

VIOLATE AT YOUR OWN RISK

THE IMMUTABILITY OF
ECONOMIC LAWS

By Dr. Arthur B. Laffer

Thinking Economically

Lesson 1

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Texas Public Policy
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Key economic concepts at the foundation of our market-based economy, such as value, entrepreneurship and competition, often get lost in today's complex policy debates. Too often this results in unforeseen consequences that no one involved intended to bring about.

Thinking Economically is a project of the Texas Public Policy Foundation designed to provide a basic economic education for policymakers, the media, and the general public. In this way, the Foundation hopes to highlight the intersection of economics and public policy, and the importance of "thinking economically" when making policy decisions. We are grateful to be able to undertake this project with the assistance of Dr. Arthur Laffer, who has throughout his distinguished career shaped the thinking of many world leaders by bringing sound economic thought into policy debates and the public's awareness.

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WHAT IS ECONOMICS?

Economics is the scientific study of how humans adjust their behavior to seek happiness as they define it, in light of the fact that they can't have everything they want. Unlike psychology, economics doesn't attempt to explain the underlying preferences (tastes) that people have, but instead takes preferences as a given starting point. The economist doesn't need to know *why* people act the way they do—other than to know they are individuals always trying to improve their lot in life.

Despite its apparently narrow field, the scope of economics is actually quite broad, and in fact economic laws are among the most powerful—definitely the most important!—that social scientists have discovered. Professional economists, like other scientists, do use empirical data to test particular theories, but fundamental economic laws are really just codified common sense. It's surprising how much insight we can gain from carefully thinking through the implications of particular views on how the world works.

Once we decide that we will treat other human beings not as inanimate collections of molecules moving through space, but rather as thinking creatures with individual goals, then we can already conclude several important principles. For example, we immediately realize that because individuals are different, they (may) have different goals. That means the economic value of something isn't objective the way its mass or temperature is. On the contrary, value is subjective, because the usefulness (or "utility") of a good or service is in the eye of the beholder. To recognize this fact doesn't make the economist a moral relativist or



Austrian-school economist Ludwig von Mises emphasized that economics is the study of human action.

nihilist, either. In order to explain the price of a pack of cigarettes, you won't get anywhere unless you admit that many people enjoy smoking. Such an admission is by no means an *endorsement* of the preference.

Another fundamental principle is scarcity. Simply put, people have a myriad of preferences, but not all of them can be satisfied. People have to choose, and such choices necessarily involve tradeoffs. Economics posits that people satisfy their most important objectives—this is just a tautology—and leave the less important desires unsatisfied. The benefit of a particular choice is the value (or utility) of the alternative chosen, while the cost of a choice is the value placed on the next-best alternative that is now unattainable. Straightforward stuff, and yet there are plenty of critics who despise this type of "thinking economically."

Once you recognize the inescapable fact of scarcity, it leads you to question the effectiveness of government programs designed to "fix" the world. This is why many people hate economists—Thomas Carlyle famously dubbed their field a "dismal science." But

disappointing as it may be, the simple fact is that government programs take resources away from other potential uses.

Economists have a duty to remind everyone of this fact as often as possible because of the immutable nature of economic laws. Just like with the laws of physics, economic laws are simply descriptions of reality. Scarcity can no more be ignored than gravity. Policymakers who think they can determine the proper price of a good better than the market will create no less a disaster than the captain of an ocean liner who believes his engines will allow him to pay no heed to momentum.

SELF-INTEREST VERSUS SELFISHNESS

Some people reject the very starting point of economics, namely that individuals are the proper unit of analysis. Isn't it more accurate, these critics wonder, to acknowledge that "no man is an island," and that people have feelings of kinship with others, and are motivated by things other than naked materialism?

