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THE INFLUENCE OF REGULATORY ECONOMISTS IN FEDERAL HEALTH AND SAFETY AGENCIES

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> The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist.
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> —*John Maynard Keynes*

This paper presents the results of a series of interviews with senior economists in federal, health, safety, environmental, and homeland security agencies (hereafter referred to as HSE) combined with reflections by the author who served more than 25 years in a similar capacity.[1] The purpose of the interviews was to determine how much influence these economists and their analyses exerted over regulatory policy and the reasons why they might not be as effective as would be optimal.

A logical question might be, why focus on economists versus other disciplines involved in regulations development? One reason is that senior regulatory economists become involved in all major regulations in their respective agencies. Further, these economists are individuals who have been in their agency a relatively long time (most well over 10 years and a few over 30) and have excellent insight into the functioning of their individual agencies. When asked what they believe their value to their agency is, one replied, in terms of their primary product, "Benefit-cost analysis can help decision makers better understand the implications of decisions by identifying and, where appropriate, quantifying the favorable and unfavorable consequences of a proposed policy change, even when information on benefits and costs is highly uncertain."[2] Another put it more directly: "That which we have to offer is fundamentally very simple and second nature to economists but not to others, and I think it's essentially the notion of opportunity costs."[3]

In an earlier book, the author noted that, "One of the best rationales for the regulatory analysis requirement is that it informs Congress and the public about the consequences of major regulatory decisions, thereby rendering the agency accountable for its actions."[4] Economists tend to ask questions that no one else in the regulatory processes asks and answers to those questions can be extremely important in making sensible regulatory decisions. These questions include:

1. Should government intervene in a market or is the market doing as well as can be done?
2. What is the evidence that there is a problem and does it make sense to have federal intervention to solve it (as opposed to markets, states, localities, or private organizations?
3. What are the options to solve this problem and what is the evidence, amongst various options, that we will solve some portion of the problems? How good is the evidence for each of the options?
4. What will each option cost society?

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[1] Agencies interviewed include EPA, headquarters and some of the agencies, FDA headquarters including CFSAN, DOT (NHTSA) DOL including OSHA, CPSC, DHS, and USDA.

[2] Arrow, Kenneth J. ET. al. "Is there a role for benefit-cost analysis in environmental, health and safety regulation?"

[3] Burton Weisbrod in Allen, WR , p. 69.

[4] McGarity, Thomas O., Reinventing Rationality: The Role of Regulatory Analysis in the Federal Bureaucracy, the Press Syndicate of the University of Cambridge, Cambridge, N.Y. 1991, p. 285.

5. What are the unintended consequences?

One economist recently pointed out the value of economics in HSE rules, "Outside of the Federal Reserve, this may be the area of public policy where economic ideas are used most often."[5] HSE economists may also provide other unique inputs including:

- Combining all health endpoints into one scale for benefit estimates including health, economic, and environmental benefits
- Measuring the amount of resources that consumers are willing to pay in their everyday lives for reductions in risk, thus providing agencies some direct input on consumer desires

Many people who criticize benefit-cost analysis fail to realize this latter point, that economists' measure what individuals think potential government actions are worth, whether through surveys or through actual market expenditures to reduce risk.

Previous Literature Based on Interviews with Federal Economists

There have been two previous efforts interviewing federal economists but they have been primarily concerned with a very select group: economists serving on the Council of Economic Advisors. Typically, most are academicians on temporary government assignment. The most thorough of research to date on the role of benefit-cost analysis in the federal government was done by William R. Allen and some of the quotations in that publication will be repeated in this paper.[6] I stress, however, that the interviews described and summarized here are the first to include a sample of career government economists who have worked on actual cost-benefit analyses of actual regulations.

The Instrument

The data used for this paper came from a structured taped interview between the author and the economists. In all cases, the questions being asked were about their own impressions of their agency and their influence. They were instructed to answer questions only with respect to regulations, not other aspects of their agency. The interviews lasted between 40 minutes to nearly 2 hours with the average interview lasting more than 1 hour. There were two parts to the interview: (1) questions about the individual agency and its regulatory apparatus and (2) questions about the influence of economic analysis on regulations. The interview did not always stick strictly to the script in order to give the economists sufficient flexibility to discuss issues they believed were important. The questions that were used as the primary focus of this paper are in the attached appendix.

Interviews

Senior economists were chosen from the following agencies: The Food and Drug Administration (FDA), The U.S. Department of Agriculture (USDA), the Consumer Product Safety Commission (CPSC), the Department of Labor (DOL), the Environmental Protection

[5] Hahn, Robert @. And P.M. Dudley "How Well Does the U.S. Government Do Cost-Benefit Analysis?" Has Economic Analysis Improved Regulatory Decisions," Journal of Economic Perspectives, 22(1) Winter 2008, p. 72.

[6] Allen, Williams R. "Economics economists, and economic policy: modern American experiences," History of Political Economy, 9:1 1977.

Agency (EPA), the Department of Homeland Security (DHS), and the Department of Transportation (DOT). In some cases, there were interviews with multiple economists from sub agencies within the departments. In most cases, the answers they provided were treated as confidential. Because of my role as a former senior economist in the FDA, I include my own thoughts on the questions throughout this paper. Although the economists interviewed do not constitute a random statistical sample, the group includes economists from every major federal public health and environmental agency. Moreover, the number of economists engaged on front-line regulatory analyses is relatively small, so the group interviewed includes economists who have worked on most of the major public health regulations for more than a decade.

The interviews begin with general questions about how the economists thought about regulations in the federal government in general, not just their particular agency. They were asked if they believed there were too many regulations, the right amount of regulation in the right places, too many regulations where there is no market failure, regulations that address the wrong risks, or regulations that don't effectively allocate resources. Virtually every economist thought that resources were not allocated in the right areas. Perhaps this general impression derives from the fact that the economists believed that their primary job is to advise policy makers how to allocate resources efficiently. From their comments, one can infer that they believe it is a problem they've not been successful in resolving. Only a few thought that there were too many regulations.

