Instead of referring to the cost of the basket of goods by the actual dollar amount, the typical approach is to choose a "base year" and define the price level in that year as equal to an index number of 100. Then, all other years are expressed in relation to that base year, using the costs of buying the basket of goods in different years.
- **C.** There are a variety of measures of inflation, depending on what basket of goods is used. The two most common are the consumer price index and the GDP deflator.
- **D.** There is a longstanding concern that calculating the inflation rate using a basket of goods overstates the true rate of inflation.
  1. One fear is that if you start with a basket of goods and the prices of some of those goods rise, people will substitute other goods, but the price index will not capture this substitution and, thus, can overstate the true rise in the costs of living.
  2. Another concern is that a basket of goods chosen at some time in the past will not take the benefits of quality improvements and new goods into account and, thus, will overstate the rise in the true cost of living.
  3. U.S. government statisticians have taken steps to reduce the impact of these concerns.

**II.** From 1900 to 1965 or so, U.S. inflation rates were typically between 1–3% per year. The exceptions were just after wars, when the high level of demand in the economy made the price level shoot up, and in the Great Depression, when the low level of demand in the economy created deflation. However, in the 1970s, inflation began to climb, hitting double-digit rates. In the early 1980s, annual inflation came back down and has typically been in the range of 2–4% since then.

**III.** A question only an economist could ask is: Why is inflation bad?

- **A.** Inflation isn't necessarily bad, at least in theory.
  1. Imagine that one night, magic money elves spread out across the entire economy. They sneak into every wallet, every purse, every bank account, every cash drawer, every paycheck, everyplace where money is, and they double it, everywhere.
  2. The next morning, everyone rushes out to spend their new money, but prices soon double, and everyone goes home.
  3. The lesson is that if all prices and wages rose at the same time, and everyone knew it was going to happen, it wouldn't make any difference to the real economy.
- **B.** In the real world, inflation isn't evenly distributed and fully predictable. It offers surprising benefits to some and costs to others.

   1. The clearest losers from unexpected inflation are those who lend money at a fixed rate of interest or those who have invested their money in a bond that promises to pay only a fixed rate of interest.
   2. Conversely, someone who borrowed at a fixed rate will gain from unexpected inflation.

**C.** Indexing refers to the practice of having adjustments made for inflation automatically, such as when the interest rate on a home mortgage rises or falls with the rate of inflation.

**D.** When inflation rates get high, they can make it difficult for markets to work well and for firms to focus on long-term productivity growth.
   1. With significant inflation, price signals in the market become unclear; does a higher price mean something is actually more expensive, or is the increase just part of the overall inflation?
   2. Businesses have to spend time worrying about vulnerability to inflation, not about competing with higher productivity, and end up with a short-term focus.

**IV.** Higher inflation can have many different starting points, but ultimately, it is always a matter of too much money chasing too few goods.

**A.** The policy tools to fight inflation all involve holding down the overall level of demand to ensure that there are fewer dollars chasing goods; possibilities include raising taxes, cutting government spending, and raising interest rates.

**B.** Fighting moderate inflation will always be controversial, because the costs of slowing down demand are obvious, but the benefits of reducing a fairly low rate of inflation are less clear.
   1. Inflation hawks argue that an economy works best if inflation is close to zero and that inflation should be nipped in the bud.
   2. Inflation doves argue that a little inflation maybe isn't such a terrible thing; for example, maybe it helps the economy in carrying out wage cuts or price cuts where needed.

**Essential Reading:**

U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Price Indexes*, bls.gov/cpi/home.htm.

**Supplementary Reading:**

Advisory Commission to Study the Consumer Price Index, *Toward a More Accurate Measure of the Cost of Living: Final Report to the Senate Finance Committee*, December 4, 1996, www.ssa.gov/history/reports/boskinrpt.html.

V. S. Naipaul, "The End of Peronism?" *New York Review of Books*, February 13, 1992, pp. 47–53.

**Questions to Consider:**

1. How might a rapid rise in inflation harm you? Consider your role as a consumer and a borrower. How might a rapid rise in inflation help you? Consider the likely effect on your wages, any interest you receive as a saver, and how you would react as a homeowner. Overall, and assuming for the moment that the inflation doesn't do drastic harm to the overall economy, do you think you would personally be better or worse off?
2. Discuss which problem seems the most important to you: economic growth, unemployment, or inflation. Does your answer depend, at least in part, on the current levels of these variables?

# Lecture Twenty-Three
# The Balance of Trade

**Scope:** The trade deficit is perhaps the most misunderstood statistic in all of economics. The single most comprehensive measure of the trade balance is called the *current account balance*, which includes trade in goods and services, returns paid on overseas investments, and unilateral financial transfers. The U.S. economy ran extremely large trade deficits in the late 1990s and into the 2000s. Conceptually, a current account deficit is always equal to the net flow of foreign investment into a country; a current account surplus is equal to a net flow of foreign investment leaving a country. The string of large U.S. trade deficits has turned the United States into the world's largest debtor economy. Trade deficits are not about "unfair" trade but, instead, result from national levels of saving and investment.

## Outline

**I.** What is the balance of trade?

**A.** The *merchandise trade balance* refers to the gap between exports and imports of goods.

**1.** If imports are higher than exports, there's a trade deficit. If exports are higher than imports, there's a trade surplus.

**2.** But in recent decades, imports and exports of services have become more important; for this reason, the merchandise trade deficit alone is a limited description of the overall trade picture.

**B.** The *current account balance* is the single statistic that captures a comprehensive picture of a nation's trade.

**1.** The current account balance includes trade in goods, services, investment income, and unilateral transfers.

**2.** For the United States, the trade in goods has typically been in deficit; trade in services has been in surplus; trade in investment income was in surplus up to about 1996 but is now in deficit; and unilateral transfers are in deficit.

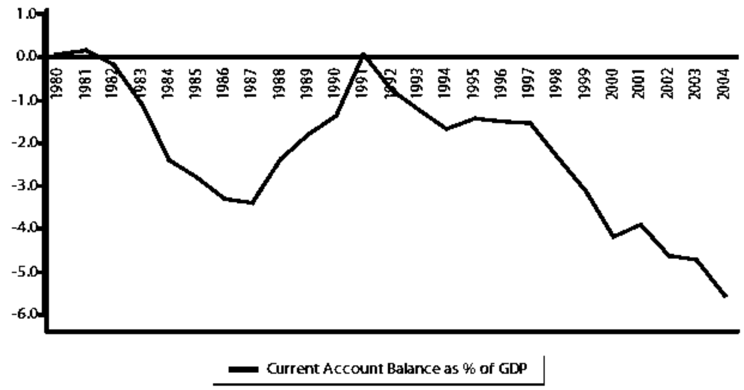
**Current Account Balance for 2003**

| | Exports | Imports | Balance |
|---|---|---|---|
| Merchandise trade | $713 billion | $1,261 billion | – $548 billion |
| Services trade | $307 billion | $256 billion | + $ 51 billion |
| Investment income | $294 billion | $261 billion | + $ 33 billion |
| Unilateral transfers | — | — | – $ 67 billion |
| TOTAL | | | – $531 billion |

Source: U.S. Bureau of Economic Analysis

**3.** Overall, the U.S. current account deficit has been fairly large for most of the 1980s, 1990s, and early 2000s.

**Current Account Balance as % of GDP**
**(1980 - 2004)**




**II.** From the late 1940s to about 1970, the U.S. trade deficit was near balance most years and typically ran a small surplus. In the 1970s, the United States ran some small trade deficits. But starting in the early 1980s, the U.S. trade deficit exploded, then declined in the late 1980s and early 1990s, before exploding again in the mid- and late 1990s and on into the 2000s

**III.** From a macroeconomic point of view, the balance of trade is intimately related to national savings and investment.

- **A.** The balance of trade always involves flows of financial capital going back and forth across national borders.
  - **1.** In macroeconomics, a trade deficit literally means the same thing as a nation that on net borrows from abroad.
  - **2.** Conversely, an economy with a trade surplus must be on net lending or investing abroad.
- **B.** The national savings and investment identity is: Domestic Savings + Inflows of Foreign Capital = Domestic Investment + Government Borrowing.
  - **1.** An *identity* is something true by definition. In this case, the quantity actually supplied of financial capital must equal the quantity actually demanded of financial capital
  - **2.** Because an identity must always hold true, a change in one part of the identity must lead to changes in at least one other part. For example, if the U.S. government borrows more, one of three things *must* happen: more private-sector saving, more foreign borrowing, or less domestic investment.
- **C.** The result of having an inflow of capital each year is that the U.S. economy becomes a net debtor to the rest of the world.
  - **1.** Relying on foreign capital investment is not necessarily a negative and probably better than not having that capital and the corresponding domestic investment.
  - **2.** However, in the long term, it would probably be better still if the United States could rely more heavily on domestic sources of capital, because then, the gains from investment would all flow to inside the United States.

**IV.** Thinking about the trade deficit in macroeconomic terms presents some unexpected implications.

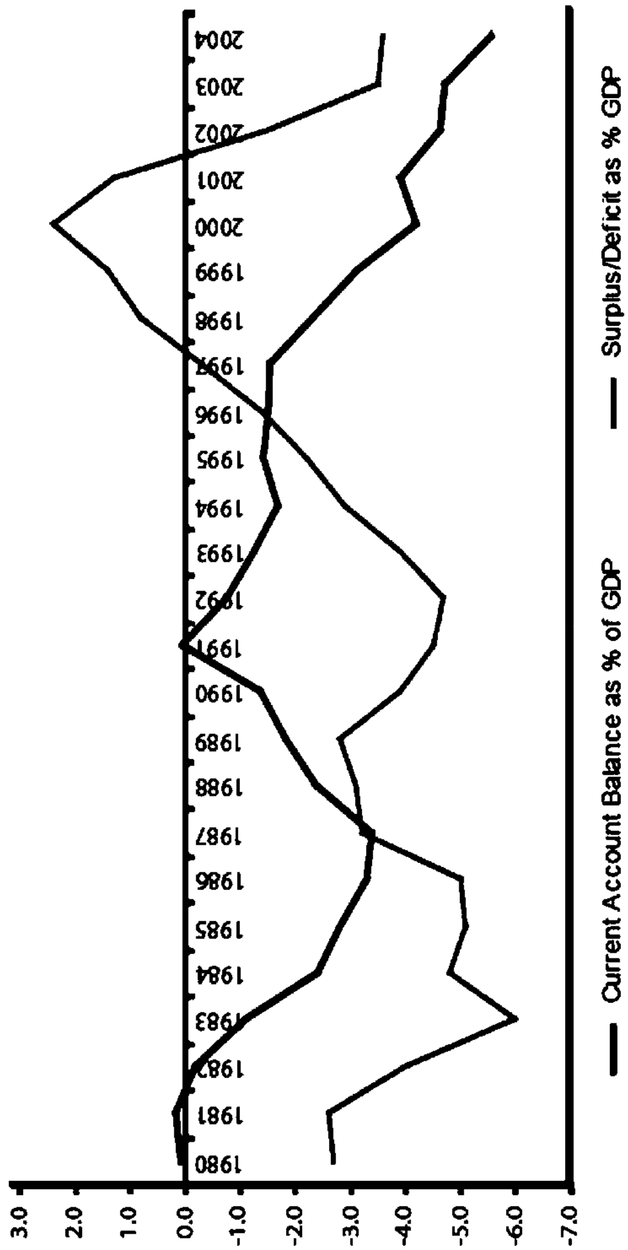
- **A.** Trade deficits are caused by patterns of national savings and investment: For example, the very large budget deficits of the mid-1980s and early 2000s were accompanied by large trade deficits. But the other two parts of the national savings and investment identity—investment and private saving—play a role in shaping the trade deficit, too.
- **B.** From a macroeconomic perspective, unfair foreign trade practices, contrary to the argument one often hears, have nothing to do with U.S. trade deficits. For example, the pattern of U.S. trade deficits since the 1980s—rapid growth, near disappearance, and rapid growth again—has certainly *not* been caused by enormous fluctuations in foreign trade barriers.

**C.** Trade deficits are not primarily determined by a higher level of trade or by greater exposure to the world economy. Both Japan with its pattern of large trade surpluses and the United States with its pattern of large trade deficits have relatively low levels of trade by world standards.

**D.** Bilateral trade deficits—that is, trade deficit with one other country—have no macroeconomic importance. There are reasons to worry about a nation's overall trade balance, but that can easily be made up of surpluses with some countries and deficits with others.

**E.** High-income countries tend to run trade surpluses and, thus, be net investors abroad, investing in low-income countries. But in recent decades, the rest of the world is investing in the United States, on net. There is no precedent for this situation, and it seems unlikely to continue in the long run.

## Current Account Balance and Budget Surplus/Deficit as % of GDP (1980 - 2004)



**Essential Reading:**

Council of Economic Advisers, "Chapter 14: The Link Between Trade and Capital Flows," in *Economic Report of the President*, February 2004, www.gpoaccess.gov/eop.

Timothy Taylor, "Untangling the Trade Deficit," *The Public Interest*, Winter 1999, pp. 82–104.

U.S. Department of Commerce, Bureau of Economic Analysis, *International Economic Accounts: Balance of Payments*, bea.gov/bea/di/home/bop.htm.

**Supplementary Reading:**

Catherine L. Mann, *Is the U.S. Trade Deficit Sustainable?* bookstore.iie.com/merchant.mvc?Screen=PROD&Product_Code=47 (Institute for International Economics Web site).

**Questions to Consider:**

1. Draw up a specific list of how you are personally affected by international markets. Think about items you buy every day, such as food and clothing. Think about local companies that depend on export sales. Think about where your pension money is invested. Think about music and culture, travel and long-distance friends.
2. You are working as a staff assistant to an economically illiterate member of Congress. Explain why the trade deficit is the same as the amount of borrowing from abroad and why a trade surplus is the same as the amount of lending abroad. Also explain the connection between the foreign borrowing of the United States and the enormous trade deficits in the 1980s.

## Lecture Twenty-Four
## Aggregate Supply and Aggregate Demand

**Scope:** Economists commonly organize their thinking about the macroeconomy with the model of aggregate demand and aggregate supply. *Aggregate supply* shows the output of the economy given the price level prevailing for inputs. *Potential GDP* refers to the maximum that an economy can produce at a given time, given the labor, capital equipment, and technology available. At any given time, *aggregate demand* may not be sufficient to reach potential output, which leads to a recession, or aggregate demand may exceed potential GDP, which leads to inflation. The model of aggregate supply and aggregate demand helps in understanding how the goals of growth, inflation, unemployment, and the trade balance are related to one another and why certain goals sometimes involve tradeoffs with others. The model also helps in determining appropriate macroeconomic policies.

## Outline

**I.** Trying to accomplish the four goals of macroeconomics at the same time may be tricky. The aggregate supply-aggregate demand model is a macroeconomic framework for thinking about how these goals relate to each other and what tradeoffs may arise. Or is it possible for an economy to attain several or all of its macroeconomic goals at the same time?

**II.** *Aggregate supply* describes the productive ability of the macroeconomy, while *aggregate demand* is made up of the five components of consumption, investment, government, exports, and imports.

- **A.** Aggregate supply is limited by potential GDP, which is the amount that the economy can produce if all resources are fully employed. At potential GDP, cyclical unemployment is zero and any remaining unemployment is accounted for by the natural rate of unemployment.
- **B.** Aggregate supply shifts for two main reasons: technological growth and sharp changes in conditions of production.
  - **1.** The process of productivity growth over time means that the productive potential of the economy is expanding gradually over time.
  - **2.** At certain times, there are sharp changes in conditions of production that can reduce what an economy is able to produce. A classic example is the sharp increases in oil prices in the 1970s.
- **C.** Aggregate demand is determined by its five components: consumption, investment, government, exports, and imports. Shifts in these factors will lead to changes in aggregate demand.

**III.** Aggregate supply in the economy must equal aggregate demand. But one theory argues that aggregate supply creates aggregate demand, while another theory argues that aggregate demand creates aggregate supply.

- **A.** Say's Law is: "Supply creates its own demand." After all, each time a good or service is produced and sold, it represents income that is earned for someone. Neoclassical economists emphasize this view today.
- **B.** The main challenge for Say's Law and neoclassical economics is the existence of recessions. If supply creates its own demand, then it's hard to explain why an economy ever shrinks in size.
- **C.** Keynes's Law is: "Demand creates its own supply." This perspective holds that the economy will often find itself in situations with unemployed workers and unused productive capacity, but it needs a surge of aggregate demand to put that capacity to use. Keynesian economists emphasize this view today.
- **D.** The main conceptual challenge for Keynes's Law is that if demand were all that mattered at the macroeconomic level, then the government could make the economy as large as it wanted just by pumping up total demand through a large increase in government spending or by legislating large tax cuts. But clearly, economies do face genuine limits on how much they can produce at a point in time.
- **E.** In the short run, aggregate demand may not increase smoothly with aggregate supply for two main reasons: fluctuations in investor or consumer sentiment and price and wage stickiness.
  - **1.** Fluctuations in investor and consumer sentiment can cause firms and consumers to bunch their aggregate demand at certain time periods, which can cause the level of aggregate demand to fall short of potential GDP or to exceed it in the short run.

2. If wages and prices in markets throughout the economy are often "sticky" and do not adjust immediately to changes in the economy, then unemployment and periods of shortage and surplus can occur.

**F.** In the long run, aggregate supply determines the size of the economy. But in the short run, aggregate demand may run behind or ahead of aggregate supply, which can lead to recession or inflation.

**IV.** The aggregate demand and aggregate supply model can be related to each of the four goals of macroeconomic policy: economic growth, low unemployment, low inflation, and the sustainable balance of trade.

**A.** Economic growth is captured by the way in which aggregate supply and potential GDP gradually increase over time. Recessions occur when aggregate demand falls short of potential GDP.

**B.** When aggregate demand and aggregate supply meet at potential GDP, there is a low rate of cyclical unemployment. The natural rate of unemployment is embodied in the concept of potential GDP.

**C.** If aggregate demand exceeds potential GDP, then the economy faces a situation of too many dollars chasing too few goods, and inflation will result. Also, if the aggregate supply experiences a negative shock, such as higher oil prices, inflation can result.

**D.** Exports, imports, and the balance of trade influence both aggregate demand and aggregate supply in various ways.

**Essential Reading:**

Council of Economic Advisers, "Chapter 1: The Year in Review and the Years Ahead," in *Economic Report of the President*, February 2005, www.gpoaccess.gov/eop.

"Oil in Troubled Waters: A Survey of Oil," *The Economist*, April 30, 2005.

**Supplementary Reading:**

Douglas A. Ruby, *The Components of Aggregate Demand*, revised January 15, 2003, www.digitaleconomist.com/ad_4020.html.

———, *Long Run Aggregate Supply and Price Level Determination*, revised January 18, 2003, www.digitaleconomist.com/as_4020.html.

**Questions to Consider:**

1. How would you expect an increase in aggregate demand to affect inflation? Output? Under what conditions would you expect it to have a bigger effect on inflation? On output?
2. Discuss which is more important in the long run in shaping national output: aggregate demand or aggregate supply. Which is more important in the short run?

## Biographical Notes

**Kenneth Arrow** (1921− ) spent most of his academic career at Stanford University, although he was on the Harvard faculty for an interlude in the late 1960s and 1970s. Arrow is known for pathbreaking theoretical work in several areas of economics, such as identifying the precise mathematical conditions under which markets will reach equilibrium, exploring when political institutions will make choices that benefit social welfare, and analyzing the economics of situations where uncertainty and imperfect information exist. In 1972, he was a co-winner of the fourth Nobel Prize in economics ever given. For a concise biography of Arrow, see www.econlib.org/library/CEEBiographies. The Web page at nobelprize.org/economics/laureates/ 1972/index.html offers an autobiography that was updated by Arrow in 2005, along with the (somewhat technical) text of his Nobel Prize address and links to his Web page at Stanford University. For an illuminating 1995 interview with Arrow, see www.minneapolisfed.org/pubs/region/95-12/int9512.cfm.

**Frederic Bastiat** (1801−1850) was not a professional economist but, rather, one of the most skilled polemicists who has ever written for a popular audience in favor of free trade and free markets. He specialized in satirical anecdotes with a sharp point, such as his proposal that sunlight should be banned because of the unfair competition it provided to candle makers. For a brief biography of Bastiat, see www.econlib.org/library/CEEBiographies.html.

**Adolf Berle** (1895−1971) was born in Boston, Massachusetts. His undergraduate and law degrees were from Harvard University. In 1927, he became a professor of corporate law at Columbia. In 1933, he wrote (with Gardiner Means) the classic book *The Modern Corporation and Private Property*, which emphasized how large corporations had developed a separation between their ownership by shareholders and their day-to-day control by corporate managers. Berle was also involved in politics and diplomacy for much of his life. He was a member of the Versailles peace delegation at the end of World War I (and he strongly opposed the outcome as being too punitive toward Germany). He had close links to the Franklin Roosevelt administration and the New Deal. He was assistant secretary of state for Latin American affairs from 1938–1944 and ambassador to Brazil from 1945–1946, after which he returned to his academic position at Columbia.

**Alan Blinder** (1945− ) has been a professor of economics at Princeton University since 1971. He is especially well-known for his work on fiscal policy, monetary policy, and the distribution of income. He served as a member of President Clinton's Council of Economic Advisers in 1993−1994 and as vice chairman of the Board of Governors of the Federal Reserve System from June 1994 until January 1996. More recently, he acted as an economic adviser to Al Gore in 2000 and John Kerry in 2004. Blinder is one of the best writers and expositors among top-notch professional economists. He is a co-author, along with William Baumol, of one of the leading economics textbooks, *Economics: Principles and Policy.* He also wrote one of the best books for describing to the general public how economists think (although the specific policy examples in the book have become dated over time), *Hard Heads, Soft Hearts: Tough-Minded Economics for a Just Society*. For an interview with Blinder, see minneapolisfed.org/pubs/region/94-12/int9412.cfm.

**Anthony Downs** (19XX− ) has been a senior fellow at the Brookings Institution in Washington, D.C., since 1977. For 18 years before that, he worked for the Real Estate Research Corporation, a consulting firm specializing in real estate and urban affairs. His most famous academic work is the 1957 book *An Economic Theory of Democracy*. In recent years, Downs has often written about traffic congestion issues, including a book called *Stuck in Traffic*, originally written in 1992 but updated and revised as *Still Stuck in Traffic* in 2004. His personal Web site with additional information is at www.anthonydowns.com.

**Milton Friedman** (1912− ) was a professor of economics at the University of Chicago for 33 years, from 1940−1973. He then moved to the Hoover Institution at Stanford University, where he has remained intellectually active as of this writing (in mid-2005). He won a Nobel Prize for economics in 1976. Among the general public, he is well known for his advocacy of free-market views, including support for school vouchers and for an all-volunteer military force. Among professional economists, he is especially well known for his work on monetary economics. One of his major works, *A Monetary History of the United States, 1867−1960*, appeared in 1963 and tells the history of the U.S. economy through its monetary policy. For a short biography, see www.econlib.org/library/CEEBiographies.html. The Nobel Prize Web site offers a nice autobiography by Friedman, updated in 2005, as well as other resources about his career, at nobelprize.org/economics/laureates/1976/index.html.

**Alan Greenspan** (1926– ) was appointed as chairman of the Federal Reserve in 1987, and his term is scheduled to expire in 2006. He has held other high-profile government positions, including chairman of the President's Council of Economic Advisers under President Ford from 1974–1977 and chairman of the National Commission on Social Security Reform from 1981–1983. He has never been an academic professor of economics. From 1954–1974 and again from 1977–1987, Greenspan ran his own economic consulting firm in New York City.

**Michael Harrington** (1928–1989) was perhaps the most prominent socialist in the United States from the 1960s through the 1980s. His 1962 book, *The Other America: Poverty in the United States*, galvanized politicians toward the set of programs that became known as the War on Poverty of the 1960s. This volume of statistics, straightforward analysis, and simply told narratives attracted an extraordinary amount of attention. In 1972, Harrington became a professor of political science at Queens College of the City University of New York.

**Robert Heilbroner** (1919–2005) spent his professional career at the New School for Social Research, where he taught from the early 1960s into the late 1990s. His most well known work is *The Worldly Philosophers*, a beautifully written and highly accessible history of economic thought. In his other work, Heilbroner was a highly unconventional economist who avoided economic jargon and mathematical and statistical modeling and often criticized the field of economics for a lack of concern with social and political issues.