These types of objections completely misunderstand how the science of economics works. The economist doesn't need to assume that people are self-centered or indifferent to the higher things of life. After all, supply and demand curves can explain the price of Bibles as well as the price of booze. And to focus on the individual as the starting point of analysis is the only method that makes sense; "crowds" don't do anything, individuals within a crowd do. (Even though people may behave differently when part of an angry mob, even so it is still individuals who decide to string up the suspect or burn the alleged witch.) For an analogy with the physical sciences, chemists believe that all matter is composed of atoms.

Does that mean chemists are ignorant of the different ways those atoms behave when arranged in different molecules?



Pursuing one's self interest need not be reflective of selfish intent. *Photo source: Evert Odekerken*

When an economist says that people act in their self-interest, or to "maximize utility," this is a purely formal statement that implies nothing about the specific preferences of the individual. A heroin addict gets utility from his next fix, and Mother Theresa gets utility from helping poor children. Though both are acting in their own self-interest, one is being selfish, the other is being selfless. The economist can use his tools to explain both types of actions.

WHY DO DEMAND CURVES SLOPE DOWNWARDS? THE LAW OF DIMINISHING MARGINAL UTILITY

A crucial economic insight is that people make decisions "on the margin." This principle solves the classical "water-diamond paradox," which poses the following riddle: If water is so important to human life, while diamonds are a mere frippery, then why are diamonds so much more expensive than water? The answer is that economic decisions are based on marginal utility. Nobody ever

chooses between “water” and “diamonds” as abstract categories. Rather, the actual choice people face in everyday life is between a definite unit of water versus a certain unit of diamonds. And though water in general is essential, its relative supply is so great that (in normal circumstances) most people would much rather sacrifice one unit of water than one unit of diamonds. Incidentally, this principle also explains why pro athletes make more than school teachers or firefighters, even though the latter’s services are obviously more important in the grand scheme: The output of any particular pro athlete is more scarce—and hence commands a higher price on the market—than the services of any particular teacher or firefighter.

The formal rule explaining all of the above is the law of diminishing marginal utility. Not only do people value goods according to their marginal (rather than total) utility, but this marginal utility declines as the supply of the good increases. Being rational, people assign the first unit of a good to its most important use—so the first gallon of water is reserved for drinking. But then successive units are assigned to goals of successively lower importance—the 20th gallon of water might be used for bathing, while the 1000th might be devoted to washing the car. To reiterate, this principle explains why the market price of water is so low; the supply of water (relative to people’s uses for it) is so great that any individual gallon can be forfeited without impairing happiness much at all. Even after taking away a marginal gallon, people still have plenty of water to satisfy thirst, cleanliness, lawn watering, car washing, water slide lubrication, etc. etc. In contrast, taking away just one diamond means that some fiancée now has an unadorned finger, and she will be quite upset at the loss!



Carl Menger was one of the first economists to fully elaborate the modern theory of value using the concept of marginal utility.

Once we understand the law of diminishing marginal utility, it’s quite obvious why demand curves slope downwards. That is to say, the lower a good’s price, the more units consumers want to buy. When a consumer decides how many units to buy, he makes the decision (as in all cases) by thinking on the margin. Suppose cartons of milk are \$2 each. The consumer doesn’t ask, “Do I like milk more than money?” No, what the consumer considers is, “Would I rather maintain the status quo, or would I prefer to have two fewer dollars bills and one more carton of milk?” If the answer is the latter, then the consumer will buy at least one carton of milk at the stated price of \$2.

After the decision to buy one carton, the consumer can ask again, “Would I prefer the status quo, or would I be happier still if I sacrificed yet another \$2 and gained a second carton of milk?” Naturally, the process continues until the point at which the consumer values the marginal dollar bills more highly than the next carton of milk. If our hypothetical consumer stops after the 4th carton, then an economist would say that on his individual demand curve, at a price of \$2 this consumer demands 4 cartons.

