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The Demand for Economic Policy Analysis: Is Anyone Listening?

Sandra S. Batie

Economic policy analysis is extremely important for the relevancy of the agricultural economics profession, as applied economics is our professional niche. Economic policy analysis, however, as a public *decision-support tool*, is a challenging endeavor that is difficult to do well. Furthermore, if analysis is to be an input into public policy formulation and implementation, it is not sufficient for applied economists to merely *supply* high quality economic policy analysis; there must also be a *demand* for it. As a profession, applied economists appear to pay more attention to the supply of policy analysis, with less consideration of who wants and will use our analysis, or how they will come to know it.

For this short paper, I will explore what I believe comprises high quality decision-oriented economic public policy analysis. Then I will place that definition in the context of the demand for economic policy analysis. I will conclude with my opinions as to why finding an audience for non-partisan policy analysis has become more difficult, and will identify ways for applied economists to be effective in the current public policy environment.

Policy-Relevant Economic Science

Bromley (forthcoming) defines policy as comprised of intentions, rules, and enforcement that result in policy outcomes. While most applied

economists relate easily to the meaning of “rules, enforcement, and outcomes,” we tend to be less conversant about policy intentions.

First, public policy is concerned not only with facts and competing interests, but also with values. Policy statements are about the right and wrong things to do (Bromley forthcoming, Wildavsky 1987). That is, public policy is about what preferences people should hold, what fair allocations of resources are, and what the legitimate scope of the government is (Wildavsky 1987). Environmental policy debates include discussion of cultural and moral concerns pertaining to environmental stewardship, justice, and equity (Graffy 2005).

Second, public policy is also about the ability of certain parties to shift uncompensated costs and risks to other parties. Indeed, public policy can be thought of as incidence policy, where the essence of the policy is to redistribute power and property rights (Bromley 1990, Schmid 2000, Vatn and Bromley 1994, and Wildavsky 1987). The values, that is, the implicit prices, embedded in policy are usually found through some negotiated process of bargaining after decision makers confront alternative choices (Schmid 2000, Samuels 1989).

Thus, the *intentions* of public policy are desired future outcomes (Bromley forthcoming). For example, two intentions of soil conservation policy are to reduce soil erosion and water pollution. The policy vehicles to obtain these desired outcomes are technical assistance and the compensation to farmers with public payments for the voluntary adoption of soil conservation and pollution prevention practices. The policy prescribes what should be accomplished (i.e., adopt practices) to presumably obtain the desired outcomes (Bromley forthcoming). In addition, farmers are assumed

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to be worthy beneficiaries and are assumed to have the property rights for soil erosion and pollution. Thus, the policy assumption is that farmers should be compensated for any changes society asks of them to reduce soil erosion and pollution.

If policy (intentions, rules, and enforcement) is to be informed by economic science-based policy analysis, then there must be policy-relevant economic science (Jasanoff 1990). One can think of policy analysis as a substitute for learning by explicit decision making; it allows decision makers to avoid trial and error experiments (Wildavsky 1987). Good policy analysis will evaluate, order, and structure incomplete knowledge so as to allow decisions to be made with an understanding of the current state of knowledge, its limitations, and its implications (Morgan 1978). Done well, economic policy analysis can inform decision makers about alternative institutional arrangements; it can expand the range of choices in the debate; it can provide an estimate of the opportunity cost of choices and outcomes; it can reframe the policy problem definition; it can identify potential solutions; it can identify values or incentives associated with particular choices; it can provide information that will lead to changes in regulatory processes and procedures; it can combat misinformation and raise the value of information; and it can provide legitimacy for some arguments (Shabman 1989).

The Role of Applied Economists

Applied economists bring a disciplinary lens to our analysis—as to what are the important questions to be asked, whose values are to count, and what alternatives are worthy of examination (Sabatier and Zafonte 1999). That is, agricultural economists rely on our discipline—which is what makes our policy analysis more valuable than that of the person-on-the-street. But truly nonpartisan, dispassionate policy analysis requires that the analyst make transparent the disciplinary assumptions and premises that underlie the analysis (e.g., that preferences are fixed and stable and/or that interpersonal comparisons are disallowed).¹

Analysts also need to understand the limits of

their ability to act as advisers to the policy process. There is no scientific imperative to a policy alternative (Lackey 2004). That is, applied economists can inform the debate with the economic way of thinking, but economists are not the appointed gatekeepers of the outcome of the debate.

