Mistakes

An Interesting Mistake

On one of my law and economics exam problems several students made the same mistake, a conceptual mistake that is common, important and dangerous. The problem involved the effect of alternative legal rules on the interaction between an airline and three thousand homeowners near the airport. One way of dealing with noise was for the airline to reduce it at a cost of a million dollars. Another was for the homeowners to achieve the same effect by soundproofing their houses at a cost of four hundred dollars each, for a total cost of 1.2 million dollars.

Suppose the airline has the right to make noise and no liability for the cost imposed on the homeowners. The obvious outcome is that the homeowners soundproof — even though it would cost less for the airline to reduce the noise. That suggests the possibility of bargaining, with the homeowners offering to pay something between a million and 1.2 million in exchange for the airline reducing the noise.

With three thousand homeowners that is unlikely to happen. If the bargain is struck, each homeowner gets the benefit whether or not he contributed to the payment, so each will be inclined to try to free ride on the expenditures of the others. They face the public good problem, how to produce something when those who pay for it cannot control who gets it.

Suppose, however, that the three thousand houses belong not to three thousand home owners but to one real estate company that rents them out. Now the public good problem vanishes. The company gets the benefit from sound reduction since it increases what people will be willing to pay to rent its housing and will be willing to pay for it. The bargain now becomes possible.

A number of students got the right conclusion for the wrong reason, writing something to the effect that combining the houses under one owner "levels the playing field" between home owners and airline. The implication is that the problem is a conflict between two sides. Combining the homeowners into one firm increases their bargaining power and so results in their getting more of what they want, the airline less.

The result of the change is that the homeowners, now combined into a single firm, get more of what they want, but so does the airline; it is being paid at least a million dollars, probably more, to do something that costs it a million dollars. Bargaining over how much it gets is a conflict between the two sides, but the agreement to reduce noise at the expense of the homeowners, which is what combining them made possible, is a win for both.

The reason the mistake is important to me as a teacher is that it illustrates a common problem in teaching economics. The student has a pattern of ideas in his head, in this case a simple model of conflict where what helps one side hurts the other. He fits what he hears into that pattern, thinks he understands it and so never gets the actual idea I am explaining.

This particular example is important for a wider reason. A lot of people in a lot of contexts take it for granted that all games are zero sum, that what benefits one side must harm the other. That is a very dangerous mistake. Consider some examples:

Trade

The term "competitiveness" is routinely used in a way that implies that what matters is how rich or productive the U.S. is *relative to other countries*, that if China gets richer that makes us worse

off. It might be true if we were at war with them but in the context of trade China being richer means that they can buy more stuff from us and sell more stuff to us to our mutual benefit. A closely related error is the survival of mercantilist economic theory, the idea that trade is a war in which each side is trying to sell more than it buys, to get a "favorable" rather than an "unfavorable" balance of payments, two hundred years after Ricardo showed why it was wrong. Much public discussion of trade policy is like discussing the space program in terms of Ptolemaic astronomy, worrying about a moonshot crashing into the crystalline sphere of the Moon that surrounds the Earth.

Wealth

Consider discussions over what has happened to the incomes of rich and poor over the past few decades. As best I can tell — it is not a subject I have looked at very carefully — the answer is that both rich and poor have gotten richer but that incomes have increased more for those at the high end of the distribution. This is often represented as the poor or the middle class losing out, with the implication that the wealth of the rich came at their expense, that there is a single pool from which the rich are getting more and the poor therefor less.

Put that way the claim is obviously false, since average incomes have increased enormously over the past few centuries, both in the U.S. and globally. In any particular situation it might be true; one way of getting rich is to steal stuff from people, whether legally or illegally. But it cannot be true in general.

Politics

It is tempting to see political disagreements as simply a question of whose side you are on.[1] There is then no point in listening to the other side's arguments. When they claim that what they propose is good for everyone that is just a trick to blind people to their true motives.

It is a common attitude and a dangerous one. Carried to its limit, it implies that the other side is your enemy, in which case there is nothing really wrong with lying about them, wiretapping them, stealing votes. Even assassination. All is fair in love and war, and this is war.

Love

Consider the effect on a marriage of seeing all disagreements as about which partner gets his or her way, which loses out.

