

She moves on to describe her research on the nexus between moral hazard and adverse selection, where Finkelstein and her collaborators use data from Alcoa's health insurance plans to reveal how consumers who are more sensitive to out-of-pocket prices tend to choose more generous plans. A penultimate section is devoted to describing a study of geographic differences in health spending growth rates following the introduction of Medicare, where she exploits variation in pre-Medicare insurance coverage as an identification strategy, ultimately arguing that the spread of insurance encouraged the adoption of new medical technologies.

The lecture format did not allow much time for institutional background, which may make the read a bit challenging for those not familiar with US healthcare system. Those who are up to the task, however, will enjoy a high-level introduction to modern thinking on empirical identification from one of the masters of the craft. The presentation on methods is nontechnical, making the empirical strategies easily comprehended by economists outside the specialty, as well as by general readers.

While Finkelstein's methodologies are typically well-regarded, whether she is focusing on issues of first-order importance is another question. Her choice of emphasis in the post-Arrow landscape is narrow, and much of the commentary and discussion surrounding the lecture touches on various areas of omission, including other aspects of moral hazard and broader questions about inefficiencies in the health care system.

Perhaps the most significant area of omission is the supply side of the market, especially provider behavior. Finkelstein acknowledges the need for more research in this area in her conclusion, and the importance of the issue is underscored further at various points in the postlecture discussion, most notably and at some length in the commentary by Gruber. Gruber stresses the significance of the provider side in the moral hazard story, noting that a proper analysis must consider the two types of moral hazard and how they interact when formulating policy.

The waters of policy implications are muddied further when moving beyond the basic mathematical paradigms used by Arrow (1963) and Pauly (1968), as noted by several of the

commentators. In his introduction, Newhouse notes the practical difficulties that consumers have in assessing the value of medical care, which raises questions about how to interpret the demand curve. He also mentions the development of insurance theory around the issue of state dependence, which relates to a broader literature concerning optimal insurance with generalized utility functions. These and other issues, such as credit constraints or liquidity constraints (discussed by Gruber), all serve to complicate the welfare analysis of the demand-side moral hazard studied by Finkelstein, leaving ambiguities about the true social costs associated with measured demand responses in relation to a no-insurance baseline.

Finkelstein accomplishes her stated goals of demonstrating the existence of price-sensitive demand and quantifying the same. Early in her lecture, she sets up a straw man who denies the existence of moral hazard in health insurance. By the end of the book, that straw man is thoroughly burned to the ground: Anyone who started with doubts that demand for health care responds to the out-of-pocket price will almost certainly be persuaded. On the other hand, it is also clear that we still lack answers to the bigger questions about the overall efficiency of the health care system posed by Arrow, Stiglitz, and Gruber in their commentaries, and that demand-side moral hazard is only one part of the story, and perhaps not even the most important consideration.

REFERENCES

- Arrow, Kenneth J. 1963. "Uncertainty and the Welfare Economics of Medical Care." *American Economic Review* 53 (5): 941–73.
- Pauly, Mark V. 1968. "The Economic of Moral Hazard: Comment." *American Economic Review* 58 (3 Part 1): 531–37.

GEORGE ZANJANI
Georgia State University

Q Agricultural and Natural Resource Economics • Environmental and Ecological Economics

Environmental Markets: A Property Rights Approach. By Terry L. Anderson and Gary D. Libecap. Cambridge Studies in Economics,

Choice, and Society. Cambridge and New York: Cambridge University Press, 2014. Pp. xv, 227. \$34.99, paper. ISBN 978-1-107-01022-2, cloth; 978-0-521-27965-9, pbk.

JEL 2014-1463

Environmental markets are set to become an increasingly important instrument for regulating climate change, pollution, fishing, water usage, and land use. It is thus immensely important to draw lessons of the experience we have with this policy instrument so far.

In this book, two of our leading scholars on environmental markets are offering a thorough advocacy of this policy instrument. Based on the reasoning of Coase (1960), lessons from Ostrom (1990), and a large number of case studies, Anderson and Libecap argue that many environmental problems should not be seen as market failures, but as missing markets, and that the natural and cost-effective solution is to establish the missing market. In essence, an environmental market is defined by a set of property rights that are enforced and a marketplace where buyers and sellers can trade these rights. The job of the government is thus to define the property rights, enforce them, and facilitate market exchange by providing information, harmonizing measurement, verification, and by establishing a way for buyers and sellers to easily find each other. Without such governmental support, the transaction costs can be high and the cost-savings from trade reduced.

The book is a very valuable read for practitioners who seek either a thorough background for understanding environmental markets or an overview of past and present experience. Environmental entrepreneurs also have a lot to learn about what makes environmental markets succeed or fail. Economists and theorists, such as myself, may find the theory part of the book a bit thin and unsurprising, but for us the book is a gold mine of case studies, teaching us how (and when) environmental markets work in practice. In addition, the large number of references provided in the footnotes is very impressive and will guide us to other interesting books and articles.