**John Maynard Keynes** (1883–1946) worked in the British Civil Service in India in the early part of the 20th century, taught economics at Cambridge, and then took a position in government. After attending the World War I peace conference at Versailles, Keynes resigned in protest over the economic terms of the treaty and wrote *Economic Consequences of the Peace*, which predicted that the requirements for economic reparations from Germany in the treaty would bring financial and political disasters to Europe. Keynes believed that market forces worked fairly well in microeconomic markets, but in his most famous work, *The General Theory of Employment, Interest and Money*, published in 1936, he laid out the then-novel case that the government had a role to play in reducing the length and depth of recessions. He was also a key participant in the Bretton Woods Conference, from which emerged the International Monetary Fund and the International Bank for Reconstruction and Development (the World Bank). For a short biography, see www.econlib.org/library/ Enc/bios/Keynes.html. For a quick survey of his professional writings with some useful links, see cepa.newschool.edu/het/profiles/keynes.htm.

**Robert E. Lucas** (1937– ) began his career at Carnegie Mellon University but has been at the University of Chicago since 1980. His most prominent early work examined how people's expectations about government policy could affect or even offset the desired effects of that policy. Much of his later work has focused on understanding causes and patterns of global economic growth. He won the Nobel Prize in economics in 1995. For an autobiography and other resources, see the Nobel Prize Web site at nobelprize.org/economics/laureates/ 1995/index.html.

**Burton Malkiel** (1932– ) has spent most of his academic career at Princeton University, with an interlude on President Ford's Council of Economic Advisers from 1975–1977. Malkiel is well known as a defender of the *random walk hypothesis* of stock market prices, which is the theory that the prices of individual stocks are fundamentally unpredictable because they take all past information into account and change only in response to new information. Malkiel's highly readable book, *A Random Walk Down Wall Street*, explains the evidence behind this theory to a popular audience. His home page at Princeton is www.princeton.edu/~bmalkiel/.

**Karl Marx** (1818–1883) is the preeminent economist and philosopher of communism. His best-known work is probably *The Communist Manifesto*, with its famous closing lines: "The proletarians have nothing to lose but their chains. They have a world to win. Working Men of All Countries, Unite!" Among economists, however, Marx is better known for his analyses and predictions of how the 19th-century economy was evolving, especially in the conflicting relationship between workers and owners of capital. Although most of his specific economic predictions did not, in fact, come true, his view of the economy as involving an ongoing conflict between owners and workers has had a powerful resonance. For background information about Marx and many links to his writing, two useful Web sites are homepage.newschool.edu/het/ profiles/marx.htm and www.marxists.org.

**Gardiner Means** (1896–1998) is well known among academic economists for his classic 1932 book, *The Modern Corporation and Private Property*, co-authored with Adolf Berle, which discussed how the large corporations that had become eminent in preceding decades suffered from a separation of ownership (nominally by their shareholders) and their day-to-day control (by their managers). Means also prominently argued in the 1940s–1960s that large corporations and some large unions do not face much competition and, thus, have considerable discretion to adjust their quantity of output and the prices they charge to maintain high profits.

**John Stuart Mill** (1806−1873) was one of the great economists and political philosophers of the 19th century. In one famous essay, "On Liberty," he explained and defended the idea that society should avoid interfering in people's decisions. In another famous essay, "On the Subjection of Women," he argued for the equality of men and women. Among economists, Mill's most famous work was his *Principles of Political Economy*. The first edition was published in 1848, and the book became the standard textbook for learning economics over the following 40 years. This comprehensive work offered detailed explanations of supply and demand, money, the merits of free trade, taxation, and many other principles. Overall, Mill argued that society could separate decisions about the production of goods, which was best done through markets, and decisions about the distribution of goods, where government taxes and spending programs might play a useful role. For a short biography of Mill with links to some of his writings, see www.econlib.org/library/CEEBiographies.html. Mill also wrote one of the greatest of all intellectual autobiographies, describing how he was raised by his father to be a utilitarian genius, how he rebelled against this training as a teenager, and how his career developed. His autobiography is available on-line at www.utilitarianism.com/jsmill.htm.

**Mollie Orshansky** (1915− ) was not an academic economist but, instead, worked in government agencies, including the U.S. Children's Bureau, the U.S. Department of Agriculture, and the Social Security Administration. In the early 1960s, she was given the task of defining a poverty line. Her insight was to link the poverty line to the cost of purchasing a basic necessary diet, which in turn, allowed a poverty line that varied according to the number of people in a household. Her poverty line was officially adopted by the U.S. government in the late 1960s and, with minor changes and adjustments for inflation, has been used ever since.

**Vilfredo Pareto** (1848−1923) was not especially famous during his lifetime, although he did hold a position at the University of Lausanne in Switzerland. His work was rediscovered and given higher prominence during the 1930s. Pareto is perhaps best known today for enunciating the *Pareto principle*, that is, that a society is better off in situation A than in situation B if at least one person is better off in situation A than in B and no one is worse off. This principle is not uncontroversial, but it has proven a useful starting point for theories of social choice ever since. Pareto was also one of the first to demonstrate that for the purposes of economic theory, people did not need to measure utility in any numerical way but needed to decide only whether they preferred one set of goods and services to another. For a personal and intellectual biography with many links to his works, see homepage.newschool.edu/het/profiles/pareto.htm.

**Alban W. Phillips** (1914−1975) is known as the originator of the *Phillips curve*, which plotted data on unemployment and inflation and showed that there was a tradeoff between them; that is, higher unemployment tended to mean lower inflation and vice versa. More recent thinking commonly holds that the Phillips curve represents a short-run tradeoff, but that in the long run, unemployment reverts to a level determined by the laws and regulations that establish incentives to work and to hire in an economy. For a short biography and links, see cepa.newschool.edu/het/profiles/phillips.htm.

**David Ricardo** (1772−1823) made an immense personal fortune, estimated at more than $100 million in current dollars, in finance. He didn't become interested in economics until middle age, then focused on the subject for the rest of his life. He is best known among modern economists for the first clear demonstration of the principle of comparative advantage as applied to international trade, which shows that even if one nation has better productivity in all goods than another, both countries can still benefit from trading with each other if they focus on the goods where their relative productivity advantage is greatest or their relative productivity disadvantage is least. Ricardo is highly respected among economists in part for his rigorous, point-by-point explanations of his arguments, but this also makes for a prose style that can be dry and difficult to read. For short biographies and links, see homepage.newschool.edu/ het/profiles/ricardo.htm and www.econlib.org/library/Enc/bios/Ricardo.html.

**Joan Robinson** (1903−1983) taught at Cambridge University from 1928 until retiring in 1971. She was probably the most prominent female economist of the 20th century—which also means, perhaps, ever. Her most prominent work involved developing a theory of imperfect competition, that is, a theory of firms that were not monopolies but still had some power to raise prices without losing all their sales to competitors. For a useful biography and links, see homepage.newschool.edu/het and www.econlib.org/library/Enc/ bios/Robinson.html.

**Jean-Baptiste Say** (1767–1832) discovered economics by reading Adam Smith and became one of the most well known expositors of Smith's views. His eventful career included editing a publication that encouraged free-market thinking in the late 1700s, writing a *Treatise on Political Economy* that got him into trouble with Napoleon, making a private fortune running a cotton factory, and eventually holding some of the first academic appointments in the subject of economics in France. He is remembered among modern economists for *Say's Law*, which holds that for the macroeconomy as a whole, supply creates its own demand. Say did argue for something like Say's Law, but he always argued the theme with a host of sensible qualifications and concerns that are often ignored today. For short biographies with links to some of his work, see homepage.newschool.edu/ het/profiles/say.htm or www.econlib.org/library/ Enc/bios/Say.html.

**Adam Smith** (1723–1790) is viewed as the originator of the field economics. Of course, many others had written on economic issues at earlier times, but in his pathbreaking book *The Wealth of Nations*, Smith provided a comprehensive overview of how economies worked, ranging from the division of labor in factories to issues of foreign trade, money, taxation, and public education. Smith saw economics within a larger context of ethics and justice. He was originally a professor of logic and, later, of moral philosophy at Glasgow University. His first major work was *The Theory of the Moral Sentiments* and his third major work, which we know only from notes because he never completed it, was to be about jurisprudence. For a biography and links, see www.econlib.org/library/ CEEBiographies.html and for more links to Smith's work and writings about him, see cepa.newschool.edu/het/profiles/smith.htm.

**Robert Solow** (1924– ) has spent his academic career at the Massachusetts Institute of Technology. He won the Nobel Prize in 1987 for work exploring the determinants of economic growth, which came to the then-surprising conclusion that the main source of economic growth in an advanced economy is not more investment in physical capital nor more investment in education but, rather, new technology and new methods of production. He is also known as one of the most lucid and graceful writers and speakers in the economics profession. For an example, see his autobiography and other links at the Nobel Prize Web site at nobelprize.org/economics/laureates/1987/index.html.

**Herb Stein** (1916–1999) worked in a wide array of government economist jobs, culminating in serving as chairman of the Council of Economic Advisers under Presidents Nixon and Ford. As an economist, he was known as a pragmatist and a problem-solver, rather than someone who created new theories. He also blossomed into one of the most lucid and lively writers in the economics profession. For a sample of his writings, see the columns he wrote for Slate magazine toward the end of his life, which are collected at slate.msn.com/?id=3944&cp=2553&nav=navom. A particular favorite of mine is a reflection on the meaning of marriage—from a man who was married for 61 years before the death of his wife—at slate.msn.com/id/2562.

**John Taylor** (1946– ) bounced between Columbia and Princeton Universities early in his career before settling at Stanford. From 2001–2005, he served as undersecretary of treasury for international affairs. He has made a number of important contributions to macroeconomics, including models that seek to explain the stickiness of prices in terms of contractual relations in the economy and a so-called "Taylor rule" for describing and predicting how central banks adjust interest rates. His Stanford Web page has biographical information and links to much of his work at www.stanford.edu/~johntayl.

**Paul Volcker** (1927– ) was chairman of the Federal Reserve from 1979–1987; that is, he was the chairman who broke the back of the double-digit inflation of the 1970s and early 1980s. Volcker did so by being willing to raise interest rates, which brought on a severe recession in the early 1980s but has left a legacy of low inflation in the decades since. He has held a variety of other roles, including undersecretary of the U.S. Treasury in the early 1970s, president of the New York Federal Reserve Bank in the early 1970s, and head of a commission to investigate possible corruption in the United Nations' Oil-for-Food program with Iraq in the 2000s.

## Bibliography


**Essential Reading:**

"American Productivity: The New 'New Economy.'" *The Economist*, September 11, 2003. This article discusses whether the U.S. gains in productivity in the early 2000s are likely to be sustained and argues that ultimately, the information technology revolution may have as big an impact on productivity as did electricity—a previous mega-innovation.

Asch, Peter, and Gigliotti, Gary A. "The Free Rider Paradox—Theory, Evidence, and Teaching." *Journal of Economic Education*, 22:1, Winter 1991. An interesting article that points out that people don't free ride in many situations, at least not completely.

"Asset Management: Other People's Money." *The Economist*, July 3, 2003. *The Economist* regularly runs excellent surveys. This one focuses on the evolution of the industry of managing other people's money.

Bastiat, Frederic. *Economic Sophisms*. Arthur Goddard, trans. and ed. Irvington-on-Hudson, NY: The Foundation for Economic Education, 1996 (1845). Available at www.econlib.org/library/Bastiat/basSoph.html. Bastiat was a talented polemicist, with a gift for showing the absurdity in certain points of view. This book is a series of short essays, good for dipping in and out. For example, I recommend Bastiat's essay on the "negative railway."

Bebchuk, Lucien, and Jesse Fried. "Pay Without Performance: The Unfulfilled Promise of Executive Compensation." *Milken Institute Review*, 2nd quarter 2005. The authors lay out the difficulties that shareholders face in monitoring corporate executives and suggest that something along the lines of a revolution in shareholder power is needed. Available at www.milkeninstitute.org. Click on "Publications" and follow the links.

Bhagwati, Jagdish. "Protectionism." *The Concise Encyclopedia of Economics*. Library of Economics and Liberty. Available at www.econlib.org/library/Enc/ Protectionism.html. Bhagwati is one of the most fierce and able defenders of free trade. This short essay will give you a taste of his arguments and style.

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———. *The Long-Term Budget Outlook*. December 2003. Available at www.cbo.gov. The nonpartisan research arm of Congress offers a number of budget scenarios out to 2050, with a particular emphasis on Social Security, health-care costs, and revenue options.

Council of Economic Advisers. *Economic Report of the President.* Each year (usually in February), the Council of Economic Advisers, an agency of academic economists appointed by the president, publishes this report. It typically includes a couple of chapters that offer an overview of macroeconomic developments in the last year or two, then has a set of chapters on specific topics in economic policy. In the back are 120 pages or so of convenient tables with different breakdowns of GDP, employment, inflation, international trade, government taxes and spending, financial

markets, and more—usually going back to about 1960. The most recent year and the past few years are available at www.gpoaccess.gov/eop.

———. "Chapter 3: Policies for Dynamic Labor Markets." In *Economic Report of the President*. February 2003. Available at www.gpoaccess.gov/eop. Discussions of movement in and out of the labor force, skill development, and other issues.

———. "Chapter 1: Lessons from the Recent Business Cycle." In *Economic Report of the President*. February 2004. This chapter draws out five lessons of the recession of 2001 and its aftermath, including lessons about why recessions happen and about countercyclical macroeconomic policy. Available at www.gpoaccess.gov/eop.

———. "Chapter 8: Regulating Energy Markets." In *Economic Report of the President*. February 2004. Available at www.gpoaccess.gov/eop. An accessible discussion of some of the ways flexible prices and markets work well in encouraging sensible consumption and production decisions and how a combination of market forces and misguided regulation can sometimes go very wrong, as in the market for electricity.

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"Cracking Down on the Cartels." *The Economist*, April 3, 2003. This three-page survey discusses how many oligopolistic cartels have been investigated and brought down in recent years.

Cross, Sam Y. *All About…The Foreign Exchange Market in the United States.* Federal Reserve Bank of New York, 1998. Available at www.ny.frb.org/ education/addpub/usfxm. The author offers a clear and lucid description of how the foreign exchange market works behind the scenes—that is, through a network of dealers and brokers, together with their customers and the occasional participation of central banks.

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"The Diamond Cartel: The Cartel Isn't Forever." *The Economist*, July 15, 2004. De Beers has long been a dominant force in the market for diamonds, but under competitive pressure from other producers, its position is weakening.

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Federal Reserve System. *Purposes and Functions*. 1994. A public information booklet that describes the structure of the Fed and the goals and implementation of monetary policy and has some discussion of other functions, such as bank oversight and consumer protection. Available at www.federalreserve.gov/ pf/pf.htm.

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Federal Reserve Bank of Chicago. *Modern Money Mechanics*. 1994. This useful booklet walks through the steps of how banks work and how banks create money. It's apparently not in print from the Chicago Fed any more, but typing the title and Federal Reserve Bank of Chicago into an Internet search engine will result in a number of hits on the Web. For example, at the time of this writing, it is at www.worldnewsstand.net/money/mmm2.html.

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Federal Trade Commission. *Promoting Competition, Protecting Consumers: A Plain English Guide to Antitrust Laws*. Undated. Available at ftc.gov/bc/ compguide/index.htm. A nice introduction to public policy with regard to antitrust, monopoly, mergers, and competition.

Friedman, Benjamin M. "Why the Federal Reserve Should Not Adopt Inflation Targeting." *International Finance*, 7:1, 2004. This article can be read in tandem with the article by Frederick Mishkin in the same issue.

Friedman, Milton, and Rose Friedman. "Chapter 1: The Power of the Market." In *Free to Choose*. New York: Harcourt Brace Jovanovich, 1980. Milton Friedman is one of the great economists of the 20th century. In this book aimed at a generalist readership, he describes and defends how market forces work.

Friedman, Milton, and George J. Stigler. "Roofs or Ceilings? The Current Housing Problem." Originally published in *Popular Essays on Current Problems*, 1:2. New York: The Foundation for Economic Education, 1946. Reprinted with revisions, along with many other articles on rent control, in *Rent Control: A Popular Paradox*. Vancouver: The Fraser Institute, 1975.

"The Global Environment: The Great Race." *The Economist*, July 4, 2002. This survey discusses the ongoing race between economic development and environmental dangers and how market-oriented environmental tools can help to ease the tension between the two.

Gruben, William C. *Yesterday's Crisis Countries: Where Are They Now?* Federal Reserve Bank of Dallas, January 2001. Available at www.dallasfed.org/ research/indepth/2001/id0101.pdf. The author discusses the international financial crashes in Mexico, Thailand, Indonesia, Korea, Russia, and Brazil, looking for points of similarity and difference and considering possible policy options.

Hardin, Russell. "The Free Rider Problem." *The Stanford Encyclopedia of Philosophy*, Summer 2003. Edward N. Zalta, ed. Available at plato.stanford.edu/ archives/sum2003/entries/free-rider. This useful entry walks through the topics of public goods, free-riding, collective action, and the role of democracy.

"Health-Care Finance: The Health of Nations." *The Economist*, July 15, 2004. A thoughtful survey that asks whether the health-care industry is providing value commensurate with the money spent. It offers a useful discussion of how health care is financed in countries around the world and the consequences of these different choices.

International Monetary Fund. *World Economic Outlook.* The IMF publishes this volume twice a year. The first chapter goes through the regions of the world, discussing current economic issues facing them. Later chapters then examine particular issues. For example, the April 2005 issue has chapters on the world oil market and on the role of remittances from workers abroad in the economic development of low-income countries. Current and past issues of the journal are available on the IMF Web site at www.imf.org/external/pubs/ft/weo/ weorepts.htm.

Irwin, Douglas. *Free Trade under Fire*. 2nd ed. Princeton: Princeton University Press, 2005. Irwin walks carefully through the many arguments that have been made against free trade, using his skills both as an economist and a historian. He offers a fair-minded review of the strengths and weaknesses of these arguments—but is ultimately a strong supporter of free trade.

 

Kerr, Steven. "On the Folly of Rewarding A, While Hoping for B." *Academy of Management Journal*, 18, 1975. This classic essay gives a series of examples and arguments concerning situations in which various organizations hoped for outcome B, rewarded outcome A—and then were surprised when they got outcome A. Incentives matter!

Krugman, Paul. "Technology's Revenge." *Wilson Quarterly*, Autumn 1994. An eminent economist argues that technology is the most likely cause of growing income inequality. He then offers a provocative historical twist: Even if technology is bringing greater inequality just now, technological waves of the past have sometimes brought greater equality, as when the assembly line helped millions of workers reach upper-middle-class status during their careers. He predicts that information technology will also, eventually, bring about a wave of greater equality.

"The Lender's Long Lament." *The Economist*, December 25, 1993. Those who charge interest have been unpopular for centuries. Yet as this article shows, the history of public attitudes toward moneylenders over the last few centuries has been filled with ambiguity. The reader might consider a person's likely attitudes toward a bank when his or her loan for a home mortgage has been approved and the likely attitude if the bank foreclosed on the loan and sells off the property because the mortgage payments weren't made.

Leonard, George. "Competition." *Esquire*, May 1984. This little essay explores the adverse reaction that some people have to the concept of competition and some ways of thinking about competition that cast it in a more positive light.

"Low-Cost Airlines: Turbulent Skies." *The Economist*, July 8, 2004. A discussion of how low-cost airlines are challenging the established firms in both the United States and Europe, thus creating both additional competition and occasional calls for re-regulation of the airline industry.

Mishkin, Frederick S. "Why the Federal Reserve Should Adopt Inflation Targeting." *International Finance,* 2004, 7:1. This article can be read in tandem with the article by Benjamin Friedman in the same issue.

Office of Management and Budget. "Part III: The Long Run Budget Outlook." In *Analytical Perspectives: Budget of the United States Government, Fiscal Year 2006*. February 2005. Available at www.gpoaccess.gov/usbudget. This discussion from the proposed 2006 budget shows long-term spending and tax trends and emphasizes how Social Security and Medicare are due to drive up government spending under current law.

"Oil in Troubled Waters: A Survey of Oil." *The Economist*, April 30, 2005. Sharp increases in oil prices are often given as a reason for negative shocks to aggregate supply. However, sharp increases in oil prices in 2004 didn't cause a recession that year. This survey explores why and discusses the future of the oil industry.

"Open Skies and Flights of Fancy." *The Economist*, October 2, 2003. This article gives a nice overview of what could be the next big step in airline competition: that is, letting all airlines, whatever their country of origin, compete all around the world. Along the way, it discusses the history of airline regulation and deregulation around the world.

Ortiz, Guillermo. *Recent Emerging Market Crises: What Have We Learned?* Per Jacobsson Foundation, 2002. Available at www.perjacobsson.org/lectures/2002-ortiz.pdf. Ortiz was the head of the central bank of Mexico at the time of giving this lecture; thus, he had a front-row seat for many of the financial crises of the 1990s and early 2000s. This thoughtful overview proceeds step-by-step, looking for common elements of the crises and possible policy solutions.

"Paper Money: Crisp and Even." *The Economist*, December 20, 2001. The single biggest introduction of a new currency in history occurred at the start of 2002, when most of the countries of the European Union agreed to give up their national currencies for the euro. This article discusses the practical difficulties of introducing the euro—along with some cautionary lessons from history about failed currencies of the past.

Penner, Rudolph G., Isabel V. Sawhill, and Timothy Taylor. "Chapter 3: Inequality and Opportunity: Winners and Losers in the New Economy." In *Updating America's Social Contract: Economic Growth and Opportunity in the New Century*. New York: W. W. Norton, 2000. We discuss the trends in inequality, the possible explanations behind the trends, and the range of policy options for addressing them.

Read, Leonard E. "I, Pencil." *The Freeman*, December 1958. Available at www.econlib.org/library/Essays/rdPncl1.html. The essay that describes how the components of a pencil are made, with far-reaching economic connections all around the world.

Ritter, Joseph A. "Feeding the National Accounts." In *Review: Federal Reserve Bank of St. Louis*. 2000. Ritter offers a step-by-step and survey-by-survey account of the sources for the data behind the GDP estimates.

Robbins, Lionel. *An Essay on the Nature and Significance of Economic Science.* London: Macmillan, 1935. The short, classic philosophical essay that, especially in its opening chapters, defines how many economists see their field as the study of choices in a world of scarcity.

Rockoff, Hugh. "Price Controls." *The Concise Encyclopedia of Economics*. Library of Economics and Liberty. Available at www.econlib.org/library/ Enc/PriceControls.html. Rockoff uses a variety of historical examples to point out how government attempts to prevent prices from adjusting to their equilibrium level, through either price floors or price ceilings, run into a predictable set of unintended consequences.

Rowen, Harry. "World Wealth Expanding: Why a Rich, Democratic, and (Perhaps) Peaceful Era Is Ahead." In *The Mosaic of Economic Growth*. Ralph Landau, Timothy Taylor, and Gavin Wright, eds. Stanford, CA: Stanford University Press, 1996. In this thoughtful article, Rowen reviews the economic and political prospects of the largest developing countries around the world and explains why economic prospects for the next couple of decades are reasonably rosy. In reading, you might pay special attention to the factors that could derail this rosy scenario. Do you find yourself in agreement with Rowen that these aren't especially likely to happen?

Shaw, Jane W. "Public Choice Theory." *The Concise Encyclopedia of Economics*. Library of Economics and Liberty. Available at www.econlib.org/ library/Enc/PublicChoiceTheory.html. The public choice field of economics applies the idea that people act in their own self-interest to the actions of voters, lobbyists, and politicians and points out conditions under which governments can fail to act in the broader public interest.

Smith, Adam. *An Inquiry into the Nature and Causes of the Wealth of Nations*. 5th ed. Edwin Cannan, ed. London: Methuen and Co., 1904 (1776). Available at www.econlib.org/library/Smith/smWN.html. This book is usually credited as the first systematic work of economic analysis, and Adam Smith is usually named as the founder of the systematic study of economics. The book is generally very lucid and readable, and the table of contents is quite helpful in locating topics.