Implications of a Doomed Dollar

My friend Jeff Hummel predicts that the U.S. will eventually default on its debt. Central to his argument is the fact that an increase in the perceived risk of default increases the risk premium the U.S. has to pay to lenders. Since the debt is large and rapidly getting larger an increase in the interest rate the U.S. has to pay results in significantly increased budgetary problems, which increases the risk of default, which results in a further increase in the risk premium, positive feedback. I do not know if his prediction is correct nor whether, if it is, default would be via repudiation or inflation, but it is at least an interesting argument.

I was reminded of it recently when I received an Email from The Motley Fools, investment advisers who for some reason have me on their mailing list. The title is "Read This Because the Dollar is Doomed." The authors argue that the U.S. trade deficit, the U.S. budget deficit, and the

[1] I discuss the issue in Chapter XXX ("Which Side Are You On?" in libertarian).

willingness of the U.S. to pay for things by printing money all threaten the dollar. They conclude that "This should be worrisome news if you earn a dollar-based salary, keep a dollar-based bank account, or invest in dollar-denominated U.S. stocks and bonds. Why? Because as the dollar declines in value, so too will all of your earnings, savings, and investments. And that's scary stuff." They argue that the solution is to invest in "stocks that do business in other currencies ... and specifically in currencies that you suspect will rise against the dollar over time."

It is possible that the dollar is doomed, but their advice confuses two quite different issues, price levels and exchange rates. Inflation due to too much money creation is a problem if you have assets whose value is fixed in dollars, such as T-bills, but not for assets whose value is merely measured in dollars, such as U.S. stocks. If all prices double, the price of Apple computers doubles too, as does the value of Apple stock. Some companies will do better in an inflation than others, in part because some companies have assets or liabilities whose dollar value is fixed. But that has nothing to do with whether the company's stock is dollar denominated.

Nor with whether the company does business in other currencies. If the value of the dollar drops and the value of the Euro does not, then the dollar value of a company that does business in Euros will go up, but so will the dollar value of a company that does business in dollars. The Euros the company is earning exchange for more dollars than they used to, but those dollars are worth less.

There is, however, a different sense in which the dollar might be doomed, with different implications for investors. Suppose the U.S. price level stays the same but the exchange rate between dollars and other currencies falls. A dollar will still buy the same goods and services in the U.S. as before, but not as many Euros or Yen or Rupees.

Why might that happen? The market exchange rate between the Euro and the dollar is the price at which the number of dollars that people want to sell for Euros equals the number that other people want to buy. One reason to trade Euros for dollars is in order to buy goods in the U.S. and ship them back to Europe, and similarly in the other direction. If that is all that is happening the exchange rate ought to reflect the purchasing power of the currencies, with some complications due to the fact that not all goods and services play a role in international trade.

Another reason a European might want dollars, however, is in order to buy T-bills — more generally, U.S. capital assets. If the U.S. is running a large budget deficit, as it is, and if much of that money is being borrowed from foreigners, as it is, then a lot of dollars are being bought in order to lend them to the U.S. government. That additional demand bids up the price of the dollar in exchange markets. The capital inflow appears in the statistics as a trade deficit, since some of the foreign goods the U.S. is importing are being exchanged for capital assets which remain in the U.S. rather than for export goods that don't.

Suppose foreigners decide that lending money to the U.S. government is no longer prudent. That part of the demand for dollars vanishes. The price of the dollar measured in Euros or Rupees falls. Some of the foreigners who have lent money to the U.S. decide it was a mistake, cash in their T-Bills for dollars, and trade those dollars for Euros or Rupees. That increases the supply of dollars on the foreign exchange market, driving the dollar down even farther.

What are the implications for investors if the dollar maintains its value domestically but falls in its exchange rate? Americans who hold assets with fixed dollar values are unaffected, except to the extent that they want foreign currency, perhaps for a Paris vacation. Americans who hold stock in foreign companies or U.S. companies whose income is largely in foreign currencies benefit, since

their stock is now worth more dollars. The losers this time are foreigners who made the mistake of holding U.S. assets.

