Straight Talk About Economic Literacy

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I. Why Economic Literacy Matters

A few centuries ago, people able to read and write were rare. Almost everyone used to be illiterate. Since then, the pattern has reversed: At least in the capitalist democracies, practically every adult can now read and write. In the absence of widespread literacy, it is hard to imagine how modern societies could function at all. Fortunately, this is no cause for alarm. The personal benefits of literacy - imagine how hard it would be to get through a single day in modern society without it! - are too good to pass up. Similarly, it is hardly surprising that computer skills are spreading rapidly; in a few decades *computer* illiteracy may become as large a handicap as regular illiteracy is today.

There are other forms of illiteracy, though, that are socially dangerous but less self-correcting. Democracies ultimately let voters decide what government does and does not do. Citizens can vote even if they have no idea what they are doing. If enough voters fit that description, democratic governments are bound to make foolish decisions. Political scientists have documented, for example, that roughly half of United States citizens do not know that each state has two senators, and only a quarter realize that senators serve six-year terms. It is hard to see how voters can hold politicians accountable for their performance if they do not even know who did what for how long.

Valuable as such study of narrowly *political* illiteracy is, I believe it only hits the tip of the iceberg. The primary activity of modern governments is to determine economic policies: which services the government supplies itself and which it leaves to private markets, how open the economy is to foreign trade, what regulations to impose. Even if voters knew our constitutional structure and their representatives' voting records by heart, intelligent policies would be unlikely to emerge if a large fraction of voters suffered from *economic* illiteracy.

Unfortunately, a large fraction of voters *do* suffer from economic illiteracy. Indeed, it is fair to say that an ample majority does not understand the basics of how markets work. They are especially confused about labor and international markets. Voters also have severe misconceptions about how government spends their tax dollars, and are extraordinarily pessimistic about long-run economic conditions.

The problem is not that voters lack thorough expertise in economics, or make an occasional careless error. We still call someone "literate" even if they misspell a word every now and then. Most voters lack *elementary* understanding of economics. They resist even ideas as simple as "In the long-run, preserving obsolete jobs reduces production." When prices change, vague conspiracy theories - not supply-and-demand - are their default explanation.

Admittedly, economic illiteracy does not *automatically* translate into foolish policies. We could imagine that the errors of half the electorate balance out the errors of the other half. In the real world, though, we shall see that such happy coincidences are rare. The public tends to cluster around the same errors - like blaming foreigners for all their woes. Another conceivable way to contain the damage of economic illiteracy would be for citizens to swallow their pride, ignore their own policy views, defer to specialists, and vote based on concrete results. Once again, though, this is rare in the real world. Politicians plainly spend a lot of energy trying to find out what policies voters want, and comparatively little investigating whether voters' expectations are in error. Indeed, even when politicians brag about their "results," they usually mean that their proposals became policies, and sidestep the difficult issue of whether those policies worked as advertised. In sum, while foolish beliefs do not *have* to lead to foolish policies, there is every reason to think they do.

II. An Overview of Economic Illiteracy

Before turning to statistical evidence on economic literacy, let me confess that fifteen years ago, I was economically illiterate myself. Before I began to study economics, I already had a set of emotionally appealing beliefs about it. To a large extent, learning about economics consisted in *unlearning* what I thought I knew. My easiest heuristic for understanding economic illiteracy, in fact, is simply to recall what I would have said before I knew better.

Suppose, for example, that you asked me what I thought about so-called "technological unemployment" - the fear that machines are gradually eliminating the economy's demand for human beings. Fifteen years ago, I would have taken this possibility seriously, just as most Americans do today. But I do not take it seriously any longer. I can still remember reading Frederic Bastiat's *Economic Sophisms* for the first time, and suddenly realizing what how misguided I was. Ten years before I picked up Bastiat, at the age of eight, I had become engrossed in Greek mythology, and learned the legend of Sisyphus, the evil-doer forever condemned to roll the same boulder up the same hill, only to have it slip from his grasp every time he neared the pinnacle. A light turned on in my head when Bastiat accused his intellectual opponents of "Sisyphism":

> The avowed object and acknowledged effort of restrictive measures is to increase the amount of labor necessary for a given result.
>
> Another of its avowed objects and acknowledged effects is to raise prices, which means nothing more nor less than a scarcity of goods. Thus, carried to its extreme, the policy of restriction is pure *Sisyphism*...: *infinite labor, without any result*.

