

## **Teaching Guide**

# **The Invisible Hand Economics of Daily Life**

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## Summary

**The Invisible Hand** is a program about the economics of daily life. It is about how we use opportunities, how we spend time, make choices, and share limited resources. You won't find graphs in **The Invisible Hand**, nor talk of GDP, export quotas, or money rates. Instead, you will find a lively exploration of some very basic economic ideas we use everyday. Viewers will learn that economics is not about money. Economics is about how we share limited resources.

- ◆ What is “cost?” Learn by considering the cost of watching television.
- ◆ Discover that “price” is a powerful force that helps us share limited resources.
- ◆ Realize that the choice to stop the program for discussion or to continue without stopping is an economic decision.
- ◆ From the story of Justin and the \$20 gallon of water, learn that “price gouging” might have social value.
- ◆ What is the law of supply and demand?
- ◆ What role do profits play in society and why are losses just as important?
- ◆ Learn about “unintended consequences.” What would happen if automakers produced completely safe cars?
- ◆ What is a trade? It's NOT an exchange of two things of equal value. Would you trade ten dollar bills for a ten dollar bill?
- ◆ Find out why the adage that “if a job is worth doing, it's worth doing as well as you possibly can” might seem inspirational, but it's not sound economics.
- ◆ Who had to work longer to earn enough money to buy a Ford? You or your great grandfather?
- ◆ How does “the invisible hand” guide our decisions?

## **Key Script Excerpts and Commentary**

*Note: Italics indicates script commentary.*

Economics isn't about money. It's about how we spend time and share limited resources. You make economic decisions every day.

*Gary Becker, a University of Chicago economist who won the Nobel Prize in 1992, simplified the question of what is economics by noting: "Economy is the art of making the most of life. Economics is the study of how we do that."*

Should you stop now or just keep watching? THAT'S an economic decision. Stop and you MIGHT learn more, but you WILL spend more time with the program. That extra time is your COST for the opportunity to learn more. That's what we mean by the economics of daily life.

*Be sure students understand what we mean by "the decision to stop for a discussion or to continue viewing without stopping is an ECONOMIC decision." The key lies in our definition of economics. The decision is about how to use your most valuable limited resource — time. Economics is not about big bucks and government expenditures; it's about how we use and share our limited resources.*

Economists talk of "opportunity cost," which is the value of the best alternative use of that resource. For example, the price tag to build a bridge runs is millions of dollars. But the opportunity cost of building a bridge are the other things that could have been built with that same labor and material. In other words, the lost opportunities.

*Here more background on this very important idea of "opportunity cost" from Dwight R. Lee, Professor of Economics and Private Enterprise at the University of Georgia and a visiting scholar at the Federal Reserve Bank of Dallas:*

*"When you are doing one thing, you are using time and resources that cannot be used for the next most valuable thing you could have been doing. The cost of doing more of one thing, then, is the value that is sacrificed by doing less of*

*something else. This is why economists are so fond of pointing out that there is no such thing as a free lunch.*

*Economists refer to the value forgone every time we do something as opportunity cost. In fact, all costs are opportunity costs. We commonly think of cost as the money we spend to obtain something. But spending money on one thing is sacrificing the opportunity to spend it on something else. The money spent on something simply provides a convenient measure of its real cost, which is the value of an opportunity forgone. The biggest cost of doing something often has nothing to do with spending money. For example, the biggest cost of going to college is the income forgone, not the money spent on tuition and books. This explains why college enrollment typically increases when high unemployment makes it difficult for college-age people to get good jobs. The biggest cost of making a telephone call is often that it prevents you from doing something else, like watching TV, reading a book or cooking dinner. This explains why so many people talk on cell phones while driving: The cost is low because there's little else they can be doing. Of course, not paying attention to your driving can be forgoing the value of safety."*

### **The Cost of Perfection**

Consider the common advice that: "If a job is worth doing, it's worth doing as well as you can." Using the idea of opportunity cost, what might an economist say about this advice?

*Discussion: The video shows the example of a poor guy making a bed "as good as he can." By choosing to spend six hours making the perfect corner, he is choosing to use his limited time NOT doing something else. So an economist would not likely give that advice. He or she might say instead, "Choose carefully how you use your limited time." Alternatives do matter.*

Price is NOT a number picked by a greedy seller. Price is an agreement between buyer and seller. It is a point at which supply and demand balance.