Not every applied economist will be interested in supplying economic policy analysis, of course. Shabman (2000) divides researchers into four policy “types”: closet scientists, arm’s-length scientists, client advocates, and science advocates. Both closet scientists and arm’s-length scientists are found throughout universities. *Closet scientists* do not become involved with policy, and they expect decision makers to find out what they need from the academic community without assistance. *Arm’s-length scientists* are willing to help and to explain, but they do not really want to be involved in the policy process to ensure the best use of their research. In contrast, *client advocates* are not appropriate within the university in that they are advocates for a client’s values and position. They are not objective in that they disregard science and research that does not support their client’s values, position, or arguments. They tend to be found in companies and client-controlled, partisan think tanks. *Science advocates* actively participate in the policy process and policy debates and use their research to introduce new alternatives into the policy debate. Most of these science advocates are found in universities, in agencies such as the Economic Research Service, or in nonpartisan think tanks such as Resources for the Future (Shabman 2000).

Professionals can change throughout their career to become a different type of policy researcher. For many researchers, the move to science advocate occurs later in their career. Also, a researcher may be a closet or arm’s-length economist on some policy issues, but an active science advocate on others (Shabman 2000).

I will be referring for the rest of this paper to this latter type of economist—the economic science advocate—as well as to the type of policy-relevant analysis that they supply. But supply does not create its own demand. The remainder of the paper explores the demand for economic policy analysis.

¹ See Rhoads (1985) for a discussion of the normative assumptions underlying welfare economics and benefit cost analysis. See Shabman and Stephenson (1996) for a discussion of how different types of envi-

ronmental and resource economists approach policy issues and what their underlying premises of analysis are.

The Demand for Economic Policy Analysis

The demand for economic policy analysis may come from many sources and may even be engineered by an analyst. One of the problems with economics information is that so few policymakers believe they need it (Bonnen 2000, Srivastava 2003). Policymakers tend to rely on their own experiences and knowledge in resolving issues of economic analysis, and it may require some entrepreneurial work on the part of the economic science advocate to convince policymakers that economic analysis can provide them with something that is valuable.

Demand for economic policy analysis will be a function of several components, including the “tastes and preferences” of the policymaker, the value of the analysis *to the policymaker*, the price of the analysis as measured by its costs to the policymaker (i.e., out-of-pocket costs, opportunity costs, and political costs), the political and financial budget constraint of the policymaker, and the availability, value, and price of substitutes, as well as the stage of the political process (e.g., timing).

The Policymaker. There are different types of policymakers. Differences stem from different foci of interest (e.g., technical assistance or financing), different levels of government (e.g., federal or state), different functions within an institution (e.g., administrative or program staff), and different institutional settings (e.g., politicians, bureaucrats, resource managers, or regulators). Each type of policymaker may desire different types of economic analysis tailored for his or her particular decision needs.

The Value of the Analysis. Public policy analysis needs to have value *within the political process* to be demanded. The immediate policy value of a significant amount of published academic policy analysis is questionable (Lee 2002, Oh 1996). Indeed, for many policymakers, the word “academic” is synonymous with, at best, “theoretical and not practical,” or, at worst, “irrelevant.” Publication of policy analyses are not sufficient for policy relevancy. The applied economist who desires to be a science advocate must go beyond mere publication.

