Common Sense Economics

What Everyone Should Know About Wealth and Prosperity

JAMES D. GWARTNEY
Florida State University

RICHARD L. STROUP
Montana State University

DWIGHT R. LEE
University of Georgia

St. Martin's Press New York

TEN KEY ELEMENTS OF ECONOMICS

1. Incentives matter.
2. There is no such thing as a free lunch.
3. Decisions are made at the margin.
4. Trade promotes economic progress.
5. Transaction costs are an obstacle to trade.
6. Profits direct businesses toward activities that increase wealth.
7. People earn income by helping others.
8. Economic progress comes primarily through trade, investment, better ways of doing things, and sound economic institutions.
9. The "invisible hand" of market prices directs buyers and sellers toward activities that promote the general welfare.
10. Too often long-term consequences, or the secondary effects, of an action are ignored.

Introduction

In a free-market economy such as the United States, our individual choices largely determine the course of our lives. At the same time, as voters and citizens we make decisions that affect the laws or "rules of the game" that guide these individual choices. To choose intelligently, both for ourselves and for society generally, we must understand some basic principles of human behavior. That is the task of economics—to explain the forces that affect human decision making.

The following section introduces ten key elements of economic analysis, ten factors that explain how our economy works. The reader will learn such things as why prices matter, the true meaning of cost, and how trade furthers prosperity. In a fraction of the time devoted to Economics 101, you will have picked up most of its important lessons. In subsequent sections you will learn more about how to put this information to good use.

1. Incentives Matter.

All of economics rests on one simple principle: that *incentives* matter. Altering incentives, the costs and benefits of making specific decisions, alters people's behavior.

Understanding incentives is an extremely powerful tool for understanding why people do the things they do because the impact of incentives can be seen on almost every level, from simple family decision making to securities markets and international trade.

In fact markets themselves work because both buyers and sellers change their behavior when incentives change. If buyers want to purchase more of something than sellers are willing (or able) to provide, its price will start to rise. As the price increases, however, sellers will be more willing to provide the good or service. Eventually, the higher price will bring the amount demanded and the amount supplied into balance.

What happens if it starts out the other way? If prices are too high, suppliers will accumulate inventories and will have to lower prices in order to sell their products. These lower prices will encourage people to buy more—but they will also discourage producers from stepping up production since at the new, lower price the product will be less profitable. Gradually the amount demanded by consumers will once again come into balance with the amount produced by suppliers.

This process does not work instantaneously. It takes time for buyers to respond fully to a change in price and for producers to step up or cut back production.

The response of buyers and sellers to changes in gasoline prices since the 1970s illustrates the importance of incentives and the role of time in the adjustment process. During the 1970s gasoline prices rose dramatically. In response consumers immediately eliminated unimportant trips and did more carpooling. Gradually, however, they also shifted to smaller, more fuel-efficient cars to reduce their gasoline consumption further.

At the same time suppliers of petroleum, the raw material of gasoline, increased their drilling, adopted techniques to recover more oil from existing wells, and intensified their search for new oil fields. By the early 1980s the supply of oil had increased enough that producers had to lower their prices in order to sell all that they had found. Prices continued to trend downward throughout most of the 1980s and 1990s, and consumers again altered their actions. They shifted to SUVs and larger automobiles that provided more power. At lower gasoline prices, driving these cars had become cheaper. If the higher gas prices experienced during 2004 persist, however, fewer SUVs will be sold as drivers respond to the incentive created by those higher prices.

Incentives also influence political choices. The person who shops in the mall doesn't behave all that differently from someone who "shops" in the voting booth. In most cases voters are more likely to support political candidates and policies that provide them with personal benefits. They will tend to oppose political options when the personal costs are high compared to the benefits they expect to receive. For example, voters in north Florida recently rose up in opposition to higher taxes to pay for a new sports stadium located in south Florida.

There's no way to get around the importance of incentives. It's a part of human nature. For instance, incentives matter just as much under socialism as under capitalism. In the former Soviet Union, managers and employees of glass plants were at one time rewarded according to the tons of sheet glass they produced. Because their revenues depended on the weight of the glass, most factories produced sheet glass so thick that you could hardly see through it. The rules were changed so that the managers were compensated according to the number of square meters of glass they could produce. Under these rules Soviet firms made glass so thin that it broke easily.

Some people think that incentives matter only when people are greedy and selfish. That's wrong. People act for a variety of reasons, some selfish and some charitable. The choices of both the self-centered and the altruistic will be influenced by changes in personal costs and benefits. For example, both the selfish and the altruistic will be more likely to attempt to rescue a child in a three-foot swimming pool than in the rapid currents approaching Niagara Falls. And both are more likely to give a needy person their hand-me-downs rather than their best clothes.