Spence, A. Michael. "Science and Technology Investment and Policy in the Global Economy." In *The Mosaic of Economic Growth*. Ralph Landau, Timothy Taylor, and Gavin Wright, eds. Stanford, CA: Stanford University Press, 1996. Spence offers one possible solution to increase R&D funding that is sure to be controversial: international arrangements for sharing the funding of science and technology.

Statistical Abstract of the United States. Annual. This desk reference pulls together government statistics, economic and otherwise, from a wide range of
sources. It's the first place to look for information; if you want more detail,
follow the footnotes.

Stone, Deborah A. "Making the Poor Count." *The American Prospect*, Spring 1994. This is the story of Mollie Orshansky, the woman who designed the official poverty line. The author talked with Orshansky and offers an interesting view of what Orshansky was thinking about when she designed the poverty line.

Taylor, Timothy. "Department of Misunderstandings." *Milken Institute Review*, 3rd quarter 2004. This article discusses the history of the "lump-of-labor" fallacy that the economy has a fixed number of jobs that need to be protected from women, immigrants, new technology, and long working hours. In the early 2000s, the fallacy manifested itself as the claim that high productivity was reducing the number of jobs.

———. "The Economy in Perspective." *The Public Interest*, Fall 2004. I review the macroeconomic performance of the U.S. economy from 2001 to 2004, along with how the spending and tax policies of the first George W. Bush administration affected the economy and were affected by the economy.

———. "Thinking about a New Economy." *The Public Interest*, Spring 2001. I put the current surge in productivity in some historical context and discuss what makes it different and likely to continue.

———. "The Truth about Globalization." *The Public Interest*, Spring 2002. I discuss how to measure globalization and how far globalization has proceeded, along with evaluating the arguments on how globalization brings economic gains.

———. "Untangling the Trade Deficit." *The Public Interest*, Winter 1999. I explain why a trade deficit has macroeconomic underpinnings and is not related to unfair trade barriers.

U.S. Census Bureau. "Poverty." Available at www.census.gov/hhes/ www/poverty.html. This Web site covers such issues as the definition of poverty and how it has changed over time. It also provides an annual report on the poverty rate among different groups, as well as historical data.

 

U.S. Department of Commerce, Bureau of Economic Analysis. *International Economic Accounts: Balance of Payments*. This Web site is the official starting point for data on the current account balance and its components. Check the most recent news release and look at some historical data. Available at bea.gov/bea/di/home/bop.htm.

———. *National Economic Accounts: Gross Domestic Product*. Available at bea.gov/bea/dn/home/gdp.htm. This Web site lists the most recent news announcements about GDP, as well as providing historical data.

U.S. Department of Justice. *Antitrust Enforcement and the Consumer*. Available at www.usdoj.gov/atr/overview.html. The DOJ, along with the FTC, is responsible for enforcing antitrust laws. Here is a brief, accessible explanation of what laws the DOJ enforces and how such enforcement benefits the consumer.

———. *Timeline of Antitrust Enforcement Highlights at the U.S. Department of Justice*. Available at www.usdoj.gov/atr/timeline.pdf. This timeline, best viewed on the Web, is a compact three-page summary of major antitrust actions going back through the 20th century.

U.S. Department of Labor, Bureau of Labor Statistics. *Consumer Price Indexes*. Available at bls.gov/cpi/home.htm. This is the official Web site for the Consumer Price Index, with current data, historical data, answers to frequently asked questions, and a wealth of background material.

———. *Labor Force Statistics from the Current Population Survey*. Available at bls.gov/cps/home.htm. This Web site is the official starting point for unemployment rates, current or historical, broken down in many different ways.

———. *Working in the 21st Century*. Available at bls.gov/opub/working/ home.htm. This Web-based presentation is a series of charts and discussion about the evolution of the U.S. labor force, covering issues from education to retirement, often with information from 1950 and projections several decades into the future.

Wirtz, Ronald A. "Will That Be Cash, Check or Debtor's Hell?" "Buyer Beware." "A Helping Hand, or New Age Loan Sharking?" *FedGazette: Federal Reserve Bank of Minneapolis*, October 2000. Available at minneapolisfed.org/ pubs/fedgaz/ffeature.cfm. These three articles explore how borrowers, especially low-income borrowers, can become trapped in a world of high-interest credit-card overruns and payday loans.

World Bank. *Global Economic Prospects.* The World Bank publishes this volume annually. Each year, it begins with a global outlook focused on the developing countries of the world, then turns to a particular theme. For example, the 2005 report focuses on how regional efforts at developing trade and markets can affect economic development. An appendix at the back of the volume goes through the regions of the world one at a time. The report is available free at the World Bank Web site, www.worldbank.org, although you will need to look in the "Publications" area or type the title into the "search" command to find it.

World Bank. World Development Indicators. Annual. This book is the place to look for tables of economic statistics that compare all countries and regions of the world.

"The World Economy: A New Economy for the New World?" *The Economist*, September 23, 1999. In the late 1990s, with the U.S. economy booming and no inflation in sight, some economists wondered if the Phillips curve tradeoff between inflation and unemployment was truly dead. This article reviews the evidence and arguments on the tradeoff and concludes that inflation is not nearly dead.

Zeckhauser, Richard. "Insurance." *The Concise Encyclopedia of Economics*. Library of Economics and Liberty. Available at: www.econlib.org/library/Enc/ Insurance.html. A solid basic explanation of insurance markets, moral hazards, and adverse selection.

**Supplementary Reading:**

Abraham, Katharine, and Christopher Mackie, eds. *Beyond the Market: Designing Non-Market Accounts for the United States.* Washington, DC: National Research Council of the National Academies, National Academies Press, 2005. Available on the Web at www.nap.edu, although it's in a format that isn't easy to read. This report examines the possibilities for expanding the concept of GDP to include leisure, health, education, environmental concerns, and other values—to make it a more complete measure of society's output broadly understood.

Advisory Commission to Study the Consumer Price Index. *Toward a More Accurate Measure of the Cost of Living: Final Report to the Senate Finance Committee*. December 4, 1996. Available at www.ssa.gov/history/ reports/boskinrpt.html. In this report, done for the Senate Finance Committee, five economists evaluate potential biases in the Consumer Price Index. Although these biases have been partially addressed over time, the background and conceptual discussion remain relevant.

Bastiat, Frederic. "Reciprocity" and "A Petition." In *Economic Sophisms*. Arthur Goddard, trans. and ed. Irvington-on-Hudson, NY: Foundation for Economic Education, 1996 (1845). Bastiat was a formidable polemicist, and these

are two of his most famous satirical essays against protectionism. In "Reciprocity" (First Series, chapter 10), two countries compete to make it harder and harder to trade with each other—because they both believe that fewer imports will make them wealthier. "A Petition" (First Series, chapter 7) is an impassioned argument from the candlestick makers for government protection from the unfair and job-killing competition posed by sunlight. Available at www.econlib.org/library/ Bastiat/basSoph.html.

Bordo, Michael D., and David C. Wheelock. "Monetary Policy and Asset Prices: A Look Back at Past U.S. Stock Market Booms." In *Review: Federal Reserve Bank of Saint Louis*. November/December 2004. The authors present an in-depth historical overview of the connections between monetary policy and asset booms. They find little evidence that monetary policy has played a major role in causing asset booms and caution hesitancy before using monetary policy to deflate an asset boom.

Bridges, William. "The End of the Job." *Fortune*, September 19, 1994. Back in the 19th century, when the bulk of the population worked on farms, the idea of a "job," in which you worked a fixed number of hours in a factory owned by someone else, was viewed with grave discontent. Today, as more and more people become independent contractors, providing services by telecommuting from a distance, the notion of a "job" is changing dramatically again. The author makes a provocative argument that the "job" as we have known it this last century "is vanishing like a species that has outlived its evolutionary time."

Buchanan, James, and Herbert Stein. "Should the Senate Pass a Balanced Budget Constitutional Amendment?" *Congressional Digest*, February 1995. See the "pro" article from James Buchanan on p. 50 and the "con" article from Herbert Stein on p. 53. Early in 1995, the U.S. Congress debated a plan for a constitutional amendment to require balancing the budget. The plan passed the House of Representatives but did not receive the two-thirds vote required in the Senate. This magazine contains a number of pro-and-con arguments. The two recommended here are from prominent economists: Buchanan is a Nobel laureate; Stein was a policy economist in Washington for decades.

Centers for Medicare and Medicaid Services. *2005 Annual Report of the Boards of Trustees of the Hospital Insurance and Supplementary Medical Insurance Trust Funds*. March 23, 2005. Each year around the end of March, the trustees of Medicare publish this readable report. The facts and analysis in this report provide the baseline for policymakers' discussion of Medicare. The current report and reports for the last few years are available at www.cms.hhs.gov/ publications/trusteesreport.

Citro, Constance F., and Robert T. Michael. *Measuring Poverty: A New Approach*. Washington, DC: National Academy Press, 1995. This report, from a group of social scientists, offers a new definition of the poverty line. This involves both a comprehensive critique of the current definition of poverty, how it might be redefined, how the new definition would change the poverty rate, and who is below the poverty line.

Clement, Douglas. "Inflation and the Phillips Curve: The Magic Is Gone." In *The Region: Federal Reserve Bank of Minneapolis*. September 2001. This article reviews several decades of evidence and argues that the short-run Phillips curve tradeoff was never as reliable as it looked and is now unsupported by evidence. The argument is the case that the economy has a fixed natural rate of unemployment, not an unemployment-inflation tradeoff. Thus, it takes the other intellectual side from the article by Jeffrey Fuhrer.

Coase, R. H. "The Lighthouse of Economics." *Journal of Law and Economics*, 17:2, October 1974. Lighthouses have often been used by economists as an example of a public good. In this classic article, Nobel laureate Coase presented evidence that many lighthouses were privately built—and that apparently the free-rider problem wasn't as severe as many economists have assumed.

Congressional Budget Office. *Budget Options*. February 2005. This report is produced annually by the CBO, the nonpartisan research arm of the Congress. It lists literally hundreds of possible spending cuts and tax increases, with projections for how they would affect the deficit over the next few years. It also offers a few paragraphs of explanation about each one. Many teachers of economics use this book as a framework for letting students design their own plan for reducing the budget deficit. Available at www.cbo.gov.

———. *Historical Effective Federal Tax Rates: 1979 to 2002*. March 2005. The nonpartisan research agency for Congress regularly publishes different breakdowns of the tax rates paid by different income groups over time. Other CBO publications also include forecasts of the rates by income group over the next decade or so. These reports are available at www.cbo.gov. Click on "Publications" and follow the links.

———. *Federal Terrorism Reinsurance: An Update*. January 2005. Can private insurance markets provide insurance against terrorism? What are the moral hazards and adverse selection problems likely to arise? In fact,

 

most governments around the world help to provide terrorism insurance. This report summarizes the situation in the United States. Available at www.cbo.gov.

Council of Economic Advisers. "Chapter 6: A Pro-Growth Agenda for the Global Economy." In *Economic Report of the President*. February 2003. This chapter offers some discussion of growth patterns in the world economy and emphasizes the importance of investment in people and a rule of law to economic development. Available at www.gpoaccess.gov/eop.

"Counting the Jobless." *The Economist*, July 22, 1995. Unemployment rates can be adjusted to include "discouraged" workers or "underemployed" workers. This one-page article describes a recent report that carries out such a calculation for the industrialized nations of the world. In the end, the conclusion is that the old-fashioned unemployment rate may remain the best single measure of pressure in the labor market.

"Debating the Minimum Wage." *The Economist*, February 1, 2001. This brief article sums up the state of the academic research about whether minimum wages cause job loss.

Environmental Protection Agency. *Draft Report on the Environment*. 2003. Available at www.epa.gov/indicators/roe/index.htm. This report provides a useful summary of environmental conditions and trends affecting air, water, land, pollutants, and ecology. As with many government reports, it's better at summarizing facts than at offering solutions.

Farrell, Paul B. *The Lazy Person's Guide to Investing: A Book for Procrastinators, the Financially Challenged, and Everyone Who Worries About Dealing with Their Money.* New York: Warner Business Books, 2004. A well-known columnist for CBS *MarketWatch*, Farrell does a nice job of describing for a popular readership how saving in a well-diversified portfolio with long-term horizons lets the power of compound interest increase your wealth.

Federal Reserve. "Chapter 4: The Federal Reserve in the International Sphere." In *Purposes and Functions*. 1994. Available at www.federalreserve.gov/pf/ pdf/frspf4.pdf. This chapter focuses in particular on the role of the Federal Reserve in foreign exchange markets.

Federal Reserve Bank of Atlanta. *The Story of Money*. A Web exhibit devoted to the history of money, with a number of examples. Available at www.frbatlanta.org/atlantafed/visitors_center/tour/story.cfm.

Federal Reserve Bank of New York. *The Foreign Exchange and Interest Rate Derivatives Markets: Turnover in the United States*. April 2004. Available at www.ny.frb.org/markets/triennial/fx_survey.pdf. Once every three years, the New York Fed and 51 other central banks around the world do a survey of the large participants in foreign exchange markets. The survey results are a little dry, but if you want to get a real image of how foreign exchange markets work, the triennial survey is the place to start.

Fieleke, Norman S. "International Capital Transactions: Should They Be Restricted?" *New England Economic Review*, March/April 1994. One common suggestion for addressing international financial crises is to slow down the flow of international finance through some sort of tax or other restrictions. The author evaluates these proposals and finds that they are in some ways appealing but ultimately unpersuasive.

Flamme, Karen. "A Brief History of Our Nation's Paper Money." *Annual Report: Federal Reserve Bank of San Francisco*. 1995. Available at www.frbsf.org/publications/federalreserve/annual/1995/history.html. A description of the evolution of U.S. currency from the American Revolution to the present.

Fuhrer, Jeffrey C. "The Phillips Curve Is Alive and Well." *New England Economic Review of the Federal Reserve Bank of Boston*, March/April 1995. This article reviews several decades of evidence. It argues that even after the macroeconomic experiences of the 1970s, 1980s, and early 1990s, the short-run Phillips curve properly understood is a strong empirical relationship. Thus, it takes the other intellectual side from the article by Douglas Clement.

Gibbons, Robert. "Incentives in Organizations." *Journal of Economic Perspectives*, 12:4, Fall 1998. A discussion of how economists think about solutions to the principal-agent problem, with a particular focus on how workers might be paid in different settings. Because this article is written for economists, it is likely to be a tough read for others. On the other hand, although it has a small bit of algebra, the text is otherwise nonmathematical, and the language is introduced as it is used.

Gottlieb, Bruce. "How Much Is That Kidney in the Window?" *New Republic*, May 22, 2000. This article offers a nice summary of the arguments for and against allowing the sale of kidneys.

International Financial Institutions Advisory Commission. *International Financial Institutions Reform*. May 2000. Available at. www.house.gov/jec/ imf/meltzer.pdf. In 1998, Congress appointed a commission headed by an economist named Allan Meltzer to consider the appropriate role of international financial institutions, such as the

International Monetary Fund and the World Bank. Meltzer is a well-known skeptic about such institutions; thus, this report suggests various ways that the role of international institutions could be more tightly defined.

International Monetary Fund. *Finance and Development*. This journal offers an authoritative and honest description of many issues in the global economy based on current economic research. The journal is not always the liveliest reading one could find, but it is intended for the general-interest reader, and the articles are typically quite accessible. Subscriptions are free, and current and past issues are available at www.imf.org/external/pubs/ft/fandd/fda.htm.

Krugman, Paul. *Peddling Prosperity*. New York: W. W. Norton & Company, 1994. For our purposes, the relevant chapters are 9 and 10 and the appendix to 10, in which Krugman offers a splendid explanation of why the argument for a "strategic" trade policy, which would favor certain key industries, is so misguided. More broadly, Krugman suggests that the rhetoric of "competitiveness" (like the rhetoric of "fair trade") will often lead to misguided economic policy.

Kuran, Timur. "Islam and Mammon." *Milken Institute Review*, 3rd quarter 2004. An expert on Islamic economics considers the potential conflict between Islamic prohibitions on the payment of interest and a modern financial sector. Available at www.milkeninstitute.org; click on "Publications" and follow the links to the MIR.

Malkiel, Burton. *A Random Walk Down Wall Street*. Updated and revised 8th ed. New York: Norton, 2004 (1973). Malkiel is a high-powered academic who offers an accessible popular treatment of the economic logic and academic work behind the random walk theory of financial markets. If you want a thorough understanding of the random walk theory, the evidence behind it, and what it implies for personal investing, this classic book is the place to get it.

Mankiw, Gregory N. *Principles of Economics*. 3rd ed. Forth Worth, TX: Thomson South-Western, 2004. Some listeners may want to supplement these lectures with an introductory economics textbook. This book, written by a top Harvard economist who also served a stint as an economic adviser for George W. Bush, is a fairly recent, highly readable, and very popular textbook.

Mann, Catherine L. *Is the U.S. Trade Deficit Sustainable?* Washington, DC: Institute for International Economics, September 1999. Available at the IIE Web site: bookstore.iie.com/merchant.mvc?Screen=PROD&Product_Code=47. As trade deficits have gotten larger in the 2000s, the question posed in the title of Mann's 1999 book has only seemed more relevant. You can also look under her name at the IIE Web site and usually find some of her more recent analyses on this subject.

McConnell, Campbell R., and Stanley L. Brue. *Economics: Principles, Problems, and Policies*. 16th ed. New York: McGraw-Hill, 2004. Some listeners may want to supplement these lectures with an introductory economics textbook. This book has been the bestseller for several decades.

"Men and Machines: Technology and Economics Have Already Revolutionized Manufacturing. White-Collar Work Will Be Next." *The Economist*, November 11, 2004. This article discusses how technology is causing the division of labor to shift, first in manufacturing and now in service industries.

Moffatt, Mike. "A Beginner's Guide to Elasticity." Available at economics.about.com/cs/micfrohelp/a/elasticity.htm. This Web site contains articles on a wide range of subjects.

Naipaul, V. S. "The End of Peronism?" *New York Review of Books*, February 13, 1992. What is it like to live with hyperinflation? No one knows better than the people of Argentina, where inflation averaged more than 400% per year during most of the 1980s. In this article, the novelist and writer Naipaul travels to Argentina and discusses the shock of this experience with a number of people. This isn't exactly an article about economics, but it is a fascinating look into the human and economic impact of letting inflation roar out of control.

National Bureau of Economic Research. *Information on Recessions and Recoveries, the NBER Business Cycle Dating Committee, and Related Topics*. Available at nber.org/cycles/main.html. A panel of experts at the NBER determines the actual months when recessions start and end. This Web site offers dates of past business cycles, the memos the agency has released (on an irregular basis) about past business cycles, answers to frequently asked questions, and an opportunity to sign up to receive future memos.

National Science Foundation. *National Patterns of Research Development Resources: 2003*. Annual report, 2005. Available at www.nsf.gov/statistics/ nsf05308/pdfstart.htm. If you want to get down and dirty with the facts on U.S. R&D spending—trends over time, divided into categories, how funded, who carries it out—this annual report is the place to turn.

 

Office of Management and Budget. *Budget of the United States Government*. Available at www.gpoaccess.gov/usbudget/index.html. If you really want to develop a feel for the federal budget, you need to look at the budget itself. The presentation and format of the budget seems to be a little different every year, and most readers won't be deeply interested in the detailed budget, which is a *lot* of fine print. But I recommend browsing through the "Historical Tables" for the budget, which offer a breakdown of major categories of taxes and spending, expressed in many different ways, for the last few decades. I also recommend browsing through the "Analytical Perspectives" volume, which looks at the budget from a variety of different angles.

Oxfam International. *Food Aid or Hidden Dumping? Separating Wheat from Chaff*. Oxfam Briefing Paper 71, March 2005. Available at www.oxfam.org.uk/ what_we_do/issues/trade/bp71_foodaid.htm. Oxfam is an international aid organization that, in the last few years, has published a series of reports on how aid to farmers in high-income countries can injure farmers and living standards in low-income countries. This report points out the problems that arise when farm surpluses from high-income countries are donated or sold at low cost in low-income countries—thus making it difficult for farmers in those countries to earn a decent level of income.

Posner, Richard A. *Natural Monopoly and Its Regulation*. Washington, DC: Cato Institute, 1999. Posner is one of the gurus of the law-and-economics movement and a lovely, lucid writer. Back in 1969, he wrote a book questioning whether natural monopolies needed to be regulated by the government. In 1999, the book was reissued with new material on the lessons of regulation and deregulation over the intervening years.

President's Commission on the United States Postal Service. *Embracing the Future: Making the Tough Choices to Preserve Universal Mail Service*. 2003. Available at www.treas.gov/offices/domestic-finance/usps. This report offers a sound diagnosis of the financial problems facing the U.S. Postal Service in the Internet era and an overview of how other countries have deregulated their post offices. However, its ultimate recommendations are a little timid, as those of presidential commissions tend to be.

Radcliff-Richards, J., A. S. Daar, R. D. Guttmann, R. Hoffenberg, I. Kennedy, M. Lock, R. A.Sells, and N. Tilney. "The Case for Allowing Kidney Sales." *The Lancet*, June 27, 1998. A group of doctors and specialists in ethics make a case for why kidney sales should be allowed.

Radford, R. A. "The Economic Organization of a P.O.W. Camp." *Economica*. New Series, 12:48, November 1945. A classic article describing how markets worked in an unexpected place—in prisoner-of-war camps during World War II.

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———. *Long Run Aggregate Supply and Price Level Determination*. Revised January 18, 2003. Available at www.digitaleconomist.com/as_4020.html. This Web site offers a textbook-style explanation of aggregate supply in the long run, together with some graphical analysis.

Scheller, Hanspeter K. *The European Central Bank—History, Role and Functions*. 2004. Available at www.ecb.int/pub/pdf/other/ ecbhistoryrolefunctions2004en.pdf. The European Central Bank and the euro are the greatest new experiments in money and central banking in at least the last few decades. This book offers a comprehensive overview of the ECB goals and operations.

 

Social Security Administration. *2005 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*. March 23, 2005. Each year around the end of March, the trustees of Social Security publish this report on the immediate, short-term, and long-term outlook for the system. The report is mostly quite readable, and the introductory chapter provides a nice overview. The most recent report and the past few reports are available at www.ssa.gov/OACT/TR.

Stewart, James B. "Whales and Sharks." *The New Yorker*, February 15, 1993. Two of the most famous antitrust cases in recent decades were the attempts by the government to break up IBM (a suit that was dropped) and to break up AT&T into separate local and long-distance companies (a suit that succeeded). Paradoxically, if IBM had allowed itself to be broken up, its various parts might be stronger competitors in the computer market today. After all, greater competition in telecommunications has invigorated that entire sector of the U.S. economy.

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U.S. House of Representatives, Ways and Means Committee. *2004 Green Book: Background Material and Data on the Programs within the Jurisdiction of the Committee on Ways And Means*. The *Green Book* is published every other year, and it offers an up-to-date if somewhat dry overview of many federal programs that affect the poor. For example, Temporary Assistance for Needy Families (TANF) is in Section 7, the Earned Income Tax Credit is in Section 13, and Food Stamps and Medicaid are in Section 15. Available at www.gpoaccess.gov/ wmprints/green/2004.html.

Wikipedia: en.wikipedia.org/wiki/Main_Page. Wikipedia is an interesting venture, because the quality of the entries depends on who wants to work on them.

Wolf, Charles, Jr. "The New Mercantilism." *The Public Interest*, Summer 1994. *Mercantilism* is the name given to a view of trade that was prevalent several centuries ago, before the writings of Adam Smith. In a nutshell, the mercantilists believed that exporting was good for a country and importing was bad. Modern economists believe that both sides of trade are interrelated, that trade as a whole is beneficial. Wolf accuses some opinion leaders and policymakers of succumbing to the mercantilist view.

World Trade Organization. *Understanding the WTO*. 2003. A short book that gives background on what the WTO actually is and how it operates and addresses many of the issues that arise about the WTO. The WTO Web site has a fair number of accessible publications, from pamphlets to short books, that discuss trade issues. Available at www.wto.org/english/thewto_e/ hatis_e/tif_e/tif_e.htm.