The results of the interviews begin with the key question of how much influence over regulations these senior economists believe they should have, followed by answers to the question of how much influence they actually have. For virtually all of them, there is at least some separation. The reasons are explored as to why this may be so and are divided into three sections: (1) the culture of the organization and managers, (2) the organization that houses them including their process for creating regulations, and (3) the quality of the economists and the analysis they conduct in each organization. The summary reflects lessons drawn from the problems that economists have discussed in each of these three areas.

Actual versus Desired Influence

Each senior economists was asked, on a scale of one (virtually no influence ever) to ten (a large influence on a regular basis), what is the usual amount of influence economic analysis has on regulatory policies in their organization (see table 1). Following that, they were asked, on the same scale, what amount of influence they thought economic analysis should have on policy. The estimates ranged from a low of 2 to a high of 10. The amount of influence they thought they should have ranged from a low of 5 to a high of 10. The average amount of influence they thought they should have was about 7.5 while the average amount they actually had was about 5. In three cases, the amount that the economists thought they should have was almost exactly the amount that they believed was correct. In other cases, however, the gap was large. It is not surprising that any analyst would think that they should have more influence than they do have, and it would be surprising if, for example, risk assessors did not poll the same way.

Table 1: Actual versus Desired Influence of Regulatory Economists

Actual influence	Desired influence	Difference
2	10	8
2.5	5	2.5
3.5	5	1.5
5	More	More
5	7	2
6	6.5	.5
5	8	3
8	9.5	4.5
5	10	5
7	8	1
7	9	2
10	10	0

1= rarely any influence 10 = frequent influence

Interestingly, no economist thought that the amount of influence they should have was less than a 5. This suggests that they believe the reason they do these analyses is to influence regulatory policy. This is not likely to be the answer given by many decision makers who receive these analyses. In my experience, many decision makers believe that either the analyses should not be done or that the only reason to do them is to support their decision and help shepherd the regulation through the Office of Management and Budget (OMB).

Even though the economists typically thought that their analyses should have more influence, they recognized their bias that economics should play a greater role in decision making. Economists tried to articulate the context in which analysis should be viewed: "I think that decision makers ought to be aware of the benefits and costs and make a decision and have to live with that decision having been informed." Another viewed it as, "If you had a circle, you would want to have a strong scientific foundation, be within the legal requirements, and have the assumptive and coalescing properties of economic analysis to deliver the message home."

A recent paper by Hahn and Tetlock examined the question of economists influence through external observation and summarized their view that, "there is little compelling evidence that such analysis has had a large overall impact, though we cannot rule out this possibility."[7] In fact, it is likely to be impossible to ascertain, by external observation, how much of an impact federal economists have on regulation, internal agency deliberations, and decision changes on regulatory options, which are influenced by economic analysis and are not made available for public review nor likely to be so anytime in the near future. Thus, the conclusion of the Hahn and Tetlock paper that, "Clearly, the use of economic analysis in improving regulations has hardly been an overwhelming success" is a premature conclusion at best and one that many senior economists "in the ring"' would disagree with according to the answers provided here.[8] The more important finding here is that influence is extremely variable between agencies based on a number of factors discussed below.

[7] Hahn, Robert W. and Paul C. Tetlock, p. 72.

[8] IBID. P. 78.

Economic executive orders, since 1981, have dictated that decision makers take economic regulatory analysis into account. But what does that mean? No economist I interviewed thought that the results of a well-done economic analysis, specifically identifying the option that maximizes net benefits, should dictate decisions to a decision maker. But none thought decision makers should be free to ignore the results of benefit-cost analysis, particularly when, for some aspects of regulatory decisions, there were large costs and very small benefits. In the Hahn and Tetlock paper cited above, they examined 95 rules and found that 14 out of 95 (about 15%) would be likely to fail a benefit-cost test.[9] The small non-random group of economists presented here, thought that they should have influence about 75% of the time (desired 7.5 out of 10). Thus, the fact that decisions are made that ignore the analysis (about 25%), even decisions that do not pass a benefit-cost analysis (never mind a net-benefits test), do not bother these economists. Most likely, that is because of the legitimate reasons for not choosing an efficient option—such as protecting highly sensitive or highly exposed population subgroups or because the decision has been mandated by Congress.

The next section of the paper will use the interview results to explain why economists do not have as much influence as they believe they should have. The reasons are divided into four parts: culture, organization, economists, and laws.

Organizational Culture

The degree of influence that economists will have over regulations strongly depends on the organizational culture, including the agency's management style. Because economists are often presenting regulatory options that may not be the initially preferred option, there must be a culture of openness to new ideas, which would allow the economists with new ideas to influence decisions. When asked if there was too much "group think" (a tendency for everyone in their agency to think alike), many economists believe that pressure in favor of group think is a huge problem. Several mentioned how difficult it was to bring in "fresh thinking." These comments went hand-in-hand with comments concerning over reliance on the use of precedents to make decisions, indicating the dominance of a legal approach to public health regulations. Some economists pointed out that the typical regulatory attorney's concern was not to change from an existing regulatory policy that has worked before (legally). One senior economic analyst noted that economists (in fact, anyone) quickly found out that it was unwise to even bring up a new idea, since it would be shot down quickly. Another noted, "we do what we always do, just trotting out the same old thing. That's why we don't come up with better regulations; we just come up with the same regulations in different areas." One economist said that reliance on precedent was "annoying" and blamed it on "inertia." In a previous study, regulatory economists complained about a "program office tendency to adopt a conveyer belt mind-set focusing upon a single option early in a rule's germination and adhering to that option through-out."[10] Still, another economist in this study said that "If your views are not mainstream, you are saying something different that is not going to be welcomed… It is an oppressive atmosphere." In one author's opinion, it was a problem with decision makers as, "…upper-level decision makers have only a limited capacity to consider widely ranging options."[11] In another study, an economist noted that…program office staffers also feel threatened by analysis, because it can represent a direct challenge to status quo approaches to regulatory problem solving that they have historically established and

[9] Hahn and Tetlock , p. 71.

[10] McGarity, p. 114.

[11] McGarity, p. 126.

dominated."[12] Only one economist said that at his agency every problem was new and that they always approached everything from a fresh perspective.