Even though no one would have accused the late Mother Teresa of greediness, her self-interest caused her to respond to incentives, too. When Mother Teresa's organization, the Missionaries of Charity, attempted to open a shelter for the homeless in New York City, the city required expensive (but unneeded) alterations to its building. The organization abandoned the project. This decision did not reflect any change in Mother Teresa's commitment to the poor. Instead, it reflected a change in incentives. When the cost of helping the poor in New York went up, Mother Teresa decided that her resources would do more good elsewhere.[1] Changes in incentives influence everyone's choices, regardless of whether we are greedy materialists, compassionate altruists, or somewhere in between.

2. There Is No Such Thing as a Free Lunch.

The reality of life on our planet is that productive *resources are limited, while the human desire for goods and services is virtually unlimited.* Would you like to have some new clothes, a luxury boat, or a vacation in the Swiss alps? How about more time for leisure, recreation, and travel? Do you dream of driving your brand-new Porsche into the driveway of your oceanfront house? Most of us would like to have all of these things and many others! However, we are constrained by the scarcity of resources, including a limited availability of time.

Because we cannot have as much of everything as we would like, we are forced to choose among alternatives. But using resources—time, talent, and objects, both manmade and natural—to accomplish one thing reduces their availability for others. One of the favorite sayings of economists is "There is no such thing as a free lunch." Many restaurants advertise that children eat free—with the purchase of an adult meal. In other words, the meal isn't really free. The patron pays for it in the price of the adult meal. Because there is "no free lunch," we must sacrifice something we value in order to get something else. This sacrifice is the cost we pay for a good or service. Both consumers and producers experience costs with everything we do.

As consumers, the cost of a good helps us balance our desire for a product against our desire for other goods that we could purchase instead. If we do not consider the costs, we will end up using our resources to purchase the wrong things—goods that we do not value as much as other things that we might have bought.

Producers face costs too—the costs of the resources they use to make a product or provide a service. The use of resources such as lumber, steel, and sheet rock to build a new house, for example, diverts resources away from the production of other goods, such as hospitals and schools. When production costs are high, it is because the resources are desired for other purposes as well. When consumers want valued resources used in a different way, they bid up the price of those resources, and producers use fewer of them in existing ways. Producers have a strong incentive to supply goods for as much or more than their production cost, but not for less. This incentive means that producers will tend to supply the goods that consumers value the most.

Of course a good can be provided free to an individual or group if others foot the bill. But this merely shifts the costs; it does not reduce them. Politicians often speak of "free education," "free medical care," or "free housing." This terminology is deceptive. These things are not free. Scarce resources are required to produce each of them. The buildings, labor, and other resources used to produce schooling could, instead, produce more food or recreation or environmental protection or medical care. The cost of the schooling is the value of those goods that must now be given up. Governments may be able to shift costs, but they cannot avoid them.

With the passage of time, people often discover better ways of doing things and improve our knowledge of how to transform scarce resources into desired goods and services. During the last 250 years, we have been able to relax the grip of scarcity and improve our quality of life. However, this does not change the fundamental point: we still confront the reality of scarcity. The use of more labor, machines, and natural resources to produce one product forces us to give up other goods that might otherwise have been produced with those resources.

3. Decisions Are Made at the Margin.

If we want to get the most out of our resources, we should undertake actions that generate more benefits than costs and refrain from actions that are more costly than they are worth. For example, a family that wants to purchase a home will save for a down payment by working long hours to earn money and by spending less on entertainment and eating out. High school students who want to go to college will spend more time studying and devote less time to video games than they would if they didn't care about college. This weighing of costs and benefits is essential for individuals, businesses, and for society as a whole.

Nearly all choices are made at the margin. That means that they almost always involve additions to, or subtractions from, current conditions, rather than "all-or-nothing" decisions. The word "additional" is a substitute for "marginal." We might ask, "What is the marginal (or additional) cost of producing or purchasing one more unit?" Marginal decisions may involve large or small changes. The "one more unit" could be a new shirt, a new house, a new factory, or even an expenditure of time, as in the case of the high school student choosing among various activities. All these decisions are marginal because they involve additional costs and additional benefits.

We don't make "all-or-nothing" decisions, such as choosing between eating or wearing clothes—dining in the nude so that we can we afford food. Instead we choose between having a little more food at the cost of a little less clothing or a little less of something else. In making decisions we don't compare the total value of food and the total value of clothing, but rather we compare their marginal values. A business executive planning to build a new factory will consider whether the marginal benefits of the new factory (for example, additional sales revenues) are greater than the marginal costs (the expense of constructing the new building). If not, the executive and his company are better off without the new factory.

Political actions should also reflect marginal decision making. One illustration of a political decision is determining how much effort should go into cleaning up pollution. If asked how much pollution we should allow, most people would respond "none"—in other words, we should reduce pollution to zero. In the voting booth they might vote that way. But the concept of marginalism reveals that this would be extraordinarily wasteful.