*Discussion: The idea of a “price” seems so obvious it is hardly worth discussing. Yet it is a very powerful idea. Think of a price as information. Prices tell us what is scarce and what is plentiful in relation to demand.*

Supply is how much of the goods are available, demand is how much people want the goods. Price is the way we balance supply and demand.

*For discussion purposes, consider the supply and demand of oceanfront property. It is clearly scarce and clearly in demand. Its supply is limited by geography. Its great demand and limited supply results in a high price. Our economy uses price to distribute its limited supply.*

*What if we lived in a society with a form of government that resulted in perfect equality? The government insures that everyone has enough income and re-distributes wealth so that all people have the same income. In such a society there would still be a great demand for oceanfront property, and its supply would still be limited. How would such a society distribute the limited supply? Instead of price as a mechanism, the government would use other standards — perhaps it would serve as a reward for loyal servants. Every economic system needs some device to distribute scarce resources — ours is price. The advantage of using price is that it leaves individuals free to make choices without the need for a governing body. The disadvantage is that it rewards only those who can pay the higher price.*

### **The Twenty Dollar Gallon of Water**

Let's say Justin, an upstanding young man, hears about a city 200 miles away that was hit by tornados that knocked out the water supply. Our enterprising do-gooder immediately fills 100 plastic bottles with tap water, and

drives to the stricken city. There he dispenses his cargo to desperate and thirsty residents for \$20 a gallon.

Justin would not win a medal for good citizenship. Most people call this “price gouging.” In some places, Justin would be arrested. People will accuse him of exploiting tragedy. What might an economist say?

*This example is intentionally controversial so as to clearly make the point about the role of prices. Our tendency is to view “low” prices as good and to seek them out. But high prices also serve a function. Some will feel Justin should be thrown in jail, others might see he is providing a useful service. They will see that the high price (and his reasonable chance for a good profit) is the cause of Justin’s urge to bring water to the city. He is not a saint, out to serve the thirsty. A market system does not depend on charitable impulses to get resources where they are needed. Justin’s efforts are driven by the profit motive, not his “pure heart.” If there were a law against such “price gouging,” the town’s citizens would just have to wait until the water department fixed the pipes. They would not have the option of obtaining water at a high price. Should Justin be rewarded or punished?*

### **Discussion: On Being Ripped Off**

*“There seems to be a widespread belief that if someone sells something to you for more than he could have—if, for example, he could make a profit selling it to you for \$5 but charges \$15—he is mistreating you, ‘ripping you off’ in current jargon. This is an oddly one-sided approach. If you pay \$15 for the good, it is presumably worth at least that much to you. If it costs him \$5 and is worth \$15 to you, there is a \$10 gain when you buy it. Your claim that he ought to sell it to you for \$5 amounts to claiming that you are entitled to the whole benefit. It makes just as much sense to argue that he should get all the benefit, that if you buy a good for \$5*

*for which you would have been willing to pay \$15, you are ripping him off. Yet I know very few people who, if they see a price of \$5 on a new book by their favorite author for which they would gladly pay \$15, feel obliged to volunteer the higher price—or even to offer to split the difference.”*  
—from ***Hidden Order: The Economics of Everyday Life*** by David Friedman

The opportunity for profits – whether from selling hot dogs or emergency water -- acts as an invisible hand to bring people what they demand. Profits tell business owners what to produce, losses tell them what to stop producing.

*Before taxes, corporate profits average from 5-10 per cent of gross domestic product. Prices for new consumer goods often start so high that only the rich or the “early adopters” can afford them. After a few years (or less) prices come down and the goods filter into more and more homes. This was true of televisions, radios, telephones, cell phones, computers, flat screen TVs, microwaves, houses with more than one bathroom, hot and cold running water, vacuum cleaners, books, and automobiles. If producers set prices, they would have less incentive to constantly lower prices. Remember, it’s the consumer who ultimately decides prices.*

*A common view of profits is that they are like high fat foods — OK only in small doses. But profits should always be considered along with losses — they are two sides of the same coin. Both profits and losses are part of the communication process between producers and consumers.*

That brings us to another basic idea of economics – people respond to incentives. In his book, ***The Armchair Economist***, Stephen Landsburg says simply, “Most of economics can be summarized in four words: ‘People respond to incentives.’ The rest is commentary.