Whether trying to bring up new ideas or simply suggesting that current directions run counter to where the analysis points, conflicts do arise and economists were asked how well their agencies handled them. Most believed that conflicts were handled well, although one said that this was only true when it was not a new idea being introduced. Two economists thought that conflicts were handled badly because meetings would end without a resolution. Some thought that more meetings were needed to resolve conflicts and others believed that meetings were better run when populated by more senior attendees, particularly because agendas were made clearer.

Interestingly, one economist said that email was more of a problem than meetings (causing conflicts) because "people will say things in a tone that can be unproductive; things spin out of control and then it becomes office gymnastics, which becomes blood sport. These disagreements would not happen in this way if there were a face-to-face meeting." Nevertheless, most economists also believed that communications were rather good in their particular agency.

Management culture is important because use of results from economic analysis lays squarely with the decision makers. Decision makers are people who, in Jim Miller's (former head of OMB) view, are responsible for "incredibly important decisions (which are) being made with incredible insufficient information by incredibly unanalytical people."[13] Economists in this survey also found problems with their decision makers. One economist in this survey complained that decision makers would never tell you what they wanted—what they consider to be the elements of a good decision—and adding, "It would be a big advantage to know whether or not there is anything that will change their mind."

The economists were asked about the level of understanding their decision makers had about various areas including science, economics, and whether the decision makers were dishonest or corrupt. As to the latter, none of the economists thought that their decision makers were corrupt or dishonest, although a few remembered the Anne Gorsuch/Rita Lavelle problem in the early '80s.[14] Most thought that the decision makers were paid sufficiently and that there were fairly good decision makers in their agency. But having said that, when asked specifics about decision makers, there were decidedly mixed reactions among the economists.

Economists see a problem of incentives facing decision makers. As one regulatory economist put it, "They have incentives to do something, they have incentives to get people off of their backs, and they have incentives to move things, (but) the incentives to make good decisions are extremely weak, as long as you are doing something, you are going to be OK." Another said that, "Success is putting out 10 regulations a year and bigger regulations are bigger successes. They don't say, 'we examined 10 regulations and we decided that 8 did not warrant regulation, which would be better.'" One economist said, "Decision makers are really afraid to take a bold stand… [Because they think] ...the decision will not be seen in the context of 'this

[12] McGarity, p. 161.

[13] Allen, William R., "Economics, economists and economic policy: modern American experiences," History of Political Economy, 9(1) 1977, p. 79

[14] Anne Gorsuch was President Reagan's EPA Administrator and Rita Lavelle was the Director of the Superfund Program. There were allegations of giving favored treatment to certain industries and Congressmen. Superfund is one of the areas that could use a great deal more input from Congress, where 80 percent of the problem is coming from 20 percent of the sites.

is the information we had and this is what we decided.'" Although some thought the incentives were about right, a few others remarked that the problem with political appointees was that they were trying to accomplish things within their tenure and that that was more important to them than making good decisions.

Another set of questions revolved around what the economists thought their decision makers understood about the scientific and economic inputs they received. When asked if their decision makers understood the necessary science, most economists interpreted that as whether or not they understood risk assessment. The economists split on this question with some thinking that decision makers did get it, some did not, and some thought it was just not important whether they got it or not as long as they understood the implications. One economist expressed concern that decision makers did not understand if scientists provided a "safe" exposure level, that exposure level did not have much meaning. The economist stated that "safe" levels had no real predictive value in terms of actual illnesses or deaths above or below those levels. Because of this, they worried that some decision makers would avoid consideration of cost when given those kinds of numbers. In fact, cost is next to impossible to consider politically when risk analysts have only given decision makers a "safe" level of exposure instead of a level of risk. Another economist expressed a related concern that safety analysis was viewed as being sufficient for decision making when it was really necessary to study the "trade-offs and synergies."

In terms of understanding economics, there was some concern expressed by economists about the lack of appreciation by decision makers for their product. It's not surprising that some decision makers deeply resent executive orders that mandate them to consider the results of benefit-cost analysis when making a decision. They are generally highly trained in their own fields and they are being asked to use such analysis to help make their decisions, even if they do not understand the analysis or know how to politically defend decisions based on economics. But health and safety policy made in federal agencies must take into account the viewpoints of many different disciplines, including economics. The reason economics gets singled out, however, is because of the executive order. Except for law, no other discipline has such a binding requirement. This requirement often produces a similar resentment toward legal inputs to decisions. Over time, some decision makers come to appreciate economic analysis but, at least for the political appointees, their term typically seems to end just as they "get it." No matter how many times an economist may tell new decision makers that rejection at a higher review level (OMB) is a likely result of failing to utilize economics in a decision, it usually takes an actual return of a regulation by OMB to drive the point home.

When asked if decision makers did not understand economics, it appeared to primarily be a problem in those agencies where the use of economics by decision makers was minimal. One economist said that lack of understanding was "a huge problem." Several economists said that their decision makers were just not attuned to economic analysis. Other economists mentioned that decision makers in their agencies believed that that the job of economists was just to deal with OMB. One insightful economist thought that while decision makers accepted that they did not comprehend physical sciences like chemistry and toxicology, they thought that economics was just "common sense." Most of the surveyed economists thought that it was not a big problem if decision makers really did not understand economics, as long as they could understand the results. These economists may be wrong about this last point, however. If decision makers don't understand how the estimates are derived and how the assumptions affect those estimates, they may be reluctant to use them because they really don't know how to publicly defend them.

The economists were also asked if decision makers were actually prejudiced against using economics in decision making. Slightly more than half of the economists thought that this was not a big problem, while the other half seemed to think it was a fairly big problem. This problem was generally expressed "as not being prejudiced about benefits" [but against consideration of costs] or "a public health mindset [that] permeates the agency." One thought that decision makers were prejudiced against use of cost information to make decisions, but not benefits. This is consistent with a number of other economists who said that decision makers were just focused on public health, not on economics. Most economists believed that this focus on improving public health at any cost was a fairly substantial problem at all levels. They added that people who are typically attracted to these kinds of jobs in government, if they did not come from industry, came in with this point of view.

In a 10-year-old survey of economic experts, Morgenstern reported how these experts thought their analysis was being used (see table 2).