 

# Economics
# 3rd Edition
## Part III
## Professor Timothy Taylor

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## Timothy Taylor

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Timothy Taylor is managing editor of the *Journal of Economic Perspectives*, an academic journal published quarterly by the American Economic Association. He was originally hired to help launch the journal in 1986, and it has since matured into the most widely distributed and widely read journal in academic economics. The purpose of the journal is to encourage communication and cross-fertilization across the many fields of economics.

He was born in Urbana, Illinois, and grew up in Bethlehem, Pennsylvania, and Saint Paul, Minnesota. He received his bachelor of arts degree from Haverford College in Pennsylvania in 1982 and a master's degree in economics from Stanford University in California in 1984. He then worked as an editorial writer for the *San Jose Mercury News* for two years, before taking the job of starting the *Journal of Economic Perspectives* in 1986.

He has taught economics in a number of contexts. In 1992, he was winner of the award for excellent teaching in a large class (more than 30 students) given by the Associated Students of Stanford University. At the University of Minnesota, he was named a Distinguished Lecturer by the Department of Economics in 1996 and voted Teacher of the Year by the master's degree students at the Hubert H. Humphrey Institute of Public Affairs in 1997. Professor Taylor has also been a guest speaker for groups of teachers of high school economics, visiting diplomats from Eastern Europe, radio talk shows, and community groups. The U.S. Department of State sent him to Japan in 1999 and to South Africa in 2003 to discuss trade and globalization issues with government and business leaders.

From 1989 to 1997, he wrote an economics opinion column for the *San Jose Mercury News*, and many of his columns were disseminated nationally over the Knight-Ridder-Tribune wire. In 2000, he co-authored *Updating America's Social Contract: Economic Growth and Opportunity in the New Century*, with Rudolph G. Penner and Isabel V. Sawhill. He has also written articles for *The Public Interest*, *Milken Institute Review*, and other publications. He has recorded several courses for The Teaching Company, including *Economics: An Introduction*, *Legacies of Great Economists*, *A History of the U.S. Economy in the 20th Century*, and *Contemporary Economic Issues*.

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# Economics, 3rd Edition

**Scope:**

The wisdom of economists is nearly proverbial, but in a negative sort of way, rather like the honesty of politicians, the verbal fluency of sports heroes, or the lips of chickens. Yet in the face of this prejudice, I maintain that economics does have useful lessons for understanding the world around us. My wife claims that I only hold to this belief because I am an evangelist, with economics as my religion. Perhaps so.

But I have also been asked many times, at conferences and cocktail parties, to recommend "just one book" that would explain economics. These requests often come from people who have just met me, but they have discovered that I edit an academic economics journal or that I teach economics classes. They aren't looking for a conservative lecture that defends the beauty of markets, nor for a liberal lecture about the need for government intervention in certain parts of the economy.

They are seeking a basic level of sophistication in economic matters. They have their own views on politics and policy, but they are self-aware enough to recognize that at least some of those views are built on a shaky or nonexistent understanding of economics. They want an overall view of what the U.S. economy looks like and how it is interconnected. They want to know how economists perceive the advantages of free markets and how economists reconcile a belief in markets with the problems of the world around them, such as poverty and pollution. They want to know why a budget deficit matters and what the Federal Reserve is and does. They want to know what economists think about international trade, how the exchange rate works, and what the "current account balance" actually is. They are skeptical about accepting all that economists have to say, as they would be skeptical about anyone who claims to have lots of answers. But they have not surrendered to cynicism; they are willing to accept that the study of economics does have some insights to offer.

The cynical view, I suppose, is that these people found themselves trapped at a dinner party with an economist (the horror! the horror!) and simply pretended an interest in the subject, hoping that I would go away. But I have an understandable preference for a more optimistic interpretation. These lectures are given in the firm belief that a body of concerned and interested citizens would like to know more about the subject of economics.

The conceptual pattern of this course follows the standard pattern of the introductory economics course offered at most colleges and universities. However, while the college course would present much of this material in a graphical and mathematical form, with an emphasis on solving the kinds of problems that will be on the exam, these lectures will focus instead on intuitive and verbal explanations of the underlying concepts.

The first 18 lectures of this course focus on *microeconomics*, which is the analysis of the economic behavior of individuals and firms. Thus, microeconomics encompasses how individuals and firms interact in markets for buying and selling goods, in markets for working and hiring labor, and in markets for saving and investing financial capital.

After Lecture One introduces the topic of economics, Lectures Two through Five discuss how the forces of supply and demand determine the prices charged and the quantities produced in markets for goods. Lecture Six applies this same structure of supply and demand to markets for labor, while Lectures Seven and Eight consider, first, the demand for financial capital by firms that want to make investments in new plant and equipment, followed by the supply of financial capital from households that are thinking about how to invest their savings.

The course then turns to a number of practical and policy issues that arise in microeconomics. Lectures Nine through Eleven discuss the competitive environment for firms, ranging from situations with many competitive firms to situations with a single monopoly producer. Government may have a role to play in encouraging competition or in regulating industries in which little competition exists.

Lectures Twelve through Fourteen turn to the policy problems that arise when a good or service is produced and sold—but the production of the good has effects on third parties who were not involved in the transaction. These external effects, or *externalities*, may be negative effects, such as pollution, or positive effects, such as the benefits of new technology or a better educated workforce.

Lectures Fifteen and Sixteen consider policy problems that arise in labor markets, including issues related to poverty and welfare reform, inequality of incomes, labor unions, and discrimination.

Lectures Seventeen and Eighteen consider issues that arise in financial capital markets, with a particular focus on the issue of who controls the decision-makers in large corporations and why markets for insurance—such as health or car insurance—often seem so costly and controversial.

In the second half of the course, starting with Lecture Nineteen, the focus shifts to *macroeconomics*. If microeconomics is the bottom-up view of the economy, looking at the actions of individuals and firms, then macroeconomics is the top-down view of the economy. Lectures Twenty through Twenty-Three introduce the most important patterns to describe an overall economy, which include gross domestic product (GDP), the rate of economic growth, periods of recession and economic upswing, unemployment, inflation, and the balance of trade.

Lectures Twenty-Four and Twenty-Five then introduce the aggregate demand and aggregate supply model of macroeconomics. Aggregate demand includes all demand in the economy for consumption, investment, government, and foreign trade. Aggregate supply focuses on total production of goods and services. The forces of aggregate demand and aggregate supply, and how they shift over time, will provide a framework for understanding the commonly observed macroeconomic patterns.

Lectures Twenty-Six through Twenty-Eight turn to government taxing and spending. These lectures describe the common patterns of taxes and spending, then discuss how government tax and spending policies will affect aggregate demand and aggregate supply and, thus, affect economic growth, unemployment, inflation, and the balance of trade.

Lectures Twenty-Nine through Thirty-One then turn to monetary policy, which in the U.S. economy, is conducted by the Federal Reserve. These lectures describe the economic role of money and the banking system, how the Fed controls the supply of money and credit in the economy, and how Fed policy affects the macroeconomy.

The course then closes with a set of lectures on international economics. Lectures Thirty-Two and Thirty-Three explain why most economists strongly believe that international trade offers benefits to all nations—but also review the arguments and counterarguments for limiting such trade. Lectures Thirty-Four and Thirty-Five discuss international financial movements, including issues that arise from exchange rates and even national financial crashes. Finally, Lecture Thirty-Six offers an overview of the global economy and where it is headed.

Skeptical listeners may wonder whether the economics in these lectures is slanted toward the policy conclusions of liberal Democrats or conservative Republicans. The answer is that professional economists of all political leanings use the tools and concepts taught in this course. The subject of economics is not a clear-cut set of answers but, rather, a structured framework for pursuing answers. Thus, although I hope the lectures will at some points challenge your own political beliefs, whatever they are, I also hope that the lectures will give you language and structure for articulating your own beliefs more clearly—and for becoming a more sophisticated participant in the economic disputes of our time.

## Lecture Twenty-Five
## The Unemployment-Inflation Tradeoff

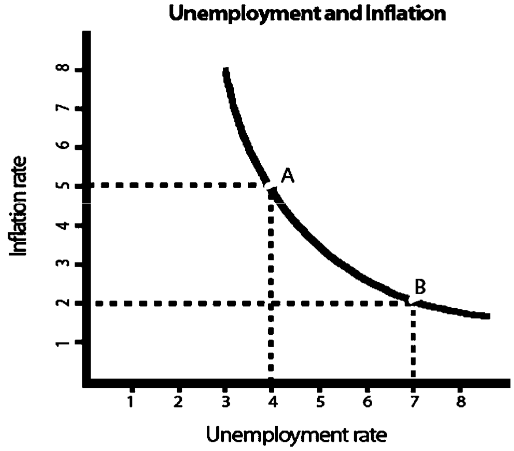
**Scope:** Political discourse often suggests that a tradeoff exists between fighting unemployment and fighting inflation. This unemployment-inflation tradeoff, known as the *Phillips curve*, appears quite clearly for U.S. data from about 1950 to 1970. However, in the 1970s, both inflation and unemployment rose at the same time—and by the 1990s, inflation and unemployment were both low at the same time. Economists often explain these patterns by saying that the Phillips curve represents a short-run tradeoff; however, in the long run, unemployment tends to return to its structural or natural rate, meaning that cyclical unemployment is close to zero. But some of the most substantial controversies in modern macroeconomics revolve around interpreting the evidence on whether an unemployment-inflation tradeoff exists.

## Outline

**I.** Economist A. W. Phillips graphed British annual data on unemployment and the percentage change in wages (a measure of inflation) over a 60-year period and found that the data yielded a distinctive relationship that could be mathematically depicted by the *Phillips curve*.

**A.** To draw a Phillips curve, put unemployment on the horizontal axis and inflation on the vertical axis. Now draw a curve sloping down from left to right and bending down (rather than arching up). On such a curve, points in the upper left represent high inflation and low unemployment, while points in the lower right represent low inflation and high unemployment.

**A Keynesian Phillips Curve Tradeoff Between Unemployment and Inflation**



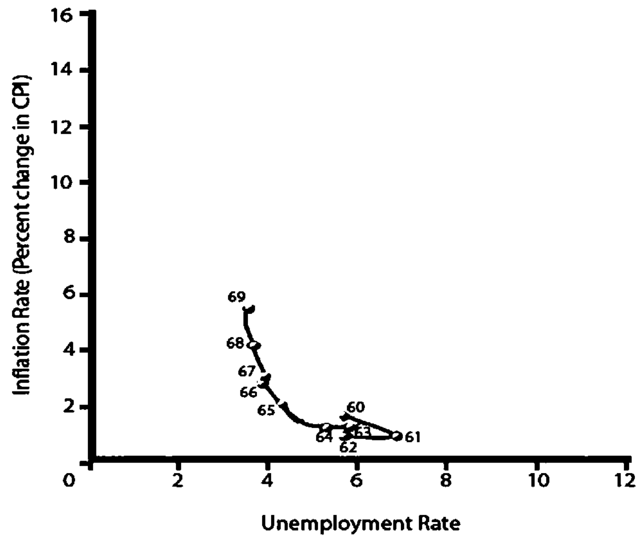

**B.** Why might an inflation-unemployment tradeoff exist?

1. When the economy is in a situation where aggregate demand and aggregate supply are meeting at potential GDP and aggregate demand then increases still further, unemployment is likely to be low, but there is a greater chance of too many dollars chasing too few goods and inflation resulting.
2. Conversely, when aggregate demand and aggregate supply are resulting in a level of output below potential GDP, unemployment is likely to be higher, but with a low level of aggregate demand in the economy, inflation isn't much of a risk.
3. During the business cycle, as the economy falls into recession and then recovers, the economy should be moving up and down a short-term Phillips curve tradeoff for unemployment and inflation.

**II.** The original Phillips curve seemed to fit the U.S. economy quite well in the 1950s and 1960s, but then the relationship seemed to fall apart in the 1970s, when both inflation and unemployment rose at the same time.

**A.** The U.S. data on unemployment and inflation from about 1950 to 1970 traces out a nice, clear Phillips curve.

### Phillips Curve for U.S. Economy in the 1960s




**B.** In 1968, the famous economist Milton Friedman was president of the American Economic Association, and in his presidential address, he foretold that the Phillips curve would not hold up in the long run because the economy would make adjustments based on expectations. His timing was good. Just a few years later, the relationship collapsed.

**C.** The Phillips curve predicts a tradeoff between inflation and unemployment; that is, as one goes up, the other goes down. But in the 1970s, they *both* went up. In the 1980s, they *both* went back down. In the late 1990s, both inflation and unemployment were very low. What of the tradeoff?

### Phillips Curve for U.S. Economy, 1960-2001

**D.** The answer might lie in the differences between the long run and short run.

1. Economists sought to reconcile the fact that the downward-sloping Phillips curve seemed to stay stable at some times but shift at other times, with the idea that it expressed a short-run relationship.
2. In the long run, however, cyclical unemployment would come and go, but the basic underlying level of the natural rate of unemployment would remain. Despite substantial variations in inflation over recent decades, the unemployment rate keeps returning to roughly 5.5%.

**U.S. Unemployment and Inflation Rates**

| | | |
|---|---|---|
| 1963 | 5.7% UE | 2.5% inflation |
| 1972 | 5.6% UE | 4.4% inflation |
| 1974 | 5.6% UE | 11.0% inflation |
| 1990 | 5.5% UE | 5.4% inflation |
| 1994 | 5.6% UE | 2.5% inflation |
| 2004 | 5.5% UE | 2.7% inflation |

Source: Bureau of Labor Statistics

3. The corresponding Phillips Curve is just a vertical line, with no trade-off between unemployment and inflation.

**A Neoclassical Long-Run Phillips Curve**


**III.** Different views of the unemployment-inflation tradeoff help to illustrate the major difference of opinion in modern macroeconomics between Keynesian and neoclassical economists.

**A.** Keynesian economists emphasize that the macroeconomy is subject to a failure to coordinate aggregate demand and aggregate supply.

1. They fear that the macroeconomy is inherently unstable. Components of aggregate demand, such as investment and consumption, may move sharply. Because of sticky wages and prices, both labor and product markets may not adjust the quantity demanded and quantity supplied to return to equilibrium very quickly.
2. Further, Keynesian economists fear that if the macroeconomy is left alone in response to these disturbances, it can be stuck below the potential GDP level of output, with correspondingly high unemployment, for a long time. They tend to support active government macroeconomic policies to fight unemployment and stimulate the economy.

**B.** Neoclassical economists tend to emphasize that the economy does adjust toward potential GDP over time.

   **1.** They believe that a modern macroeconomy is inherently stable. They often argue that many of the fluctuations in the economy are the result of a process of adjustment to new technologies, which is, overall, a key contributor to long-run growth and, therefore, a desirable process.

   **2.** Neoclassical economists fear that if the government actively intervenes in macroeconomic policy, it is at least as likely to do harm as good. They often prefer to see government macroeconomic policy conducted with clear rules that are specified in advance so that markets can take the rules into account.

   **3.** Neoclassical economists also believe in fighting inflation fiercely, because from the long-run perspective, inflation provides no reduction in unemployment or any other economic benefit.

**C.** Both Keynesians and neoclassicals believe in the natural rate of unemployment, and both are open to considering whether redesign of the institutions that affect incentives to hire and work might help to reduce the natural rate of unemployment.

**D.** Although Keynesians tend to focus more on unemployment than on inflation and neoclassicals tend to focus more on inflation than on unemployment, both schools argue that their focus will improve prospects for long-term growth.

   **1.** Low inflation clearly lays a better groundwork for making long-term plans for investment; at the least, economic actors aren't distracted by fear of inflation.

   **2.** But lower unemployment should also help growth, because employment itself is a form of investment in experience and human capital that should aid long-term growth.

**E.** Although these schools of economic thought conflict on a number of points, they also agree on several points.

   **1.** There is no necessary conflict between the view that over the long-run of several decades, economic growth is what matters, but that a country should seek to minimize the extremes of economic cycles to the extent possible and avoid either high unemployment or high inflation.

   **2.** Both sides recognize that at least some of the disagreements between Keynesian and neoclassical economists come down less to matters of economic insights than to political judgments about the effectiveness of government and which macroeconomic goals should be viewed as more important (unemployment? inflation? long-term growth?).

   **3.** All schools of macroeconomics can use the basic framework of aggregate supply and aggregate demand to argue their case.

**Essential Reading:**

"The World Economy: A New Economy for the New World?" *The Economist*, September 23, 1999.

**Supplementary Reading:**

Douglas Clement, "Inflation and the Phillips Curve: The Magic Is Gone," in *The Region: Federal Reserve Bank of Minneapolis*, September 2001.

Jeffrey C. Fuhrer, "The Phillips Curve Is Alive and Well," in *New England Economic Review of the Federal Reserve Bank of Boston*, March/April 1995, pp. 41–56.

**Questions to Consider:**

**1.** Make a list of areas in which macroeconomists largely agree and in which they disagree. For example, consider what different economists believe would be the effects of tight or loose monetary and fiscal policy in the short run and in the long run. Consider also how enthusiastic different groups of economists would be about these policies in a situation of high unemployment or high inflation.

**2.** Consider the long-run issues of economic growth and the short-run issues of unemployment and inflation. Which do you believe are more important? Try not to be wishy-washy in your answer: Choose a position and defend it!

# Lecture Twenty-Six
# Fiscal Policy and Budget Deficits

**Scope:** Fiscal policy, the other main tool of macroeconomics, involves tax and spending policy—and, thus, also involves the issues of budget deficits and surpluses. This lecture begins with an overview of the main spending and taxing components in the federal budget and notes some overall trends in the level of spending and taxes over time. It then reviews trends in the federal budget deficits and overall federal debt and explains what has been going on behind those patterns to make budget deficits explode in the early 1980s, contract in the later 1990s, and explode again in the 2000s.

## Outline

**I.** Fiscal policy is important both because of the sheer size of government spending and because it involves all tax and spending policies.

- **A.** The U.S. federal budget is huge. Roughly speaking, the U.S. federal budget alone is 1/16 of *world* GDP.
- **B.** *Fiscal policy* is defined as government tax and spending policy.

**II.** Although the U.S. federal budget is huge and changes every year, some long-term patterns are discernible in its categories and levels of spending and taxes.

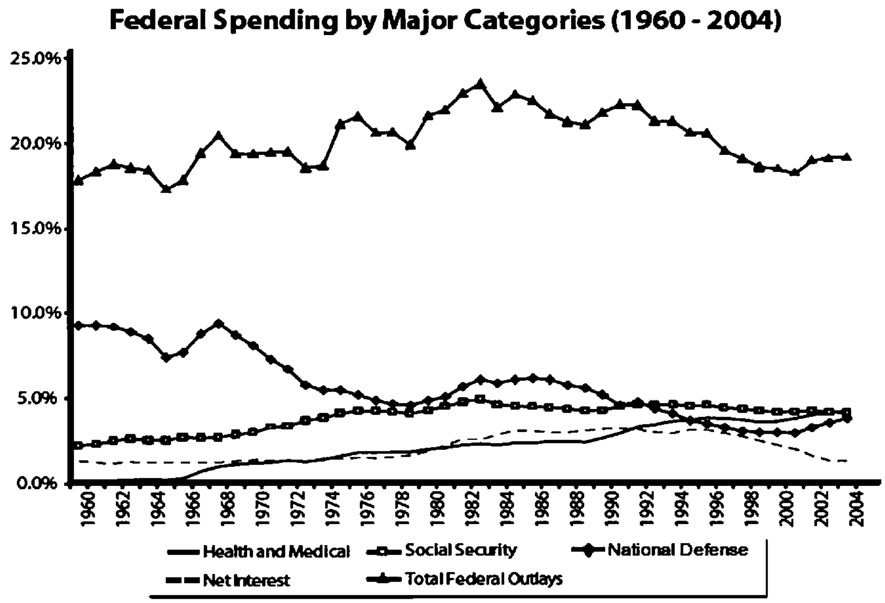
- **A.** The main categories of federal spending, making up about 70% of the total, are much the same over time.
  1. The four main categories are defense, Social Security, health spending (especially Medicare/Medicaid spending), and interest payments on past borrowing.

**Federal Spending in Fiscal Year 2005**

| | Dollar spending | Share of total |
|---|---|---|
| Defense | $466 billion | 19% |
| Social Security | $520 billion | 21% |
| Health/Medicare | $553 billion | 22% |
| Interest | $177 billion | 7% |
| The rest | $763 billion | 31% |
| TOTAL | $2,479 billion | 100% |

Source: U.S. Council of Economic Advisers

  2. Many arguments over such issues as support for the National Endowment for the Arts or foreign aid are over pretty small amounts by federal government standards.
  3. Defense spending is big and has grown since September 11, 2001, but an enormous share of the federal budget is aimed at the elderly.
- **B.** Overall federal spending has changed less than many people think over time, although the size of some categories within the budget has shifted.
  1. Despite what many people think, federal spending as a share of GDP shows no upward trend in recent decades, typically ranging from 19–22% of GDP.
  2. Defense spending as a share of GDP has dropped quite a bit over time, from 10% of GDP in the 1950s to 3–4% of GDP in the mid-2000s.
  3. Social Security and health-care spending have increased as a share of GDP over time.




**III.** Federal taxes are highly complex, but some common patterns can be discerned over time.

**A.** The main categories of federal taxes, making up about 95% of the total, are individual income taxes, corporate income taxes, payroll taxes for Social Security and Medicare, and excise taxes on gasoline, cigarettes, and alcohol.

**Federal Tax Receipts, Fiscal Year 2005**

| | In dollars | Share of total |
|---|---|---|
| Individual income taxes | $894 billion | 43% |
| Corporate income taxes | $227 billion | 11% |
| Social insurance (payroll) taxes | $774 billion | 38% |
| Excise taxes | $ 74 billion | 4% |
| Estate and gift taxes | $ 24 billion | 1% |
| Customs duties and fees | $ 25 billion | 1% |
| Miscellaneous | $ 36 billion | 2% |
| TOTAL | $2,052 billion | 100% |

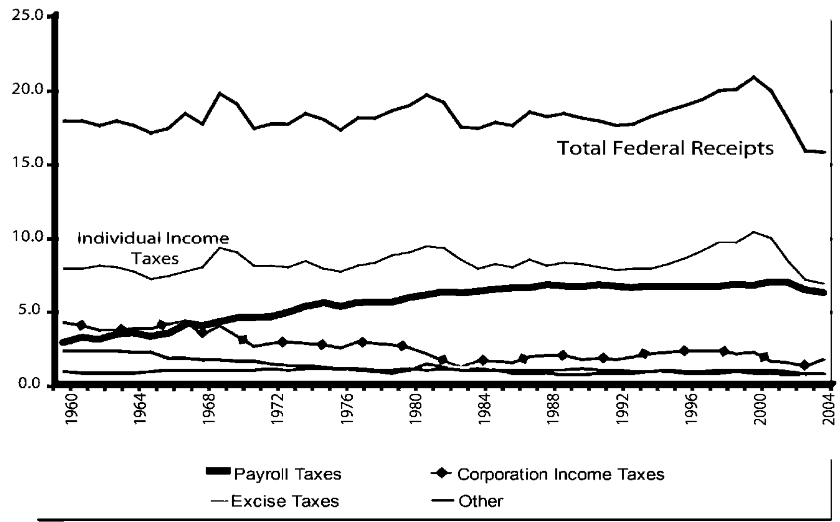
Source: Office of Management and Budget

1. Many people tend to think of individual income taxes as the main tax, but actually, less than half of all federal revenue comes from that source.
2. Payroll taxes raise almost as much money as personal income taxes—and far more than other federal taxes.
3. Some highly controversial taxes, such as the estate tax, don't raise a ton of money in the big picture. For example, the estate tax raises about 1% of federal revenue.

**B.** Federal taxes have typically been in the range of about 17–19% of GDP since 1960.

1. Contrary to what many people think, there hasn't been an upward trend in tax collections over the last few decades.

**Federal Taxes as a Percentage of GDP, 1960 - 2004**




2. However, the late 1990s and first half of the 2000s were an interesting time for federal taxes. Taxes went from 20.9% of GDP in 2000, the highest level since World War II, down to 16.4% of GDP by 2003, which was the lowest level since the 1950s.

**IV.** Two common questions about the federal budget are: Why is Social Security included? Why are state and local spending left out?