There are challenges to providing valuable analyses. As mentioned previously, public policy is about values as well as the incidence of costs and benefits. Yet, many times the debate is cloaked so that these values and incidence concerns are not obvious. Consider soil conservation policy debates, which, on the surface, appear to be about the most cost-effective way to achieve soil erosion reductions. There has been considerable published research that demonstrates that, as transaction costs are reduced, it is cost-effective to target conservation program vehicles—both spatially and temporally—to achieve soil or water quality objectives (e.g., Feather, Hellerstein, and Hansen 1999, Ribaud 1986, Ribaud 1989, and Yang et al. 2005). Thus, targeting appears to be an obvious soil conservation policy alternative. However, the policymakers may be far more concerned about fairness and equity—making sure all who are deemed deserving obtain benefits—or they may be concerned about replacing existing commodity programs with conservation ones, while ensuring the same level of payments to individual producers. If the latter is the case, the policy debate will probably be deaf to a targeting-as-efficiency argument (Bromley 1990).

Furthermore, proposed alternatives will tend to be ignored unless analysts provide alternatives that are accessible to (non-expert) policymakers, that are appropriate to their institutional culture, and that include variables under the control of the policymakers in the time available (Wildavsky 1987). Wildavsky (1987) refers to this relevant type of analysis as “identifying problems that can be solved.”

An example of a failure to provide relevant economic analyses, at least in the short run, comes from water pollution economics research. The trading of environmental credits requires a willing buyer and seller (Horan, Shortle, and Abler 2004). Successful trading of nonpoint pollutants requires a farmer to reduce his or her farm’s pollution to earn an environmental credit available to trade. However, if a state law has a “zero discharge” law for water pollutants, then there will be nothing for farmers to legally trade in any proposed pollution credits trading scheme. Unless the policymakers believe that changing the law is a near-term probability, they will not find research outlining alternative water pollution trading programs pertinent to their short-run implementation needs.

Another example comes from a personal experience. In a conversation with a state environmental regulator, I suggested the use of water quality performance standards as an alternative to on-farm soil conservation design standards. I argued on the basis of research-supported conclusions that lower costs and higher probability of water quality improvements would be an outcome of such standards. The response from the agency person was “Do not give me any Cadillac plan, Sandra. I just need a check sheet so I will know if the farmer has completed the requirement.” I had proposed something that vastly exceeded the ability of this resource-limited (and often litigated) agency to implement—even with my inclusion of a few low-cost proxies for measuring performance. I had flunked the “real world practical implementation test” with that particular economic argument.

There are circumstances where policymakers do not desire nonpartisan, objective information, and may even be threatened by such information if it does not validate their political positions (Rich and Oh 2000). Unless persuaded otherwise, the value of such policy analysis—no matter how well done—to these decision makers may be zero, or even negative.

Finally, most problems require a multidisciplinary research approach for a well-informed, science-based response (Parsons 1995). If the economic analysis draws only from the economics discipline without significant and realistic inputs from other sciences, the policymaker may find the analysis incomplete or naive for his or her purposes.

Costs. Costs are important in the calculations of the net worth of economic policy analysis. There are four important types of costs that influence the demand for economic policy analysis and which comprise the implicit price of the analysis to the policymaker. These costs are the out-of-pocket costs of the analysis, the opportunity and the transaction costs associated with policy alternatives, and the political costs.

The theory of bounded rationality informs applied economists that the search for information is limited (March and Simon 1958). One obvious source of limitation is the out-of-pocket costs of the analysis itself. In addition, there may be serious time constraints. Economic policy analysis

that comes with too high a price tag and which takes too long will not be in demand. The total price tag may be influenced by the opportunity costs associated with either the analysis itself or alternatives that emerge from the analysis. These types of costs will be sensitive to the size of associated transaction costs, including the probabilities of court litigation of policy decisions and resulting outcomes.

Policies also have specific political price tags (May 1986). “Any policy action entails political costs, with some proposals being more costly than others. Like financial costs, the political costs of a policy proposal revolve around prices and opportunity costs. Securing approval or implementing a policy proposal involves a ‘price’ in the form of policy or other concessions that diminish the policy advocate’s store of political capital. Even if enacted (and certainly if not enacted), there are opportunity costs of not giving attention to other, perhaps more profitable issues. Balanced against these prices and opportunity costs are the political consequences of being associated with enactment of, or failure to enact, a particular policy proposal” (May 1986, p. 113).