Reading Bastiat inspired me to delve deeper into economics. While I was disappointed to find out that few economists rivaled Bastiat's flair and wit, they had plenty of solid supporting arguments. On the most obvious level, they pointed out, if stories about technological employment made sense, we would all be unemployed right now. How so? Two hundred years ago we were all farmers, but agricultural machinery now enables one farmer to feed a hundred people. Other economists I read pointed out that workers in technologically advanced nations earn vastly more than they do in backwards lands, strongly indicating that technology *increases* the demand for labor. The more I read, the more I thought that these economists were on to something.

I feel like I learn a lot about economic literacy simply by comparing what I think now to what I used to think. But the cautious reader might start worrying about how typical an economist I now am, or how typical a non-economist I used to be, or both. Fortunately, there is an elegantly constructed survey to help keep me honest, known as the *Survey of Americans and Economists on the Economy*. The premise of this fascinating study, put together by the *Washington Post*/ Henry J. Kaiser Family Foundation/ Harvard University Survey Project, is simply to ask average Americans (1,510 of them) and professional economists (250 of them) the same questions about economics, and see how their answers compare.

The viewpoints of the two groups could hardly be more different, as a quick glance at Table 1 reveals. (If you want more details, the survey's write-up at http://www2.kff.org/content/archive/1199/econgen.html is rather engrossing). At least to me, the natural inference is that economic illiteracy is rampant in the general public. If the public's beliefs about math or history sharply diverged from those of professional mathematicians and historians, I know which side I would bet on. After walking with me through the results for the Survey of Americans and Economists on the Economy, you can decide for yourself if you would do the same.

Due to its length, my plan is to talk about the survey's big patterns, rather than working through question-by-question. One of the first things that stands out is ***anti-foreign bias***. When they contemplate economic interaction with foreigners, the general public gets unreasonably negative. Thus, most of the public is very worried about companies sending jobs overseas, but few economists take this seriously. I hardly find this surprising: Before I studied economics, the threat of foreign competition driving us to penury seemed like a genuine threat. But then I learned about an amazing principle called *comparative advantage*. It shows how a fixed quantity of resources can always produce more wealth if countries specialize and trade. Cutting off foreign trade to "save jobs" makes about as much sense as boycotting your local grocery store. Once you began to grow your own food, you would never again need to worry about how to spend your free time. You would probably have no free time left!

The public is a little less hostile to free trade agreements than one might expect. In terms of their overall economic effect, at least more see them as positive than negative. Compared to economists' near-unanimous evaluation, though, public support is lukewarm. This is probably driven in large part by the public's fears about the domestic employment effect of trade agreements: economists expect job gains, while the public expects job losses.

The public also worries a great deal about the economic harm of immigration, while economists see little cause for concern. Once again, I have been on both sides of the issue: Until I studied economics, immigration seemed to me at best a necessary evil.

But after you digest the implications of comparative advantage for international exchange of goods, it is only a small step to notice that the same idea holds for international exchange of labor. A fixed amount of labor can accomplish more if workers specialize and trade their services. This is particularly clear in the U.S., where millions of highly skilled women leave the workforce for years due to the high cost of childcare, even though there are millions of women in Latin America who would be delighted to move here to offer childcare services at an affordable price. If everyone involved in these transactions were born in the United States, the benefits would be plain to all; but when Americans hire foreigners, the public's warning bells go off.

The public's anti-foreign bias even stands out for policies that economists have strongly criticized. Many economists have questioned whether foreign aid actually helps recipient countries; it often seems like foreign aid's main effect is to allow bad policies to linger. But virtually no economist thinks that foreign aid is a serious drain on *donor nations* like the United States, because it is such a tiny percentage of the budget - in the neighborhood of 1%. In stark contrast, the general public sees foreign aid as a grave danger for the domestic economy. Whenever foreigners are part of the equation, the public assumes the worst.

A second major pattern in the public's economic illiteracy is ***make-work bias***. People tend to see job loss as an unmitigated economic bad. The most primitive form of make-work bias is undoubtedly fear of the machine, concern that technology is making human beings superfluous. The survey says that much of the public views it as a serious economic problem, though economists often question whether this is even true in the short-run. Employment often expands fastest in precisely those industries most marked by rapid technological progress. In the long-run, blaming technology for unemployment is just silly. As the mechanization of agriculture beautifully illustrates, when machines replace people in one line of work, they switch to another. There is always something else to do, and the more goods the economy produces, the more goods a worker receives for a day's labor. Virtually all economists sign on to these long-run benefits of technological progress, but only a minority of the public will go along. It is a little heartening, though, that on this question the public worries *less* about new technology in the long-run than the short-run.