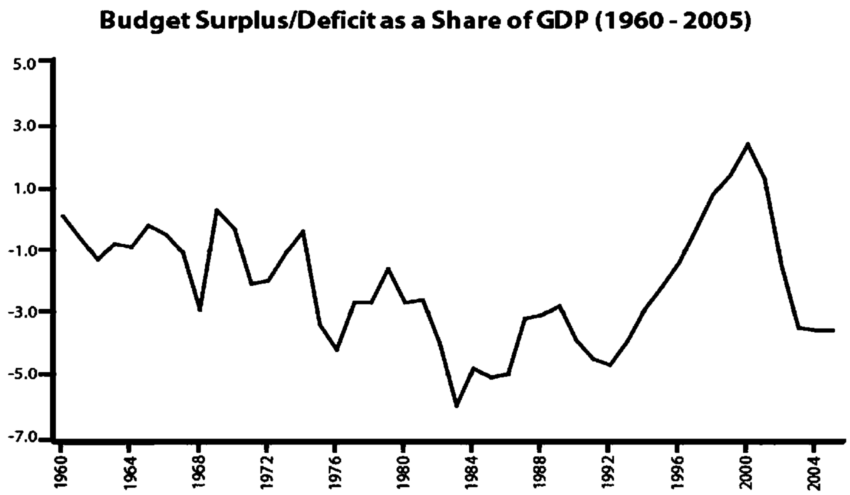
**A.** People sometimes want to leave Social Security out of discussions of the federal budget on the grounds that it is run with a separate trust fund. But accounting measures, such as a trust fund, don't change the reality that Social Security involves government taxes and spending.

**B.** State and local budgets, taken as a whole, are quite substantial, amounting to more than half of federal spending. State and local spending is the dominant government spending in certain areas, such as education. However, because state and local governments are constrained by law to have balanced budgets, they cannot end up with the same deficit problem as the federal government.

**V.** In any given year, taxes need not match spending; thus, the government can have a budget deficit or a surplus.

**A.** If the government spends more than it gets in taxes, it has a budget deficit. If the government taxes more than it spends, it has a budget surplus.

**B.** Over the last few decades, the U.S. government has mainly run budget deficits, except for 1969 and from 1998–2001. These deficits were especially large in the mid-1980s and the mid-2000s.




**C.** The budget surpluses of 1998–2001 and the large budget deficits of the mid-2000s can be explained more readily by patterns of taxes than by patterns of spending.

**D.** When government has a deficit, it uses bonds to borrow.

**VI.** Fiscal policy of taxing and spending can be related to each of the four main macroeconomic goals.

**A.** Government borrowing and saving is part of the national saving and investment identity and, thus, affects the extent to which an economy draws in foreign investment funds from other countries.

**B.** Fiscal policy can be used to address different kinds of unemployment. Redesigning tax burdens on employers or spending subsidies for the unemployed might reduce structural unemployment. In recession, spending more or taxing less could pump up aggregate demand and reduce cyclical unemployment.

**C.** Fiscal policy can be used to reduce aggregate demand and bring down inflation.

**D.** Government borrowing and saving is part of the national saving and investment identity and, thus, affects the funds available for investment in physical capital. Government policies are also central to building human capital and providing investments for technology.

**Essential Reading:**

Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2006 to 2015*, January 2005, www.cbo.gov.

Timothy Taylor, "The Economy in Perspective," *The Public Interest*, Fall 2004, pp. 85–99.

**Supplementary Reading:**

Congressional Budget Office, *Budget Options*, February 2005, www.cbo.gov.

Office of Management and Budget, *Budget of the United States Government*, www.gpoaccess.gov/usbudget/index.html.

**Questions to Consider:**

1. In the current state of the economy, which one or two of the four goals of macroeconomic policy do you feel is most important? How can fiscal policy help achieve that goal?
2. It's always easy to think of tax cuts and spending increases to support. But what are some tax *increases* and spending *cuts* you might be willing to support? For a list of possibilities, see the report from the Congressional Budget Office listed in the Supplementary Reading above.

## Lecture Twenty-Seven

## Countercyclical Fiscal Policy

**Scope:** When an economy is mired in recession, increases in spending or cuts in taxes can provide additional demand that stimulates the economy out of a recession, as John Maynard Keynes argued. When an economy is experiencing high inflation, a fall in spending or a rise in taxes can reduce demand and help to diminish that inflation. The U.S. system of spending and taxes is set up so that these countercyclical changes in fiscal policy to some extent happen automatically. But controversy exists over whether the government should go beyond its automatic stabilizers and attempt to implement a discretionary fiscal policy.

### Outline

**I.** Fiscal policy can be used to affect aggregate demand in an economy and, thus, to affect cyclical unemployment.

- **A.** Fiscal policy can expand or reduce aggregate demand.
  - **1.** *Expansionary* or *loose* macroeconomic policy is a policy to increase aggregate demand. Thus, a policy of tax cuts or spending increases is expansionary fiscal policy.
  - **2.** *Contractionary* or *tight* macroeconomic policy is a policy to reduce aggregate demand. Thus, a policy of tax increases or spending cuts is contractionary fiscal policy.
- **B.** *Countercyclical* fiscal policy is the practice of having fiscal policy counterbalance the business cycle of recession and recovery.
  - **1.** If the economy is in a recession, producing less than potential GDP, then it can use expansionary fiscal policy to increase aggregate demand and push production toward potential GDP.
  - **2.** If the economy is producing at or above its potential GDP, then it can use contractionary fiscal policy to restrain aggregate demand.
- **C.** Fiscal policy can be used to address cyclical unemployment. In recession, spending more or taxing less could pump up aggregate demand and reduce cyclical unemployment.
- **D.** The design of tax and spending policies, as well as other regulations, can increase or reduce structural unemployment. However, such changes can involve either higher or lower government spending.
- **E.** Reducing aggregate demand will bring down inflation. This would require a tight fiscal policy of lower spending or higher taxes.

**II.** *Automatic stabilizers* refers to the property of taxes and certain government spending programs that they adjust automatically to help stimulate aggregate demand when the economy is declining and to hold down aggregate demand as the economy is expanding.

- **A.** Taxes naturally rise as the economy grows and shrink as the economy contracts, acting as automatic stabilizers.
- **B.** A number of government spending programs that are aimed at those with low incomes or the unemployed tend to expand during recessions and contract during economic upswings, again acting as automatic stabilizers.
- **C.** These automatic stabilizer properties, especially for taxes, are fairly clear in the U.S. macroeconomic experience of the late 1990s and early 2000s.
- **D.** More broadly, systematic evidence shows the impact of countercyclical fiscal policy over time.

**III.** Given the presence of automatic fiscal stabilizers, there is controversy over whether Congress should go further and attempt to enact additional discretionary countercyclical fiscal policies.

- **A.** Conceiving, enacting, and seeing the effects of fiscal policy might take 18 months or more, at which time, the economic problem may be different.
- **B.** Fiscal policy can have a range of effects other than just moving aggregate demand: for example, on investment, imports, savings, and the price level.
- **C.** Politicians are often (not always!) willing to take the advice of stimulating aggregate demand in recession, but it is often quite difficult for politicians to run tight fiscal policies during economic upswings.

**D.** Monetary policies, run by the Federal Reserve, offer an alternative policy for short-term management of aggregate demand, which makes using discretionary fiscal policy for this purpose less attractive.

**IV.** The theory of countercyclical fiscal policy takes no side at all in the dispute over higher or lower taxes or higher or lower government spending.

**A.** Expansionary fiscal policy can be conducted with either tax cuts or spending increases.

**B.** Contractionary fiscal policy can be conducted with either tax increases or spending cuts.

**Essential Reading:**

Council of Economic Advisers, "Chapter 1: Lessons from the Recent Business Cycle," in *Economic Report of the President*, February 2004, www.gpoaccess.gov/eop.

———, "Chapter 2: Expansions Past and Present," in *Economic Report of the President*, February 2005, www.gpoaccess.gov/eop.

**Supplementary Reading:**

James Buchanan and Herbert Stein, "Should the Senate Pass a Balanced Budget Constitutional Amendment?" *Congressional Digest*, February 1995, pp. 50, 53.

**Questions to Consider:**

1. The federal government appears likely to have budgets that are balanced for the next few years. Consider proposals to balance the federal budget every single year, regardless of economic conditions. Describe the strengths and weaknesses of such a policy. Ultimately, do you think it's a good idea?
2. Describe the theoretical case for countercyclical fiscal policy and some of the practical difficulties in implementing such a policy.

## Lecture Twenty-Eight
## Budget Deficits and National Saving

**Scope:** When government budget deficits are large and sustained over time, they soak up a large share of the available private savings in the economy. Two possible effects can result. First, less financial capital may be available for private investment, which is sometimes called *crowding out*. Second, the U.S. economy may need to draw in financial capital from foreign investors. In the long term, neither a reduction in private investment nor an ever-growing reliance on inflows of foreign capital is healthy for the U.S. economy.

## Outline

**I.** Government borrowing is a part of national saving, as illustrated by the national savings and investment identity.

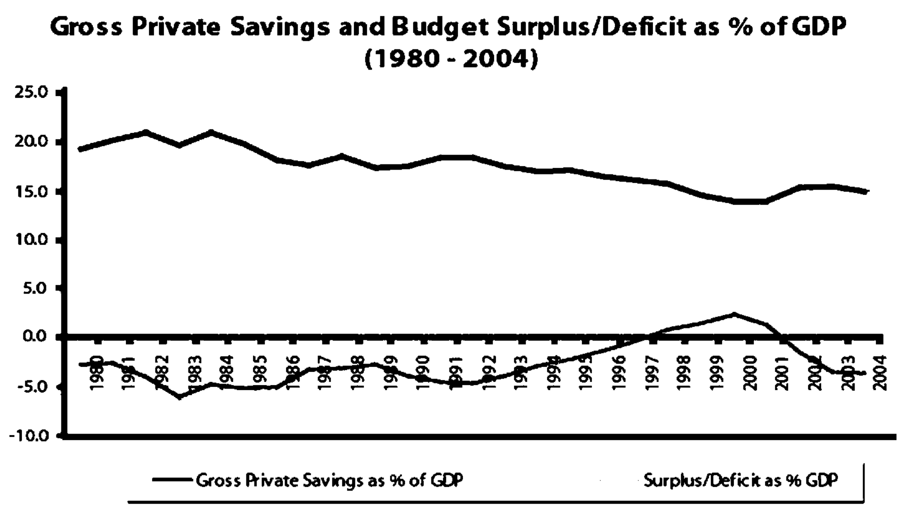
**A.** The national savings and investment identity, as discussed in Lecture Twenty-Three, shows that if government borrowing rises, then some combination of three things *must* happen, so that quantity demanded and quantity supplied of financial savings will be equal: private saving rises, private investment falls, or the trade deficit increases.

**B.** Demand for investment funds = Supply of investment funds

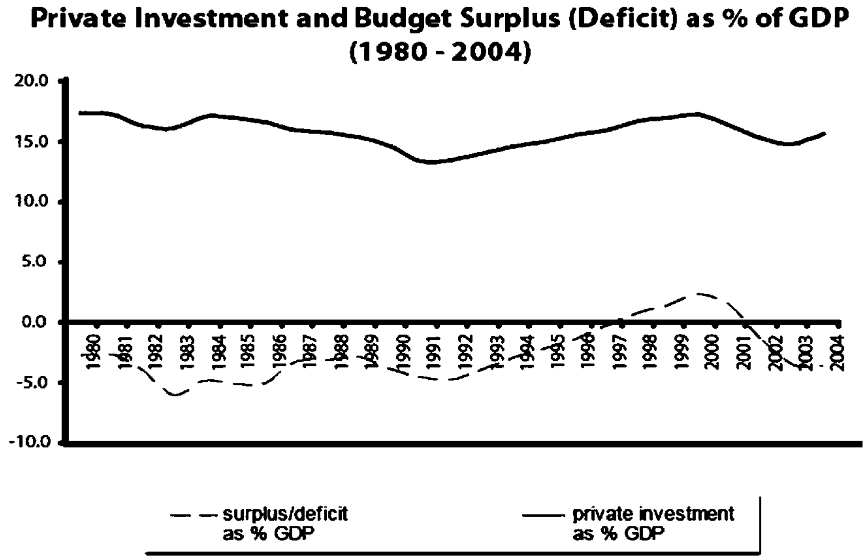
$$I + (G - T) = S + (M - X)$$

Investment + (Government spending – Taxes) = private Saving + (iMports – eXports).

**C.** The theory of Ricardian equivalence holds that a rise in government borrowing will cause an offsetting rise in private saving. Although this theory does seem to hold, at least partially, in many countries, it does not appear to hold in the United States in recent decades. That is, private saving and government borrowing don't systematically move in opposing directions.




**D.** The theory of *crowding out* private investment holds that more government borrowing reduces funds available for private investment, while less government borrowing increases funds for private investment. Private investment and government borrowing often do seem to move in opposite directions.




**E.** The theory of *crowding in* a trade deficit holds that more government borrowing draws in additional foreign investment—which means a larger trade deficit. This theory seems to hold in the mid-1980s and mid-2000s but not in the 1990s.

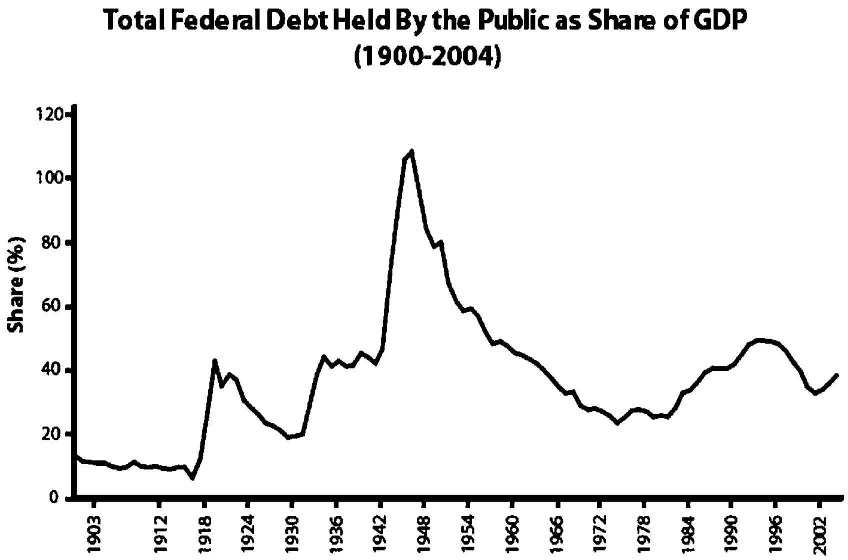
**II.** Government borrowing for a few years, in a large, rich economy such as that of the United States, doesn't pose a large problem. But government borrowing over the long run can have negative effects.

**A.** In the short run of a few years, there is little reason to worry about the macroeconomic consequences of budget deficits, especially if the economy seems to be operating below potential GDP.

**B.** A deficit is government borrowing that happens in a single year. The debt is the accumulation of that borrowing over a number of years.

**C.** It is often useful to divide the accumulated government debt in any given year by the GDP in that year. This has the effect of focusing on debt in proportion to the economy at that time. The debt/GDP ratio in the mid-2000s is roughly 40%, which is not extraordinarily high by the standards of recent decades.




**D.** However, long-run projections for the federal budget show potentially very high debt/GDP ratios, such as 100% by 2050, mainly because of the looming gaps in Medicare and Social Security.

**III.** How can the United States reduce its budget deficits over time and raise its rate of national saving?

**A.** Reducing government spending seems unlikely in the long run. The most aggressive plans for Social Security and Medicare are about holding down their rate of growth, not actually reducing their spending.

**B.** Increasing taxes is possible, but federal taxes have long been in the range of 17–19% of GDP, and it seems politically implausible that they will increase sharply outside that range.

**C.** Is it possible to increase private saving and, thus, to help finance government deficits with private saving?

**1.** One set of proposals provides incentives for additional saving in the form of reducing taxes on the rate of return. These policies have increased the amount of money in certain tax-favored accounts but have not increased overall private saving.

**2.** Proposals for mandatory or strongly encouraged savings accounts are on the table for discussion. Sometimes these accounts are linked to reform of Social Security.

**D.** It seems as if none of the options is likely. Spending won't fall. Neither taxes nor private saving will rise by much. But the resulting deficits from this scenario are unimaginably large, as well.

**Essential Reading:**

Congressional Budget Office, *The Long-Term Budget Outlook*, December 2003, www.cbo.gov.

"The Economics of Saving: The Shift away from Thrift," *The Economist*, April 7, 2005.

Office of Management and Budget, "Part III: The Long Run Budget Outlook," in *Analytical Perspectives: Budget of the United States Government, Fiscal Year 2006*, February 2005, pp. 208–219, www.gpoaccess.gov/usbudget.

**Supplementary Reading:**

Centers for Medicare and Medicaid Services, *2005 Annual Report of the Boards of Trustees of the Hospital Insurance and Supplementary Medical Insurance Trust Funds*, March 23, 2005, www.cms.hhs.gov/publications/trusteesreport.

Social Security Administration, *2005 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, March 23, 2005, www.ssa.gov/OACT/TR.

**Questions to Consider:**

**1.** Explain the possible consequences of sustained large budget deficits.

**2.** What do you think is the likeliest outcome in the long-term budget picture? Tax increases? Spending reductions (at least from anticipated levels)? Soaring budget deficits? What outcome do you prefer?

# Lecture Twenty-Nine
# Money and Banking

**Scope:** Monetary policy, or government control of the money and banking system, is one of the main tools of macroeconomic policy. This lecture begins with an overview of money and banking. Economists define money not by its form—such as paper or gold—but as whatever in an economy performs certain functions, acting as a medium of exchange, store of value, and unit of account. There are also a variety of definitions of money that include expanding combinations of currency, traveler's checks, checking accounts, savings accounts, money market mutual funds, certificates of deposit, and other time deposits. These definitions emphasize that in a modern economy, money and the banking system are tightly interrelated.

## Outline

**I.** Economists have their own definition of money, based not on its form but on what it does.

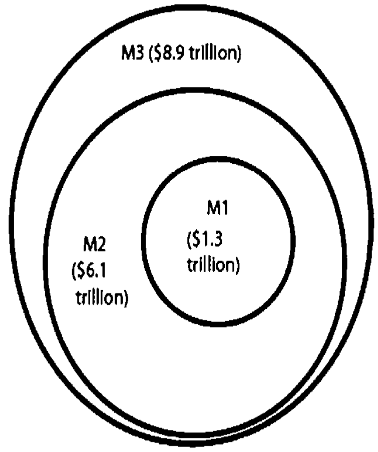
- **A.** Money isn't just bills and coins. After all, many items have been used as money by different cultures, including gold, cattle, shells, cigarettes, and more. In the history of the world, the item used for money over the broadest geographic area and for the longest period of time is probably the cowrie, a mollusk shell found mainly off the Maldive Islands in the Indian Ocean.
- **B.** Money is what fulfills three specific functions: serving as a medium of exchange, store of value, and unit of account.
  1. The *medium of exchange* means that money can be traded for everything.
  2. A *store of value* means that money can be held for a time without losing (much of) its purchasing power.
  3. The *unit of account* means that the price of different items is measured with the units of money; thus, money is a yardstick of value across the economy.
- **C.** Money avoids the need for barter, which can be an inefficient way of organizing exchange in the economy because it requires a double coincidence of wants. Thus, money helps the economy to function more smoothly.

**II.** When government statisticians define money, they measure it as M1, M2, and M3.

- **A.** The M1 definition of money includes currency, traveler's checks, and checking accounts.
- **B.** The M2 definition of money includes everything in M1, plus savings accounts and money market mutual funds.
- **C.** The M3 definition of money includes everything in M2 (which, in turn, means everything in M1), plus certificates of deposit and other time deposits.
- **D.** Credit cards and debit cards are not money. Credit cards are a way of borrowing in the short term and paying later. Debit cards are a way of paying immediately. But they are methods of payment that don't directly alter the amount of money in an economy.

## The Components of the Money Stock in 2002

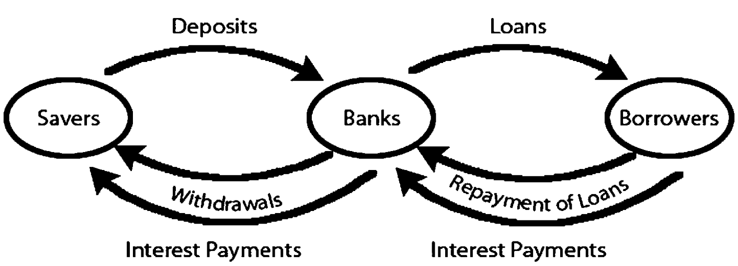
| | |
|---|---|
| Currency | $664.7 billion |
| Traveller's checks | $7.7 billion |
| Demand deposits and other checking accounts | $616.0 billion |
| **TOTAL M1** | **$1288.4 billion** |
| Savings accounts | $3192.4 billion |
| Small time deposits | $802.2 billion |
| Individual money market mutual fund balances | $784.0 billion |
| **TOTAL M2** | **$6067 billion** |
| Large denomination time deposits | $955.1 billion |
| Institutional money market mutual fund balances | $1100 billion |
| Other financial instruments | $779.4 billion |
| **TOTAL M3** | **$8901 billion** |




**III.** Money is intimately intertwined with the banking system.

**A.** A bank is a financial intermediary. It accepts deposits and makes loans. It receives income from making loans but must pay interest to depositors, as well as covering its expenses.

### Banks as Financial Intermediaries




**B.** The actual balance sheet for the banking industry shows that two-thirds of its income comes from interest payments and the rest from fees, while more than half its costs are operating expenses (salaries, office space, equipment) and only about a quarter of its expenses are interest payments.

**Revenues, Expenses, and Profits for the U.S. Banking Industry, 2003**

| *Total Revenues* | | *Total Costs* | |
|---|---|---|---|
| Interest income | $405 billion | Interest payments | $123 billion |
| Other income (fees and charges) | $203 billion | Cost of loans that are not repaid | $ 37 billion |

| | | | |
|---|---|---|---|
| | | Operating expenses (salaries, office space, equipment) | $280 billion |
| | | Taxes | $ 59 billion |
| Total revenues | $608 billion | Total costs | $499 billion |
| Accounting profits = Total revenues – Total costs = $109 billion | | | |

Source: U.S. Federal Deposit Insurance Corporation

**C.** A bank will be bankrupt if the value of its loans drops substantially. The value of loans will decline if an unexpectedly large number of loans are not repaid. It will also decline if the loans are made at fixed rates of interest (as most home loans are), and the interest rate then rises so that banks are locked into the lower interest rates.

**IV.** Banks create both money and aggregate demand through the interlocking web of deposits that they accept and the loans that they are willing to make.

**A.** Banks create money by the process of making loans, which are then deposited in other banks and form the basis for additional loans, which are deposited in other banks and form the basis for additional loans—and so on.

**B.** When banks make loans available, they also create aggregate demand to buy products, including physical capital investment for firms and houses and cars for consumers.

**C.** Because money, banking, lending, and borrowing are so tightly interrelated, the government can exert influence over the quantity of money and aggregate demand in an economy through its regulation of the banking system.

**Essential Reading:**

Federal Reserve Bank of Chicago, *Modern Money Mechanics*, www.worldnewsstand.net/money/mmm2.html.

"Paper Money: Crisp and Even," *The Economist*. December 20, 2001.

**Supplementary Reading:**

Federal Reserve Bank of Atlanta, *The Story of Money*, www.frbatlanta.org/ atlantafed/visitors_center/tour/story.cfm.

Karen Flamme, "A Brief History of Our Nation's Paper Money," in *1995 Annual Report: Federal Reserve Bank of San Francisco*, www.frbsf.org/publications/ federalreserve/annual/1995/history.html.

**Questions to Consider:**

1. In a modern economy, money is just pieces of paper or blips in a computer memory. Are you emotionally comfortable with an economy based on money that isn't made of gold or silver and has no intrinsic value?
2. How can banks create money?

## Lecture Thirty

## The Federal Reserve and Its Powers

**Scope:** The Federal Reserve controls monetary policy, which refers broadly to money, the interrelationship of money with the banking system, and interest rates. The three major tools that the Fed has to influence the money supply are controlling the reserve requirement, changing the discount rate, and performing open market operations. The Fed can expand the money supply, which has the effect of reducing interest rates, or contract it, thus raising interest rates. The Fed has great power over the U.S. economy—even over the world economy. Yet it is run by presidential appointees and bankers, and its policy decisions are not voted on by Congress or other publicly elected officials. Although there are plausible reasons for this lack of democratic accountability, it remains an ongoing source of controversy.

