Humanizing Cost-Benefit Analysis

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I. Introduction

In the last twenty months, the Obama Administration has been taking an approach to regulation that is distinctive in three ways.

First, we have approached regulatory problems not with dogma or guesswork, but with the best available evidence of how people really behave.

Second, we have used cost-benefit analysis in a highly disciplined way, not to reduce difficult questions to problems of arithmetic, but as a pragmatic tool for cataloguing, assessing, reassessing, and publicizing the human consequences of regulation – and for obtaining public comment on our analysis. This emphasis on human consequences – on reducing or eliminating unjustified burdens on the private sector and on ensuring that high costs are justified by high benefits – is especially important in a period of economic difficulty. We have worked to put into place important safeguards while also making regulation compatible with the economic recovery, and while reducing the risk that costly regulations will have adverse effects on job creation, wages, prices, and economic growth as a whole.

Third, we have promoted transparency and open government in unprecedented ways. In domains ranging from nutrition and obesity to automobile safety to credit markets to energy efficiency, we have been using disclosure as a low-cost, high-impact regulatory tool. This new emphasis on transparency is compatible with a central goal of the Administrative Procedure Act, with its emphasis on public notice and comment – an idea that we are implementing with the aid of modern technology.

II. What works and what does not – In general

In a memorandum signed on January 30, President Obama emphasized that as a result of many years of experience, "Far more is now known about regulation – not only about when it is justified, but also about what works and what does not."

He explicitly directed the Director of the Office of Management and Budget, Peter Orszag, to produce recommendations for regulatory review that, among other things, "clarify the role of the behavioral sciences in formulating regulatory policy" and that "identify the best tools for achieving public goals through the regulatory process."

Consider three key findings:

1. Inertia: People are prone to inertia, and they tend to procrastinate. This is one reason that in many circumstances, the prevailing default rule tends to "stick" – if people are automatically enrolled in a savings plan, or a magazine subscription, they tend to continue. (I received a personal lesson to this effect, having subscribed to a number of not-so-great magazines for free for a period of several months – only to find that I was still receiving them, and paying for them, many years later.) Inertia is a powerful force. There is an issue here for energy consumption: How many households are aware that there may well be ways to save energy – and plan to investigate those plans tomorrow?
2. Social influences: People are much affected by the behavior of others, especially those in their social network. For example, obesity can be contagious, in the sense that people are significantly more likely to become obese if their friends are also obese. Healthy behavior can be contagious as well. The same is true of energy use and savings behavior. In many areas, the perceived actions and beliefs of others have an influence on what we do.
3. Salience: People are affected by incentives, to be sure; but incentives have to be salient in order to matter. Nobel Prize winner Daniel Kahneman has emphasized the central importance of the scarce resource of attention. Return to the area of energy conservation: People want to save money, but sometimes they don't. As a California company recently found, the presence of an "ambient orb", which glows red when energy use is high, produces large decreases in energy use.

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Let me mention just two other findings:

4. Unrealistic optimism: In many contexts, people display unrealistic optimism. In one study, about 90% of drivers say that they are better than the average driver and less likely to be involved in a serious accident. If you ask the average couple what percentage of the household labor each does, and if the total is not more than 100%, you have a most unusual couple. One study found that while smokers do not underestimate statistical risks faced by the population of smokers, they nonetheless believe that their personal risk is less than that of the average nonsmoker.
5. System 1 and System 2: Social science research suggests that human beings have 2 cognitive systems: System 1 is the automatic system, while System 2 is more deliberative and reflective. System 2 is a bit like a computer or Mr. Spock from the old Star Trek show; it runs numbers, carefully but sometimes slowly. It is deliberative. It hears a loud noise, and it assesses whether the noise is a cause for concern. It sees a delicious snack, and it makes a judgment about whether, all things considered, one should eat it. It is a planner more than a doer. System 1 works faster. It is emotional and intuitive. It hears a loud noise, and it is inclined to run. It certainly eats a delicious snack. It can be excessively fearful and too complacent. It is a doer, not a planner.

III. Default rules and simplification

An understanding of these findings has numerous implications for regulatory policy.

Consider, for example, the significant power of starting points, or default rules, for social outcomes. In the United States, workers have long been asked whether they want to enroll in 401(k) plans – pension plans that come with large economic advantages. The number of employees who enroll, or "opt in", is sometimes disappointingly low. Many employers have responded with *automatic enrollment*, by which employees are enrolled unless they opt out. The results are substantial. Far more employees enroll with an "opt out" design than with "opt-in."