When there is a lot of pollution—so much, say, that we are choking on the air we breathe—the marginal benefit of reducing pollution is very high and is likely to outweigh the marginal cost of that reduction. But as the amount of pollution goes down, so does the marginal benefit—the value of additional reduction. There is still a benefit to an even cleaner atmosphere—for example, we will be able to see distant mountains—but this benefit is not nearly as valuable as saving us from choking. At some point before all pollution disappeared, the marginal benefit of eliminating more pollution would decline to almost zero.

But while the marginal benefit of reducing pollution is going down, the marginal cost is going up and becomes very high before all pollution is eliminated. The marginal cost is the value of other things that have to be sacrificed to reduce pollution a little bit more. The marginal benefit is the value of a little additional improvement in the air. Once the marginal cost of a cleaner atmosphere exceeds the marginal benefit, additional pollution reduction would be wasteful. It would simply not be worth the cost.

To continue with the pollution example, consider the following hypothetical situation. Assume that we know that pollution is doing $100 million worth of damage, and only $1 million is being spent to reduce pollution. Given this information, are we doing too little, or too much, to reduce pollution? Most people would say that we are spending too little.

This may be correct, but it doesn't follow from the information given.

The $100 million in damage is total damage, and the $1 million in cost is the total cost of cleanup. To make an informed decision about what to do next, we need to know the marginal benefit of cleanup and the marginal cost of doing so. If spending another $10 on pollution reduction would reduce damage by more than $10, then we should spend more. The marginal benefit exceeds the marginal cost. But if an additional $10 spent on antipollution efforts would reduce damages by only a dollar, additional antipollution spending would be unwise.

A similar confusion over total versus marginal costs and benefits is found in discussions of how funding for medical research should be allocated. An *Associated Press* dispatch reported in 1989 that about $1.3 billion would be spent on AIDS research and prevention, but only $1 billion on heart disease research and prevention. Yet, the article noted, many more people—777,000—were expected to die from heart disease than from AIDS, which would kill 35,000 (*Associated Press,* July 15, 1989). The article seemed to suggest that the nation was spending too much on AIDS compared with heart disease. This may be true, but the data in the *Associated Press* dispatch did not support that position.

The article provided information on total spending and deaths, but told us nothing about the marginal effects of additional spending. AIDS was a new disease in 1989, and, compared to heart disease, it still is. There is much more to learn about AIDS than about heart disease—we are not as far along on the learning curve with AIDS. So the marginal (additional) dollar spent on AIDS research may save more lives than it would if spent on heart disease. We aren't arguing that this is the case. We don't know. But we do know that without information on the marginal impacts of research spending, it is impossible to know how to allocate spending over different diseases to save the most lives.

People commonly ignore the implications of marginalism in their comments and votes but seldom in their personal actions. Consider food versus recreation. When viewed as a whole, food is far more valuable than recreation because it allows people to survive. When people are poor and living in impoverished countries, they devote most of their income to securing an adequate diet. They devote little time, if any, to playing golf, water skiing, or other recreational activities.

But as people become wealthier they can obtain food easily. Although food remains vital to life, continuing to spend most of their money on food would be foolish. At higher levels of affluence, they find that at the margin—as they make decisions about how to spend each additional dollar—food is worth much less than recreation. So as Americans become wealthier, they spend a smaller portion of their income on food and a larger portion of their income on recreation.[2]

The concept of marginalism reveals that it is the marginal costs and marginal benefits that are relevant to sound decision making. If we want to get the most out of our resources, we must undertake only actions that provide marginal benefits that are equal to or greater than marginal costs. Both individuals and nations will be more prosperous when the implications of marginalism are considered.

4. Trade Promotes Economic Progress.

The foundation of trade is mutual gain. People agree to an exchange because they expect it to improve their well-being. The motivation for trade is summed up in the statement: "If you do something good for me, I will do something good for you." Trade is productive because it permits each of the trading partners to get more of what he or she wants. There are three major sources of gains from trade.

First, trade moves goods from people who value them less to people who value them more. Trade increases the value obtained from goods even though nothing new is produced. When secondhand goods are traded at flea markets, through classified ads, or over the Internet, the exchanges do not increase the quantity of goods available (as new products do). But these trades move products toward people who value them more. The product adds to the wealth of the person who purchases it.

People's preferences, knowledge, and goals vary widely. A product that is virtually worthless to one person may be a precious gem to another. A highly technical book on electronics may be worth nothing to an art collector but valued at hundreds of dollars by an engineer. Similarly, a painting that an engineer cares little for may be cherished by an art collector. Voluntary exchange that moves the electronics book to the engineer and the painting to the art collector will increase the benefit derived from both goods. The trade will increase the wealth of both people and also their nation. It is not just the amount of goods and services produced in a nation that determines the nation's wealth, but how those goods and services are allocated.

Second, trade makes larger outputs and consumption levels possible because it allows each of us to specialize more fully in the things that we do best. When people specialize in the production of goods and services that they can provide easily at a low cost, they obtain revenues they can use to trade for goods they cannot produce for themselves. Together, people who specialize this way will produce a larger total quantity of goods and services than they would otherwise—and a combination of goods more varied and more desirable than they could have produced on their own. Economists refer to this principle as the *law of comparative advantage.* This law is universal: it applies to trade among individuals, businesses, regions, and nations.