The Political and Financial Budget Constraints. Political feasibility screens can be thought of as political budgets, that is, what the policymaker can afford to spend. If the alternatives that emerge from the analysis cannot fit through the political feasibility “screen” as perceived by the policymaker, demand for the analysis will be quite limited. One component of such screens might be political party platforms that, say, pledge “no new taxes.” In this case, an economic analysis of the ability of a tax on inputs to reduce pollutants would be seen as impractical and infeasible.

The Availability and Quality of Substitutes. As public provision of information and policy analysis has declined, substitutes have arisen. Some are close to perfect substitutes, some are nonpartisan but narrowly focused, and others are imperfect substitutes or even blatantly biased (Bonnen 2000). One of the challenges of our modern information-rich society is to discern the quality of the available information. Nevertheless, for a variety of reasons, policymakers may demand economic policy analysis from non-academic sources.

The Stage of the Political Process. The political process has its own temporal (and spatial) logic, which influences what questions get asked, what alternatives are considered, and what choices are made. A policy economic science advocate will be more effective if he or she understands where an issue is in the political process, what type of information is desired, who desires it, and for what reasons it is desired.

There is also a limited political attention span—much has been written about the cycles associated with attention to particular topics or the cycle of political interest for a particular topic (Bosso 1987, Downs 1972). Political attention to policy analysis is usually more receptive before an issue has become controversial or before bargaining and compromise mechanisms have resulted in an agreement on the appropriate policy choices.

Other Demand Shifters. There are additional shifters of the demand for analysis. Exogenous events, the skill of the analyst, or the regulatory requirement for more analysis (e.g., a required positive benefit-cost ratio) are some examples of possible demand shifters. Also, occasionally, an event will trigger a search for information or alternative courses of action. For example, the frequent reconsideration of the Farm Bill is usually accompanied by a search for policy alternatives for its redesign. Or, as another example, large pollution events may cause a search for alternative regulatory policies for large animal confinement facilities. Sometimes, institutions such as the federal Office of Management and Budget may be a catalyst for more program information and attendant economic analyses.

Why Is Economic Science-Advocacy So Difficult?

As my career in agri-environmental policy analysis has progressed, it has become increasingly difficult to be an effective economic science advocate in the policy process. I think there are many reasons for this increased difficulty. One obvious reason is the declining public respect for science and experts as well as institutions. The one-time public optimism about the wisdom of progress stemming from scientific discoveries has diminished as the trade-offs associated with technologies and various progressive choices have be-

come more visible (Batie 1992, Bocking 2004, and Bonnen 2000).

Furthermore, this declining public respect has been coupled with heightened uncertainty associated with globalization, the information revolution, the increasing complexity of issues, the changing global politics, and the rapid pace of change (Bocking 2004, Gilbert 2005, Graffy 2005, and Wildavsky 1987). For just one example, consider the complexity of environmental issues. At one time the nature of environmental risks was focused on acute risks of primarily local impact and short time frames with relatively obvious benefit/cost ratios and considerable public support. Now many of the risks are chronic in nature, with global impacts and long time frames for potential impacts. The risk/benefit ratios are highly uncertain and controversial; public support is uncertain as well (Gilbert 2005).

At such times of heightened uncertainty, the public tends to turn to religious and other strongly held belief ideologies, and as a result has less use and respect for dispassionate research. Indeed, some of the public may become quite anti-intellectual (Bocking 2004, Bonnen 2000, and Wildavsky 1987). When this occurs, the public tends to disinvest in institutions that provide information that might run counter to these ideologies (Bonnen 2000).

At the same time, there has been a growing polarization of politics by political leadership as well as the fragmenting of authority (Bonnen, Browne, and Schweikhardt 1996). In such a political environment, policy analyses are used mainly as political weapons (Wildavsky 1987). Also, since the early 1970s, most policy debates have attracted organized interests (e.g., consumers, environmentalists, and minorities) with different values and differing perceptions of problems, their severity, their causes, and their impacts (Sabatier and Zafonte 1999). Policy debate has become very complicated.