## Outline

**I.** The chairman of the Federal Reserve may be the single most powerful economic actor in the world.

**II.** The Federal Reserve is run with a mix of public and private elements.

- **A.** It is officially a corporation owned by all the federally chartered banks.
- **B.** However, all seven members of its Board of Governors are appointed by the president and confirmed by the Senate.

**III.** A central bank enacts its monetary policy through three main tools: reserve requirements, the discount rate, and open market operations.

- **A.** Every bank is required to keep some of its deposits on reserve at the central bank. If this reserve requirement is raised, then banks have less money to lend out and interest rates will rise. If the reserve requirement is reduced, then banks have more money to lend out and the interest rate will fall.
- **B.** If a bank needs or wishes to borrow from the central bank, then the interest rate that it is charged is called the *discount rate*. A higher discount rate encourages banks to keep money on hand and to loan out less; a lower discount rate encourages banks to lend more freely.
- **C.** The Federal Reserve uses open market operations, when it buys and sells government bonds, to raise or reduce interest rates. If the Fed buys bonds from banks, then the banks have more money to lend—and the Fed holds the bonds. If the Fed sells bonds to banks, then the banks have the bonds, but they also have less money to lend. Decisions about open market operations are made by a 12-member Federal Open Market Committee.

**IV.** Monetary policy influences lending, aggregate demand, and interest rates.

- **A.** Steps to expand the money supply, or have a “looser” money supply, tend to reduce interest rates and encourage more lending and aggregate demand in the economy.
- **B.** Steps to restrict growth in the money supply, or have a “tighter” money supply, tend to raise interest rates and discourage lending and overall demand in the economy.
- **C.** By influencing the supply of funds that banks are willing to lend, the Federal Reserve can move interest rates up or down. Strictly speaking, the Fed controls the federal funds interest rate—the rate at which banks make overnight loans to each other—but other interest rates generally move together with that one.

**V.** The Federal Reserve, often alongside the U.S. Treasury, also plays a number of key roles in everyday management and regulation of the banking system.

- **A.** The Federal Reserve manages the seasonal flow of money: For example, more money needs to be in circulation during the Christmas shopping season.
- **B.** The Federal Reserve is a bank for banks, and thus, it plays a central role in clearing checks, so that a check drawn on one bank will be deposited in another bank.
- **C.** Banks pay into a deposit insurance system, which ensures that all deposits up to $100,000 are protected even if the bank goes broke.

**D.** The Federal Reserve, along with the U.S. Department of the Treasury, plays a key role in auditing banks to make sure that they have sufficient financial assets and are not making overly risky loans.

**E.** A central bank also has a role as lender of last resort; that is, when a financial system is actually or potentially endangered by a systemic crisis, the central bank provides short-term loans so that the financial system doesn't implode.

**F.** All large economies have a central bank, for example, the European Central Bank, the Bank of England, and the Bank of Japan.

**Essential Reading:**

Federal Reserve System, *Purposes and Functions*, www.federalreserve.gov/ pf/pf.htm.

———, *Monetary Policymaking: Federal Open Market Committee*, www.federalreserve.gov/FOMC/default.htm.

**Supplementary Reading:**

Hanspeter K. Scheller, *The European Central Bank—History, Role and Functions*, www.ecb.int/pub/pdf/other/ecbhistoryrolefunctions2004en.pdf.

The Federal Reserve has regional head offices around the country, in Boston, New York, Cleveland, Chicago, Minneapolis, San Francisco, Dallas, Atlanta, St. Louis, Kansas City, and Richmond (Virginia). All of them have regular journals and publications, many of which are accessible to the general public and all of which are available on the Web, with print subscriptions free on request. For links to all the regional banks, start at www.federalreserve.gov/otherfrb.htm. For links to the educational materials produced by the Federal Reserve banks, start at www.federalreserveeducation.org/FRED.

**Questions to Consider:**

1. Explain how and why the Federal Reserve would implement an expansionary monetary policy. What about a contractionary monetary policy?
2. Describe the responsibilities of a central bank that do not involve the conduct of monetary policy.

## Lecture Thirty-One
## The Conduct of Monetary Policy

**Scope:** The Federal Reserve, along with many central banks around the world, has used monetary policy to reduce the "great inflation" that plagued the world economy in the 1970s. But while no one favors high inflation, there are many controversies over how exactly the Federal Reserve should fight inflation and what other economic goals it should take into account. Should a central bank focus exclusively on inflation, or should it also pay attention to other goals, such as shortening the length of recessions? Should a central bank act when it appears that stock market prices or housing prices may be forming a bubble? How should a central bank communicate its goals and actions for maximum credibility?

## Outline

**I.** Monetary policy can affect each of the four goals of macroeconomics: lower unemployment, lower inflation, economic growth, and a sustainable balance of trade. In addition, there is dispute over whether monetary policy should also pay attention to the possibility of bubbles in financial markets.

- **A.** Monetary policy can reduce cyclical unemployment by helping to make recessions shorter.
- **B.** Monetary policy does not reduce the natural rate of unemployment, which is determined by the incentives for working and hiring.
- **C.** A tighter monetary policy can fight inflation by raising interest rates and reducing aggregate demand in the economy.
- **D.** Deflation—that is, a negative rate of inflation—raises the real interest payments for borrowers who borrowed at a fixed interest rate.
  - **1.** Deflation occurs when the rate of inflation is negative; that is, instead of money having less purchasing power over time, as occurs with inflation, money is worth more.
  - **2.** Remember that the real interest rate is the nominal interest rate minus the rate of inflation. If the nominal interest rate is 7% and the rate of inflation is 3%, then the borrower is effectively paying a 4% real interest rate. But if the nominal interest rate is 7% and there is *deflation* of 2%, then the real interest rate is actually 9%. In this way, an unexpected deflation raises the real interest payments for borrowers.
  - **3.** Deflation can lead to a situation in which an unexpectedly high number of loans are not repaid. When banks suffer losses, they become less able and eager to make new loans. Aggregate demand declines, which can lead to recession.
- **E.** Low and stable inflation and interest rates provide a good framework for long-term investment decisions and economic growth.
- **F.** There is controversy over whether monetary policy should be used to address financial bubbles, such as the buildup in the U.S. stock market in the late 1990s or in Japan's stock market and housing market in the late 1980s. Central banks do not currently pay much attention to asset bubbles.

**II.** Given these goals, should monetary policy be conducted at the discretion of the central bank, or should it be guided by specific rules?

- **A.** The case for discretionary monetary policy is that the economy is unpredictable. Different problems arise. The central bank should have the flexibility to diagnose problems and react to them.
- **B.** Discretionary monetary policy has some practical problems: time lags, the risk of overshooting, and the problem of pushing on a string.
  - **1.** Monetary policy involves a chain of events, from recognizing the need for action, to taking action, to having the action fully affect the economy. This chain of events can take 1–3 years.
  - **2.** With uncertainty over the time lags and variable size of the reactions to monetary policy, discretionary policy has a risk of overshooting and creating more economic fluctuations than it resolves.
  - **3.** Monetary policy may be better at contracting an economy than at stimulating it: Although monetary policy can increase the ability of banks to lend, it cannot necessarily make banks eager to lend.

4. A final practical problem is that the central bank might have different priorities than politicians or citizens.

**C.** One possible rule for a central bank is that it should increase the money supply by a fixed percentage rate each year, reflecting the average rate of real economic growth over time.

1. The advantage of expanding the money supply at a fixed rate is that it would avoid the problem of overshooting. On average, money would grow as quickly as the economy.
2. Having the money supply grow at a fixed rate works well only if the ratio of the GDP to the money supply is a constant—or, at least, a predictable number. But in the 1980s, the ratio between money and GDP began to vary substantially; in this case, a fixed growth rate of the money supply would have had unpredictable and destabilizing economic effects.

**D.** Perhaps the preferred method of setting monetary policy today is referred to as *inflation targeting*. Congress or an elected body sets an inflation target for the Federal Reserve or central bank to meet. The central bank focuses only on the inflation target, and if it does not meet that target, its leaders can be dismissed.

**E.** Under law, the U.S. Federal Reserve is required to pay attention to both unemployment and inflation. In practice, this means reducing interest rates during recessions and raising interest rates if inflation appears to threaten.

**III.** No nation with a developed economy conducts its monetary policy through the legislative or the executive branch of government. Instead, they all set up an agency somewhat independent of politics. Why is monetary policy so undemocratic?

**A.** The case for having monetary policy made through a more democratic process is that monetary policy is important, and central bankers will not necessarily represent the needs and desires of the population or the democratic process.

**B.** The case for having an independent central bank is that the central bank has some insulation from day-to-day politics; thus, its members can take a nonpartisan look at specific economic situations and make tough, immediate decisions when necessary.

**C.** Central banks are not democratic, but neither are judges. In both cases, society finds it useful to appoint independent bodies who are responsible for following a set of democratically determined rules.

**Essential Reading:**

Benjamin M. Friedman, "Why the Federal Reserve Should Not Adopt Inflation Targeting," *International Finance*, 2004, 7:1, pp. 129–136.

Frederick S. Mishkin, "Why the Federal Reserve Should Adopt Inflation Targeting," *International Finance*, 2004, 7:1, pp. 117–127.

**Supplementary Reading:**

Michael D. Bordo and David C. Wheelock, "Monetary Policy and Asset Prices: A Look Back at Past U.S. Stock Market Booms," in *Review: Federal Reserve Bank of Saint Louis*, November/December 2004, pp. 19–44.

**Questions to Consider:**

1. Imagine that inflation seems to be accelerating. You are working as the staff person for a member of Congress who wants to know what the Federal Reserve might do about this. Describe how the Fed is likely to react, and if some reaction seems likely, what policy tools the Fed might use in reacting.
2. Do you think that monetary policy should be carried out by votes of Congress and the signature of the president, like regular legislation? Why or why not?

## Lecture Thirty-Two

## The Gains of International Trade

**Scope:** Economists are deeply supportive of foreign trade, with all its warts and flaws; the average person on the street is much more suspicious. This lecture begins by focusing on the arguments of economists for why there are mutual gains from trade and why trade is not a zero-sum game. The key gains from trade stem from absolute advantage, comparative advantage, a more productive global division of labor, and greater competition that leads to dynamic gains over time. The expansion of global trade in the post–World War II period, due to reductions both in legal trade barriers and in transportation and communication costs, has brought large gains to the United States and to the world economy.

### Outline

**I.** Since 1950, world exports as a share of world GDP have roughly tripled; U.S. exports as a share of U.S. GDP have roughly quadrupled.

**II.** There are several reasons that international trade can be a win-win situation for all participating countries.

- **A.** *Absolute advantage* refers to a situation in which one country has higher productivity than another. If two countries each have an absolute advantage in one area, they can both benefit if they focus their resources on the areas where they have the absolute advantage and trade with each other, rather than each trying to be self-sufficient.
- **B.** *Comparative advantage* refers to a situation in which one country has an absolute advantage in producing all goods, but its absolute advantage is relatively greater for some goods than for others. In this case, two countries can focus on where their absolute productivity advantage is highest or on where their absolute productivity *dis*advantage is least and then trade with each other. This is known as focusing on comparative advantage.
- **C.** Much of world trade involves countries that export and import the same goods, such as cars, computers, machine tools, and pharmaceuticals. This kind of trade can provide benefits to both parties, as well.
  1. Trading similar goods allows even smaller countries to take advantage of economies of scale.
  2. Trading similar goods provides gains of variety.
  3. Trading similar goods allows a greater degree of specialization within industries.
  4. Trading similar goods can encourage a flow of knowledge and skills between countries that benefits both parties.
  5. Trading similar goods provides greater competition for domestic producers and, thus, better incentives for low prices and innovation.
- **D.** Trading advantages are bound to shift somewhat over time, as new products are developed, workers learn new skills, and so on.

**III.** Although international trade can contribute to prosperity and growth, it is not a sufficient factor to guarantee growth.

- **A.** There is a strong empirical correlation between countries that expand trade and countries that have a solid record of economic growth.
- **B.** However, international trade is only one of many factors that contribute to economic growth and almost certainly isn't the most important. Other key factors contributing to economic growth include education, investment, use of new technology, and a rule of law that supports market institutions.

**IV.** How close is the world to a borderless market?

- **A.** If national borders don't make an economic difference, then the amount of trade between regions should not be affected by whether they are in the same country. However, an economic effect of national borders is observed in trade patterns.
- **B.** If national borders don't matter, then prices for a certain good should be quite similar on either side of a national border. However, prices are often quite different between nearby countries.

C. National borders hinder trade because crossing a border involves many issues, including different tax and accounting rules, safety regulations, currencies, and labor force rules.

V. Everyone seems to favor free trade as long as it is "fair." But "fairness" is in the eye of the beholder, and to many economists, many of those who talk about fair trade are being disingenuous.

A. Proponents of "fair trade" are often talking about a comprehensive set of rules that would make trade very much *not* free. In trade discussions, "fairness" is often a pleasant way of saying that imports should be limited.

B. Argument over restricting imports can be evaluated on its merits, but calling it "fairness" confuses the issue more than it clarifies it.

**Essential Reading:**

Timothy Taylor, "The Truth about Globalization," *The Public Interest*, Spring 2002, pp. 24–44.

Council of Economic Advisers, "Chapter 8: Modern International Trade," in *Economic Report of the President*, February 2005, www.gpoaccess.gov/eop.

**Supplementary Reading:**

Charles Wolf, Jr., "The New Mercantilism," *Public Interest*, Summer 1994, pp. 96–106.

World Trade Organization, *Understanding the WTO*, www.wto.org/english/ thewto_e/whatis_e/tif_e/tif_e.htm.

**Questions to Consider:**

1. How can it make economic sense for two countries to import and export the same product, such as cars, computers, or machine tools?
2. Can you imagine some goods whose production could be substantially more globalized than it is today? What about services that might be performed in other countries?

# Lecture Thirty-Three

# The Debates over Protectionism

**Scope:** Although economists are generally supportive of the forces of trade, they readily admit that trade can cause dislocations and disruptions to an economy. Thus, political pressures will arise to limit imports; such steps are known generically as *protectionism*. From an economic point of view, protectionism is nothing more or less than an indirect way for government to provide a subsidy to a particular industry. This lecture reviews the many possible arguments for protectionism—saving jobs, helping young industries become established, protecting the environment, protecting overseas workers from exploitation, and others—and examines the reasons that most economists find those arguments less than compelling.

## Outline

**I.** *Protectionism* is the general name for laws or rules that reduce or shut out imports.

- **A.** There are a variety of ways to shut out or restrict imports, all of which are known as *protectionism* because they seek to protect certain domestic industries.
  - **1.** Quotas put numerical limits on imports.
  - **2.** Tariffs are taxes on imports.
  - **3.** Voluntary export restraints are put in place when two countries negotiate and one agrees to reduce its exports; such reductions are usually not very voluntary at all!
  - **4.** Nontariff barriers are bureaucratic or regulatory barriers set up for the purpose of restricting imports.
- **B.** Protectionism definitely helps the industry that is being protected, but consumers pay the costs.
  - **1.** Because that industry does not face as much competition from abroad, it can charge higher prices and make higher profits. (If this isn't true, then there isn't any point to protectionism.)
  - **2.** Domestic consumers pay those higher prices.
  - **3.** Thus, protectionism is a way for government to provide an indirect subsidy to an industry, paid for by higher consumer prices.

**II.** Many arguments have been made for protectionism, some more sensible than others.

- **A.** There is no question that protectionism is a subsidy that can protect jobs in a certain industry. However, there is no reason to believe that protectionism increases the overall number of jobs in an economy.
- **B.** Protectionism is a subsidy that can raise wages in a certain industry, but not for the economy as a whole.
  - **1.** The higher wages in one industry come at the cost of higher prices for goods in the rest of the economy.
  - **2.** Ultimately, wages depend on productivity, as explained in Lecture Six, and to the extent that protectionism prevents the gains from trade, it will hold down productivity and wages.
- **C.** The U.S. economy has seen a substantial increase in income inequality since the 1970s (as discussed in Lecture Sixteen). However, this increase was driven more by changes in information and communications technology than by increased trade with low-wage countries.
- **D.** The income gap between the richest and the poorest countries has grown in recent decades. However, the rising gap has not resulted because globalization is harming the poorest countries in the world, but because these countries are not participating in globalization. In fact, the leading successes in economic development, such as South Korea and China, have used foreign trade as one of their engines of growth.
- **E.** It is sometimes argued that "infant industries" need to be sheltered from foreign competition for a short time, until they are ready to compete. In theory, this argument can make sense. In practice, infant industries often become inefficient and geriatric without ever getting ready to compete—and the economy suffers all along from supporting them.
- **F.** The concern here is that foreign producers may have an advantage because their nations have lower environmental standards. But trade also provides an avenue for higher environmental standards. Further, environmental laws and treaties are a more direct way to achieve environmental goals than limiting trade.
- **G.** Predatory pricing (dumping) occurs when foreign producers sell their products below cost, drive U.S. competition out of business, and then reap monopoly profits. It is easy enough to find cases where foreign

competitors gave U.S. firms great difficulties or even drove some of them out of business. It is difficult or impossible to find a case where the foreign firms were then able to raise prices and get monopoly profits; after all, they still had to compete with each other!

**H.** It is sometimes claimed that certain products are vital to national security and, thus, should not be imported from abroad.

1. But if the vital product is oil or a mineral, surely it makes more sense to import as much as we can now and to stockpile it, rather than using up our domestic resources!
2. If the vital product is a new technology, surely it makes sense to have the best available technology and to focus on learning how to make it ourselves, rather than denying ourselves the technology.
3. Moreover, the national security excuse is easily abused.

**I.** *Strategic trade* refers to a situation in which a natural monopoly may exist in an industry, and subsidizing an industry to help it get established and get a jump on potential competitors can make sense. But when this argument holds, it makes more sense to collect the money for that subsidy through taxes, rather than putting the entire burden on consumers of that particular product.

**III.** What is the rationale for international trade agreements?

**A.** Democracies don't just add up economic gains and losses; they add up votes. It is perfectly plausible in many cases that special interests can influence the political process to do things that are not for the good of the whole.

**B.** The World Trade Organization (WTO) is the main international agreement that promotes the reduction of barriers to international trade. There are also a variety of regional trade agreements, such as the North American Free Trade Agreement and the arrangement to reduce trade barriers across Europe through the European Union.

**Essential Reading:**

Jagdish Bhagwati, "Protectionism," in *The Concise Encyclopedia of Economics*, www.econlib.org/library/Enc/Protectionism.html.

Douglas Irwin, *Free Trade under Fire*.

**Supplementary Reading:**

Frederic Bastiat, "Reciprocity" and "A Petition," in *Economic Sophisms*, www.econlib.org/library/Bastiat/basSoph.html.

Paul Krugman, *Peddling Prosperity*.

**Questions to Consider:**

1. Make the argument for why the United States should eliminate completely all of its trade barriers to imports from other countries—*even if other countries continue to keep their barriers to U.S. products*. Make the argument as strongly as you can. Do you believe it?
2. Economists sometimes say that although protectionism certainly works as a way for government to confer benefits on a particular domestic industry (albeit at a cost to consumers and the economy), it is always a second-best strategy. What they mean is that given any particular goal of protectionism, there is always an alternative, better method of accomplishing that goal—a method that doesn't involve the costs of protectionism. For each of the reasons that is given for protectionism, list some of the alternative methods of accomplishing the goal.

## Lecture Thirty-Four
## Exchange Rates

**Scope:** An exchange rate is the rate at which one currency exchanges for another. Stronger exchange rates for a currency help those who earned their money in that currency and are buying goods produced elsewhere in the world, including tourists abroad and those buying imported goods. Conversely, a weaker exchange rate will help those, such as exporting firms, who have their costs defined in the weaker home currency but are earning their revenues in a stronger foreign currency. Whether you prefer exchange rates high or low simply depends on whether you are a buyer or seller in the global market. Countries must decide whether to let their exchange rate "float"—that is, be determined in global financial markets—or whether they should seek to limit fluctuations in their exchange rates.

## Outline

**I.** Exchange rates can be considered as a (misguided) symbol of national economic virility, when in reality, the exchange rate is just a price for currency.

**A.** Everyone knows that "strong" is good and "weak" is bad, right? When it comes to prices, however, this isn't so obvious. Whether you favor "strong" or "weak" gasoline prices, for example, depends on whether you own stock in an oil company or whether you are pumping gasoline for your car.

**B.** Similarly, a "strong" or a "weak" exchange rate tells you whether the buying power of a currency is higher or lower compared to other currencies, but how you feel about it depends on whether, say, you have a job in an export-oriented industry or whether you are buying imported products.

**1.** In the foreign exchange market for currencies, those who supply the U.S. dollar include U.S. tourists traveling abroad, foreign firms that sell in the U.S. market, and U.S. investors who want to invest in other countries.

**2.** Conversely, those who demand U.S. dollars include foreign tourists in the United States, U.S. exporters who have earned foreign currency, and foreign investors who want to invest in U.S. assets.

**C.** When the U.S. dollar is "stronger" and can buy more of foreign currencies, those who supply dollars benefit and those who demand dollars suffer. When the U.S. dollar is "weaker" and can buy less of foreign currencies (or, equivalently, foreign currencies buy more of U.S. dollars), then those who supply dollars suffer and those who demand dollars benefit.

**How Do Exchange Rate Movements Affect Each Group?**

| | A stronger U.S. dollar | A weaker U.S. dollar |
|---|---|---|
| A U.S. tourist abroad | ☺ | ☹ |
| A foreign tourist in the U.S. | ☹ | ☺ |
| A U.S. exporting firm | ☹ | ☺ |
| A foreign firm exporting to the U.S. | ☺ | ☹ |
| A U.S. investor abroad | ☹ | ☺ |
| A foreign investor in the U.S. | ☺ | ☹ |

**1.** International tourists would prefer that the currency of their home country be strong and the currency of the country they are visiting be correspondingly weak.

**2.** Foreign firms that produce U.S. imports prefer a strong U.S. currency, because they are earning U.S. dollars. U.S. firms that export abroad prefer a weak U.S. currency and stronger foreign currencies, because they are earning the foreign currency. As a result, a stronger currency tends to bring smaller trade surpluses or larger trade deficits, while a weaker currency tends to bring smaller trade deficits or larger trade surpluses.

3. Foreign investors in the U.S. economy like a strong dollar, because the U.S. dollars they earn with their investments are now worth more. However, a strong U.S. dollar hurts U.S. investors abroad, because the foreign currencies they earn are now worth relatively less when converted back into dollars. Thus, a stronger currency encourages net inflows of foreign financial capital (and, conversely, a weaker currency discourages such inflows).

**II.** Exchange rates fluctuate more than would be expected based on underlying factors, such as the prices of goods being traded, and by the rates of return available to investors in different countries.

**A.** Exchange rates for some of the leading U.S. trading partners are given below. These figures are for mid-April 2005. Exchange rates do fluctuate considerably. Current exchange rates are available in many newspapers, and the Federal Reserve also prints both daily data and historical data back several decades at www.federalreserve.gov/ releases.

**Dollar Exchange Rates, April 2005**

| Country | Currency | Per U.S. dollar | U.S. dollars per unit of foreign currency |
|---|---|---|---|
| Canada | Dollar | 1.24 | .81 |
| China | Yuan | 8.27 | .12 |
| European Union | Euro | 0.77 | 1.30 |
| Japan | Yen | 107 | .01 |
| Mexico | Peso | 11.10 | .09 |
| United Kingdom | Pound | .52 | 1.92 |

Source: Federal Reserve Bank

**B.** The Bretton Woods Agreement (July 1944) created the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (also called the World Bank). The IMF fixed exchange rates. But since 1973, exchange rates have been allowed to "float," meaning that the market primarily determines the rate—with some occasional government intervention.

**C.** In the long run, exchange rates tend to move toward the purchasing-power parity exchange rate, which is the exchange rate that equalizes the prices of internationally traded goods across countries.

**D.** In the short and medium run, exchange rates are largely driven by changing expectations about rates of return, which can lead to volatility in exchange rates as investors chase trends for a time before reversing themselves.