*In 1905 the average American woman had 3.75 children. One hundred years later she has two. Why? People respond to incentives, and the incentives for having more children changed.*

*For discussion: You've no doubt noticed signs (typically in restaurants that serve low cost food) near cash registers saying "your purchase free if we don't give you a receipt.." What is the purpose of these signs? The answer is NOT that the restaurant wants to be sure you have a receipt for tax purposes. Hint: The answer lies in the basic idea of economics that people respond to incentives. Second hint: Do not assume that the incentive in this case is for the customer.*

*One answer: The sign serves as an incentive to prevent employees from stealing from the cash register. A common employee theft is to make a sale and pocket it instead of recording it. The sign acts as a strong incentive to insure employees record all sales.*

### **The Paradox of the Crashproof Car**

*The program asks viewers to consider how the invention of a completely crashproof car would influence driving. Yes, lives would be saved. But since one of the reasons people drive safely is to avoid accidents, removing that incentive could actually lead to an increase in accidents. A "crashproof car" would remove SOME of the incentive to drive carefully. Accidents would be "safer" but there might be more of them. The crashproof car also illustrates that most actions have unintended consequences.*

### **Cancer Cure Causes Heart Attacks**

*Another example of "unintended consequences" would be the discovery of a vaccine that prevents cancer. Assume that everybody is required to take the vaccine. Years later experts note an increase in death from heart disease. People suspect that some batches of the vaccine*

*may have been tainted and thus caused the heart disease deaths. They sue for the right not to take the vaccine. A government study assures the vaccine is safe. What could be the problem here?*

*To an economist, “everything has a cost.” A common way of stating this is that “there is no free lunch.” The cancer vaccine works quite well and millions are spared death from cancer and live longer lives. But what is the cost of the vaccine? Part of the cost is the billions of dollars needed to discover, produce, and distribute the vaccine. But a more hidden or unintended cost is that since people no longer die from cancer, more die from heart disease. The death rate from heart disease will increase as a direct consequence of the cancer vaccine. This is not to say that the vaccine “kills people.” The death rate is still 100% — everyone dies of something. But since cancer is taken off the board as a cause of death, more people will live long enough to die from heart disease — an unintended consequence of curing cancer.*

### **Productive People Create Wealth**

Consider life centuries ago. There was no unemployment. Most people were farmers, but their efforts could feed only themselves – if they were lucky. The whole family worked all day, every day just to survive.

Our farmer ancestors found by doing what they could do best, and trading for things they couldn't or didn't want to do, life improved for all – in today's terms they were becoming more productive. They slowly gained freedom in choosing how to use their time.

Everyone is born with time. The real cost of living can be measured in the hours and minutes we must work to live. Time is all we have to spend. In his book *Walden*, Henry Thoreau had his own idea of cost. He said, “The cost of a thing is the amount of...life which is required to be exchanged for it – immediately or in the long run.” In other words, time is what we spend. Money is merely one way to place a value on time.

In 1870, the typical household worked about 1,800 hours to produce its own food. In 1930 food took about 800 hours and accounted for about 25% of the family budget. Today it takes about 260 hours.

*The Federal Reserve Bank of Dallas prepared an annual report in 1997 called "Time Well Spent: The Declining Real Cost of Living in America." The report is available online at [www.dallasfed.org](http://www.dallasfed.org). The report observes: "The cost of living is going up—in money terms. What really matters, though, isn't what something costs in money; it's what it costs in time. Making money takes time, so when we shop, we're really spending time. The real cost of living isn't measured in dollars and cents but in the hours and minutes we must work to live." The report continues:*

*"In 1908 a typical factory worker had to toil more than two years to buy Ford's Model T... A 1997 Ford Taurus costs today's worker just eight months. ...plus today's cars are just so much better." In 1940 Californians paid 30 cents—nearly half an hour's wages—for the McDonald brothers' first burger—a one-eighth pounder. Today's (1997) one-fifth-pound Big Mac costs \$1.89, the equivalent of just 8.6 minutes' work. ...A Hershey's chocolate bar has a work time of two minutes, a tenth of what it cost at the turn of the century."*

### **How To Grow An Automobile**

There are two ways to produce automobiles. We can build them in Detroit or we can grow them in the fields. We can grow cars? Sort of.