Fear of the machine is the most basic expression of make-work bias, but it takes many forms. As the survey unsurprisingly finds, most non-economists see downsizing as a serious problem. Economists disagree. Before my introduction to economics, I certainly would have found the very notion of "benefits of downsizing" to be paradoxical. Studying economics allowed me to see that this apparent paradox is only common sense. Labor is a limited and valuable resource. When workers stay at jobs where they do little or nothing, society loses what those workers *could have produced* if they looked for a more productive way to spend their time. Perfect job security is the way to lock in perfect economic stagnation. Downsizing is obviously a temporary misfortune for those affected. But at root downsizing is about firms figuring out ways to achieve more with less. Without such efforts, the modern world as we know it would never have been born.

Economic illiteracy is especially apparent in the public's perspective on international and labor markets. But they have less concentrated doubts about markets as such, a blanket ***anti-market bias*** that (mis)directs their thinking. Economists generally hold that markets work considerably better than the public believes. One of the main roots of this bias is probably the way that markets base so much on material incentives, or "greed." Before I came to economics, my tacit assumption was that greed was a destructive force; little good could come of behavior motivated by desire to make money. A central lesson of economics, though, is that in market settings, it pays to do a good job. Markets give people choices; they can go elsewhere if you fail to satisfy them. Mistreating customers is a sign of stupidity rather than greed.

One survey item that captures the public's anti-market bias is the question asking why the price of gasoline rose back in 1996. Is the reason the "normal law of supply and demand," or is it instead "oil companies trying to increase profits"? An overwhelming majority of economists - 89% - points to supply and demand. An almost equally lopsided fraction of the public - 74% - says the opposite. In the minds of public, prices apparently go up when businesses suddenly start to feel greedier. Economists, in contrast, expect businesses to be greedy year-in, year-out; but depending on market conditions, greed may call for prices to go up, go down, or stay the same.

The questions about excessive profits and executive pay help flesh out non-economists' anti-market bias. Very few economists see these as drags on economic performance. Quite the opposite: Incentives for performance - making wise investments or craftily managing a company - are what makes markets work. Economists know, too, that the dollar size of these items is greatly exaggerated. Many non-economists, on the other hand, mentally fail to connect performance and reward. It is hard for them to see what investors and executives "really contribute." Now if they were thinking about professional athletes or movie stars they might see matters differently. But when they contemplate the rewards going to the market's primary decision-makers - investors and executives - they see grave economic danger, rather than money well-spent.

The question on regulation sheds some further light on anti-market bias. The truth is that the public is a little more worried than economists about the economic harm of government regulation. What is interesting, though, is that this is one of the few questions where experts and laypeople are *close* to agreeing. In almost every other case, economists treat the public's fears as at best over-stated. In other words, excessive regulation is one of the few economic concerns of the public that economists take seriously.

A final catch-all category of economic illiteracy may be called ***pessimistic bias***. Conventional wisdom has it that conditions are going from bad to worse. Most Americans think that real income has been falling for decades, most new jobs are low-paying, and doubt whether the next generation will have a higher standard of living. Economists think that this conventional wisdom is dead wrong. They appreciate, as few others do, the fact that living standards have risen phenomenally during the past century. And while economic growth has *slowed* since the 1970's, living standards continue to rise. (Many economists now recognize, moreover, that by failing to adjust for quality improvements, official statistics underestimate the actual degree of improvement).

Non-economists' pessimistic bias extends further; even when they notice real problems, they have trouble keeping them in perspective. Take the size of the federal deficit, for example. Almost all members of the public see it as a major economic problem. Economists are much more restrained. While they acknowledge its dangers, they also know that it could get a lot worse. Or consider the public's beliefs about the economic harm of excessive welfare dependence. Economists have long been aware of the inefficiencies of the welfare system, but the fact remains that welfare spending is only about 10% of the federal budget.

In sum, then, we can profitably distinguish four main faces of economic illiteracy: anti-foreign bias, make-work bias, anti-market bias, and pessimistic bias. On any particular issue, of course, more than one bias may be at work. Immigration naturally touches on both anti-foreign bias and make-work bias. Technological unemployment probably taps not just make-work bias, but pessimistic bias as well. Nevertheless, I believe that each of these four biases has independent intuitive appeal. To undermine any one of these advances the cause of economic literacy.

