

# Strategy and Policy in the Food System: Emerging Issues

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## PART FIVE: Avenues for Improving the Quality of Benefit/Cost Analysis of Food Regulations

### **20. Improving Benefit-Cost Analysis for Policy Makers**

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# **Improving Benefit-Cost Analysis for Policy Makers**

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## Improving Benefit-Cost Analysis for Policy Makers

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My remarks on improving cost-benefit analysis are from the perspective of a policy analyst who is routinely involved in the analytical development and review of regulations that implement USDA policies in many areas, including food safety. I am not a policy official. My remarks will have to be generic rather than specific to USDA's proposed HACCP rule for food safety because I am prohibited by longstanding Department policy from discussing regulations that are still under development.

I want to repeat an important point that Dr. Ahl made about analysis. In making policy and regulatory decisions, more factors should be considered than just risk analysis and benefit-cost analysis. Social values, international relationships, legal authorities, and political factors enter the calculus.

Analyses that demonstrate the need for regulatory action are more basic and more important than benefit-cost analysis. Executive Order 12866 requires agencies to document the need for regulatory action. Often this involves economic analyses documenting market failure, but the need can result from a statutory requirement or judicial order.

Benefit-cost analysis is required by Executive Order 12866 for all significant and economically significant regulations. Regulatory review in the Office of the Chief Economist focuses on economic content found in the benefit-cost analyses. Analyses are expected to be economically sound, based on appropriate data and methods, and correctly interpreted. The analyses should be complete—identifying all affected parties and estimating, where possible, all relevant costs and benefits. The analyses should correspond to the content of the rule. If agencies follow the maxim that “analysis precedes regulation” then this last criterion should be satisfied.

Reviewers in USDA's Office of Budget and Program Analysis (OBPA) and in the Office of Management and Budget (OMB) look for the same qualities in the economic analyses. They also assess whether the proposal fits into the Administration's overall policy framework, consider implications for agency resources, and note possible effects on other agencies' programs. Again, good economic analysis does not mean that a policy will or should be implemented, because analysis is just one factor influencing the decision.

In my experience, analysts and policy makers look for certain things in analyses. First, analysts and officials want data they can trust; data that correspond as closely as possible to the real world. Next, they want the analytical results to derive from valid methods appropriate to the data and problem. Finally, they expect the presentation of analytical results to be understandable and put into perspective. Let me elaborate on these things.

Better data can improve analysis. Lack of data frustrates researchers and analysts seeking to test hypotheses or estimate relationships. Data collection is costly, and those in the best position to collect it, businesses for example, may have little incentive to do so and even less incentive to share it with competitors or regulators. Sometimes, taxpayers at large bear the cost for data collection. For example, USDA's Nationwide Microbiological Baseline Data Collection Program estimates the prevalence and levels of bacteria of public health concern on carcasses of various food animal species.

Regulatory analyses require good baseline data, but they are not always there or are not as good as we would like. We need to anticipate the need for data to justify funds for monitoring and developing baselines. More fundamentally, are we monitoring the right things and collecting the right data in our baselines?

It is not practical to expect universities to sponsor basic data collection, but academic researchers can integrate and synthesize disparate sources of data, identify emerging data needs, and develop strategies for efficient data collection. When complex systems are at issue, academia may have an advantage by more easily mustering multidisciplinary thinking on data problems.

Not long ago, OMB released a useful guidance document, “Economic Analysis of Federal Regulations,” dealing with economic analysis of federal regulations in general and cost-benefit analysis in particular. The introduction to that document states, “Good EA (economic analysis) cannot be written according to a formula.” That document confirms two observations regarding economic analysis. First, analysts must use professional judgement given the available evidence and significance of the regulation. Second, existing analytical methods cannot deal with all the economic aspects of regulatory actions.

When analysts find that estimates of benefits and costs are uncertain, they properly resort to reporting range estimates. But, policy makers find wide ranges less valuable and have less confidence in the analysis. OMB suggests approaches to deal with uncertainty, but none fully solves the problem. Benefit-cost analysis does not deal well with nonmarket values. Although economists have developed approaches for valuing nonmarket goods, it is still problematic to determine the value of a spotted owl, or the value consumers place on safer food.