The result of all of these trends is a society that is “increasingly critical of science, the academy, and all experts.... The earlier commitment to more reasoned, pragmatic approaches to problems and to the production and use of objective, nonpartisan information in politics and public policy has been slowly undermined” (Bonnen 2000, p. 508). When strongly held values are in conflict in sharply partisan debates, there is less room for

bargaining, compromise, or the use of nonpartisan information, including economic policy analysis.

In addition, there are plenty of imperfect substitutes for nonpartisan policy analysis. The rise of partisan think tanks, funded generously by stealth lobbyists, and populated by client advocates who aim to arm one side of partisan debates with carefully tailored information weapons, has led to a situation where dogma trumps data (Rampton and Stauber 2000). The public, even if they are interested, have trouble sifting through these competing sources of information with quality screens. This inability to discern the objectivity of research findings further leads to suspicion of all self-proclaimed experts (Bocking 2004, Bonnen 2000, and Jasanoff 1990).

In such a climate, nonpartisan, objective, dispassionate economic policy analysis is not only in less demand, it is harder to supply. Some decision makers want to know which side of the debate the analyst is supporting. They may disbelieve that an analyst is nonpartisan. This situation is not such a problem if the policy analysis tends to support a policymaker's pre-determined political position, but it is problematic if the conclusions of the analysis (i.e., the predicted outcomes of a policy alternative) undermine a favored political position.

The Challenges to the Policy Economist

In this policy process environment, there are many challenges to the economic science advocate. I will mention two: (i) the challenges of being effective in the process and (ii) the challenges of being rewarded for being effective in the process.

Effective Science-Advocacy. Policy relevancy requires that the science advocate understand the policy in question, the issues of concern, and the institutions and stakeholders involved in the decision(s). This requirement suggests a considerable amount of effort by the analyst in understanding the history of the issues surrounding the policy, the motivations of the actors involved, and the policy process itself. Also, to be an effective analyst requires a commitment to learning about the art and craft of policy analysis.

A quickly learned lesson is that, to the extent that analysts are arm's-length scientists or closet scientists and publish analyses in journals divorced from the policy process, or preach only

about efficiency, or refuse to provide an analysis that is germane to the current policy debate, they will be ignored by policymakers. The less useful the analysis as a decision-support tool, the less trust there will be in economic analysts' abilities, and the more decision makers will turn to alternative providers of information—frequently these providers are internal to their own organization (Wildavsky 1987).

This observation decidedly does not mean that the analyst should “cook the books” so that the decision maker obtains the desired results for a predetermined and favored outcome (Shabman 2005). Quite the opposite—conclusions from valid analysis should not be abandoned because of a political litmus test. To stay within the policy debate, and still speak “truth to power” (Wildavsky 1987), however, an analyst can use the conditional normative approach. This approach involves placing policy statements within “if, then” clauses. An example of such an approach would be framed thus: “If the desired outcome is cost-effectiveness (e.g., a budget concern), then one should target.... But, if the desired outcome is to spread benefits widely so that more stakeholders benefit from the program (e.g., a fairness concern), then one should not target.... The trade-offs (i.e., opportunity costs) between targeting and not targeting are as follows....” If the political process is focused on balancing budget and fairness concerns, such information can be quite useful and lead to more informed decision making.

Another successful technique is to provide policy analysis and the framing of policy problems and alternatives before the particular policy issue has obtained much public attention. There is an art and political instinct to this ability to see issues as policy problems before they emerge. It is a means of conducting analysis with less controversy and being better prepared for the public debate once the issue emerges. Such preparation also usually ensures some invitation into the debate once it becomes more public.

Rewards and Incentives. What conclusions can be drawn about rewards for policy-relevant economic analyses? It may seem inappropriate for me—a well-rewarded person—to talk about the difficulties of being rewarded for policy work. Yet, despite my personal successes, I think it can be difficult for an academic to be rewarded for economic science-advocacy.