Table 2: Officials' Views on Usefulness of Regulatory Economic Analysis[15]

Use of Analysis	**Number of Analyses**
Identify the most cost-effective approach	10
Implement health based regulations cost effectively	2
Define regulation's coverage	3
Define regulation's implementation date	1
Defend/document a regulatory decision	2
Reduce health risks at a feasible cost	1
Played no role in the regulatory decision	1

Source: General Accounting Office, "Regulatory Reform: Agencies could Improve Development, Documentation, and Clarity of Regulatory Economic Analyses," GAO/RCED-98-142, 26 May, 1998.

In the interviews, most economists thought that they needed both better analysis as well as more effective use of their analyses by decision makers and some said that their analysis played little or no role in regulatory decisions. One economist said that more effective use would be very helpful in terms of social welfare particularly because, "Right now, the psyche is to pick the safe level regardless of cost." Another said that the decisions were made and "the point of the RIA [Regulatory Impact Analysis] is just to put a nice neat packaging on it."

If there is an anti-science bias in an agency, particularly against economics, this signals that economics probably has very little impact. The most common manifestation of this is—decision makers pressuring economists to make the analysis conform to a decision that has already been made and with no consideration of the economic analysis. Most of the economists acknowledge this kind of pressure but all thought it was subtle. One said, "I have yet to see anyone be rewarded for doing an analysis that suggests less regulation" and another said that, "Everyone knows that life will be easier… if you just go along with the program office." Another economist said you "do everything you can to bump up benefits."

[15] Farrow, Scott and M. Toman, "Using Environmental Benefit-Cost Analysis to Improve Government Performance," Discussion Paper 99-11, Resources for the Future, 1998.

A Personal Example of the Use of Economics by Decision Makers

My own experience over the years is that some decision makers just absolutely believed that economic analysis must be subservient to their decisions. When FDA was promulgating the seafood Hazard Analysis Critical Control Points (HACCP) regulation, it was obvious to both epidemiologists and economists from the beginning that there would be very few benefits.[16] During the early stages, the rule was being written in the commissioner's office, not in the program center. I was told by the writer that the rule would most likely not contain any public health benefits because the main reason for FDA to write this regulation on seafood safety was to keep Congress from moving the seafood program from FDA to USDA. Later on, when it became apparent that the costs were higher than benefits by about 10 to 1, the pressure was put on me as the chief economist to change the numbers. At one point, on a Friday, I was told not to bother coming back to work if I could not agree to change the benefits and costs. As I didn't have alternate employment, I did what other economists expressed that they had been forced to do, cited in Allen's paper: "Hold your nose and assume you can fight another day."[17] Another economist described this situation as, "Every once in a while there was a small—perhaps not small, perhaps I only rationalized it as small—compromise with integrity."[18]

I compromised and came back to work and allowed the program office to dictate new cost estimates for the analysis, which were considerably less than the existing estimates. I did successfully argue that we should keep in our best estimates of cost, although cited as an upper bound. The benefits were an even bigger problem. After the initial estimates showed very few benefits, the dictated solution from senior managers was to allow two scientists (one retiring and another from a completely different agency who was unfamiliar with the details of the rule) to "estimate" that 50 percent of all illnesses caused by seafood would decrease following imposition of the rule—an estimate that has not come true. Those in OMB who thought the benefits and costs were poorly estimated were told by the White House to back off. It was not the last time at FDA that I was told to change estimates by FDA managers. The very last time that happened, a very senior manager—a lawyer—told me that he just could not understand why we couldn't write analysis to back up his decisions.

Congress and the Agencies

Agency culture can be affected by outside bodies, including stakeholders and Congress. The economists were asked about that influence. The amount of flexibility Congress allows agencies by giving broad versus narrow directives, how much it monitors agency performance, and whether they write laws requiring consideration of economic analysis, all affect the influence economists have on regulations.

One might suppose that Congress could take congressional oversight to be the norm and, in fact, in 1996, they voted on a law to allow themselves to do just that—the Congressional Review Act.[19] This act allows Congress to review recently passed regulations and overrule them. In fact, it has been used only one time since 1996, on the Department of Labor's

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[16] HACCP stands for hazard analysis critical control points. It is a process control mechanism based on paperwork that causes manufacturers to look for places where hazards may be controlled, set tolerance limits at those places and take corrective action when tolerance limits are exceeded.

[17] Allen, W.R. p. 63.

[18] Allen, W.R. p. 60.

[19] http://usgovinfo.about.com/library/bills/blcra.htm.

Ergonomic Rule.[20] As one economist put it, "No one [in Congress] is looking over our shoulder and saying, 'we trust you to implement this act.'" As to other kinds of regulatory oversight, such as hearings, economists were evenly split as to whether Congress was exercising the right amount—too much or too little. One economist said, "It's too much… Congress will set standards and they don't have the background to understand what they are doing and they make no sense at all." Another economist complained that there were too many hearings with an associated "transactions cost," and another said that Congress just didn't know what was going on. Finally, one economist said that Congress should define the standards for economic analysis more clearly.

Congress can also establish a culture of influence for economists by mandating that decision makers utilize economic analysis. This has happened frequently with newer laws. In USDA for example, Congress established a small office—the Office of Risk Assessment and Cost Benefit Analysis (ORACBA)—with authority to review and return rules to the different agencies if the economic analysis is not well done. Other laws that require consideration of economics include the Endangered Species Act, the Safe Drinking Water Act, and the law establishing the Consumer Product Safety Commission.[21] Based on responses from agency economists, with the exception of ORACBA, these laws appear to have increased the influence of economics. Although benefit-cost analysis has been around as a public policy tool since the 1920s, where it was used to justify dam projects, Congress has tried numerous times unsuccessfully to pass a law of general applicability requiring this type of analysis. The Unfunded Mandates Reform Act, which requires economic analysis in all major rules, does not appear to have had much of an impact on consideration of economic analysis, perhaps because of its general applicability or because its primary focus is on unfunded mandates to the states.

Jason Johnston makes the argument that, in order for benefit-cost analysis to make a significant difference in rulemaking, it must be judicially reviewable and the courts must be able to observe "true project costs and benefits" such that the court becomes a "creditable" threat.[22] Although it may be a matter of degree of influence, the economists in the agencies who operate under such a statute appear to at least have greater influence than those who do not.