The first case studies that are discussed include rights that have been created spontaneously and

from the bottom, for example in mining camps, where it was necessary to regulate entry and the ownership of discoveries. Such rights, however, were easily overridden by more formal regulation, it turned out, so the more enduring markets are created by governments. The authors go on to case studies of water rights, water pollution, fishing, ecosystem services, and the 1990 amendments of the US clean air act establishing a large market for sulphur dioxide emissions. The latter market has reduced compliance costs by two-thirds, estimates show. Drawing on these case studies, the authors conclude that markets work best if they are local, the rights are real property rights (rather than weaker "user permits"), transaction costs can be reduced by the government, and the government is otherwise committing itself to not intervene in the market without compensating the property rights owners. These lessons are thereafter referred to when discussing global commons problems (such as climate change and whaling), which naturally involve even larger transaction costs.

The main contribution of the book, in my view, is that it explains and contrasts a large number of very different environmental markets so that the reader can learn the difference between them, and in which details the devil is hidden.

This may contrast a little with the authors' intended mission, which is to advocate environmental markets and "compare them to the regulatory and tax alternatives" (p. xii). After all, the emphasis in the book is on various environmental markets, rather than alternative policy solutions or a comparison to them. The authors do a pretty good job by discussing how traditional command-and-control policies have often failed or been excessively costly, particularly when it comes to fishing. That said, it is not clear to me why the US SO₂ trading program was so much better than the policy that replaced it, the so-called Cross-State Air Pollution Rule, which only allowed intrastate trading. After all, acid rain is a more local problem than is climate change, different states may have different needs, and local markets are more likely to succeed than larger markets, as the authors have concluded already.

More importantly, fans of Pigou taxes may see few reasons for changing their minds to favor environmental markets instead. The book lumps together Pigou taxes and old-fashioned command-and-control policies when arguing that such governmental intervention is politicized, burdened by distributional concerns, and require more information than is available for the policy-makers. But setting the cap in an environmental market requires hard-to-get information, as well, as the European Emission Trading System has painfully learned. Whether caps or taxes require more information depends on the costs, the benefits, and the source of the uncertainty (Weitzman 1974). In addition, it seems natural that a market may require more costly regulatory administration than does a simple tax. Finally, the revenues generated by the tax can be used to satisfy distributional concerns.

There are also several challenges for environmental markets that could deserve a more careful discussion. First, asymmetric information and lemon problems may be a major obstacle in some markets. As the authors observe, in many environmental markets there is no trade at all! Second, the authors suggest (chapter 5) that the initial allocation of allowances should be grandfathered based on historical production or needs. However, with asymmetric information, such allocation methods may generate market distortions that can outweigh the gains from trade (Harstad and Eskeland 2010).

The importance of transaction costs is emphasized by the authors, and they do a good job explaining what these costs actually are. However, I hope future research will focus more on how the transaction costs can be lowered. One thing is that the government can help when it comes to enforcement and measurement, but technology can also dramatically reduce the transaction costs. Anderson and Libecap point to the interesting example of barbed wire, which dramatically lowered the protection cost of land in the Far West. Yet more interesting may be the impact of information technology and satellite monitoring. New technology will certainly reduce transaction costs. The question is whether the costs will be reduced more for environmental markets than for alternative instruments such as quotas or taxes.

REFERENCES

- ▶ Coase, Ronald H. 1960. "The Problem of Social Cost." *Journal of Law and Economics* 3: 1–44.
- ▶ Harstad, Bård, and Gunnar S. Eskeland. 2010. "Trading for the Future: Signaling in Permit Markets." *Journal of Public Economics* 94 (9–10): 749–60.
- Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge and New York: Cambridge University Press.
- ▶ Weitzman, Martin L. 1974. "Prices vs. Quantities." *Review of Economic Studies* 41 (4): 477–91.

BÅRD HARSTAD
University of Oslo

The United States in a Warming World: The Political Economy of Government, Business, and Public Responses to Climate Change. By Thomas L. Brewer. Cambridge and New York: Cambridge University Press, 2015. Pp. xxix, 351. \$39.99, paper. ISBN 978–1–107–06921–3, cloth; 978–1–107–65569–0, pbk.

JEL 2015–0285

Support for action to mitigate climate change among firms, government, and the general public runs hot in Europe, but is tepid in the United States. Further, US support has waxed and waned over time, whereas support in Europe is relatively stable. Thomas Brewer, a trade economist at the International Centre for Trade and Development in Geneva, documents the level of support for climate change mitigation and changes in support over time, provides a history of political events related to climate change regulation, and takes some first steps at an explanation (Brewer 2015).

The book establishes many stylized facts and is useful for anyone seeking background information on bills, court cases, treaties, and other political documents and their support within the US political system. The book (and a recent literature) is less successful at explaining why. The book argues that support is low because energy-intensive states receive excess representation in the US Congress, irrational US firms ignore large profit opportunities associated with support for climate change legislation, and irrational households ignore evidence of climate change. However, these explanations account for only a subset of the stylized facts, and other plausible hypotheses are not considered.