III. The Distribution of Economic Illiteracy

Economic illiteracy is widespread, but not equally severe in all segments of the population. Some factors make people think more like economists; others make them think less like economists. It takes some moderately complex statistical methods to extract this information, summarized in Figure 1. The top bar of the figure indicates how much two otherwise *average* people would disagree if one were an economist and one were not. The lower bars show how much larger or smaller the belief gap gets if the non-economist is, in one respect, *not* average. Bars smaller than 100% mean smaller than normal levels of disagreement. Bars larger than 100% show the opposite. But let us cut to the chase. The Survey of Americans and Economists on the Economy has six main lessons about the distribution of economic literacy to teach us.

1. By itself, *higher income does **not** reduce economic illiteracy*. If you compare otherwise identical individuals with very different income levels, their average degree of

economic literacy is about the same. In other words, a high school graduate who runs a successful business typically has as good (or as bad) a grasp of economics as a high school graduate who drives a cab. A person can enjoy great practical success in the economy without understanding how that economy ultimately works on a deep level. In other words, there is really no distinctive economic worldview that the rich as such share.

The absence of a clear connection between income and economic literacy has some amusing implications. A long-standing charge against economists, popularized by Karl Marx, is that they are hired apologists for the rich. But economists and the rich, all else equal, do not see eye-to-eye to begin with! Do the rich hire others to apologize for them, but fail to apologize for themselves? Do the rich employ propagandists to contradict their own views? I would suggest, instead, that the effort to link economists' distinctive beliefs to their personal interests is nothing more than a poorly thought-out conspiracy theory.

2. *Ideological conservatism does **not** reduce economic illiteracy*. The survey also shows that on balance conservative Republicans are no more economically literate than liberal Democrats. Neither are economists especially likely to endorse stereotypically conservative beliefs about how the economy works. Economists have often been ridiculed as conservative ideologues, but their critics once again simply do not have their facts straight. The typical economist is a moderate Democrat, not a staunchly conservative Republican.

Still, it cannot be denied that there is some basis for this confusion. Economists frequently do endorse extremely conservative views of how the economy works: when they look on the bright side of downsizing, belittle the economic damage of business tax breaks, attribute price changes to market forces, or point to the reality of economic progress over the last twenty years. Nevertheless, economists also frequently endorse extremely liberal views of how the economy works: when they emphasis the economic benefits of immigration, dispute the severity of the welfare problem, herald the benefits of trade agreements, or note the rise in inequality.

Overall, conservatives seem to have weaker make-work and anti-market biases. But liberals' anti-foreign bias is less serious than conservatives'. Moreover, people across the political spectrum suffer from pessimistic bias; what varies is the exact targets of their unreasoning pessimism.

Economic literacy often demands that personal ideology be subjected to critical scrutiny. That scrutiny may reveal ideological distortions and exaggerations, but it often happens that ideologues fail to be extreme enough! When moderate views are drastically wrong, being right requires more than moderate dissent. For example, while conservatives are *more* willing to attribute price changes to supply-and-demand, *most* conservatives still balk. Liberals are less worried about immigration, but most are worried nonetheless. Economists across the ideological spectrum, on the other hand, accept that supply-and-demand controls prices, and immigration is a minor or non-problem for the economy.

3. *Education **does** increase economic literacy.* The more educated otherwise similar individuals are, the more inclined they are to agree with the economic beliefs of professional economists. The effect is quite large. Imagine splitting people up into seven educational levels, with grade school drop-outs in the lowest group, and people with graduate educations in the highest. Then you will find that on average, each

education step reduces the belief gap between economists and the public by about 9 percentage points relative to its normal, massive size. Another way to say the same thing is that, on average, the belief gap between economists and the most-educated members of the public is 77% as large as average; the gap between economists and the least-educated is 133% as large as average. In absolute terms, highly-educated non-economists still have a lot to learn, but they sure know a lot more about economics than most people do.

Highly educated workers generally earn more money. But that extra money is not the *reason* why the highly educated think differently. Education works all by itself to raise economic literacy, and income does not. So imagine comparing two Ph.D.s. One struck it rich in the Internet boom, while the other works as a clerk in a bookstore. You should expect their economic literacy to be the same.

It is hardly surprising that better-educated individuals know more about economics. Education is a good predictor of knowledge for a wide variety of subjects. Presumably education has a direct effect on economic knowledge by making people more likely to take a couple of economics courses. There are probably indirect effects too: The well-educated have better opportunities to casually learn about economics from friends, family, and co-workers. Another part of the explanation, presumably, is that individuals who stay in school longer also tend to be smart and therefore prone to teach themselves more about the world.