Notice that the downward sloping demand curve “pops out” of this type of model. If our consumer buys more and more cartons of milk until the point at which the marginal carton is less valuable than the marginal number of dollar bills, then this critical point will occur earlier

if the price of milk is higher. In other words, at a higher unit price of milk, each additional carton reduces the remaining supply of dollar bills at a quicker rate, and so our consumer will hit the cutoff point sooner. When milk is \$3 per carton, for example, our man might decide that the 4th carton is less desirable than his remaining \$3, and so on his demand curve at a price of \$3 he would purchase only 3 cartons.

Of course, economists recognize that consumers in the real world might not literally run through the above mental operations before every purchase. Even so, economists have found that this framework is very useful in explaining consumer behavior, and moreover feel that consumers must be doing something equivalent to such reasoning, even if only subconsciously. Consumers in the real world clearly do buy more units when the price drops, and they definitely value goods on the margin, rather than choosing between the entire supply of one good versus another.

As simple as the Law of Demand is, policymakers need to pay it heed! When well-meaning government programs subsidize health care or food purchases, for example, that lowers the out-of-pocket price from the point of view of the beneficiaries. Naturally, this means that people then demand more health care, child care, food, etc. What happens is that the government subsidies distort the pattern of production, as resources flow into areas that consumers do not value as highly as others. To give a specific example, it makes a tremendous difference whether the government gives a man \$500 to do with what he pleases, as opposed to telling him that if he buys a plasma screen TV, the government will pick up \$500 of the bill. Both approaches cost the taxpayers \$500, but the latter also influences the behavior of the recipient and nudges him

toward something he probably would not have otherwise bought. As this simple example illustrates, to ensure that their policies achieve the desired results, legislators need to understand the laws of economics!

WHY DO SUPPLY CURVES SLOPE UPWARDS? THE LAW OF INCREASING MARGINAL COST

The Law of Demand states that consumers buy more of a product at lower prices. The Law of Supply says the opposite: Producers sell more of a product at higher prices. Just as the Law of Demand is due to diminishing marginal utility, the Law of Supply is an outcome of the law of increasing marginal cost.



At some point, increasing marginal costs begin to limit supply, regardless of the price.

Just like consumers, producers make decisions on the margin and don't ask, "Do I like money more than milk?" Rather, the question for producers is, "How many cartons should I produce at a given price?"

It is a technological fact that for any production process, at some level of output the additional cost (i.e. marginal cost) of producing one more unit begins to rise. It might be because of the difficulty of finding the additional materials and labor needed to increase production, or it might be that the equipment only works optimally in a certain capacity of output, after which point additional units of output begin to strain the system. But regardless of the specifics, at some point marginal costs have to rise. If they didn't, it would mean a single factory

could efficiently produce all of the world's cars, or that the entire crop yield of Earth could be reaped from a single acre of farmland. No, at some finite level of output, at least one of the ingredients in the production process becomes overburdened, making additional units very costly to produce.

Rising marginal costs explain why successful producers don't sell an infinite amount. Think about it: If a car manufacturer can make a car for \$10,000, but turn around and sell it (wholesale) for \$11,000, then why would it only produce, say, 600 units per year? Wouldn't it make twice as much profit by producing 1,200 cars? Or ten times as much profit by producing 6,000 cars? The answer is that it would if it weren't for rising marginal costs. Understanding this, it is easy to see that there are limits on profitability, and that overall profit is maximized when the firm produces up to the point at which the price just covers marginal costs. If the marginal cost of the 601st car is higher than the \$11,000 wholesale price, then to sell one additional unit (at that point) would lower total profits. Even though the average production cost might still be much lower than the \$11,000 wholesale price, this is irrelevant. The producer makes decisions on the margin, and his total profits would go down were he to produce the 601st car.