The Motley Fool is not entirely clear about which sort of decline of the dollar he is talking about but one could, with a little effort, take his references to the trade deficit and the budget deficit as suggesting some mechanism along these lines. It is, perhaps, unreasonable to expect investment advisers to not only understand economics but to explain it correctly to their customers. On the other hand, since which part of their advice one ought to follow depends on what sort of doom the dollar is facing, it would be nice if they at least tried. And, in this case, neither sort has all of the implications that they claim.

The Price of Money

The interest rate is often described as the price of money. It isn't. If the interest rate is five percent and the interest rate is the price of money, I ought to be able to buy money for five cents on the dollar. I doubt anyone will be willing to sell it to me at that price.

The price of money is what you have to give up to get it, the inverse of the price level. If the price of an apple is fifty cents, the price of a dollar is two apples. The interest rate is not the price of money but the rent on money measured in money. A change in the price of money affects both the money you are renting and the money you are paying as rent, leaving the ratio of the two unchanged.

Suppose that at midnight tonight every dollar bill in the world twins, along with a similar change in the accounting entries for bank deposits, other forms of money, and all obligations denominated in money. By morning there is twice as much money as before and nothing else has changed.

Would the interest rate drop? If your answer is yes, my next question is whether you would expect a much more extreme drop if we relabeled pennies as dollars and dollars as hundred dollar bills, thus increasing the money supply, measured in "dollars," a hundredfold.

The reason the description of the interest rate as the price of money is not only wrong but dangerously wrong is that it implies a simple relation between money and the interest rate — in the extreme (but not uncommon) version, the belief that interest rates are set by central banks, with high interest rates the result of a tight monetary policy.

A central bank can create money and lend it out, increasing both the supply of loans, which reduces the interest rate, and the money supply. That is the one element of truth to the relationship. But what is affecting the interest rate is not the amount of money but the amount of loans; the government could get the same effect by collecting more in taxes than it spends and lending out the difference.

The interest rate is a market price, the price paid for the use of capital, and the central bank controls it only in the same sense in which the government can control the price of wheat by choosing to buy or sell some of it. The central bank does not have an unlimited amount of capital from money creation to lend and so has only a limited ability to shift interest rates from what they would otherwise be. Putting the effect of its loans aside, an expansion of the money supply creates a price increase and the expectation of future price rises, which pushes the nominal interest rate up, not down.

Much of the confusion here comes from the multiple meanings of the term "money." When we say someone has lots of money we do not usually mean that he has a lot of currency in his wallet or a

large balance in his checking account; we mean that he is wealthy. His wealth might be in money, it might be in valuable real estate, it might be in stocks and bonds. If there is lots of money in that sense, more precisely if lots of people have wealth they would like to lend out, that will tend to lower interest rates. But that has nothing to do with the amount of money in circulation.

This confusion showed up in the attempt to justify bailouts by linking the 2008 crisis with the events that led to the Great Depression. Those events produced a sharp drop in the money supply due to banks going broke and depositors either losing or withdrawing their deposits; with a fractional reserve system, replacing a mix of currency and deposits with just currency reduces the total amount of money in circulation, in that case by a lot. The problem could have been prevented if the Federal Reserve System had kept those banks from failing, part of what it had been set up to do and something that had been done earlier by private arrangements among banks.

That cannot happen now because the FDIC insures bank deposits. What happened in 2008 was not a drop in the money supply but a loss of wealth as firms discovered that their assets, mortgages and securities backed by mortgages, were worth less than they thought they were. That explains why the bailout was enormously greater than would be required to prevent a run on bank deposits. $500 billion[2] was roughly a third of the total money supply of the U.S. (M1—currency plus checking accounts and similar assets) and about half of that is currency, which is not going to vanish whatever happens to the banks. The total wealth of the economy is enormously greater than the total amount of money in the economy; the bailout was a response not to a reduction in the amount of money but a reduction in the amount of wealth — more precisely, the discovery by some firms that their wealth was less than they thought, possibly negative.

That also explains why the bailout had very little to do with preventing another Great Depression. The U.S. money supply at the time was at or near its all-time high and it was hard to see how anything likely to happen, with or without a bailout, would reduce it by much. The mechanism that set off the Great Depression wasn't happening.

