

Environmental Policy

Better Media Coverage Of Risks Is Urged

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I was on a plane a few days ago, coming back from Austin, Texas, where I participated in a weekend conference of environmental journalists. The person next to me asked me what I did for a living and I said, "Well, I'm an environmental economist." There was a long, long pause and a blank stare. It began to occur to me that what that blank stare and that pause were really saying was that, in his mind, I had just uttered an oxymoron. So, am I a living, breathing oxymoron?

What does economics have to do with the environment, anyway? My answer to that is really in two parts. The

first is that the causes of environmental problems in our society are fundamentally economic. The second is that many of the consequences of environmental problems have important economic dimensions.

What is it about our market economy that causes these environmental problems? You already know, as we all know and observe every day (particularly if you're involved in any kind of business yourself), that the forces of the market economy normally force each of us to focus on the proverbial bottom line; to worry about the money that's coming in and the money that's going out; to worry about the benefits and the costs. The result of that competitive process is that if you don't do that, you go out of business, essentially.

And the result of that process—and this is not a simple matter, but we've observed it over and over again—is that firms in the private market tend to use the resources that they have, labor and capital, in a relatively efficient way. On average (there are lots of exceptions), they tend not to systematically use too much or too little of labor or capital.

It also means that firms tend to produce, on average, about the right amount of the various goods and services that we want to buy. We tend not to have very long queues waiting to buy products. We tend not to have exceptionally large surpluses—actually, the one exception is in cases in which government gets involved in offering subsidies, such as in agriculture. But other than that, in the market economy, we tend not to have long queues and huge surpluses, something, of course, [that] characterized, as you know, centrally planned economies, until very, very recently.

Unfortunately, some of the things that firms produce are unintentional byproducts. Those unintentional byproducts may not show up in the bottom line, with the result that the competitive forces of the marketplace, which do such a marvelous job in terms of ensuring that the right amounts of labor and capital and all sorts of inputs and outputs are utilized and produced,

don't work. The market fails. Environmental pollution is a primary example of this.

You might be thinking as I'm speaking, "But wait. There are some real costs of this. There are some real costs of pollution, some social costs of pollution. It costs us something, as a society. It hurts us. It reduces our well-being." That's absolutely true. The problem, of course, is that those social costs are not showing up on the bottom line of the firms that have to make the decisions in the first place about what to produce, how to produce it, and how to dispose of their waste. In other words, those impacts are external to the firms (in some cases, the individuals, you and me) that are making the decisions. That's why, if you've ever spoken to an economist about environmental topics, for even one minute, you've heard them utter the word "externality," because that's our perception of this. The problem is that environment is outside, is external to the decision-making framework of the firm.

The textbook example of this is a factory producing a product you and I want to buy, at a reasonable cost. It's using a particularly dirty fuel. The result is that some stuff is going up the stack which we might not like very much.

The more technically oriented call this "total suspended particulates" or TSP. I'll simply refer to it, as an economist, as "gunk." There's some stuff going up there that's problematic. But the firm is not thinking about it. It's not affecting them.

Next door, there's a commercial laundry facility. It finds that it's sucking in this dirty smoke from the factory next door. The cleaned laundry becomes dirty again.

They install expensive filters on the roof of the factory. That's one way we see the cost. But it doesn't show up in the decision-making of the factory next door, unless they share ownership.

That's a simple example of why I said, and why economists perceive that it is failures of the market that are the fundamental cause of environmental problems.



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Robert N. Stavins

So let me turn next to what that might suggest for public policy. I'd like to begin with an analogy. If you or I were particularly concerned about our personal health, if we were ill, we might, as a result of consulting a physician, be able to identify which part of our body it was that was causing us the problem. Surely, if we identified which part of our system it was that was the cause of the problem, the last thing we would do would be simply to curse it and ignore it, and try to proceed as if it didn't exist. On the other hand, I certainly hope (at least, if it was my doctor) that the diagnosis of the source of the problem would be linked with the eventual treatment.

So if the central cause of environmental degradation in our mixed-market economy is economic, then surely we would not be so foolish, as a society, to ignore the problematic economic system when we devise cures through our public policy. Surely, we wouldn't be so foolish as to do that. Of course, the reason that I have a job teaching about this is that the sorry fact is that for 25 years that's precisely what we have been doing, going back to the first Earth Day and the wave of environmental legislation that characterized the early 1970's: the Clean Air Act, the Clean Water Act, later, the Resource Conservation and Recovery Act and, later still, the Superfund program and others.

Until very, very recently, the predominant approach of virtually all environmental statutes and regulations by governments around the world, including the United States, has been so-called command-and-control, an approach whereby the government tells individual firms or individuals at large what precise technologies to use, or precise standards that they have to meet; tells private firms how much pollution control they have to carry out. These approaches have sometimes been effective. Indeed, if we look at certain environmental problems, particularly certain local air pollutants and certain local water pollutants, we see remarkable progress over the past 25 years.

It's also true that, because these policies work around the market, not through the market (work around the

part of the body that's ill, rather than trying to identify the problem and fix it), they turn out to be exceptionally costly.

That means sacrifice in terms of the other things that you and I care about. It means we are getting our environmental protection, but we're spending too much, and therefore getting less of the other public goods we might care about (generalized health care, education, national defense—take your pick). And those private goods that we want (a reasonably priced food supply, or a VCR), have their price driven up more than is necessary.

Beginning about five years ago political leaders on both sides of the Atlantic Ocean began to recognize that there was an alternative approach to environmental protection that could enable us to achieve our environmental goals, the same goals or stricter ones, but at much lower cost. The phrase that's often used is "harnessing market forces to protect the environment," using so-called market-based environmental policy mechanisms, such as pollution taxes, tradable permits, reducing distorting subsidies, and a host of others.