The law of comparative advantage is just common sense. If someone else is willing to supply you with a product at a lower cost than you can produce it for yourself, it makes sense to trade for it. You can then use your time and resources to produce more of the things for which you are a low-cost producer. For example, even though most doctors might be good at record keeping and arranging appointments, it is generally in their interest to hire someone to perform these services. The time they spend keeping records is time they could have spent seeing patients. Because the time spent with their patients is worth a lot, they would reduce their earnings if they spent a great deal of time keeping records rather than seeing patients. The relevant issue is not whether doctors are better record keepers than the assistants they could hire, but how doctors use their time most efficiently.

Third, voluntary exchange makes it possible for firms to achieve lower per-unit costs by adopting mass production methods. Trade makes it possible for business firms to sell their output over a broad market area so they can plan for large outputs and adopt manufacturing processes that take advantage of economies of scale. Such processes often lead to substantially lower per-unit costs and enormous increases in output per worker. Without trade, these gains could not be achieved. Market forces are continuously reallocating production toward low-cost producers (and away from high-cost ones). As a result, open markets tend to allocate goods and resources in ways that maximize the value of the goods and services that are produced.

It is difficult to exaggerate the importance of trade in our modern world. Trade makes it possible for most of us to consume a bundle of goods far beyond what we would be able to produce for ourselves. Can you imagine the difficulty involved in producing your own housing, clothing, and food, to say nothing of radios, television sets, dishwashers, automobiles, and telephones? People who have these things do so largely because their economies are organized in such a way that individuals can cooperate, specialize, and trade. Countries that impose obstacles to exchange—either domestic or international—reduce the ability of their citizens to achieve more prosperous lives.

5. Transaction Costs Are an Obstacle to Trade.

Voluntary exchange promotes cooperation and helps us get more of what we want. However, trade itself is costly. It takes time, effort, and other resources to search out potential trading partners, negotiate trades, and close the sale. Resources spent in this way are called *transaction costs,* and they are an obstacle to the creation of wealth. They limit both our productive capacity and the realization of gains from mutually advantageous trades.

Transaction costs are sometimes high because of physical obstacles, such as oceans, rivers, and mountains, which make it difficult to get products to customers. Investment in roads and improvements in transportation and communications can reduce these transaction costs. In other instances, transaction costs are high because of the lack of information. For example, you may want to buy a used copy of the economics book assigned for a class, but you don't know who has a copy and is willing to sell it at an attractive price. You have to try to find that person: the time and energy you spend doing so is part of your transaction costs.

Frequently transaction costs are high because of political obstacles, such as taxes, licensing requirements, government regulations, price controls, tariffs, or quotas. But regardless of whether the roadblocks are physical, informational, or political, high transaction costs reduce the potential gains from trade.

People who help others arrange trades and make better choices reduce transaction costs and promote economic progress. Such specialists, sometimes called middlemen, include campus bookstores, real estate agents, stockbrokers, automobile dealers, publishers of classified ads, and a wide variety of merchants.

Often people believe that these middlemen merely increase the price of goods without providing benefits. But once we recognize that transaction costs are an obstacle to trade, we can see the fallacy of this view. People often talk about eliminating the middleman, but they seldom do.

The grocer, for example, is a middleman. (Of course, today's giant supermarket reflects the actions of many people, but together their services are those of a middleman). Think of the time and effort that would be involved in preparing even a single meal if shoppers had to deal directly with farmers when purchasing vegetables; citrus growers when buying fruit; dairy operators if they wanted butter, milk, or cheese; and ranchers or fishermen if they wanted to serve beef or fish. Grocers make these contacts for consumers, place the items in a convenient selling location, and maintain reliable inventories. The services of grocers and other middlemen reduce transaction costs significantly, making it easier for potential buyers and sellers to realize gains from trade. These services increase the volume of trade and promote economic progress.

6. Profits Direct Businesses Toward Activities That Increase Wealth.

The people of a nation will be better off if their resources—their land, their buildings, their people—produce valuable goods and services. At any given time a virtually unlimited number of potential investment projects are under consideration. Some of these investments will increase the value of resources by transforming them into goods and services that increase the satisfaction of consumers. These will promote economic progress. Other investments will reduce the value of resources and reduce economic progress. If we are going to get the most out of the available resources, projects that increase value must be encouraged, while those that use resources less productively must be discouraged.

This is precisely what profits and losses do. Business firms purchase resources (raw materials, intermediate goods, engineering and secretarial services, etc.) and use them to produce goods or services that are sold to consumers. If the sales of the products exceed the costs of all the resources required to produce them, then these firms will make a profit. This means that profits result only if firms produce goods and services that consumers value more than the cost of the resources required for their production.