Organization and Rulemaking Structure

The organization of an agency is an important element in determining how science, including economics, is utilized in decision making. If an agency is well organized, all of the necessary science, including economics, will play an appropriate role in regulatory decision making, and rules have a greater chance of being efficient.[23] Economists were asked a number of questions about the organization of their agency and regulatory process.

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[20] http://usgovinfo.about.com/library/weekly/aa030701a.htm

[21] The Endangered Species Act requires that "The Secretary shall designate critical habitat, and make revisions thereto, under subsection (a)(3) of this section on the basis of the best scientific data available and after taking into consideration the economic impact,." The Commissioners of the Consumer Product Safety Commission must take into account both "a preliminary description of the potential benefits and potential costs…." and "a description of any reasonable alternatives to the proposed rule, together with a summary description of their potential costs and benefits, and a brief explanation of why such alternatives should not be published as a proposed rule."

[22] Johnston, Jason S., "A Game Theoretic Analysis of Alternative Institutions for Regulatory Cost-Benefit Analysis," University of Pennsylvania Law Review, 150(5) May 2002, p. 1409.

[23] Efficient to an economist has a specific meaning, in the case of regulations, it means selecting the regulatory option that maximizes net benefits, that is, the maximum difference between benefits and costs.

Although economists aren't necessarily experts in organization theory, some of the observations they made about the agency's organization and processes could be the cause of poorly developed regulations from an economic standpoint. A number of EPA economists talked about problems that were created due to EPA's "stovepipes." Because the laws establish different offices for different hazard pathways (air, water, etc.), EPA offices do not coordinate their efforts to manage hazards in the most cost-efficient manner. The Government Accountability Office (GAO) reported on this problem 25 years ago:

"Some environmental laws passed in the early 1970s placed more emphasis on the level of cleanup to be achieved than on the costs involved in reaching those levels. Such laws prohibit or limit the use of cost-benefit analysis in setting standards and the accompanying regulations. Consequently, the results of a cost-benefit analysis prepared under Executive Order 12291 cannot always be used in the decision-making process. The Clean Water Act limits the kinds of regulatory alternatives that can be considered, since the act requires each regulated industry to individually comply with an effluent limitation that can be achieved by installing the best available technology. Consequently, a more flexible regulatory approach, which would take advantage of the fact that one industry may be able to control water pollution at only a fraction of the cost charged by another industry, could not be adopted although such an approach might achieve the same overall level of pollution control at a lower cost."[24]

Although this is an organizational problem, it is created by EPA's enabling laws. Nevertheless, this organization greatly limits the effectiveness of economists. Again, GAO has recognized this problem that the law creates in setting up EPA offices, "A further difficulty resulting from legal restrictions is that useful data may be obtained but then not used. For example, the Clean Air Act states that primary air quality standards are to protect public health, and costs cannot be considered in setting the standards. Nevertheless, EPA prepares cost-benefit analyses on air quality standards to comply with Executive Order 12291. Because of the legal restriction, the analyses are not being used in the standard setting process, although they are expensive to prepare."[25] Recall from an earlier discussion that virtually every single economist interviewed believes that the biggest problem in regulation is that resources are poorly allocated.

Organization not only affects the use of economic analysis, it can also affect the quality of the analysis when economists are organizationally located under those who make these decisions. As one economists said about the organization's effect on quality, "They do it [change the analysis to fit decisions] in this organization because our economists are located organizationally along with regulatory economists or people whose job it is to develop a rationale for policy. …if an economist [were not] in an environment [organizational section] driven by political objectives, rather than scientific or quality of analysis, then it would be a little bit easier to stand up in front of decision makers and voice your objection to a regulation [as opposed to] if you were coming out …the policy part of the agency." Most of the economists who did not complain about this kind of pressure are those for which consideration of economic analysis is mandated by law, as opposed to just an executive order.

A key question addressed if the senior economists believed that the economists were well managed. As it was largely economic supervisors who were questioned, they were allowed to

[24] General Accounting Office, "Cost-Benefit Analysis may be Useful in Assessing Environmental Regulations, Despite Limitations," GAO/RCED-84-62, April 6, 1984, p. iii. http://archive.gao.gov/d5t1/123970.pdf

[25] IBID, GAO

interpret this question in any way they wished. For the most part, they believed that the primary problem with management of economists was whether or not the supervisors at the next level were themselves economists. One said, "It would be a luxury to be managed by economists; non-economists focus mainly on deadlines and not on quality economics or having economics influence policy. Another said, "They are poorly managed here; I have had to report to my next supervisor who had no understanding of economics whatsoever . . . If we did have a supervisor that was an economist, our work would improve and we could attract and retain a much better level of economist. It's one of the things that I asked for when I came on and it never materialized." Interestingly, another economist commented on the preceding commenter and said, "I think of one guy who has totally given up and it's hard for me to believe that his institution is that terrible." Yet another said that mismanagement of economics is particularly bad in public health agencies. Finally, one said "Yeah, they are almost always managed by non economists who view it as a necessary activity to check the box off and as a means to get it [rules] through OMB. As another economist noted, this is a problem "because we are never going to recruit good people unless you let the economics flourish, no one will want to work here." However, one economist noted that he was an economist and his boss was an economist and it was not a problem.

In my own case at FDA as the associate director for social science (including economics), this became particularly troublesome when I was moved under a new office director—a lawyer. We had another process lawyer who was also an associate director, responsible for moving the regulations through the process both internally and externally. This associate director (ostensibly at my level) was put in the review chain above me for economic analysis.

When the first major disagreement came, up I went to the office director and complained about what I viewed as changing the fundamental economic analysis by a non-economist. I was told to always defer to those changes. Given the problems with management of economists in some of these agencies, it is likely that they would have experienced this as well. For any economist, these experiences are disheartening to say the least. A few of the economists interviewed noted that this type of heavy-handed interference with their work causes some of economists to get too discouraged and not try very hard.

It is not necessary that economists be managed by other economists, but it is essential that they be managed by someone who takes a scientific approach. This type of management would place just as high a value on quality and defending quality as they would on timeliness and team play.