4. *Men have higher economic literacy levels than women*. It often happens that one gender knows more about a field than the other. Economics is one of those fields. Males think markedly more like economists than women do. The effect is fairly large:

male gender has about the same effect on economic literacy as one-and-a-half steps of education. The male and female belief gaps are, respectively, 92% and 107% the average size.

There is a temptation to blame this pattern on teaching deficiencies unique to economics. But political literacy fits the same pattern: Men significantly outperform equally educated women on tests of political knowledge. In other words, those who attribute the gender gap to poor instruction should start by considering the problems that economics and political science have in common. There is no need to be fatalistic; better teaching could help economics come to life. But part of the gender gap probably arises simply due to selective curiosity: The average man normally find politics and economics more intrinsically interesting than the average woman.

5. *Individuals with high levels of job security are more economically literate.* As you increase a person's perceived degree of job security and hold other traits fixed, they appear to grow more economically literate. The difference between the most secure and the least secure is equivalent to two full steps on the educational ladder.

What does this finding mean? One popular answer is that self-interest distorts economic beliefs. And indeed, people with a lot of job security seem markedly less subject to make-work bias. What makes the self-interested interpretation problematic, though, is the lack of any connection between economic literacy and *income*. Why would job security twist beliefs when income fails to do so? A more plausible partial answer is that some people are more optimistic than others across the board. Such people have sunnier estimates of not only their personal prospects, but the overall economy's as well.

And indeed, what I previously termed pessimistic bias falls markedly as job security goes up.

6. *Though income **level** does **not** increase economic literacy, income **growth** does.* The survey asked people whether their family's standard of living went up, down, or stayed flat during the last five years. It also asked them what they expected would happen during the next five years. Now imagine comparing individuals who got richer and expect to keep getting richer to others who got poorer and expect to get poorer still. Their difference in economic literacy is very big - almost the size of five steps up the education ladder. Since there are only seven steps to begin with, that is quite an impact.

Self-interest is bound to remain a popular explanation for this pattern. But bearing in mind the fact that income *level* has no connection with economic literacy makes it hard to craft a convincing self-interested account. What interests does "new money" have in common with poor immigrants working their way into the middle class? Once again, blanket optimism is probably part of the story: Individuals who look on the bright side of life are more likely to perceive progress on the national as well as the personal level. Another possibility is that it is easier to notice economic progress in the broader world when you have personal experience with it.

IV. Meeting the Challenge

A precondition of improvement is the recognition that things are not perfect the way they are. If there is nothing to complain about, there is also no way for things to get better. While I find the public's economic illiteracy distressing, it is also a source of hope. Literal illiteracy has all but vanished. Over the long-run, why should comparable progress against economic illiteracy be unachievable? The strong connection between education and economic literacy suggests that some people have learned to overcome popular economic fallacies. Why should others be unable to do the same?

The facts about economic illiteracy are heartening in a more direct way as well. When experts observe democracies' countless foolish policies, they usually blame an "iron triangle" of special interests. Both economists and political scientists often conclude that under the guise of democratic rule, politicians tune out the voice of public opinion and serve whoever gives most generously to their campaign.

One big reason to be skeptical of this popular story is how *small* campaign donations actually are. Put it in perspective. Total annual donations are under a billion dollars, but the federal government spends well over a trillion every year. Could such a small tail really wag such a large dog?

Research on economic literacy raises further doubts about the power of interest groups to derail democracy. Why? The policies economists deplore - like protectionism or subsidies to dying industries - turn out to be *popular* with voters. So why should we think that politicians fail to listen? I would suggest that politicians listen well, but unfortunately hear a great deal of economically illiterate advice. Even if a politician knows better, electoral pressure encourages him to go along.

You may be wondering "What is so heartening about that?" Well, if bad policies exist because politicians obey special interests instead of voters, we are stuck. Special interests run the show and always will; so-called reforms of, say, campaign finance, will only happen if the special interests themselves want them to happen. If instead bad policies exist because of voters' economic illiteracy, there is hope. Politicians will quit supporting bad policies once economic illiteracy becomes a thing of the past.

Obviously economists themselves have a large role to play here. One important task is to reverse the popular perception that economists habitually disagree. In reality, it is quite amazing how much economists agree with one another. The key fact to emphasize, instead, is how radically economists disagree with the general public. Economists have to politely make it clear that they deem a great many popular beliefs about the economy to be false. And as any teacher knows, a key to clear communication is repetition. The public is going to need to be politely but unambiguously corrected again and again and again. On a problem of this importance, even a moderate rate of progress will be worth the effort.

Suggested Readings

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