The value of a product to the consumer is measured by the price the consumer is willing to pay. If the consumer pays more than the production costs, then the decision by the producer to bid the resources away from their alternative uses was a profitable one. Profit is a reward for transforming resources into something of greater value.

In contrast, losses are a penalty imposed on businesses that use up resources without converting them into something more valuable. The losses indicate that the resources would have been better used producing other things.

Suppose it costs a shirt manufacturer $20,000 per month to lease a building, rent the required machines, and purchase the labor, cloth, buttons, and other materials necessary to produce and market one thousand shirts per month. If the manufacturer sells the one thousand shirts for $22 each, he receives $22,000 in monthly revenue, or $2,000 in profit. The shirt manufacturer has created wealth—for himself and for the consumer. By their willingness to pay more than the costs of production, his customers reveal that they value the shirts more than they value the resources required for their production. The manufacturer's profit is the reward for turning the resources into more valuable products.

On the other hand, if the shirts cannot be sold for more than $17 each, then the manufacturer will only earn $17,000, losing $3,000 a month. This *loss* occurs because the manufacturer's actions reduced the value of the resources. The shirts—the final product—were worth less to consumers than the resources required for their production. We are not saying that consumers consciously know that the resources used to make the shirts would have been more valuable if converted into some other product. But their choices, taken together, reveal that fact, sending a clear message to the manufacturer.

In a market economy, losses and *business failures* will eventually bring such wasteful activities—producing shirts that sell for less than their cost—to a halt. Losses and business failures will redirect the resources toward the production of other goods that are valued more highly. Thus, even though business failures are often painful for the investors and employees involved, there is a positive side: they release resources that can be directed toward wealth-creating projects.

We live in a world of changing tastes and technology, imperfect knowledge, and uncertainty. Business owners cannot be sure what the future market prices will be or what the future costs of production will be. Their decisions are based on expectations. But the reward-penalty structure of a market economy is clear. Entrepreneurs who produce efficiently and who anticipate correctly the products and services that attract consumers at prices above production cost will prosper. Business executives who are inefficient and who allocate resources into areas where demand is weak will be penalized with losses and financial difficulties.

Profits and losses direct business investment toward projects that promote economic progress and away from those that squander scarce resources. This is a vitally important function. Economies that fail to perform this function well will almost surely experience stagnation, or worse.

7. People Earn Income by Helping Others.

People differ in many ways—in their productive abilities, their preferences, their opportunities, their specialized skills, their willingness to take risks, and their luck. These differences influence people's incomes because they affect the value of the goods and services that individuals are able or willing to provide to others.

People who earn large incomes do so because they provide others with lots of things that they value. If these individuals did not provide valuable goods or services, consumers would not pay them so generously. There is a moral here: if you want to earn a large income, you had better figure out how to help others a great deal. The opposite is also true. If you are unable and unwilling to help others, your income will be small.

This direct link between helping others and receiving income gives each of us a strong incentive to acquire skills and develop talents so we can provide others with valuable goods and services. College students study for long hours, endure stress, and incur the financial cost of schooling in order to become doctors, chemists, accountants, and engineers. Other people acquire training and experience that will help them become electricians, maintenance workers, or computer programmers. Still others invest and start businesses. Why do people do these things?

In some cases individuals may be motivated by a strong personal desire to improve the world in which we live. However, and this is the key point, even people who don't care about improving the world, who are motivated mostly by the desire for income, will have a strong incentive to develop skills and take actions that are valuable to others. *High earnings come from providing goods and services that others value.* People seeking great wealth will have a strong incentive to pay close attention to what others want.

Some people think that high-income individuals must be exploiting others. But people who earn large incomes in the marketplace generally do so by improving the well-being of many people. Millions of people enjoy watching Tiger Woods play golf, and he is rewarded by tournament winnings and revenue from advertising endorsements. Celine Dion earns millions because many are willing to pay sizeable amounts for her music. Business entrepreneurs who succeed in a big way do so by making their products affordable to millions of consumers. The late Sam Walton, who founded Wal-Mart, became the richest man in the United States because he figured out how to manage large inventories more effectively and sell brand-name merchandise at discount prices to small-town America. Bill Gates, the founder and president of Microsoft, rose to the top of *Forbes* "Wealthiest Four Hundred" list by developing a set of products that dramatically improved the efficiency and compatibility of desktop computers. Millions of consumers who never heard of either Walton or Gates benefited from their talents and low-priced products. *Walton and Gates made a lot of money because they helped a lot of people.*

8. Economic Progress Comes Primarily Through Trade, Investment, Better Ways of Doing Things, and Sound Economic Institutions.

On the first day of an introductory economics class, we often inform students that Americans produce and earn approximately thirty times as much per person today as in 1750. Then we solicit their views on the following question: "Why are Americans so much more productive today than 250 years ago?" Think for a moment how you would respond to this question.