The process by which regulations are developed can also play a large part in whether or not economists are influential. An ideal process would be:

- Define the problem
- Define different options for solving the problem
- Develop the science to help compare options
- Make a decision

In many cases, however, the decision is made and everything else follows. Many of the economists surveyed felt that their regulatory processes were poor. But not all economists found it necessary to have a well-defined process to create regulations; some cited the use of well-formed teams that worked together on regulations. Where neither existed, economists thought that this was a huge problem. Some claimed that they had a standard operating procedure but that it was just never followed. When that happens, the right inputs do not enter

the decision making process at the right time. One economist said that in their agency one small group made decisions and "everybody else is supposed to do paperwork around those decisions." Only one economist said that they had a strong process and tracking system.

Most of the economists were extremely concerned that there was no place in the process where a sufficient numbers of options were considered. A few said *problems* were not well defined so that it would be difficult to get consistent options that addressed the same problem. In fact, research has shown that vague goals are a "distinctive characteristic of public organizations and their management."[26] One economist complained that, instead of defining a problem as reducing risks, it was more like "let's update this standard." One economist said that only economists thought about options in his organization. Another thought that it would make sense to consider more options outside of the statute (something OMB has consistently asked agencies to do). Finally, one economist said that his agency "forecloses any discussion of meaningful options at a pretty early stage." In part, consideration of options may be due to decision makers knowing what they want to do, prior to the analysis, but it may also be due to an insufficient amount of time to consider a broad range of options. A better process, such as the one sketched above, could help ameliorate this problem.

The interviews also addressed the issue of deadlines. Numerous economists mentioned that there was often an insufficient amount of time to do the analysis properly. Some accepted externally imposed deadlines but resented the internally set ones where "you hurry up and then someone sits on it." One economist said that they were frequently given "false deadlines . . . drop-dead deadlines and it might be many months, years, before that proposal has been put into the process. The consequences of that are that you are doing things to meet the short-term deadline and you may have to re-do them and you don't do a good job. You don't do enough thinking in the initial stages and invest in data and information as much as you should and you don't think as broadly about the alternatives as you should." Another economist said that the rulemaking was "frequently rushed; they (deadlines) can be either court or internally generated . . . frequently they flow from congressional deadlines and they [Congress] just don't know what is involved in these rulemakings."

Economic Analysis and Economists

Clearly, the quality of the economics and the ability by economists to communicate their findings will increase the influence of the analysis on regulatory decisions. One study described this as, "At least half of an economist's job is to communicate effectively the results of the analysis to the decision maker and the public."[27] In addition to communication, there is the question of the quality of the analysis and there have been plenty of criticisms leveled at benefit-cost analysis performed in regulatory agencies.

Hahn and Dudley believe "agency appointees, at EPA and elsewhere, do not face a strong incentive to do high-quality analysis. They are generally rewarded for promulgating and implementing regulations, not studying them. Moreover, analysis may be viewed as a necessary evil. Indeed, there appear to be few sanctions for doing poor analysis.[28] They

[26] Chun, Young Han and Hal Rainey, "Goal Ambiguity in U.S. Federal Agencies," Journal of Public Administration Research and Theory, 15(1), pp 1-30.

[27] McGarity, p. 159.

[28] Hahn, Robert W. and P.M. Dudley, "How Well Does the U.S. Government do Cost-Benefit Analysis," Working paper 04-01, AEI-Brookings Joint Center for Regulatory Studies, revised March 2007, p. 16.

evaluated 74 regulatory analyses, all from EPA and their finding "is that quality, as measured by the inclusion of fundamental economic information, is generally low.[29] Harrington found that, for the RIAs he surveyed, both benefits and costs are likely to be overestimated but that benefit overestimates are likely to be greater than cost overestimates.[30] As noted earlier, many of the economists in this survey believe that there was pressure from decision makers to overestimate benefits.

Rather than asking the economists directly about the quality of their analyses, they were asked how better analysis would help with decisions. Virtually all economists thought that better analysis would help. One economist, who stated that the agency discouraged good analyses, said, "I think it would have an immense difference if we were allowed to do good regulatory analysis. Where we run into problems is when the presumption is made that the outcome or the options are determined by politics." Another economist said that they typically take a value of information approach where the amount of effort put into an analysis is determined inversely by whether or not there is a congressionally-mandated approached. Virtually all economists thought that their analysis was better than outside economists have charged. There have been quite a few papers that thought that federal economists were not providing very good analysis. Hahn and Dudley found that, of a sample of 74 regulations examined that they "typically do not provide enough information to make decisions that would maximize the effectiveness of a rule."[31] Hahn, Lutter, and Viscusi found that the agencies were not in compliance with OMB guidelines for doing the analyses.[32]

Perhaps the difference in opinion might be that the economists do not put as much time into "checking the boxes" for those rules that they do not think there is much of a chance to make an impact. That was the decision rule I used, and it was consistent with OMB guidelines.[33]

The economists were asked detailed questions about their economic analysis, including components addressed in the analysis (following OMB Circular A-4), the quality of the economists working in their agencies, the presentation skills of the economists and how OMB affected the quality of economics.

Quality of Data and Models

First, they were asked about the quality of the data and models they used. The economists who relied on epidemiological data taken from reports to the government were the most satisfied with their data. Others, however, said that the quality of the data they had to work with was a huge problem—much bigger than the problem of better models. Inadequate funding for data collection was a recurrent theme, although one economist complained about the problem of getting a survey through the OMB clearance process.

Uncertainty

When asked about how they handled uncertainty, one economist admitted to being lazy with respect to analyzing uncertainty because, "the last thing the lawyers want to hear is that the

[29] IBID. P. 9.

[30] Harrington, Winston, "Grading Estimates of the Benefits and Costs of Federal Regulation," RFF Discussion Paper (DP-06-39), September 2006, p. 21. http://www.rff.org/Documents/RFF-DP-06-39.pdf

[31] Hahn, Robert W. and Paul Tetlock, p. 72.

[32] OMB Circular A-4, September 17, 2003. http://www.whitehouse.gov/omb/circulars/a004/a-4.pdf

[33] McGarity, p. 80.

economists are uncertain… they will win the day on that argument."

Domestic and Foreign Competition

Most economists thought that they did take into account effects on domestic competition, although two said that they never did. Few economists said they took effects on foreign competition into account.