The supply curve isn't just for big business, however. Everyone from factory laborers to entrepreneurs makes decisions about whether and at what cost to sell their labor. And marginal utility is at work here as well. For instance, a person might be willing to sell 10 hours per week of their labor for \$15 because they can accept the work while still having time for other things. But to work an additional 20 hours, the price might have to be much higher per hour because of the costs (i.e., time away



The law of increasing marginal costs explains why one factory cannot produce all of the world's cars.

from family and other activities or hobbies) of giving up the additional 10 hours per week to work. In fact, the person might decide not to sell any more than 10 hours of labor no matter the hourly price offered. Here again we see increasing marginal costs at work, in that if an employer wants to attract more workers overall, higher wages are necessary to induce additional people to switch from other uses of their time.

As with the demand side, policymakers must understand the laws of economics when it comes to supply as well. Most obvious, business taxes reduce the profit margin of goods for producers, and so discourage output. Regulations raise the cost of doing business, and also reduce output.

IMMUTABILITY: THE LAW OF UNINTENDED CONSEQUENCES

When people break the laws of the city or state where they live, they usually have to face consequences. They may pay a fine or have to do community service. In more severe cases, they may have to spend time in jail. But there are those situations where criminals get away

with breaking the law because the crime cannot be traced back to them.

This is too often the case when it comes to attempts by policymakers to break economic laws. Of course, try as they may, they cannot be successful. Economic laws cannot be broken—only ignored. Thus these failed attempts leave a convoluted trail of unintended consequences harming people who don't understand what went wrong or who caused the problem.

The mass subsidy of corn-based ethanol is a perfect example of this. For years, Congress has been ignoring what market prices have been telling them about ethanol—it is too costly to be a substitute or additive for gasoline. Yet Congress has continued to increase the subsidies and has mandated use of ethanol in an attempt to lessen air pollution and our dependence on foreign oil.

Only now are the results of this push becoming readily apparent. Corn prices have skyrocketed as the demand for corn increased. At first this was felt mostly by those who depend on corn tortillas as a food staple—large protest marches were set off in Mexico City when the price of tortillas doubled. But now the higher prices are being noticed here at home. The increased price of animal feed is leading to higher prices for poultry, pork and eggs. Soft drinks, which rely on corn syrup, shouldn't be far behind.

Another result of the ethanol policies is that the increased production of corn is putting heavy pressure on water supplies throughout the Midwest and West. The National Academy of Sciences reported that “in some areas of the country, water resources are already significantly stressed.... Increased biofuels



Federal ethanol mandates and subsidies have increased the prices of tortillas in Mexico and chicken in the U.S.

production will likely add pressure to the water management challenges the nation already faces.” Environmentalists, many of whom were early proponents of subsidies, are now second guessing themselves and the policies.

Whatever their political leanings may be, all policymakers greatly benefit from a thorough understanding of economics. Perhaps the greatest lesson to be learned from economic laws is that there are limits to what can be accomplished in the political realm. Learning where those limits are, and what is better left to individuals in the marketplace, will go a long way toward eliminating the unintended consequences that cause harm to so many. ♦

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ABOUT THE AUTHOR



Arthur B. Laffer is the founder and chairman of Laffer Associates, an economic research and consulting firm that provides global investment-research services to institutional asset managers, pension funds, financial institutions, and corporations. Since its inception in 1979, the firm's research has focused on the interconnecting macroeconomic, political, and demographic changes affecting global financial markets.

Dr. Laffer has been widely acknowledged for his economic achievements. His economic acumen and influence in triggering a world-wide tax-cutting movement in the 1980s have earned him the distinction as the "Father of Supply-Side Economics." He was also noted in *TIME's* 1999 cover story on the "Century's Greatest Minds" for inventing the Laffer Curve, which it deemed one of "a few of the advances that powered this extraordinary century." His creation of the Laffer Curve was deemed a "memorable event" in financial history by the *Institutional Investor* in its July 1992 Silver Anniversary issue, "The Heroes, Villains, Triumphs, Failures and Other Memorable Events."

Dr. Laffer was a member of President Reagan's Economic Policy Advisory Board for both of his two terms (1981-1989).



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