Invariably, our students mention three things: First, today's scientific knowledge and technological abilities are far beyond anything Americans imagined in 1750. Second, we have complex machines and factories, far better roads, and extensive systems of communications. Finally, students usually mention that in 1750 individuals and families directly produced most of the items that they consumed, whereas today we typically purchase them from others.

Basically, the students provide the correct explanation even though they have little or no prior knowledge of economics. They recognize the importance of technology, capital, and trade. Their response reinforces our view that economics is the *"science of common sense."*

We have already highlighted gains from trade and the importance of reducing transaction costs as sources of economic progress. Economic analysis pinpoints three other sources of economic growth: investments in people and machines, improvements in technology, and improvements in economic organization.

First, investments in productive assets (tools and machines, for example) and in the skills of workers (investment in "human capital") enhance our ability to produce goods and services. The two kinds of investment are linked. Workers can produce more if they work with more and better machines. A logger can produce more when working with a chain saw rather than a hand-operated, crosscut blade. Similarly, a transport worker can haul more with a truck than with a mule and wagon.

Second, improvements in technology (the use of brain power to discover new products and less costly methods of production) spur economic progress. During the last 250 years, the steam engine, followed by the internal combustion engine, electricity, and nuclear power replaced human and animal power as the major source of energy. Automobiles, buses, trains, and airplanes replaced the horse and buggy (and walking) as the chief methods of transportation. Technological improvements continue to change our lifestyles. Consider the impact of CD players, microcomputers, word processors, microwave ovens, video cameras, cell phones, DVDs, by-pass surgery, hip replacements, automobile air conditioners, and even garage door openers. The introduction and development of these products during the last forty years have vastly changed the way that we work, play, and entertain ourselves, and have improved our well-being.

Third, improvements in economic organization can promote growth. By economic organization we mean the ways that human activities are organized and the rules under which they operate—factors often taken for granted or overlooked. How difficult is it for people to engage in trade and to organize a business? The legal system of a country, to a large extent, determines the answers to these questions, influencing the degree of investment, trade, and economic cooperation. A legal system that protects individuals and their property, enforces contracts fairly, and settles disputes is an essential ingredient for economic progress. Without it, investment will be lacking, trade will be stifled, and the spread of innovative ideas will be retarded. Part 2 of this book will investigate in more detail the importance of the legal structure and other elements of economic organization.

Investment and improvements in technology do not just happen. They reflect the actions of entrepreneurs, people who take risks in the hope of profit. No one knows what the next innovative breakthrough will be or just which production techniques will reduce costs. Furthermore, entrepreneurial genius is often found in unexpected places. Thus, economic progress depends on a system that allows a very diverse set of people to try their ideas to see if they will pass the market test but also discourages them from squandering resources on unproductive projects.

For this progress to occur, markets must be open so that all are free to try their innovative ideas. (An entrepreneur with a new product or technology needs to win the support of only a few investors willing to finance it.) Competition must be present to hold entrepreneurs and their investors accountable: their ideas must face the "reality check" of consumers, who will decide whether or not to purchase a product or service at a price above the production cost. Consumers are the ultimate judge and jury. If they do not value an innovative product or service enough to cover its cost, it will not survive in the marketplace.

9. The "Invisible Hand" of Market Prices Directs Buyers and Sellers Toward Activities That Promote the General Welfare.

> *Every individual is continually exerting himself to find out the most advantageous employment for whatever capital he can command. It is his own advantage, indeed, and not that of the society which he has in view. But the study of his own advantage naturally, or rather necessarily, leads him to prefer that employment which is most advantageous to society. . . . He intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was not part of his intention.*[3]
>
> —Adam Smith

As Adam Smith noted, the remarkable thing about an economy based on private property is that *self-interest* will further the general prosperity of a community or nation. The individual "intends only his own gain" but he is directed by the "invisible hand" of market prices to promote the goals of others, leading to greater prosperity.

The principle of the *"invisible hand"* is difficult for many people to grasp. There is a natural tendency to associate order in a society with centralized planning. Yet Adam Smith contends that pursuing one's own advantage creates an orderly society in which demands are routinely satisfied without a central plan.

This order occurs because market prices coordinate the actions of self-interested individuals when private property and freedom of exchange are present. One statistic—the market price of a particular good or service—provides buyers and sellers with what they need to know to bring their actions into harmony with the actions and preferences of others. Market prices register the choices of millions of consumers, producers, and resource suppliers. They reflect information about consumer preferences, costs, and matters related to timing, location, and circumstances that are well beyond the comprehension of any individual or central-planning authority.

Have you ever thought about why the supermarkets in your community have approximately the right amount of milk, bread, vegetables, and other goods—an amount large enough that the goods are nearly always available but not so large that a lot gets spoiled or wasted? How is it that refrigerators, automobiles, and CD players, produced at diverse places around the world, are available in your local market in about the quantity that consumers desire? The invisible hand of market prices provides the answer. It directs self-interested individuals into cooperative action and brings their choices into line with each other.