**III.** What is the range of public policies with regard to exchange rates?

**A.** One policy is to let the market determine the exchange rate. This is mainly the U.S. policy. The difficulty with this policy is that exchange rate markets seem quite volatile.

**B.** If a government seeks to manage its exchange rate, it should generally seek a stable (or slowly moving) exchange rate over time, rather than trying to benefit export industries with a continually cheaper currency.

1. A stable exchange rate facilitates international trade and financial transactions. (Imagine the U.S. economy with 50 separate state currencies!) For this reason, the introduction of the euro will benefit the economy of Europe.
2. It is sometimes proposed that a nation depreciate its currency to help its exporters become more "competitive." A weaker currency will help exporters, but this is a shaky road to a wealthy national economy. After all, a weaker currency makes exporters more competitive by imposing a reduction in buying power for all workers. Also, this is a strategy that won't work in the long term. Is a nation supposed to keep reducing the value of its currency forever?

**C.** A government that seeks to fix its exchange rate can use monetary policy.

1. Contractionary monetary policy can raise interest rates and strengthen the exchange rate; expansionary monetary policy can reduce interest rates and weaken the exchange rate.

2. Of course, if monetary policy is used for this purpose, it may not fit with the goals of reducing inflation or fighting unemployment.

**D.** An alternative method for a government to affect exchange rates is to buy and sell its own currency directly on foreign exchange markets.

1. A country that wishes to strengthen its currency will buy that currency on foreign exchange markets, and a country that wishes to weaken its own currency will sell it on foreign exchange markets.
2. However, buying a nation's own currency requires foreign exchange reserves and, thus, can't go on forever. Selling a nation's currency requires accumulating foreign exchange reserves, which can go on for a long time but not forever either.

**E.** All government attempts to manage exchange rates run into two practical problems: Foreign exchange markets will attempt to outguess the government, and the choice of exchange rate is never completely clear.

1. Government attempts to stabilize an exchange rate can actually be a source of destabilization, as investors in international markets try to guess in advance what the central bank is likely to do and act accordingly.
2. It's hard for governments to choose a realistic exchange rate. In the long run, a currency needs to reflect what it can buy. If a government tries to fix a currency at an unrealistic level with regard to what it can buy, it will create macroeconomic imbalances and be subject to speculative attacks.

**F.** Some countries have attempted to keep their exchange rate more stable than the market outcome but also allow it to move slowly over time. This policy of setting a *target zone* for a currency, or *pegging* a currency, is out of favor. It often seems to lead to a situation in which banks assume that the exchange rate won't change—and, thus, are unprepared when it does change.

**Essential Reading:**

Sam Y. Cross, *All About…The Foreign Exchange Market in the United States*, www.ny.frb.org/education/addpub/usfxm.

Federal Reserve Bank of New York, "The Basics of Foreign Trade and Exchange," www.ny.frb.org/education/fx/index.html.

**Supplementary Reading:**

Federal Reserve, "Chapter 4: The Federal Reserve in the International Sphere," in *Purposes and Functions*, www.federalreserve.gov/pf/pdf/frspf4.pdf.

Federal Reserve Bank of New York, *The Foreign Exchange and Interest Rate Derivatives Markets: Turnover in the United States*, www.ny.frb.org/markets/ triennial/fx_survey.pdf.

**Questions to Consider:**

1. Think about whether you personally are helped or hurt when exchange rates rise or fall. For example, would you like to take vacations abroad? Do you buy a number of imported products or products that must compete in the market with imported products? How is the company you work for influenced by exchange rates? What about other important companies in your local economy?
2. Discuss whether exchange rates should be fixed or floating. Start by drawing up a list of the reasons why a fixed exchange rate would be a good idea. Then, you might disagree with fixed exchange rates for one of two reasons: It isn't practically possible to keep them fixed, or it wouldn't be a good idea to keep them fixed. Spell out the reasons behind these arguments as well. What's your bottom line?

## Lecture Thirty-Five
## International Financial Crashes

**Scope:** In the late 1990s and early 2000s, countries from Thailand to Russia to Argentina suffered deep recessions after an inflow of international foreign investment reversed itself. This lecture explores the causes of international financial crashes and what policies have been proposed to reduce their risk. The U.S. economy has experienced a large inflow of foreign investment in the 1990s and 2000s, but it is less vulnerable to a crash than many other countries. The issues raised by international financial crashes will likely continue, because international flows of financial capital seem likely to expand in the future.

## Outline

**I.** Recent decades have seen a number of international financial crashes, including Argentina in 2001–2002, Russia in 1998, countries across East Asia in 1997, and Mexico in 1994–1995. These crises followed a broadly similar pattern.

- **A.** Countries that have experienced financial crashes suffer very large drops in GDP, much deeper than a typical U.S. recession.
- **B.** The countries that experienced financial crashes were typically running substantial trade deficits before their crises, which means that they were experiencing a large net inflow of foreign financial capital. Bank lending was rising rapidly in these countries, and the percentage of nonperforming loans was rising.
- **C.** This inflow of foreign financial capital then stopped or reversed itself very quickly. The change from a large net inflow of financial capital to an outflow caused a sharp change in the country's exchange rate. Exchange rates have some tendency to fluctuate violently, or to *overshoot*.
- **D.** In developing economies, most borrowing in international markets is done in U.S. dollars. However, when the money is loaned within the economy, it is typically loaned in the local currency, such as Thai *baht*. When the local exchange rate falls sharply, it becomes impossible for the banks to repay their U.S. dollar loans. Banks that have been involved in such international loans, which means most banks, are literally all bankrupt.

**II.** What policy options might limit the likelihood or costs of international financial crashes?

- **A.** The International Monetary Fund can give loans to countries that are experiencing a financial crash to soften the blow. But the IMF intervention arrives only after the crash has occurred.
- **B.** Some governments have sought to impose controls on international flows of financial capital, but this approach has had modest success at best.
  - **1.** Blocking international flows of financial capital altogether is difficult.
  - **2.** Perhaps the most useful controls seek to encourage direct investment, rather than portfolio investment.
- **C.** Countries might do a better job of regulating their banking and financial systems to enable banks to do a better job of recognizing the foreign exchange risks they face and take steps to hedge those risks.
- **D.** Some have proposed an international mechanism that would work as a sort of bankruptcy court for countries. The hope is that if foreign investors knew that they would be treated fairly in a predictable procedure, they wouldn't be so quick to pull their funds out of the country.

**III.** How vulnerable is the United States to an international financial crash?

- **A.** The U.S. economy was running very large trade deficits in the early and mid-2000s, which reflect large net inflows of international financial capital to the U.S. economy. Trade deficits in the mid-2000s have been in the range of 4–5% of GDP, numbers like $500 billion deficit.
- **B.** Foreign investors will not hold a rising share of U.S. assets in their portfolios forever, which implies that at some point, the inflow of capital will be reduced.
  - **1.** The ratio of total U.S. foreign debt/GDP is rising but won't continue to rise forever.
  - **2.** The share of the portfolio of foreign investors held in U.S. assets has risen but won't rise forever.
- **C.** However, the U.S. economy is considerably less vulnerable to an international financial crash than other countries.

1. Much of the inflow of foreign financial capital to the U.S. economy is in the form of investments in assets with variable returns, such as stock in companies or real estate. Because the return is not guaranteed, the foreign investors are exposed to greater risk—and the U.S. economy, to less risk.
2. U.S. firms and banks are able to borrow in U.S. dollars, which is their own currency. If the U.S. dollar drops in value, U.S. banks do not suffer a mismatch between the currency in which they are earning money and the currency in which they owe their debts.
3. The U.S. economy has handled substantial falls in the value of the U.S. dollar in the past without dramatic ill effects.

**D.** If the balance of trade falls, how will the national savings and investment identity adjust? Will the result be lower government budget deficits, less domestic investment, or more private saving?

**IV.** International flows of financial capital are already very large, but they appear likely to become even larger in the future.

**A.** *Home bias* in international investment—that is, the tendency of investors to invest in their own countries, rather than diversifying internationally—is still very real.

**B.** Most countries still rely primarily on their own domestic savings, rather than on inflows of foreign capital, to fund their domestic investments in physical capital. However, regions within countries do not always rely on regional savings, but some regions receive net inflows of financial capital from other regions, while others send net outflows of financial capital to other regions. Someday, net inflows of financial capital between countries, with some being net borrowers and others being net lenders, may be larger too.

**Essential Reading:**

William C. Gruben, *Yesterday's Crisis Countries: Where Are They Now?* www.dallasfed.org/research/indepth/2001/id0101.pdf.

Guillermo Ortiz, *Recent Emerging Market Crises: What Have We Learned?* www.perjacobsson.org/lectures/2002-ortiz.pdf.

**Supplementary Reading:**

Norman S. Fieleke, "International Capital Transactions: Should They Be Restricted?" *New England Economic Review*, March/April 1994, pp. 27–39.

International Financial Institutions Advisory Commission, *International Financial Institutions Reform*, May 2000, www.house.gov/jec/imf/meltzer.pdf.

**Questions to Consider:**

1. Based on what you understand about how international financial crashes have happened in the past, discuss some of the factors that would make an economy especially likely to suffer from such a crash.
2. The U.S. economy is the world's largest debtor. Why, then, is the risk of a costly international financial crash typically viewed as relatively low for the U.S. economy compared to other countries?

# Lecture Thirty-Six
# A Global Economic Perspective

**Scope:** The costs of communication and transportation are continually falling, which economically speaking, brings the world closer together. Certain areas of the world, such as countries in East Asia, are taking off in a growth explosion. This lecture begins with an overview of the rest of the world economy, using the ideas of GDP and per capita GDP. It then discusses global economic prospects over the next few decades. Even after considering a number of potential stumbling blocks, including misguided economic policy, war, trade war, an energy or resource shortage, environmental issues, and population issues, the prospects for several billion people to be far better off in the next few decades are extraordinary. The United States sometimes seems to fear this richer world, but it need not. Economic growth is not a zero-sum game, and living in a richer world will benefit the U.S. economy, too.

## Outline

**I.** When reviewing the global economic scene, it's useful to begin by looking at GDP and population for the world, then for major groups of countries around the world. A standard breakdown is first to separate out the high-income economies, the largest of which are the United States, countries of the European Union, and Japan. Then, the world is divided into regions: East Asia and Pacific, Eastern Europe and Central Asia, Latin America and Caribbean, Middle East and North Africa, South Asia, sub-Saharan Africa.

**A.** World GDP was estimated at $32 trillion in 2002. World population that year was 6.2 billion. Thus, per capita GDP is approximately $5,200.

**B.** High-income countries of the world include the United States, the countries of Western Europe, Japan, Canada, Australia, and New Zealand.

**1.** These countries have about 16% of world population but produce 80% of world GDP. In this region, per capita GDP is roughly $27,000.

**2.** Each of these economies faces issues and problems, including unemployment rates, budget deficits, the issue of how to pay for an aging population, and other concerns. However, this group of countries as a whole also seems to keep racking up average growth rates of GDP of about 2.5% per year. They have enormous fundamental strengths in human capital, physical capital, technology, and functional market institutions.

**GDP, Population, and Per Capita GDP for the World Economy**

| Region | GDP for region (2002) | Percent of total world GDP | Population for region | Percent of total world population | Per capita GDP for region |
|---|---|---|---|---|---|
| High-income countries | $26,052 billion | 80.1% | 966 million | 15.6% | $26,969 |
| East Asia and Pacific | $1,833 billion | 5.7% | 1,838 million | 29.6% | $ 997 |
| Eastern Europe; Central Asia | $1,132 billion | 3.5% | 473 million | 7.6% | $2,393 |
| Latin America and Caribbean | $1,668 billion | 5.2% | 525 million | 8.7% | $3,177 |
| Middle East and North Africa | $670 billion | 2.1% | 306 million | 4.9% | $2,189 |
| South Asia | $649 billion | 2.0% | 1,401 million | 22.6% | $ 463 |
| Sub-Saharan Africa | $319 billion | 1.0% | 689 million | 11.1% | $ 462 |
| Total for world | $32,312 | 100.0% | 6,199 | 100.0% | $5,210 |

| Region | GDP for region (2002) | Percent of total world GDP | Population for region | Percent of total world population | Per capita GDP for region |
|---|---|---|---|---|---|
| | billion | | million | | |

Source: World Bank, World Development Indicators 2004.
Note that columns may not sum exactly due to rounding.

**C.** The largest economies in the East Asia and Pacific region include China and the countries sometimes called the "East Asian tigers," such as Indonesia, South Korea, and Thailand.
  **1.** These countries have 30% of world population (China has two-thirds of that) but about 6% of world output. Per capita GDP, which is heavily influenced by China, is about $1,000.
  **2.** This region is the world's major economic success story of the last few decades. Real GDP growth in this region averaged 7.3% from 1990–2002— and remember that this includes a deep financial crash and recession for many countries of East Asia in 1997–1998.

**D.** The largest economy in the region of Eastern Europe and Central Asia is Russia, but other large economies include Poland and Turkey.
  **1.** This region has about 7.5% of world population but produces about 3.5% of world output. Per capita GDP is about $2,400.
  **2.** Economies in this region had great difficulty in the 1990s. The real GDP of this region was actually lower in 2002 than it was in 1990. As Russia and countries of Eastern Europe opened up to market forces in the early 1990s, their economies nearly collapsed from the shock. But in the early 2000s, Russia and other economies of the region have begun to grow at a more robust pace.

**E.** The biggest economies in the Latin America and Caribbean region include Brazil, Mexico, and Argentina.
  **1.** This region has 9% of world population, 5% of world GDP, and a per capita GDP of about $3,200.
  **2.** In the 1970s and 1980s, these countries had enormous debt, inward-looking trade substitution policies, and horrendous inflation and government budget deficits. Now, they have shaped up their macroeconomic policies and tamed hyperinflation. Additionally, they have largely given up protecting infant industries and have reduced price controls. Although their economic performance has picked up, it is only moderate.

**F.** The largest economies in the Middle East and North Africa region are Saudi Arabia, Iran, and Egypt.
  **1.** This region has about 5% of world population and 2% of world output. Per capita GDP is about $2,200.
  **2.** Real GDP in this region grew 3.2% per year from 1990 through the early 2000s.

**G.** The largest economy in the South Asia region is India. Other populous countries in the region include Pakistan and Bangladesh.
  **1.** This region has about 22% of world population but produces about 2% of world GDP. Per capita GDP is about $460.
  **2.** Although this region is extremely poor, there are some encouraging signs. From 1990 to the early 2000s, real GDP in the region grew at 5.4% per year—roughly double the rate of the high-income economies. India, in particular, seems to be reducing what used to be an extremely heavy level of regulation in its economy and moving toward market incentives and orientation to the world economy.

**H.** The largest economy in sub-Saharan Africa is South Africa. The most populous country is Nigeria, and there are 48 countries in the region.
  **1.** Sub-Saharan Africa has 11% of world population and produces 1% of world GDP. Per capita GDP is roughly $460—the same as in the South Asia region.
  **2.** Although Africa's economic picture is gloomy, there are a few intriguing signs. Levels of education and measures of health have improved substantially in recent decades. South Africa might have a strong enough economy to help stimulate growth elsewhere. But many people continue to eke out a subsistence living in countries that are ill-governed at best, in turmoil at worst.

**I.** China and India together have about 37% of the world population, and their economic progress in the last couple of decades has been the best possible news for billions of the poorest people in the world.

**II.** Potential stumbling blocks for long-run growth in the world economy include misguided policy, military war, trade war, an energy or resource shortage, environmental issues, and population issues.

  **A.** Will misguided government economic policies cause economic turmoil? Mistakes will sometimes be made, of course, but there seems no reason to expect an outbreak of terrible economic policy.

  **B.** Will war disrupt long-run economic growth? Probably not. War is, of course, very harmful to the smooth functioning of an economy. But the damage can also be repaired; think of the recovery of Europe's economies after the devastation of World War II.

  **C.** Will a trade war cripple the global economy? The world does have 50 years of momentum toward more free trade since the end of World War II, and despite the major political battles waged over it, the momentum would be very difficult to stop.

  **D.** Will an energy shortage stop long-run growth? Over the next 30–40 years, prices of current energy sources may rise, but there is little reason to expect an outright shortfall. Plus, emerging technology may uncover new energy sources to exploit and more efficient ways to make use of resources or substitutes.

  **E.** Will an environmental crisis stop long-run growth? In general, a richer world will be more willing to spend resources on environmental protection. In fact, if we tax energy sources for environmental purposes, such as reducing the risk of greenhouse warming, we will also increase incentives for conserving energy and reduce the second concern.

  **F.** Will population growth outstrip world economic growth? Long-run projections suggest that the world is going through a "demographic transition" toward lower birth rates and longer life expectancies.

**III.** Sometimes it seems as if global economy is nothing but a threat to the United States. But the future economy will have remarkable opportunities, along with its challenges.

  **A.** Political forces in the United States sometimes seem to feel that all trade is potentially threatening, whether it's trade with high-wage countries, such as Japan or Germany, or low-wage countries, such as China and India. International trade is certainly a force for disruption, but it is also a spur to economic growth.

  **B.** Would you prefer to live in a world where the U.S. economy grows at 3% per year and the rest of the world averages 5% a year? Or in a world where the U.S. economy averages 2% growth a year and the rest of the world grows at 1% a year? Do you prefer a faster absolute rate of growth or a faster relative rate of growth?

  **C.** To a large extent, each nation has control over its own economic growth, as determined by its policies to encourage long-term savings and investment in a market-oriented context and by increasing productivity.

**Essential Reading:**

International Monetary Fund, *World Economic Outlook*, www.imf.org/external/ pubs/ft/weo/weorepts.htm. (Current and past issues of the journal are available on the IMF Web site.)

Harry Rowen, "World Wealth Expanding: Why a Rich, Democratic, and (Perhaps) Peaceful Era Is Ahead," in *The Mosaic of Growth*, pp. 122–155.

World Bank, *Global Economic Prospects*, www.worldbank.org.

**Supplementary Reading:**

International Monetary Fund, *Finance and Development*, www.imf.org/external/ pubs/ft/fandd/fda.htm. (Subscriptions are free, and current and past issues are available on the Web site.)

**Questions to Consider:**

1. This lecture clearly presents a somewhat optimistic view of world economic growth over the next few decades. Do you find this forecast persuasive? What do you feel are the most significant dangers to this forecast?
2. Is faster growth around the world good or bad for the United States? In considering this question, try to avoid the "lifeboat" mentality, which holds that if others consume more, we must consume less. There are real issues here, but that isn't one of them.

## Bibliography


**Essential Reading:**

"American Productivity: The New 'New Economy.'" *The Economist*, September 11, 2003. This article discusses whether the U.S. gains in productivity in the early 2000s are likely to be sustained and argues that ultimately, the information technology revolution may have as big an impact on productivity as did electricity—a previous mega-innovation.

Asch, Peter, and Gigliotti, Gary A. "The Free Rider Paradox—Theory, Evidence, and Teaching." *Journal of Economic Education*, 22:1, Winter 1991. An interesting article that points out that people don't free ride in many situations, at least not completely.

"Asset Management: Other People's Money." *The Economist*, July 3, 2003. *The Economist* regularly runs excellent surveys. This one focuses on the evolution of the industry of managing other people's money.

Bastiat, Frederic. *Economic Sophisms*. Arthur Goddard, trans. and ed. Irvington-on-Hudson, NY: The Foundation for Economic Education, 1996 (1845). Available at www.econlib.org/library/Bastiat/basSoph.html. Bastiat was a talented polemicist, with a gift for showing the absurdity in certain points of view. This book is a series of short essays, good for dipping in and out. For example, I recommend Bastiat's essay on the "negative railway."

Bebchuk, Lucien, and Jesse Fried. "Pay Without Performance: The Unfulfilled Promise of Executive Compensation." *Milken Institute Review*, 2nd quarter 2005. The authors lay out the difficulties that shareholders face in monitoring corporate executives and suggest that something along the lines of a revolution in shareholder power is needed. Available at www.milkeninstitute.org. Click on "Publications" and follow the links.

Bhagwati, Jagdish. "Protectionism." *The Concise Encyclopedia of Economics*. Library of Economics and Liberty. Available at www.econlib.org/library/Enc/ Protectionism.html. Bhagwati is one of the most fierce and able defenders of free trade. This short essay will give you a taste of his arguments and style.

Cohen, Linda, and Roger Noll. "Privatizing Public Research: The New Competitiveness Strategy." In *The Mosaic of Economic Growth*. Ralph Landau, Timothy Taylor, and Gavin Wright, eds. Stanford, CA: Stanford University Press, 1996. More and more, politicians of both parties are attempting to push R&D into the private sector. The results may be good for certain companies that receive government support for their research, but this "privatized" research is not widely available, making it hard for it to have an impact throughout the economy.

Congressional Budget Office. *Baby Boomers' Retirement Prospects: An Overview*. November 2003. Available at www.cbo.gov. The nonpartisan research agency for Congress examines how well prepared the baby-boom generation is for retirement. Most will live far better than their parents did in retirement—but perhaps not as well as they are currently expecting.

———. *The Economic Costs of Fuel Economy Standards versus a Gasoline Tax*. December 2003. Available at www.cbo.gov. The nonpartisan research agency of Congress evaluates the choice between tougher fuel economy standards and a tax on gasoline as ways of reducing gasoline consumption.

———. "The Effect of Price Changes on Gasoline Consumption." In *Reducing Gasoline Consumption—Three Policy Options*. November 2002. Available at www.cbo.gov. This report discusses how to reduce gasoline consumption—with some discussion of elasticities along the way.

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Council of Economic Advisers. *Economic Report of the President.* Each year (usually in February), the Council of Economic Advisers, an agency of academic economists appointed by the president, publishes this report. It typically includes a couple of chapters that offer an overview of macroeconomic developments in the last year or two, then has a set of chapters on specific topics in economic policy. In the back are 120 pages or so of convenient tables with different breakdowns of GDP, employment, inflation, international trade, government taxes and spending, financial


 

markets, and more—usually going back to about 1960. The most recent year and the past few years are available at www.gpoaccess.gov/eop.

———. "Chapter 3: Policies for Dynamic Labor Markets." In *Economic Report of the President*. February 2003. Available at www.gpoaccess.gov/eop. Discussions of movement in and out of the labor force, skill development, and other issues.

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———. "Chapter 8: Regulating Energy Markets." In *Economic Report of the President*. February 2004. Available at www.gpoaccess.gov/eop. An accessible discussion of some of the ways flexible prices and markets work well in encouraging sensible consumption and production decisions and how a combination of market forces and misguided regulation can sometimes go very wrong, as in the market for electricity.

———. "Chapter 9: Protecting the Environment." In *Economic Report of the President*. February 2004. This chapter offers an introduction to market-oriented perspectives on protecting the environment, along with some discussion of current environmental issues.

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International Monetary Fund. *World Economic Outlook.* The IMF publishes this volume twice a year. The first chapter goes through the regions of the world, discussing current economic issues facing them. Later chapters then examine particular issues. For example, the April 2005 issue has chapters on the world oil market and on the role of remittances from workers abroad in the economic development of low-income countries. Current and past issues of the journal are available on the IMF Web site at www.imf.org/external/pubs/ft/weo/ weorepts.htm.

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“The Lender’s Long Lament.” *The Economist*, December 25, 1993. Those who charge interest have been unpopular for centuries. Yet as this article shows, the history of public attitudes toward moneylenders over the last few centuries has been filled with ambiguity. The reader might consider a person’s likely attitudes toward a bank when his or her loan for a home mortgage has been approved and the likely attitude if the bank foreclosed on the loan and sells off the property because the mortgage payments weren’t made.

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“Oil in Troubled Waters: A Survey of Oil.” *The Economist*, April 30, 2005. Sharp increases in oil prices are often given as a reason for negative shocks to aggregate supply. However, sharp increases in oil prices in 2004 didn’t cause a recession that year. This survey explores why and discusses the future of the oil industry.

“Open Skies and Flights of Fancy.” *The Economist*, October 2, 2003. This article gives a nice overview of what could be the next big step in airline competition: that is, letting all airlines, whatever their country of origin, compete all around the world. Along the way, it discusses the history of airline regulation and deregulation around the world.

