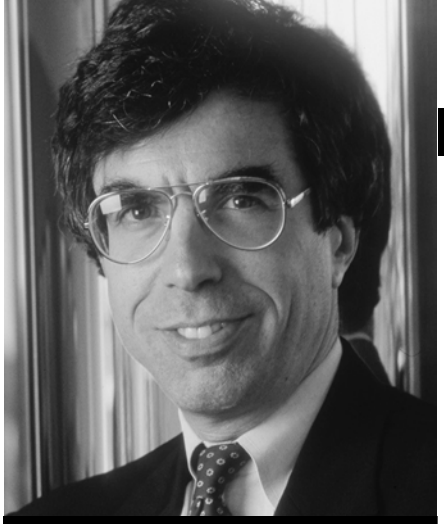

By Robert N. Stavins

The Myth Of The Universal Market

Communication among economists, other social scientists, natural scientists, and lawyers is far from perfect. When the topic is the environment, discourse across disciplines is both important and difficult. Economists themselves may have contributed to some misunderstandings about how they think about the environment, perhaps through enthusiasm for market solutions, perhaps by neglecting to make explicit all of the necessary qualifications, and perhaps simply by the use of technical jargon.

So it shouldn't come as a surprise that there are several prevalent and very striking myths about how economists think about the environment. Because of this, my colleague Don Fullerton, a professor of economics at the University of Texas, and I posed the following question in an article in *Nature*: how do economists really think about the environment? In this and succeeding columns, I'm going to answer this question, by examining — in turn — several of the most prevalent myths.

One myth is that economists believe that the market solves all problems. Indeed, the "first theorem of welfare economics" states that private markets are perfectly efficient on their own, with no interference from government, so long as certain conditions are met. This theorem, easily proven, is exceptionally powerful, because it means that no one needs to tell producers of goods and services what to sell to which consumers. Instead, self-interested producers and self-interested consumers meet in the market place, engage in trade, and thereby achieve the greatest good for the greatest number, as if "guided by an invisible hand," as Adam Smith wrote in 1776 in *The Wealth of Nations*. This notion of maximum general welfare is what economists mean by the "efficiency" of competitive markets.

Economists in business schools may be particularly fond of identifying markets where the necessary conditions are met, such as the stock market, where many buyers and many sellers operate with very good information and very low transactions costs to trade well-defined commodities with enforced rights of ownership. These economists regularly produce studies demonstrating the efficiency of such markets (although even in this sphere, problems can obviously arise).

For other economists, especially those in public policy schools, the whole point of the first welfare theorem is very different. By clarifying the conditions under which markets *are* efficient, the theorem also identifies the conditions under which they are *not*. Private markets are perfectly efficient only if there are no public goods, no externalities, no monopoly buyers or sellers, no increasing returns to scale, no information problems, no transactions costs, no taxes, no common property, and no other distortions that come between the costs paid by buyers and the benefits received by sellers.

Those conditions are obviously very restrictive, and they are usually *not* all satisfied simultaneously. When a market thus "fails," this same theorem offers us guidance on how to "round up the usual suspects." For any particular market, the interesting questions are whether the number of sellers is sufficiently small to warrant antitrust action, whether the returns to scale are great enough to justify tolerating a single producer in a regulated market, or whether the benefits from the good are "public" in a way that might justify outright government provision of it. A public good, like the light from a light house, is one that can benefit additional users at no cost to society, or that benefits those who "free ride" without paying for it.

Environmental economists, of course, are interested in pollution and other *externalities*, where some consequences of producing or consuming a good or service are external to the market — that is, not considered by producers or consumers. With a negative externality, such as environmental pollution, the total social cost of production may thus exceed the value to consumers. If the market is left to itself, too many pollution-generating products get produced. There's too much pollution, and not enough clean air, for example, to provide maximum general welfare. In this case, laissez-faire markets — because of the market failure, the externalities — are not efficient.

Similarly, natural resource economists are particularly interested in common property, or open-access resources, where anyone can extract or harvest the resource freely. In this case, no one recognizes the full cost of using the resource; extractors consider only their own direct and immediate costs, not the costs to others of increased scarcity (called "user cost" or "scarcity rent" by economists). The result, of course, is that the resource is depleted too quickly. These markets are also inefficient.

So, the market by itself demonstrably does not solve all problems. Indeed, in the environmental domain, perfectly functioning markets are the exception, rather than the rule. Governments can try to correct these market failures, for example by restricting pollutant emissions or limiting access to open-access resources. Such government interventions will not necessarily make the world better off; that is, not all public policies will pass an efficiency test. But if undertaken wisely, government interventions *can* improve welfare, that is, lead to greater efficiency. And it is to those interventions that I will turn next time.

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