Friedrich Hayek, a modern economist, called the market system a "marvel" because just one indicator, the market price of a commodity, spontaneously carries so much information that it guides buyers and sellers to make decisions that help both obtain what they want.[4] The market price of a product reflects thousands, even millions, of decisions made around the world by people who don't know what the others are doing. For each commodity or service, the market acts like a giant computer network grinding out an indicator that gives all participants both the information they need and the incentive to act on that information.

Consider the price of apples in the supermarket. This price reflects what consumers are likely to be willing to pay for their next apple but also incorporates the costs that suppliers had to cover to make it available. As a consumer, you will purchase more apples only if the value of each additional apple (its *marginal* value) is worth at least as much to you as the price. If you are willing to pay the price, you value the apples at least as much as other consumers who might have purchased them and at least as much as it cost producers to supply them. And because you are paying for them, you have an incentive to make the wisest possible decision.

But that coordination is only the beginning of the "marvel." Changes are constantly taking place that affect both the value and the cost of apples, and those changes must be communicated to consumers and producers if the desires of consumers and producers are to remain in harmony. Consider what would happen if the citizens of Omaha, Nebraska, initiate a giant Halloween festival that features dunking for apples. They will want more apples than usual. If apple prices do not increase, there will not be enough apples to go around. As people in Omaha (first individuals, then retail outlets, then distributors) express their desire for more apples, the price will go up. The higher price may lead consumers in other cities and states, and perhaps even countries, to reduce their consumption of apples. Without a strong immediate need for apples, they will prefer to eat fewer apples rather than pay more. The result is that outsiders will eat fewer apples, making it possible for Omahans to consume the desired additional apples—at the higher price, which they are willing to pay.

On the supply side, the higher apple prices will make it more profitable for producers to supply more. Attracted by the higher price, suppliers will take more care to avoid spoilage or damage to apples that are stored and shipped. A short-term event such as a Halloween festival will not affect decisions about planting orchards, but a broader increase in consumer interest in apples (perhaps spurred by respected nutritionists who recommend an apple a day) will lead apple growers to increase the size of their orchards.

As apple growers expand production, their actions will increase the value of resources required for the production of apples, such as seedlings, pesticides, and orchard labor. This will draw resources from other activities into the apple-growing industry. As the prices of inputs to apple production go up, more suppliers will be willing to provide them. Over time, these adjustments will expand the future availability of apples. Apple production will increase as long as consumers communicate through prices that they value additional apples more than they value the goods and services that have to be sacrificed to produce the apples.

No individual or central-planning authority could possibly obtain or consider all the information needed for millions of consumers and producers of thousands of different goods and services to coordinate their actions the way markets do. But *market prices contain this information in a distilled form.* They will direct producers and resource suppliers toward production of those things that consumers value most (relative to their costs, that is). No one will have to force a farmer to raise apples or tell a construction firm to build houses or convince a furniture manufacturer to produce chairs. When the prices of these and other products indicate that consumers value them as much or more than their production costs, producers seeking personal gain will supply them.

Nor will it be necessary for anyone to remind producers to search for and utilize low-cost methods of production. The invisible hand of market prices will provide them with a strong incentive to seek out the best combination of resources and the most cost-effective production methods. Because lower costs will mean higher profits, each producer will strive to keep costs down and quality up. In fact competition will virtually force them to do so.

In a modern economy, the cooperation that comes from self-interest directed by the invisible hand of market prices is truly amazing. The next time you sit down to a nice dinner, think about all the people who helped make it possible. It is unlikely that any of them, from the farmer to the truck driver to the grocer, was motivated by concern that you have an enjoyable meal at the lowest possible cost. Market prices, however, brought their interests into harmony with yours. Farmers who raise the best beef or turkeys receive higher prices, truck drivers and grocers earn more money if their products are delivered fresh and in good condition to the consumer, and so on, always using the low cost means to do so. Literally tens of thousands of people, most of whom we will never meet, make contributions that help each of us consume a bundle of goods that is far beyond what we could produce for ourselves. The invisible hand works so quietly and automatically that the order, cooperation, and vast array of goods available to modern consumers are largely taken for granted.

10. Too Often Long-Term Consequences, or the Secondary Effects, of an Action Are Ignored.

Henry Hazlitt, a popular writer about economics during the last century, authored the classic book *Economics in One Lesson.* Hazlitt's one lesson was that when analyzing an economic proposal, a person:

> *. . . must trace not merely the immediate results but the results in the long run, not merely the primary consequences but the secondary consequences, and not merely the effects on some special group but the effects on everyone.*[5]

Hazlitt believed that failure to apply this lesson was the most common source of economic error.

Especially in politics there is a tendency to stress the *short-term benefits* of a policy while completely ignoring its *longer-term consequences.* In politics we hear an endless pleading for proposals to help specific industries, regions, or groups without consideration given to their impact on the broader community, including taxpayers and consumers.