These work by providing incentives to firms and individuals to do the right thing environmentally. This way, environmental protection is achieved at much lower sacrifice, in terms of all those public goods and private goods at reasonable cost, that you and I also desire. In other words, a highly effective way to protect the environment can be to give firms and individuals a direct, daily, and hourly, self-interest in doing so.

These economically rational policies do not, I want to point out, represent a laissez-faire free-market approach. In fact, remember, the whole point is that we identified the source of the problem as market failures, and so we seek to fix the market. This is not a matter of anyone suggesting that the market will solve the problems. On the contrary, it will not, on its own. At the same time, this new breed of environmental policies—the incentive-based ones—reject the notion that these market failures

would suggest that we ought to scrap the market and ignore it as we proceed with our environmental policy.

In fact, these approaches have several potential advantages. The first, as I have emphasized, is that they can enable us to achieve our environmental goals at lower aggregate cost to society at large. The second is that they give continuous, ongoing incentives for firms to adopt new, better pollution control technologies—unlike the current standards, such as in the Clean Water Act and the Clean Air Act, which actually provide perverse incentives against adopting a new and better pollution control technology. Furthermore, they make the incremental costs of environmental protection much more visible to the general public, which then can focus public debate on the appropriate ways of protecting the environment, rather than simply on fighting back and forth regarding the evils of pollution, *per se*.

Finally, because some of these market-based approaches can raise substantial revenues (the pollution taxes), they can enable governments to reduce distortionary taxes, taxes that discourage desirable behavior, such as the generation of capital (investment, that is) and labor (work), and instead, substitute for them taxes which discourage fundamentally undesirable behavior, such as environmental pollution—going from so-called distortionary taxes to so-called corrective taxes.

I want to note that new laws and regulations over the last five to six years have, indeed, begun to incorporate some of these approaches. In the United States, the way we phased out leaded gasoline over a five-year period was through a tradable permit system among refineries in the United States. The result was a savings of \$250 million per year, as estimated by EPA, compared to what it would have cost us otherwise. More recently, and strikingly, in the Clean Air Act amendments of 1990, the Congress adopted and the President then signed an approach to using a tradable permit system to reduce acid rain, at a savings that's now predicted to be between \$1 and \$2 billion per year. The same amount of acid rain

control, and an extra \$2 billion is injected into the economy. There are also a range of other environmental problems to which these mechanisms could be applied.

Interest in these approaches has increased for a number of reasons. One is that environmental protection is getting more expensive. After all, we weren't foolish; we cleaned up the cheap sources first. On the margin, it's costing more and more to reduce a given amount of pollution. That has brought more focus among politicians, anyway, to the issue of cost-effectiveness.

Also, there's a very new economic climate, in which the economic burdens of regulation are obviously taken increasingly seriously. There's also a more favorable view, it seems to me, of the role of markets in addressing a variety of social problems. That phrase, "using the market to address a social problem," was the province of the right wing, 20 years ago. That's more or less now mainstream thinking. In fact, that may even be left-of-center rhetoric nowadays.

Eventually, what this is going to mean, I think, is that increasing use of these approaches can enable us to achieve environmental protection, higher levels of environmental protection, without the rancor and the divisiveness that so strongly characterize the adversarial system that dominates today in the United States.

But no single approach is a panacea. Market-based instruments are simply one approach that ought to be in the overall portfolio. The real challenge, of course—indeed, the subject matter, really, for the course I teach each year at Harvard in the spring—is to use the wisdom that we can bring to this question, to identify what's the right policy instrument for each specific problem that we face.

Finally, I want to emphasize that, in my opinion, the role of the press, in terms of enlightened, progressive environmental policy, is absolutely critical. I'll illustrate this by reminding you of the fact that EPA, about six years ago, carried out a study—not an economic



Murray Seeger, right, Special Advisor to Curator Bill Kovach, organized the Harvard à la Carte lectures. Ian Menzies introduced some of the speakers.

study, but a natural science study—called "Unfinished Business," in which they asked their best natural scientists to say what the risks are out there, and try to rank those risks. Now, that's a very difficult task. There's a lot of comparing of apples and oranges. But they were mainly looking at health risks, at least, not ecological risks, as well.

So they ranked their risks. And they said, now, let's take a look at our priorities in government. One way to look at government priorities would be, how much are we spending of government money on a particular problem. So they ranked those.

Do you know what they found? There was a very tight correlation, but it was inverse. Precisely the most important problems were the ones that were getting the least attention, and the least important problems, like abandoned hazardous waste sites, the Superfund program, were getting the most attention.

Now there's another ranking that I want to bring to your attention, and that's The New York Times Roper Poll that for quite a few years has asked the American population for their perceptions of relative risk. We find, again, a nice correlation. Do you know who the

American population correlates with, in terms of their assumptions of relative risk? Not the scientists at EPA or the outside university people who did a later study. Theirs correlates very well with government spending.

There are two hypotheses about that linkage. The first is that government programs, themselves, create a demand for themselves. They do create awareness of risk. After all, because of the Superfund program, we are all much more aware of and worried about leaking hazardous waste drums at a local facility.

There is also very strong causality in the other direction that suggests that we're getting what we're asking for, in terms of public policy. The democratic process is working in our representative democracy. But that democratic process is working with flawed information.

This is the point at which I think the role of the press, on both of those causal links, is absolutely critical. Better environmental coverage is necessary if there is to be more progressive environmental policy in the United States. ■

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