Publishing journal articles is not mutually exclusive from effective policy analysis, but publishing is not central to such analysis either. And, for many researchers, publishing is critical to their career evaluation, but the reverse is not usually true. That is, being effective in the political process is not usually a critical component of a successful research career. Indeed, in the worst case, economic science-advocacy may invite criticism from one's peers and administrators. Also, analysts within public agencies are frequently discouraged from actively engaging the policy process. That is, agency researchers can conduct nonpartisan policy-relevant analysis, but directing the attention of a policymaker to such analyses is left to others. Thus, for some individuals, pursuing the economic science-advocacy career route may mean limited institutional rewards and incentives.

Also, because politics can be contentious and partisan, sometimes an economic science advocate needs courage to proceed. On occasion, some interest group or individual may take offense at the analysis and attempt to discredit the economic science advocate. Not every researcher is willing to expose themselves to the risk of either being attacked or being forced to trust their administrators to protect him or her.

Still, despite the difficulties, there is considerable satisfaction in doing economic science-advocacy well. Furthermore, there is considerable importance in our profession of supplying high-quality nonpartisan analysis. As an applied science that focuses on decision making, agricultural economics has much to offer. But, if a decade from now, the recipient of NAREA's "Outstanding Public Service Through Economics" award is to praise the great progress the profession has made in informing policy decisions, then more applied economists need to understand the demand for policy analysis, to invest in increasing the quantity demanded and shifting the demand curve for such analysis, and to improve institutional incentives for the supply of excellent economic policy research.

References

- Batie, S.S. 1992. "Biotechnology and Science: The Imperatives of Choice." James C. Snyder Memorial Lecture presented at Purdue University, West Lafayette, IN, March 11.
- Bocking, S. 2004. *Nature's Experts: Science, Politics, and the Environment*. New Brunswick: Rutgers University Press.
- Bonnen, J.T. 2000. "Providing Economic Information in An Increasingly Difficult Policy Environment." *Review of Agricultural Economics* 22(2): 500–518.
- Bonnen, J.T., W.P. Browne, and D.B. Schweikhardt. 1996. "Further Observations on the Changing Nature of National Agricultural Policy Decision Processes, 1946–1995." *Agricultural History* 70(2): 130–152.
- Bosso, C.J. 1987. *Pesticides and Politics: The Life Cycle of a Public Issue*. Pittsburgh, PA: University of Pittsburgh Press.
- Bromley, D.W. 1990. "The Ideology of Efficiency: Searching for a Theory of Policy Analysis." *Journal of Environmental Economics and Management* 19(1): 86–107.
- Bromley, D.W. Forthcoming. *Sufficient Reason: Volitional Pragmatism and the Meaning of Economic Institutions*. Princeton, NJ: Princeton University Press.
- Downs, A. 1972. "Up and Down with Ecology: The Issue-Attention Cycle." *Public Interest* 28(41): 38–50.
- Feather, P., D. Hellerstein, and L. Hansen. 1999. *Economic Valuation of Environmental Benefits and the Targeting of Conservation Programs: The Case of the CRP*. Agricultural Economics Report No. 778, Economic Research Service, U.S. Department of Agriculture, Washington, D.C.
- Gilbert, J. 2005. "Resolving the Political/Sustainability Dilemma." Invited paper given at a Michigan State University conference titled "Shaping Future Water Policy: The Role of Science," East Lansing, MI.
- Graffy, E.A. 2005. "Beyond the Next Generation: Challenges for the Future of U.S. Environmental Policy." Ph.D. dissertation, Land Resources Department, University of Wisconsin-Madison.
- Horan, R.D., J.S. Shortle, and D.G. Abler. 2004. "The Coordination and Design of Point-Nonpoint Trading Programs and Agri-Environmental Policies." *Agricultural and Resource Economics Review* 33(1): 61–78.
- Jasanoff, S. 1990. *The Fifth Branch: Science Advisers as Policymakers*. Cambridge, MA: Harvard University Press.
- Lackey, R.T. 2004. "Normative Science." *Fisheries* 29(7): 38–39.
- Lee, J.E. 2002. "Can Agricultural Economists Contribute to Good Public Policy?" *Choices* (Fall): 11–14.
- March, J.G., and H. Simon. 1958 *Organizations*. New York: Wiley.
- May, P.J. 1986. "Politics and Policy Analysis." *Political Science Quarterly* 101(1): 109–125.
- Morgan, M.G. 1978. "Bad Science and Good Policy Analysis." *Science* 201: 971.
- Oh, C.H. 1996. *Linking Social Science Information to Policy Making*. Greenwich, CT: Jai Press.
- Parsons, W. 1995. *Public Policy: An Introduction to the Theory and Practice of Policy Analysis*. Aldershot, UK: Edgar Elgar.
- Rampton, S., and J. Stauber. 2000. *Trust Us, We Are the Experts: How Industry Manipulates Science and Gambles with Your Future*. New York: Penguin Putman.
- Rhoads, S. 1985. *The Economist's View of the World: Gov-*