Risk-Risk Tradeoffs

Some economists said they did look at risk-risk tradeoffs but thought that more should be done in that area, that they were taking too narrow of a viewpoint. Another acknowledged that they look at the trade-offs in only a narrow context, particularly direct chemical for chemical substitutions. This sentiment was supported by another who acknowledged that they did not get into investigating changes in behavior that would affect risks as a result of rules. This was the case where technical substitutions were examined but not risks that were caused by regulation-induced behavioral changes. One thought that upper echelon decision makers might think about these trade-offs more than economists. One economist said that, "A lot of people don't want to acknowledge that other risks deserve equal footing." When asked if the economists thought they were doing a good job investigating those risk-risk tradeoffs, most generally thought that they were not.

Cumulative Effects of Regulation and Small Business Concerns

No one said that they took into account the effect of cumulative regulations. Several thought that this was a serious problem, particularly for small businesses. One economist tied it to retrospective review and said it would be better if this was done by a neutral party. Finally, all but one economist thought that they were doing a good job of taking into account small business concerns.

Obviously, higher-quality economics are likely with higher-quality economists. The quality of economists may be poor if: 1) poor economists are hired; 2) good ones are hired but their skills decline; or 3) good ones tend to leave. To get and keep high-quality economists, government agencies must hire high quality economists, keep them well trained, pay competitive wages, and motivate them to produce high-quality analysis. An additional interesting aspect that came out of the interviews is the necessity to have a sufficient "core" of economists in an organization. Otherwise, it becomes extremely difficult to resist the pressure to make the analysis conform.

Most of the senior economists in managerial positions thought that they had pretty good junior economists although one thought that there is a problem when "you can call yourself an economist with only 21 hours of economics and that is not enough to get it." Most, but not all thought that there was sufficient training for economists, although one complained, "You have people with masters degrees in economics and they never bought into economics; will training fix that? If you ask for more analysis, they will complain about it because their role is to check the box that the economics is done as a way to get to the Promised Land, a *Federal Register* notice." He went on to say that, "One of our economists talked about the need for research 'so that we can justify our regulations.' They are outnumbered by non-economists so that they all run around trying to get the regs out the door."

Most did not think that they should try and hire economists at higher grades but all thought it was a problem that economists were "topped out" in their agency. They thought that this was a significant problem and complained about scientists and lawyers who were at the very top of their organization— but no economists ever occupied top positions. One economist noted that, "you can apply but it is not going to happen, only (the physical scientists) are going to get managerial positions."

One set of questions addressed whether economists were simply not presenting their information in a clear and concise manner and if they really understood what decision makers needed from them. Most surveyed economists agreed that the presentations made by (usually junior) economists for decision makers did not get to the punch line quickly enough. While they would like decision makers to invest a little more time to understand economics (and apparently, some do), its understood that the primary job of the economist to communicate effectively. One noted, "I think there is a gulf between economists and non economists and sometimes economists don't get that you don't have to tell them everything, sometimes if you just put it in plain language that's all they really need to know—get to the punch line, kind of like Goldilocks . . . is it low, medium, or high? It is not necessary to tell them the wherefores of how I got to whatever it is." One economist indicated that it takes time to know how to do these briefings but poor briefings are a big problem, as it "puts us on the defensive." The economists may not really understand the needs of the decision makers but then, they often don't have enough exposure to them to understand their needs. Of course, as one economist explained, "It would be fairly significant if the audience thrived on wanting to have good economic analysis but they don't set their clocks by when they are going to have an economic briefing." Again, however, this last point is not true of those agencies that are required by law to consider economic analysis.

A last point is that economists must not be afraid to speak up. In the McGarity study he noted that in an interview an FSIS economist said, "In FSIS, it was reported that "in the 'master meetings' in the Administrator's office, where the most important issues were discussed, the economists took a passive role, sitting back on a couch rather than around the table with other work group members."[32]

Another question asked was, how well economists defended their analysis? Several decades ago, the OPM handbook (long out of print) for the GS-110 series (economists) that said that one of the marks of a good economist was effectively defending their position. Most thought that their economists did fairly well but a few thought they gave in too easy, one even suggesting they apologized too much. One thought that economists were picked on more when they presented uncertainty, such as in the form of a range, than risk assessors, who generally have greater leeway to admit uncertainty.

A key to better use and quality of economics is how effective the President's oversight body, the Office of Information and Regulatory Affairs (OIRA) in OMB, is doing. Federal regulatory agency economists have a peculiar arrangement with OMB economists. OMB economists who read RIAs are the most reliable reviewers since they actually read their work. In some cases, the economist is a desk officer trained in public policy but in other cases there is a PhD economist in that position. Agency economists depend on OMB economists to protect them by challenging bad economics resulting from decision maker's directives. But the economists are also sensitive to the criticisms that they have not done a good job from the OMB reviewers.

Nearly all interviewed economists thought that OMB reviewers did a good job reviewing their

work. The economists understood implicitly that without OMB reviewers, there was very little chance that their work would influence policy (unless there was a law directing agency managers to do so). The reason, as stated earlier, is that most people attracted to these agencies have, as one economist put it, a "mindset to protect public health" or, as another put it, "public health issues seem to be treated as sacrosanct, above the pale of economic analysis." The economists found that decision makers seemed unable to view economic analysis as a tool to design policies that can improve public health.

The charge to OMB, particularly OIRA, is to enforce the president's economic executive order (currently E.O. 12866). However, in many cases senior bureaucrats and political appointees view OMB review as just an exercise between their economists and OMB, and they are only concerned when it slows up their regulation. OMB economists are perceived as interfering with decisions about which they have very little knowledge. For those new to the process, it is always a shock to find out that the economic analysis may cause a regulation to be returned by a young and apparently inexperienced reviewer at OMB.