Ortiz, Guillermo. *Recent Emerging Market Crises: What Have We Learned?* Per Jacobsson Foundation, 2002. Available at www.perjacobsson.org/lectures/2002-ortiz.pdf. Ortiz was the head of the central bank of Mexico at the time of giving this lecture; thus, he had a front-row seat for many of the financial crises of the 1990s and early 2000s. This thoughtful overview proceeds step-by-step, looking for common elements of the crises and possible policy solutions.

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Rowen, Harry. "World Wealth Expanding: Why a Rich, Democratic, and (Perhaps) Peaceful Era Is Ahead." In *The Mosaic of Economic Growth*. Ralph Landau, Timothy Taylor, and Gavin Wright, eds. Stanford, CA: Stanford University Press, 1996. In this thoughtful article, Rowen reviews the economic and political prospects of the largest developing countries around the world and explains why economic prospects for the next couple of decades are reasonably rosy. In reading, you might pay special attention to the factors that could derail this rosy scenario. Do you find yourself in agreement with Rowen that these aren't especially likely to happen?

Shaw, Jane W. "Public Choice Theory." *The Concise Encyclopedia of Economics*. Library of Economics and Liberty. Available at www.econlib.org/ library/Enc/PublicChoiceTheory.html. The public choice field of economics applies the idea that people act in their own self-interest to the actions of voters, lobbyists, and politicians and points out conditions under which governments can fail to act in the broader public interest.

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Statistical Abstract of the United States. Annual. This desk reference pulls together government statistics, economic and otherwise, from a wide range of sources. It's the first place to look for information; if you want more detail, follow the footnotes.

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———. "Untangling the Trade Deficit." *The Public Interest*, Winter 1999. I explain why a trade deficit has macroeconomic underpinnings and is not related to unfair trade barriers.

U.S. Census Bureau. "Poverty." Available at www.census.gov/hhes/ www/poverty.html. This Web site covers such issues as the definition of poverty and how it has changed over time. It also provides an annual report on the poverty rate among different groups, as well as historical data.

 

U.S. Department of Commerce, Bureau of Economic Analysis. *International Economic Accounts: Balance of Payments*. This Web site is the official starting point for data on the current account balance and its components. Check the most recent news release and look at some historical data. Available at bea.gov/bea/di/home/bop.htm.

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U.S. Department of Labor, Bureau of Labor Statistics. *Consumer Price Indexes*. Available at bls.gov/cpi/home.htm. This is the official Web site for the Consumer Price Index, with current data, historical data, answers to frequently asked questions, and a wealth of background material.

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Wirtz, Ronald A. "Will That Be Cash, Check or Debtor's Hell?" "Buyer Beware." "A Helping Hand, or New Age Loan Sharking?" *FedGazette: Federal Reserve Bank of Minneapolis*, October 2000. Available at minneapolisfed.org/ pubs/fedgaz/ffeature.cfm. These three articles explore how borrowers, especially low-income borrowers, can become trapped in a world of high-interest credit-card overruns and payday loans.

World Bank. *Global Economic Prospects.* The World Bank publishes this volume annually. Each year, it begins with a global outlook focused on the developing countries of the world, then turns to a particular theme. For example, the 2005 report focuses on how regional efforts at developing trade and markets can affect economic development. An appendix at the back of the volume goes through the regions of the world one at a time. The report is available free at the World Bank Web site, www.worldbank.org, although you will need to look in the "Publications" area or type the title into the "search" command to find it.

World Bank. World Development Indicators. Annual. This book is the place to look for tables of economic statistics that compare all countries and regions of the world.

"The World Economy: A New Economy for the New World?" *The Economist*, September 23, 1999. In the late 1990s, with the U.S. economy booming and no inflation in sight, some economists wondered if the Phillips curve tradeoff between inflation and unemployment was truly dead. This article reviews the evidence and arguments on the tradeoff and concludes that inflation is not nearly dead.

Zeckhauser, Richard. "Insurance." *The Concise Encyclopedia of Economics*. Library of Economics and Liberty. Available at: www.econlib.org/library/Enc/ Insurance.html. A solid basic explanation of insurance markets, moral hazards, and adverse selection.

**Supplementary Reading:**

Abraham, Katharine, and Christopher Mackie, eds. *Beyond the Market: Designing Non-Market Accounts for the United States.* Washington, DC: National Research Council of the National Academies, National Academies Press, 2005. Available on the Web at www.nap.edu, although it's in a format that isn't easy to read. This report examines the possibilities for expanding the concept of GDP to include leisure, health, education, environmental concerns, and other values—to make it a more complete measure of society's output broadly understood.

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Bastiat, Frederic. "Reciprocity" and "A Petition." In *Economic Sophisms*. Arthur Goddard, trans. and ed. Irvington-on-Hudson, NY: Foundation for Economic Education, 1996 (1845). Bastiat was a formidable polemicist, and these

are two of his most famous satirical essays against protectionism. In “Reciprocity” (First Series, chapter 10), two countries compete to make it harder and harder to trade with each other—because they both believe that fewer imports will make them wealthier. “A Petition” (First Series, chapter 7) is an impassioned argument from the candlestick makers for government protection from the unfair and job-killing competition posed by sunlight. Available at www.econlib.org/library/ Bastiat/basSoph.html.

Bordo, Michael D., and David C. Wheelock. “Monetary Policy and Asset Prices: A Look Back at Past U.S. Stock Market Booms.” In *Review: Federal Reserve Bank of Saint Louis*. November/December 2004. The authors present an in-depth historical overview of the connections between monetary policy and asset booms. They find little evidence that monetary policy has played a major role in causing asset booms and caution hesitancy before using monetary policy to deflate an asset boom.

Bridges, William. “The End of the Job.” *Fortune*, September 19, 1994. Back in the 19th century, when the bulk of the population worked on farms, the idea of a “job,” in which you worked a fixed number of hours in a factory owned by someone else, was viewed with grave discontent. Today, as more and more people become independent contractors, providing services by telecommuting from a distance, the notion of a “job” is changing dramatically again. The author makes a provocative argument that the “job” as we have known it this last century “is vanishing like a species that has outlived its evolutionary time.”

Buchanan, James, and Herbert Stein. “Should the Senate Pass a Balanced Budget Constitutional Amendment?” *Congressional Digest*, February 1995. See the “pro” article from James Buchanan on p. 50 and the “con” article from Herbert Stein on p. 53. Early in 1995, the U.S. Congress debated a plan for a constitutional amendment to require balancing the budget. The plan passed the House of Representatives but did not receive the two-thirds vote required in the Senate. This magazine contains a number of pro-and-con arguments. The two recommended here are from prominent economists: Buchanan is a Nobel laureate; Stein was a policy economist in Washington for decades.

Centers for Medicare and Medicaid Services. *2005 Annual Report of the Boards of Trustees of the Hospital Insurance and Supplementary Medical Insurance Trust Funds*. March 23, 2005. Each year around the end of March, the trustees of Medicare publish this readable report. The facts and analysis in this report provide the baseline for policymakers’ discussion of Medicare. The current report and reports for the last few years are available at www.cms.hhs.gov/ publications/trusteesreport.

Citro, Constance F., and Robert T. Michael. *Measuring Poverty: A New Approach*. Washington, DC: National Academy Press, 1995. This report, from a group of social scientists, offers a new definition of the poverty line. This involves both a comprehensive critique of the current definition of poverty, how it might be redefined, how the new definition would change the poverty rate, and who is below the poverty line.

Clement, Douglas. “Inflation and the Phillips Curve: The Magic Is Gone.” In *The Region: Federal Reserve Bank of Minneapolis*. September 2001. This article reviews several decades of evidence and argues that the short-run Phillips curve tradeoff was never as reliable as it looked and is now unsupported by evidence. The argument is the case that the economy has a fixed natural rate of unemployment, not an unemployment-inflation tradeoff. Thus, it takes the other intellectual side from the article by Jeffrey Fuhrer.

Coase, R. H. “The Lighthouse of Economics.” *Journal of Law and Economics*, 17:2, October 1974. Lighthouses have often been used by economists as an example of a public good. In this classic article, Nobel laureate Coase presented evidence that many lighthouses were privately built—and that apparently the free-rider problem wasn’t as severe as many economists have assumed.

Congressional Budget Office. *Budget Options*. February 2005. This report is produced annually by the CBO, the nonpartisan research arm of the Congress. It lists literally hundreds of possible spending cuts and tax increases, with projections for how they would affect the deficit over the next few years. It also offers a few paragraphs of explanation about each one. Many teachers of economics use this book as a framework for letting students design their own plan for reducing the budget deficit. Available at www.cbo.gov.

———. *Historical Effective Federal Tax Rates: 1979 to 2002*. March 2005. The nonpartisan research agency for Congress regularly publishes different breakdowns of the tax rates paid by different income groups over time. Other CBO publications also include forecasts of the rates by income group over the next decade or so. These reports are available at www.cbo.gov. Click on “Publications” and follow the links.

———. *Federal Terrorism Reinsurance: An Update*. January 2005. Can private insurance markets provide insurance against terrorism? What are the moral hazards and adverse selection problems likely to arise? In fact,

 

most governments around the world help to provide terrorism insurance. This report summarizes the situation in the United States. Available at www.cbo.gov.

Council of Economic Advisers. “Chapter 6: A Pro-Growth Agenda for the Global Economy.” In *Economic Report of the President*. February 2003. This chapter offers some discussion of growth patterns in the world economy and emphasizes the importance of investment in people and a rule of law to economic development. Available at www.gpoaccess.gov/eop.

“Counting the Jobless.” *The Economist*, July 22, 1995. Unemployment rates can be adjusted to include “discouraged” workers or “underemployed” workers. This one-page article describes a recent report that carries out such a calculation for the industrialized nations of the world. In the end, the conclusion is that the old-fashioned unemployment rate may remain the best single measure of pressure in the labor market.

“Debating the Minimum Wage.” *The Economist*, February 1, 2001. This brief article sums up the state of the academic research about whether minimum wages cause job loss.

Environmental Protection Agency. *Draft Report on the Environment*. 2003. Available at www.epa.gov/indicators/roe/index.htm. This report provides a useful summary of environmental conditions and trends affecting air, water, land, pollutants, and ecology. As with many government reports, it’s better at summarizing facts than at offering solutions.

Farrell, Paul B. *The Lazy Person’s Guide to Investing: A Book for Procrastinators, the Financially Challenged, and Everyone Who Worries About Dealing with Their Money.* New York: Warner Business Books, 2004. A well-known columnist for CBS *MarketWatch*, Farrell does a nice job of describing for a popular readership how saving in a well-diversified portfolio with long-term horizons lets the power of compound interest increase your wealth.

Federal Reserve. “Chapter 4: The Federal Reserve in the International Sphere.” In *Purposes and Functions*. 1994. Available at www.federalreserve.gov/pf/ pdf/frspf4.pdf. This chapter focuses in particular on the role of the Federal Reserve in foreign exchange markets.

Federal Reserve Bank of Atlanta. *The Story of Money*. A Web exhibit devoted to the history of money, with a number of examples. Available at www.frbatlanta.org/atlantafed/visitors_center/tour/story.cfm.

Federal Reserve Bank of New York. *The Foreign Exchange and Interest Rate Derivatives Markets: Turnover in the United States*. April 2004. Available at www.ny.frb.org/markets/triennial/fx_survey.pdf. Once every three years, the New York Fed and 51 other central banks around the world do a survey of the large participants in foreign exchange markets. The survey results are a little dry, but if you want to get a real image of how foreign exchange markets work, the triennial survey is the place to start.

Fieleke, Norman S. “International Capital Transactions: Should They Be Restricted?” *New England Economic Review*, March/April 1994. One common suggestion for addressing international financial crises is to slow down the flow of international finance through some sort of tax or other restrictions. The author evaluates these proposals and finds that they are in some ways appealing but ultimately unpersuasive.

Flamme, Karen. “A Brief History of Our Nation’s Paper Money.” *Annual Report: Federal Reserve Bank of San Francisco*. 1995. Available at www.frbsf.org/publications/federalreserve/annual/1995/history.html. A description of the evolution of U.S. currency from the American Revolution to the present.

Fuhrer, Jeffrey C. “The Phillips Curve Is Alive and Well.” *New England Economic Review of the Federal Reserve Bank of Boston*, March/April 1995. This article reviews several decades of evidence. It argues that even after the macroeconomic experiences of the 1970s, 1980s, and early 1990s, the short-run Phillips curve properly understood is a strong empirical relationship. Thus, it takes the other intellectual side from the article by Douglas Clement.

Gibbons, Robert. “Incentives in Organizations.” *Journal of Economic Perspectives*, 12:4, Fall 1998. A discussion of how economists think about solutions to the principal-agent problem, with a particular focus on how workers might be paid in different settings. Because this article is written for economists, it is likely to be a tough read for others. On the other hand, although it has a small bit of algebra, the text is otherwise nonmathematical, and the language is introduced as it is used.

Gottlieb, Bruce. “How Much Is That Kidney in the Window?” *New Republic*, May 22, 2000. This article offers a nice summary of the arguments for and against allowing the sale of kidneys.

International Financial Institutions Advisory Commission. *International Financial Institutions Reform*. May 2000. Available at. www.house.gov/jec/ imf/meltzer.pdf. In 1998, Congress appointed a commission headed by an economist named Allan Meltzer to consider the appropriate role of international financial institutions, such as the

International Monetary Fund and the World Bank. Meltzer is a well-known skeptic about such institutions; thus, this report suggests various ways that the role of international institutions could be more tightly defined.

International Monetary Fund. *Finance and Development*. This journal offers an authoritative and honest description of many issues in the global economy based on current economic research. The journal is not always the liveliest reading one could find, but it is intended for the general-interest reader, and the articles are typically quite accessible. Subscriptions are free, and current and past issues are available at www.imf.org/external/pubs/ft/fandd/fda.htm.

Krugman, Paul. *Peddling Prosperity*. New York: W. W. Norton & Company, 1994. For our purposes, the relevant chapters are 9 and 10 and the appendix to 10, in which Krugman offers a splendid explanation of why the argument for a "strategic" trade policy, which would favor certain key industries, is so misguided. More broadly, Krugman suggests that the rhetoric of "competitiveness" (like the rhetoric of "fair trade") will often lead to misguided economic policy.

Kuran, Timur. "Islam and Mammon." *Milken Institute Review*, 3rd quarter 2004. An expert on Islamic economics considers the potential conflict between Islamic prohibitions on the payment of interest and a modern financial sector. Available at www.milkeninstitute.org; click on "Publications" and follow the links to the MIR.

Malkiel, Burton. *A Random Walk Down Wall Street*. Updated and revised 8th ed. New York: Norton, 2004 (1973). Malkiel is a high-powered academic who offers an accessible popular treatment of the economic logic and academic work behind the random walk theory of financial markets. If you want a thorough understanding of the random walk theory, the evidence behind it, and what it implies for personal investing, this classic book is the place to get it.

Mankiw, Gregory N. *Principles of Economics*. 3rd ed. Forth Worth, TX: Thomson South-Western, 2004. Some listeners may want to supplement these lectures with an introductory economics textbook. This book, written by a top Harvard economist who also served a stint as an economic adviser for George W. Bush, is a fairly recent, highly readable, and very popular textbook.

Mann, Catherine L. *Is the U.S. Trade Deficit Sustainable?* Washington, DC: Institute for International Economics, September 1999. Available at the IIE Web site: bookstore.iie.com/merchant.mvc?Screen=PROD&Product_Code=47. As trade deficits have gotten larger in the 2000s, the question posed in the title of Mann's 1999 book has only seemed more relevant. You can also look under her name at the IIE Web site and usually find some of her more recent analyses on this subject.

McConnell, Campbell R., and Stanley L. Brue. *Economics: Principles, Problems, and Policies*. 16th ed. New York: McGraw-Hill, 2004. Some listeners may want to supplement these lectures with an introductory economics textbook. This book has been the bestseller for several decades.

"Men and Machines: Technology and Economics Have Already Revolutionized Manufacturing. White-Collar Work Will Be Next." *The Economist*, November 11, 2004. This article discusses how technology is causing the division of labor to shift, first in manufacturing and now in service industries.

Moffatt, Mike. "A Beginner's Guide to Elasticity." Available at economics.about.com/cs/micfrohelp/a/elasticity.htm. This Web site contains articles on a wide range of subjects.

Naipaul, V. S. "The End of Peronism?" *New York Review of Books*, February 13, 1992. What is it like to live with hyperinflation? No one knows better than the people of Argentina, where inflation averaged more than 400% per year during most of the 1980s. In this article, the novelist and writer Naipaul travels to Argentina and discusses the shock of this experience with a number of people. This isn't exactly an article about economics, but it is a fascinating look into the human and economic impact of letting inflation roar out of control.

National Bureau of Economic Research. *Information on Recessions and Recoveries, the NBER Business Cycle Dating Committee, and Related Topics*. Available at nber.org/cycles/main.html. A panel of experts at the NBER determines the actual months when recessions start and end. This Web site offers dates of past business cycles, the memos the agency has released (on an irregular basis) about past business cycles, answers to frequently asked questions, and an opportunity to sign up to receive future memos.

National Science Foundation. *National Patterns of Research Development Resources: 2003*. Annual report, 2005. Available at www.nsf.gov/statistics/ nsf05308/pdfstart.htm. If you want to get down and dirty with the facts on U.S. R&D spending—trends over time, divided into categories, how funded, who carries it out—this annual report is the place to turn.

 

Office of Management and Budget. *Budget of the United States Government*. Available at www.gpoaccess.gov/usbudget/index.html. If you really want to develop a feel for the federal budget, you need to look at the budget itself. The presentation and format of the budget seems to be a little different every year, and most readers won't be deeply interested in the detailed budget, which is a *lot* of fine print. But I recommend browsing through the "Historical Tables" for the budget, which offer a breakdown of major categories of taxes and spending, expressed in many different ways, for the last few decades. I also recommend browsing through the "Analytical Perspectives" volume, which looks at the budget from a variety of different angles.

Oxfam International. *Food Aid or Hidden Dumping? Separating Wheat from Chaff*. Oxfam Briefing Paper 71, March 2005. Available at www.oxfam.org.uk/ what_we_do/issues/trade/bp71_foodaid.htm. Oxfam is an international aid organization that, in the last few years, has published a series of reports on how aid to farmers in high-income countries can injure farmers and living standards in low-income countries. This report points out the problems that arise when farm surpluses from high-income countries are donated or sold at low cost in low-income countries—thus making it difficult for farmers in those countries to earn a decent level of income.

Posner, Richard A. *Natural Monopoly and Its Regulation*. Washington, DC: Cato Institute, 1999. Posner is one of the gurus of the law-and-economics movement and a lovely, lucid writer. Back in 1969, he wrote a book questioning whether natural monopolies needed to be regulated by the government. In 1999, the book was reissued with new material on the lessons of regulation and deregulation over the intervening years.

President's Commission on the United States Postal Service. *Embracing the Future: Making the Tough Choices to Preserve Universal Mail Service*. 2003. Available at www.treas.gov/offices/domestic-finance/usps. This report offers a sound diagnosis of the financial problems facing the U.S. Postal Service in the Internet era and an overview of how other countries have deregulated their post offices. However, its ultimate recommendations are a little timid, as those of presidential commissions tend to be.

Radcliff-Richards, J., A. S. Daar, R. D. Guttmann, R. Hoffenberg, I. Kennedy, M. Lock, R. A.Sells, and N. Tilney. "The Case for Allowing Kidney Sales." *The Lancet*, June 27, 1998. A group of doctors and specialists in ethics make a case for why kidney sales should be allowed.

Radford, R. A. "The Economic Organization of a P.O.W. Camp." *Economica*. New Series, 12:48, November 1945. A classic article describing how markets worked in an unexpected place—in prisoner-of-war camps during World War II.

Resources for the Future. *Resources.* A Washington think-tank called Resources for the Future, which has often led the way in providing economic analyses of environmental problems, has a readable magazine called *Resources*. It's available on the Web at www.rff.org/rff/Publications/Resource_Articles.cfm. If you like it, you can also order a free subscription at the Web site.

Rosenberg, Nathan. "Uncertainty and Technological Change." In *The Mosaic of Economic Growth*. Ralph Landau, Timothy Taylor, and Gavin Wright, eds.. Stanford, CA: Stanford University Press, 1996. When Marconi invented the radio, he thought it would be used only for place-to-place "narrowcasting," not broadcasting to the public. When Bell's engineers invented the laser, they saw no point in seeking a patent for it, because lasers would never have anything to do with the telephone industry. In this delightful and provocative article, Rosenberg argues that examples like these are not the result of short-sightedness or stupidity, but simply occur because new technologies are extraordinarily unpredictable. As a result, he argues that government policy should steer away from trying to channel scientific effort in a way that attempts to predict the unpredictable and, instead, should focus on ensuring strength in a broad portfolio of technologies.

Ruby, Douglas A. *The Components of Aggregate Demand*. Revised January 15, 2003. www.digitaleconomist.com/ad_4020.html. This Web site offers a textbook-style explanation of aggregate demand and its components, together with some graphical analysis.

———. *Long Run Aggregate Supply and Price Level Determination*. Revised January 18, 2003. Available at www.digitaleconomist.com/as_4020.html. This Web site offers a textbook-style explanation of aggregate supply in the long run, together with some graphical analysis.

Scheller, Hanspeter K. *The European Central Bank—History, Role and Functions*. 2004. Available at www.ecb.int/pub/pdf/other/ ecbhistoryrolefunctions2004en.pdf. The European Central Bank and the euro are the greatest new experiments in money and central banking in at least the last few decades. This book offers a comprehensive overview of the ECB goals and operations.

 

Social Security Administration. *2005 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*. March 23, 2005. Each year around the end of March, the trustees of Social Security publish this report on the immediate, short-term, and long-term outlook for the system. The report is mostly quite readable, and the introductory chapter provides a nice overview. The most recent report and the past few reports are available at www.ssa.gov/OACT/TR.

Stewart, James B. "Whales and Sharks." *The New Yorker*, February 15, 1993. Two of the most famous antitrust cases in recent decades were the attempts by the government to break up IBM (a suit that was dropped) and to break up AT&T into separate local and long-distance companies (a suit that succeeded). Paradoxically, if IBM had allowed itself to be broken up, its various parts might be stronger competitors in the computer market today. After all, greater competition in telecommunications has invigorated that entire sector of the U.S. economy.

U.S. Census Bureau. *Historical Income Inequality Tables.* Available at www.census.gov/hhes/income/histinc/ineqtoc.html. For a variety of tables illustrating the extent of inequality and trends over time, check here.

U.S. Department of Labor, Bureau of Labor Statistics*. How the Government Measures Unemployment.* Available at www.bls.gov/cps/cps_htgm.htm. Last modified October 16, 2001. This 12-page report explains basic questions about how unemployment is measured. It is aimed at a general audience, but it includes a lot more detail than appeared in the lecture. This is a good starting point for those who want to know about "seasonally adjusted" unemployment, issues concerning the unemployment survey itself, and other topics.

U.S. House of Representatives, Ways and Means Committee. *2004 Green Book: Background Material and Data on the Programs within the Jurisdiction of the Committee on Ways And Means*. The *Green Book* is published every other year, and it offers an up-to-date if somewhat dry overview of many federal programs that affect the poor. For example, Temporary Assistance for Needy Families (TANF) is in Section 7, the Earned Income Tax Credit is in Section 13, and Food Stamps and Medicaid are in Section 15. Available at www.gpoaccess.gov/ wmprints/green/2004.html.

Wikipedia: en.wikipedia.org/wiki/Main_Page. Wikipedia is an interesting venture, because the quality of the entries depends on who wants to work on them.

Wolf, Charles, Jr. "The New Mercantilism." *The Public Interest*, Summer 1994. *Mercantilism* is the name given to a view of trade that was prevalent several centuries ago, before the writings of Adam Smith. In a nutshell, the mercantilists believed that exporting was good for a country and importing was bad. Modern economists believe that both sides of trade are interrelated, that trade as a whole is beneficial. Wolf accuses some opinion leaders and policymakers of succumbing to the mercantilist view.

World Trade Organization. *Understanding the WTO*. 2003. A short book that gives background on what the WTO actually is and how it operates and addresses many of the issues that arise about the WTO. The WTO Web site has a fair number of accessible publications, from pamphlets to short books, that discuss trade issues. Available at www.wto.org/english/thewto_e/ hatis_e/tif_e/tif_e.htm.

 