- ernment, Markets and Public Policy. London: Cambridge University Press
- Ribaudo, M. 1986. "Consideration of Off-site Impacts in Targeting Soil Conservation Programs." *Land Economics* 62(4): 401–411.
- _____. 1989. "Targeting the Conservation Reserve Program to Maximize Water Quality Benefits." *Land Economics* 65(4): 320–332.
- Rich, R., and C.H. Oh. 2000. "Rationality and Use of Information in Policy Decisions." *Science Communication* 22(2): 173–211.
- Sabatier, P., and M. Zafonte. 1999. "Are Bureaucrats and Scientists Members of Advocacy Coalitions? Evidence from an Intergovernmental Water Policy Subsystem." In Shi-Ling Shu, ed., *Economic Research and Policy Concerning Water Use and Watershed Management: Proceedings of the Third Workshop in the Environmental Policy and Economics Workshop Series*. U.S. Environmental Protection Agency, Office of Economy and the Environment, Office of Research and Development, Seattle, WA.
- Samuels, W.J. 1989. *Fundamentals of the Economic Role of Government*. New York: Greenwood Press.
- Schmid, A.A. 2000. "All Environmental Policy Instruments Require a Moral Choice as To Whose Interests Count." Paper prepared for the William Robbins Memorial Seminar on Economics, Ethics, and the Environment, Mansfield College, Oxford University, March 28–29.
- Shabman, L.A. 1989. "Making a Difference in the Making of Natural Resource and Environmental Policy: Can Economists Matter?" Staff Paper No. 89-45, Department of Agricultural Economics, Virginia Tech, Blacksburg, VA.
- _____. 2000. "Making Environmental Policy Analysis Relevant: A Researcher's Perspective." In L. Racevskis and L. Libby, eds., *Making Environmental Policy Analysis Relevant: The EPA Case*. A report of a workshop sponsored by the U.S. Environmental Protection Agency, The Ohio State University, and Michigan State University, in Columbus, Ohio, April 12–13.
- _____. 2005. "Water Resources Management: Choices and Challenges for the Coming Decade." Invited paper given at a conference titled "Shaping Future Water Policy: The Role of Science," Michigan State University, East Lansing, MI.
- Shabman, L.A., and K. Stephenson. 1996. "Environmental Policy Reform: A Taxonomy of Economists' Perspectives." *Journal of Agricultural and Applied Economics* 23(1): 117–125.
- Srivastava, L. 2003. "Supply and Demand in a Sound Bite." Seminar presented at the Department of Agricultural Economics, Michigan State University, East Lansing, MI.
- Vatn, A., and D.W. Bromley. 1994. "Choices without Prices without Apologies." *Journal of Environmental Economics and Management* 26(2): 129–148.
- Wildavsky, A. 1987. *Speaking Truth to Power: The Art and Craft of Policy Analysis*. New Brunswick, NJ: Transaction Books.
- Yang, W., M. Khanna, R. Farnsworth, and H. Onal. 2005. "Is Geographical Targeting Cost-Effective? The Case of the Conservation Reserve Enhancement Program in Illinois." *Review of Agricultural Economics* 27(1): 70–88.