Much of this is deliberate. When seeking political favors, interest groups and their hired representatives, lobbyists, have an incentive to put the best spin on their case. They will exaggerate the benefits (most of which they will capture if the policy is enacted) and minimize the costs (most of which will be borne by others). Such interest groups are most effective if the benefits are immediate and easily visible to the voter, but the costs are less visible and mostly in the future. Under these conditions, interest groups can often mislead voters.

Thus voters often authorize actions that they would probably have rejected if they had known the *secondary effects* or long-range consequences. Consider the case of rent controls imposed on apartments. Cities such as Berkeley and Santa Monica, California, as well as New York City have adopted such controls, usually in response to claims that rent controls will keep rents from rising and make housing more affordable for the poor.

Yes, this is true in the short run, but there will be secondary effects. First, the market for apartments will stagnate. Existing apartments will not be transferred to those who want them most. It will be expensive for someone to give up a rent-controlled apartment, even if another apartment is closer to work, and it will be hard to find a closer one because others are holding onto theirs at the below-market rent.

The lower rental prices will also reduce investments in new housing. Although rent control may force current owners to accept a lower return, this will not be true for potential future owners. Because people respond to incentives, investors who would have put their funds into new apartments will channel them elsewhere. The number of rental units in the future will decline, making it more difficult to find an apartment. Shortages will develop. The quality of rental housing will also fall with the passage of time because landlords receive little in return for maintenance because the shortage creates a demand for even poorly maintained units.

These secondary effects, however, will not be immediately observable.

When the decline in the quality and quantity of apartments appears, many people will be puzzled about the cause. Thus, rent controls command substantial popularity, even though a declining supply of rental housing, poor maintenance, and shortages are the inevitable results. In the words of Swedish economist Assar Lindbeck: "In many cases rent control appears to be the most efficient technique presently known to destroy a city, except for bombing."[6]

Similarly, proponents of tariffs and quotas on foreign products almost always ignore the secondary effects of their policies. By limiting the importation of products from foreign countries, tariffs and quotas may initially protect the U.S. workers who make comparable products at a higher cost. But there will be secondary consequences, perhaps severe ones.

The steel import quotas imposed by the Bush administration in 2002 vividly illustrate this point. The quotas sharply reduced steel imports, and this reduction in supply pushed U.S. steel prices upward by about 30 percent. At the higher prices, the domestic producers of steel expanded both output and employment. But what about the secondary effects? The higher steel prices also made it more expensive to produce goods that contain a lot of steel, such as trucks, automobiles, and heavy appliances. American producers of these commodities were harmed by the quotas and often forced to lay off workers. American steel container producers, which had previously dominated the world market, sharply curtailed their employment because they were unable to compete with foreign firms purchasing steel at much lower prices.

Furthermore, there was an additional secondary effect. Because foreigners sold less steel in the U.S. market, they acquired fewer dollars with which to import American-made goods. Therefore, U.S. exports fell as a result of the import restrictions.

Once the secondary effects are considered, the impact on employment is clear: trade restrictions do not create jobs; they reshuffle them. Employment may expand in industries shielded by quotas and tariffs, but it will contract in other industries, particularly export industries. The popularity of the restrictions is not surprising because the jobs of the people actually working in a shielded industry, steel in this case, are highly visible, while the secondary effects—the lost jobs in other industries—are less visible and difficult to trace back to the trade restrictions. Thus many people fall for the "protecting jobs" argument even though it is clearly fallacious when examined more closely.

Government spending also generates secondary effects that are often ignored. Politicians like to argue that government spending on favored projects expands employment. Of course there may be good reasons for government expenditures on roads, increased police protection, administration of justice, and so forth. The creation of jobs, however, is not one of them.

Suppose the government spends $50 billion on a project employing one million workers to build a high-speed train linking Los Angeles and San Diego. How many jobs will the project create? Once the secondary effects are considered, the answer is none.

The reason is that the government must either use taxes or debt to finance the project. Taxes of $50 billion will reduce consumer spending and private savings, and this reduction will destroy as many jobs as the government spending will create. Alternatively, if the project is financed by debt, the borrowing will lead to higher interest rates and taxes to cover interest payments. This will divert funds away from other projects, both private and public.

The one million new jobs grabs the headlines, but the loss of jobs in thousands of locations goes unrecognized. As in the case of trade restrictions, the result of this project is job rearrangement, not job creation. This fact does not necessarily mean that the project should not be undertaken. But it does mean that justification for the project must come from evidence that the benefits are greater than the costs of giving up other opportunities.

Secondary effects are not just a problem for governments and politicians. They can also lead to unanticipated outcomes for individuals. The recent experience of a first-grade teacher in West Virginia illustrates this point. Her students were constantly losing their pencils; so she reasoned that if she paid them 10 cents for the stub they would respond to the incentive to hang on to the pencil until it was all used. To her dismay, the students soon formed long lines at the pencil sharpener, creating stubs just as fast as she could pay for them. It pays to be alert for unintended consequences!