The economists typically have had a lot of interaction with OIRA, and therefore had a lot to say about OMB oversight. One economist thought there was too much oversight, but that was because the OMB desk officer asked to review many more types of documents than this economist thought was necessary, and it caused both regulations and surveys to be delayed. Two economists wanted much more oversight. Another thought that OMB got too much into the design of rules and yet another thought OMB focused too much on analysis and not on policy. One economist mentioned that they (OIRA economists) got caught up in politics too often and sometimes let rules go where there was zero analysis. Most thought that OMB oversight was pretty much the right amount and one suggested that OMB should have more people. In fact, OIRA has a little more than 50 people to oversee 24 regulatory agencies, work with the Council of Economic Advisors, and carry out White House initiatives. The OMB economists often do not have time to read the draft regulations or economic analyses prior to meeting with the agencies about them. One regulatory economist thought on one hand, it was OMB's job to "keep everyone honest." On the other hand, another described meetings with OMB as "Sometimes there is a lack of knowledge and lack of trust and you just glare at one another and don't accomplish your objective." Finally, one economist said that he was a big believer in OMB oversight and thought that they were doing a good job.

Finally, as I said earlier, there are a few specific statutes directing agencies to take economic analysis into consideration. Where statutes require consideration of economic effects, most of the problems of economic influence seem to disappear. The economists who worked under these statutes believed that their desired and the actual amount of influence was about the same. One economist thought that more of such laws are probably "a long time coming (as) Congress is not interested in economic analysis." One economist described the biggest constraint to effective economics as the statutes and described the lack of legal support for economics as "one arm already tied behind our backs."

Summary

Economic analysis is important for public policy and economists can, in the right circumstances, improve social welfare if their analysis is objective and used in decision making. Some of the insights that economists have about their agency should be helpful in increasing the impact that economic analysis should have on regulations. Key findings include:

Influence

- The influence of economists in HSE agencies varies considerably.

Culture

- Agency cultures need to encourage new ideas and consideration of more options.
- Better incentives are needed for decision makers to make good regulatory decisions as opposed to being rewarded for more or bigger regulations.
- Decision makers need to be trained in how to use economic analysis.

Organization

- Organization matters, and two key recommendations here are:
- Economists should be managed by economists and separate from program offices.
- Regulations development needs an enforced process or small teams.
- Laws requiring consideration of economic analysis are likely to have a huge impact—particularly when directed at individual agencies.

Economists and Analyses

- Economists should be trained to make presentations to decision makers.

Providing decision makers with information about regulatory options that will point them to those options that achieve more benefits using fewer of societies' resources is the job of health and safety economists in the federal government. It is clear, though, that their impact on their individual agency is variable with some having a significant impact on decisions and others having virtually none. The reasons why economic analysis is not used also varies, from poor managers who either do not understand or do not appreciate economics—some going so far as to dictating outcomes to the economists, to poorly done analysis. Agencies can make many of the changes themselves to ensure that they have high quality analysis used to make better decisions but, in some cases, it may require new laws or executive orders to prod recalcitrant agencies into action.

Appendix: Survey Instrument

I. Improvements in Regulations

Do you think there is
Too much regulation
Just the right amount
Too little regulation
Regulate the wrong risks
If anything other than (b)

The following is a list of potential problems with regulations: On a scale from 1 to 10, where 1 means this is never a problem to 10, where 10 means this is frequently the biggest problem leading to poor regulations, rate each of the problems below. You are encouraged to elaborate or provide examples on any of the below.

Economics
Spend too much per life saved
Regulate even when no market failure
Regulate even when risk is low

Oversight
Too much/too little Congressional oversight
Too much/too little OMB oversight
Too much/too little Court oversight

Quality of decision makers
Decision makers do not understand industry
Decision makers do not understand consumers
Decision makers do not understand science
Decision makers are underpaid
Decision makers do not understand economics
Decision makers exercise too much precaution
Decision makers are dishonest or corrupt
Incentives for decisions makers are poorly structured
Outside influence—too much, too little, or the right amount of influence
Industry
Consumer Groups
Academia
Too much/too little or the right amount of reliance on precedent

Structural problems with agency
There is no agreement on what the problem is to be addressed
There is too much group think in the organization
There are people who are "in" and people who are "out" of decision making.
People in the agency do not work well together
There is not enough communication between different units
Meetings almost never resolve anything
Conflicts in the agency are poorly handled
There is too much "backbiting' in the agency (little trust)

Bureaucrats are too political (attached to one party or the other)
Regulatory agency is poorly organized.

Political appointees
Political appointees try only to please White House
Political appointees do not take long run view
Political decision makers bring prejudices to government

Process
Standard operating procedures to follow to establish regulations
Poor process for making regulations
Not enough people included in the decision making process
The problems to be addressed are hazy
Not enough options considered
There is not enough time to make good decisions
Not enough relief for small businesses

The following are rarely or never taken into account:
Competition
Foreign competition
Risk/risk trade-offs
Health/health trade-offs
Effective of cumulative regulations on firms
Other (name)

How much can better regulatory analysis help with regulations?

How much will more effective use of regulatory analysis help with that?

II. Effectiveness of Economists in Government

On a scale of 1-10 with 1 representing economists never making a difference in regulatory policy and 10 representing economists almost always influencing regulatory policy, what number do you think represents the usual amount of influence regulatory economists have?

Describe in your own words the influence they have in your agency.

On the same scale, what influence ought regulatory economists to have on regulatory policy?
What reasons do you think economists do not have sufficient influence on regulatory policy?

Decision-makers prejudiced against economics
Decision-makers do not understand how to use economics
Other influences on decisions greater, e.g., lawyers
Economists do not present their information effectively
Economists as speakers
Present abstract concepts (e.g., consumer surplus)
Fail to emphasize key findings quickly
Fail to memorize key information

Fail to organize briefing
Fail to effectively defend analysis
Fail to understand or address needs of decision makers
Need more economists at higher levels
Decisions are made prior to economic analysis completion
Need better analyses

Analyses are poorly done because:
Need better data
Need better models
Fail to adequately explain assumptions
Fail to do sensitivity analysis
Fail to follow OMB guidelines
Need peer review
Need better economists
Better training opportunities
Hire better economists at higher grades
Promote and retain economists better
Economists lose skills too quickly
Need more staff fellows, rotation
Economists do not understand policy arena
Economists do not understand other sciences
Economists make too many mistakes
Need to integrate with risk assessment
Economists try and direct outcome to affect policy
Economists are poorly managed
Pressure to make economic analyses conform to decision
Not enough time given to do a good job
Not enough economists on staff
Funding for data is insufficient
Other_____