What was happening was the failure of lots of firms. The failure of a firm does not wipe out wealth except to the extent that the firm itself, its internal culture, web of relationships and such, has some value. When a firm fails that is evidence that that value was negative, since otherwise someone would probably have chosen to buy out the firm and keep it going. Other assets of the firm, such as land, buildings, intellectual property, do not vanish when a firm goes bankrupt, they get sold to someone else.

The bailout did not prevent the loss of value; that happened when people made bad mortgage loans. What happened after that was the recognition of that loss. All the bailout could do was to shift the loss from some people to others, from the stockholders and creditors of firms that are now effectively bankrupt to the taxpayers.

All of which comes back to confusion over the meaning of "money."

Getting Adverse Selection Wrong

Austan Goolsbee, Barack Obama's economic advisor in his presidential campaign and later a member of the Council of Economic Advisors, appears from articles I have read to be a pretty good economist in the Chicago style, someone who sees economics as a powerful and exciting

[2] One estimate of the total amount of the bailout.

tool for explaining the world.[3] He is also the author of a 2007 article in *Slate* on the American health care system. It took the form of a critique of proposals by Michael Moore but included Goolsbee's own views of what is wrong and what should be done about it. He wrote:

Economists call this "adverse selection" and when there is too much adverse selection—when the health of the people in the uninsured pool is extremely different from the average person in the country—the market may fail completely. Insurance companies may just deny people coverage entirely.

This is a problem at the core of our health care woes. Moore finds scores of examples—people with tumors, heart problems, lost limbs and digits, you name it. And in each case the insurance company finds a way to deny paying for people's illness even though the people actually have health insurance. He also shows people who simply cannot get insurance because they have pre-existing conditions, are too heavy, are too light, and on and on.

Without any rules against cream-skimming, the insurance companies have every incentive to keep dumping the sick people—often retroactively, after they become sick.

This confuses several different issues. One is the failure to enforce insurance contracts, with the result that the insurer who has lost his bet fails to pay off. That may be a serious problem but it has nothing to do with adverse selection or cream skimming.

That case aside, the argument is simply wrong. Insurance companies free to set the price of what they sell have no incentive to avoid insuring people who are bad risks. They can make money insuring good risks at good risk prices and bad risks at bad risk prices.

Adverse selection, as Goolsbee surely knows, requires asymmetric information, a situation where one party to a transaction has and can act on information the other does not. If the customer knows more about his health than the insurance company the decision to buy insurance will be taken as a signal that the purchaser is a worse than average risk, insurance companies will price accordingly, and people who know they are good risks but cannot prove it may be unwilling to buy insurance at a bad risk price. That is the problem of adverse selection in insurance. It is notcream skimming, since the bad risks end up insured at a bad risk price and some of the good risks end up uninsured. In Ackerlof's famous sketch of the problem, set in the used car market, lemons sell, cream puffs don't.

All of this assumes that insurers are free to set their prices. Suppose instead that they are restricted in ways that prevent them from charging bad risks the true cost of insuring them. It will be in the interest of the insurance companies to try to avoid insuring bad risks, to skim the cream off the top. But the problem is produced not by the market but by the price control.

What does Goolsbee propose?

Addressing cream-skimming is at the heart of every responsible program for U.S. health-care reform .... These plans take aim at "pooling," for example, by allowing insurance companies to insure an entire state or region as a whole in exchange for serving everyone in that pool—no dropping, no denials, no shenanigans.

---

[3] See, for example, "A Charismatic Economist Who Loved to Argue," Goolsby's piece on Milton Friedman's death.

For the requirement that the insurance company serve everyone in the pool to have any teeth it must include restrictions on the prices insurance companies can charge to those they serve. So Goolsbee's solution to a problem created by price control is, unless I badly misread him, price control.

There is another problem in the background, but one that has nothing to do with adverse selection. Someone with bad health will, on a free market, end up paying more for health care, directly or through insurance, than someone with good health. Many people, quite possibly including Goolsbee, see that as a bad thing that we should do something about, but it is not a problem that insurance can be expected to solve. Once the dice, for bad health or anything else, have been rolled, it is too late to bet on them.[4] Trying to convert insurance into a welfare program, income redistribution to make up for the inequality of health, creates the problems that Goolsby is proposing to solve.

[4] Readers can find a more detailed explanation of adverse selection in my webbed Law's Order.