This finding bears directly on regulatory policy. Consider these words from the 2010 Budget:

"Research has shown that the key to saving is to make it automatic and simple. Under this proposal, employees will be automatically enrolled in workplace pension plans – and will be allowed to opt out if they choose ... Experts estimate that this program will dramatically increase the savings participation rate for low and middle-income workers to around 80 percent."

In September 2009, the President expanded on this theme by offering new initiatives for increasing automatic enrollment. He said, "we know that automatic enrollment has made a big difference in participation rates by making it simpler for workers to save – and that's why we're going to expand it to more people."

In many other domains, it might be possible to achieve regulatory goals by selecting the appropriate default rules. And where it is not possible or best to change the default, we can have a similar effect merely by easing people's choices. The Administration has taken a series of aggressive steps toward simplifying the Free Application of Student Aid (FAFSA), reducing the number of questions and allowing electronic retrieval of information. Use of a simpler and shorter form is accompanied by steps to permit online users to transfer data previously supplied electronically in their tax forms directly into their FAFSA application.[1] These steps are enabling many people to receive aid, and to attend college, when similarly situated people would have a hard time doing so in the past.

Simplification also bears on disclosure requirements. In numerous domains, we have been using disclosure to help people to make informed choices for investments, safety, health, and more. We have been working hard to ensure that disclosure is clear and straightforward, not merely technically accurate, and that it responds to how people process information.

IV. Social norms

I have referred to the importance of social norms. Consider the following:

– With respect to energy use, people are greatly affected by the behavior of their peers. If people learn that they are using more energy than simi-

1 On the importance of such steps, see Eric P. Bettinger *et al.*, "The Role of Simplification and Information in College Decisions: Results from the H & R Block FAFSA Experiment", available on the Internet at <ssrn.com>.

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likely effects of what they propose to do. Science, including social science, is critically important.

These uncontroversial points suggest a particular defense and understanding of cost-benefit analysis. It is not possible to do evidence-based, data-driven regulation without assessing both costs and benefits, and without being as quantitative as possible.

We have attempted to avoid regulatory failure with extremely disciplined analyses of the likely effects of regulations, including a careful and transparent accounting of both benefits and costs. A few examples:

- In their rulemaking on fuel economy and greenhouse gas reductions for light-duty vehicles, both DOT and EPA offered systematic accounts of a wide range of benefits and costs – finding that the benefits of the rules exceed the costs by billions of dollars annually.
- In a rule protecting passengers from long delays on the tarmac, the Department of Transportation offered a rigorous, and highly quantitative, analysis of both costs and benefits.
- Workplace safety initiatives have also been transparent about benefits and costs, and have proceeded with a clear explanation that those initiatives have net benefits, measured in monetary terms.

VII. Numbers and beyond numbers

In a January 30, 2009 memorandum, President Obama pointed to the importance of "a dispassionate and analytical 'second opinion' on agency actions." He also asked the Director of OMB to address the role of three factors that are not always fully included in cost-benefit analysis: the interests of future generations; distributional considerations; and fairness.

If regulation is to be data-driven and evidence-based, it must include, rather than neglect, those who will follow us. Consider the recent effort of an interagency working group within the United States Government to develop figures for the social cost of carbon – figures that were recently used for several regulations. The figures were designed to recognize the adverse effects of such emissions on future generations.

Nor can sensible regulation ignore distributional considerations. If regulation would impose serious costs on the least well-off, or deliver significant benefits to them, regulators should take that point into account in deciding how to proceed. Of course fairness matters. These points have been recognized in many rules over the past year, including rules eliminating the HIV entry ban, where careful analysis of quantities and monetary equivalents was complemented by an appreciation of the humanitarian values at stake:

"The primary benefit of this rule is that each year an additional 4,275 (range of 1,073 to 6,409) immigrants who otherwise qualify for entry but are denied based solely on HIV status will now be able to enter the country. Although we are unable to quantify all of the benefits of this change in policy, we believe it will help reduce stigmatization of HIV-infected people; bring family members together who had been barred from entry (thus strengthening families); and allow HIV-infected immigrants with skills in high demand to enter the U.S. to seek employment and contribute as productive members of U.S. society, and if they are able to obtain better health care in the United States, to improve health outcomes and productivity. There are also ethical, humanitarian, distributional, and international benefits that are important but difficult to quantify."

These various examples suggest the need to humanize cost-benefit analysis in two ways – first by ensuring that we focus on human consequences in the most disciplined possible way, and second by understanding that monetary equivalents cannot tell us everything we need to know.