We first grow wheat or corn. We put the wheat and corn on ships and send it as trade to Japan. The ships come back loaded with Hondas and Toyotas, not to mention Sony's and Toshibas.

To an economist, trading grain for autos is just another

form of production. The productivity of the American farmer causes those Hondas to show up in America. In a sense, the farmers grow the cars.

Centuries ago, people learned to grow and make what they did best and trade those goods for other things.

So, if a million people in India or China moved from poverty to the middle class their gain would not be at our expense. In fact, we would become richer. People who earn only a few dollars a day cannot buy what we make. Plus freeing that much human talent from subsistence tasks would no doubt produce goods or services that would make life better for others in the world.

### **The Benefits of Trade**

The benefits of trade are sometimes hard to see. Back in the 1860s, the U.S. was building its first transcontinental railroad. It would make us much more productive. Someone urged President Lincoln to buy cheap iron rails from England's mature steel industry. He replied, "It seems to me that if we buy the rails from England, then we've got the rails and they've got the money. But if we build the rails here, we've got the rails AND we've got our money."

Mr. Lincoln's thinking sounds logical. What would an economist say? You might see it better if we change the product. If you buy milk from the grocer, you get your milk, but he gets your money. But if you keep a cow in your backyard, then you've got your milk AND your money. So why don't you keep a cow in your backyard?

Because it would take a lot of time – time that you could use to do something more productive or enjoyable. That's why we trade with others – to free up the time and resources to do the things we enjoy or do best.

*Adam Smith in **Wealth of Nations**: "It is the maxim of every prudent master of a family, never to attempt to make at home what it will cost him more to make than to buy."*

*They make what they are best at or enjoy making the most and trade for other things. What is true for a family is true as well for the family of nations. “*

### **Trade Helps Make the Best Use of Resources**

People trade only when each sees it makes them better. People don't trade what each considers equal. I won't trade my five apples for your five apples unless I consider your apples more desirable.

If I think your apples make better pies, and you think my apples are better for eating we will trade if I want apples for pies and you want apples to eat.

You won't find stores selling ten dollar bills for ten dollars. People don't trade if they see equal value. We trade only if we see the exchange as a benefit.

*Trade does not have a winner and a loser; it has two winners. The seller would rather have the money than the goods, and the buyer would rather have the goods than the money. Both are better off, even though neither might intend the betterment of the other.*

Let's say a couple decides to share the labor of cooking and house cleaning. She takes about thirty minutes daily to cook, and he takes 30 minutes to clean the house. So she cooks and he cleans; fair and square.

But they quickly discover he is a better cook AND can make that better food in only 20 minutes. She is quite an efficiency expert and can find ways to do the cleaning in only 20 minutes.

So what should they do? Should she cook and he clean, or should they trade jobs?

By trading jobs they both win. The food they eat will be better and each gains ten minutes a day to do other things

An economist would call this the theory of comparative advantage. If we buy from someone who can supply it better and cheaper, they become richer because they receive our cash. We become richer because we spend less than we might otherwise have to, and can spend the savings elsewhere.

So a baker will bake not to feed you but to feed his own family. A free market requires people to act in their own interest. Economist Adam Smith said it well in the 18th Century: *“It is not from the goodness of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest.”*

### **An Economic Parable**

You are the ruler of a rugged, mountainous country filled with coal, but lacking land to grow food. Your subjects are hungry.

So you call in the world’s greatest scientists and ask them to invent a way to make coal into tasty food.

A bio-engineer you hire creates a wondrous, complex machine that puts coal into one end, and out comes....limburger cheese. An amazing invention...if everyone likes limburger cheese.

You bring in an agronomist who shows how to grow wheat using crushed coal for soil – but it takes three years to grow enough wheat for a loaf of bread. Not good enough.

Your next expert is an economist who takes some coal to a neighboring country that has plenty of good soil but no coal. He trades the coal for food. Moral of the story? Economics is a powerful set of ideas worth understanding. It can even turn coal into food.