There are times when the distributional effects of a proposed regulation are of great concern. Federal rule making is explicitly required to consider the impact on small entities. Distributional impacts may be important for groups of consumers, classes of business, regions, and other groupings. In rule making, public comments often arise because of concerns that a proposed rule may have inequitable impacts on subgroups. If, for example, the regulatory issue is one that will affect the prices of a class of foods, then the analyst will need detailed knowledge of consumption behavior (own and cross elasticities, baseline quantities consumed) of different groups to determine distributional impacts.

A similar concern arises when benefit-cost analysis focuses on discounted present values and does not consider the implications of the timing of costs and benefits. There are good reasons to prefer regulatory options where benefits closely coincide with costs. Is there a refined, systematic approach with which to compare alternatives that have similar discounted benefits and costs but different time paths?

Analysts and policy officials sometimes must analyze the benefits and costs of several distinct, but related actions, which act in concert to achieve the regulatory goal. There may be good reason to undertake several actions simultaneously—lower costs to industry, an urgent need to address a problem, and more effective use of agency resources. Costs of each component may be readily estimated, but benefits might only be calculable in the aggregate. That is, benefit-cost comparisons are not made for each component. The outcome is that the analysis does not support individual components. There is little basis to respond to complaints that the proposed regulation requires too much, the assertion being that a subset of components would achieve the regulatory goal. Although policy officials and the public would like to know the incremental benefits of multi-element proposals, that type of analysis is sometimes impractical or impossible.

It is generally accepted that performance standards are preferable to design standards. With performance standards regulated parties have incentives to find the most efficient method to achieve the required performance, and unlike design standards, performance standards encourage rather than stifle innovation. However, with performance standards, cost analysis becomes a problem because it is not clear what equipment will be purchased, what types of labor and training will be used, and so on. In such circumstances, the analyst can estimate costs by assuming that a common technology will be used by all parties. That is, the analyst treats the costs as if there were a design standard and the lower costs we

expect from performance standards do not show up in the analysis. Approached this way, benefit-cost analysis does not give policy makers quantitative evidence to select between a design standard and a performance standard. A challenge for benefit-cost analysis is to demonstrate quantitatively and a priori that performance standards are lower cost options.

If policy officials and the public are to adequately assess regulatory proposals, the supporting benefit-cost analysis must be clearly presented. Reviewers should be able to see how the analysis leads to the regulatory options under consideration. This often means that the analyst must acquire and use highly technical information such as engineering relationships, economic relationships, microbiological studies, and industry specific information. Agencies generally do not have the resources to do all this. They depend on limited in-house expertise and the research contributions from universities, other government agencies, and contractors.

The public and policy officials understand dollar estimates of benefits and costs but may not easily understand the underlying research and how that research leads to those dollar estimates. Thus, a challenge facing analysts engaged in benefit-cost analysis of scientifically tough subjects like food safety and environmental policy is to transform enough of the underlying technical information into usable information for policy officials. This will boost the credibility of the bottom line benefit and cost estimates.

Quantitative estimates are clearly more desirable than qualitative statements. If qualitative statements are presented with no indication of their likely magnitude, each reader will apply subjective weights. Statements like “positive for farm income” may have unwarranted influence on policy makers decisions if not put in perspective. Similarly, when analytic models are inadequate to predict the net effect of factors operating in opposite directions, care must be taken not to suggest the net effect must be zero. Ambiguous results should stimulate efforts to improve data and models. The point is, how economic analyses are presented *is* important.

Benefit-cost analysis is just one factor considered in regulatory and policy decisions. Economic analysis can carry great weight and should be as sound, complete, and clear as possible. Three avenues toward making benefit-cost analysis more useful for policy and regulatory decisions are improving data, adding to analytical methods while making better use of existing methods, and improving the communication of technical and economic information. This last avenue is cheap; it just means trying harder.

### Note

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