VIII. Open government

President Obama has placed a great deal of emphasis on open government. In calling for transparency, the President has emphasized three quite separate points.

First, he has emphasized the importance of accountability and stressed the words of Supreme Court Justice Louis Brandeis: "Sunlight is said to be the best of disinfectants." Second, he has said that transparency enables people to find information that they "can readily find and use"; for this reason, he has said that agencies "should harness new technologies" and "solicit public feedback to identify information of greatest use to the public." Third, he has said that "[k]nowledge is widely dispersed in society, and public officials benefit from having access to that dispersed knowledge" and hence to "collective expertise and wisdom."

In these ways, the President suggested that transparency can serve as a *disinfectant*; provide *data* for citizens to find and use; and ensure that institutions benefit from the *dispersed knowledge* of Americans.

Taken as a whole, these points suggest that if regulation is to be empirically informed, it must be in large part because of the knowledge and participation of the American people.

In the United States, a significant success story for "sunlight" is the Emergency Planning and Community Right-to-Know Act, enacted by Congress in 1986 in the aftermath of the Chernobyl nuclear plant disaster in the Soviet Union. At first, this law seemed to be merely a bookkeeping measure, requiring a Toxic Release Inventory in which firms reported what pollutants they were releasing. But the law has had dramatic beneficial effects, spurring large reductions in toxic releases throughout the United States. And in March of 2009, the Administration worked with Congress to strengthen the Toxic Release Inventory by lowering the thresholds for reporting releases of more than 650 toxic chemicals.

The Environmental Protection Agency has built on this precedent and issued a Greenhouse Gas Reporting rule, requiring disclosure by the most significant emitters. The data will also allow businesses to track their own emissions, compare them to similar facilities, and provide assistance in identifying cost-effective ways to reduce emissions in the future.

Or consider Data.gov, a new government website that allows the public to download Federal datasets to build applications, conduct analyses, and perform research. Early usage of the website suggests that individuals and organizations are not only viewing the data, but they are repurposing it. When Data.gov was launched, the Sunlight Foundation launched a parallel competition to elicit from the public the most innovative applications based on data available from the government site. Within days, there was a new application called "FlyOnTime.US," which uses data from the Bureau of Transportation Statistics to allow consumers to see estimated versus actual flight times for flights on major commercial carriers.

All this is merely a glimpse at an unprecedented effort to democratize data. Consider as well the following:

– The Department of Transportation has issued a passenger protection rule that will ensure clear, available information about prolonged delays at the airport. The same Department has proposed a rule that would call for disclosure of information about the safety, durability, and fuel efficiency of tires. On data.gov, the Department of Transportation has released a great deal of new information about car safety and about infant safety seats.
– The FDA has signaled its intention to police deceptive front-of-the-package labeling and to investigate methods for ensuring accurate labels, so that people will have a clear and simple way to see key nutritional information.
– The Occupational Safety and Health Administration has, for the first time, listed fatality information on its website. When workers die on the job, the public can learn about it – a step that might well end up increasing safety.

OMB's Open Government Directive attempts to institutionalize transparency and accountability, with ambitious plans and deadlines for increasing openness. Within forty-five days, agencies and departments were asked to produce and to post at least three high-value sets – and they did. Shortly thereafter, they were asked to produce "/open" sites, seeking public engagement with their efforts to increase transparency – and eventually to produce ambitious, concrete open government plans.

IX. Conclusion

In the regulatory domain, the Obama Administration has moved in three directions, all designed to ensure that regulation is empirically informed.

Armed with an accurate understanding of human behavior, we have suggested fresh, effective, low-cost methods for achieving regulatory goals, in domains ranging from consumer protection to workplace safety to energy efficiency to driver distraction to childhood obesity. Seeing cost-benefit analysis as a pragmatic tool, we have emphasized the importance of science and economics, of eliminating unjustified burdens, and of ensuring that benefits justify the costs. Stressing the importance of transparency, we have sought to engage the public in evaluating regulation, benefiting from dispersed knowledge and thus improving rules by reducing burdens, increasing benefits, and often moving in creative directions.

I have emphasized what we all know: This is a period of acute economic distress. Regulations must be designed in a way that promotes, and does not undermine, the continuing recovery. A transparent accounting of consequences – of costs and benefits – is indispensable. If we look before we leap, with a commitment to openness and transparency, we are going to be finding unprecedented opportunities for improving and even extending people's lives.