## Internet Resources

**National Council on Economic Education** is the premier organization promoting economic literacy for students and teachers at all grade levels. They offer a wide range of lesson plans, publications, and award and training programs for teachers. The fastest way to learn more about NCEE is by checking out their website at [www.ncee.net](http://www.ncee.net)

Especially recommended is the “Great Economic Mysteries” series. Students solve mysteries about current events, government, and the environment by responding to hints and using “economic thinking.” One book targets grades 4-8 and another grades 9-12.

NCEE also has a printed catalog available upon request from 800-338-1192.

**Real World Economics** is the name of a column in the St. Paul Pioneer Press by Ed Lotterman. He publishes some of this columns on line. Lotterman writes his lively columns for the educated newspaper reader. Try [www.edlotterman.com](http://www.edlotterman.com)

**The Federal Reserve Bank of Dallas** has a web site filled with good readings for those interested in understanding basic economic ideas. Included are downloads of their annual reports. The 1997 report called “*Time Well Spent: The Declining Real Cost of Living in America*” compares the cost of living today (at least in 1997) with “the good old days.”

“*Free Enterprise: The Economics of Cooperation*” is an excellent 36-page introduction to basic economic concepts.

The website can be found at [www.dallasfed.org](http://www.dallasfed.org).

## Readable Books on Economics

The books listed below all provided ideas for **The Invisible Hand**. You might pre-judge books about economics to be dull and dense. These are lively and provocative. Try them.

**The Armchair Economist: Economics and Everyday Life** by Steven E. Landsburg (Free Press, NY, 1993). Not a single graph or chart in this whole book. Landsburg is witty, readable, and understands economics. Learn why popcorn costs more at the movies, why taxes are bad, and how economics influences even the mating game.

**Hidden Order: The Economics of Everyday Life** by David Friedman (Harper Collins, NY, 1996). Yes, David is Milton's son but is also a professor of law and economics at Santa Clara University. Friedman has written a textbook on economics, but this highly readable book is downright entertaining. What does he mean by the economics of daily life? "Two guys ran into a hungry bear in the woods. The first man turned and ran away. The second yelled after him, "It's hopeless, man, you can't outrun a bear!" "I know," shouted the first over his shoulder, "but I can outrun you."

**The Economics of Life** by Gary S. Becker and Guity Nashat Becker (McGraw-Hill, NY, 1997). Gary Becker is the 1992 Nobel Laureate for his theory of "economic reasoning." The book is a collection of short essays written for *Business Week*. You might find a lot to disagree with here, but you will be challenged to think in terms of economics.

**Naked Economics: Undressing the Dismal Science** by Charles Wheelan (W.W. Norton and Company, NY, 2002). Wheelan "undresses" economics by stripping away diagrams, equations, and jargon for a fun and breezy tour of the economic world all around us.

**Sex, Drugs & Economics: An Unconventional Introduction to Economics** by Diane Coyle (Texere, London, 2002). Economics “according to Coyle” (a Harvard trained economist and financial columnist) is a method of thinking about any subject. So there can be an economics of anything — marriage, sport, crime, drugs, movies, and even sex. This book is worth the price simply for the glossary of terms and Coyle’s “Ten Rules of Economic Thinking.”

**Basic Economics: A Citizen’s Guide to the Economy** by Thomas Sowell (Basic Books, NY, 2000). Sowell’s emphasis here is on the economics of a society rather than its individuals. For example, his comment on inflation, “...inflation is in effect a hidden tax. The money that people have saved is robbed of part of its purchasing power, which is quietly transferred to the government that issues new money.”

**The Business of America** by John Steele Gordon (Walker & Co., NY, 2001). Gordon is an historian, not an economist. He tells the stories of famous industrialists from Henry Ford to Samuel Slater as he teaches about the market economy. His chapter on “*The Tragedy of the Commons*” would make an excellent discussion starter. “What if a supermarket that served 1,000 families tried a new system. Instead of every customer paying for groceries as they are purchased, each family gets a bill of 1/1,000th of the total. What would happen under these circumstances?”

**Economics in One Lesson** by Henry Hazlitt (Three Rivers Press, NY, 1962). Read especially chapter 2, “The Broken Window” to understand why economics is often about what cannot be seen. Hazlitt first wrote this book in 1946 and it remains a classic of clear writing on a complex topic.