Saint Louis University Public Law Review

Volume 20
Number 1 *Ten Years After the Clean Air Act Amendments: Have We Cleared the Air? (Volume XX, No. 1)*

Article 10

2001

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Recommended Citation

Pedersen, William F. (2001) "Costs Matter: Effective Air Quality Regulation in a Risky World," *Saint Louis University Public Law Review*: Vol. 20 : No. 1 , Article 10.
Available at: https://scholarship.law.slu.edu/plr/vol20/iss1/10

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COSTS MATTER: EFFECTIVE AIR QUALITY REGULATION IN A RISKY WORLD

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I. INTRODUCTION

I want to present an argument that agencies should consider costs in making complicated scientific regulatory decisions that is somewhat different from the standard argument in support of a cost-benefit approach. Although I think what I am saying should have general application, I will focus particularly on the establishment of National Ambient Air Quality Standards by the Environmental Protection Agency.[1] In this article, I will argue both that EPA should consider costs, in the particular sense that I am mentioning, and that the statute allows this.

Let me begin by saying that in a world of limited resources, some type of cost consideration is, as we all know, inevitable. Statements that costs should not be considered in a particular context really mean that the cost-benefit decision reached by one social entity should not be second-guessed by another. The question thus becomes which organ of government should consider costs, and at what point in the regulatory process. I concede there is a substantial argument that Congress can legitimately decide that certain social goals are worth any likely cost of achieving them, and that Congress can in consequence forbid the second-guessing of that judgment in the regulatory process. However, even if we concede that point, there is *still* a very strong argument

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This article was written before the Supreme Court's decision in *Whitman v. American Trucking Association*, 121 S. Ct. 903 (2001) and has not been updated to reflect that decision.

1. 42 U.S.C. § 7409; Clean Air Act § 109. The purpose of this section is to have the EPA Administrator set the national ambient air quality standards for criteria air pollutants and then have the states decide how to control local pollution sources so as to meet those standards through state implementation plans. *See also id.* at § 110. The air quality criteria are supposed to "accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollution. *Id.* at § 108(a)(2).

that when *agencies* evaluate the *meaning* of uncertain data to carry out such a command, costs should be considered. Failure to consider costs in this context is likely to produce economically inefficient regulations without foundation in any intelligible principle.

II. DISCUSSION

In making any policy decision, costs must be considered somewhere. In a world of limited resources, no goal is ever attained to the maximum extent possible. Even the achievement of such pressing, or imperative, goals as national defense, prevention of disease, or provision of an adequate level of education is subject to explicit or implicit cost constraints. Environmental protection is no different. The question is rather which level of government should make the fundamental judgment on defining social goals and how much to invest in pursuing them.

A. *Arguments Why Congress Should Consider the Costs of Achieving Goals and Agencies Should Not*

In confirmation of the point I just made, most of the arguments against considering cost in making regulatory decisions really boil down to the argument that Congress has already decided on a proper role for costs, and meant to exclude any agency second-guessing. That is the way the opponents of considering costs in setting air quality standards in fact argued their point. A number of arguments why this approach is proper have been advanced. I will list them from strongest to weakest (in my personal opinion).

1. The Role of Congress

It can well be argued that the ultimate, or even the secondary, goals of our society should not be selected through cost-benefit analysis even if cost judgments are proper in selecting the means. Propositions such as "every child should master basic academic skills" or "the public health should be protected against damage from air pollution" can articulate legitimate goals regardless of the practicality of achieving them. Congress as an elected body is far more suited than an agency to articulate such generic goals. However, if goals are to be meaningful, Congress cannot stop simply at articulating them. Since attaining each Congressional mandated goal requires resources that could be used to attain some other public or private goal, Congress must also specify at least in rough-cut form the "budget" of social resources to be invested in pursuing each such goal if its decision is to be meaningful.

Such a system, in which Congress specifies basic public ends and (to some extent) the means for achieving them, is more politically responsible than a regime of universal cost-benefit analysis administered by agencies. It is

probably more "transparent" as well, and provides greater opportunities for public involvement.

2. Correcting Agency Inaction

Agencies, it is often said, with considerable justification, have a bias against action, whether that action is needed to establish some new protection for the public, or to reform a misguided or obsolete program. Some claim that unless Congress overcomes that bias with a strong command, nothing will get done.

In a further, more debatable step, some argue that consideration of costs itself embodies a bias against action. The costs of an action are far easier to quantify and appreciate than its benefits. Therefore, laws must be structured to specifically downplay the role of costs in attaining a goal, or nothing will get done.

3. Correcting the Political Balance

Certain groups and interests, it is said, are underrepresented in our society. Precisely because of that underrepresentation, they are entitled to "seize the moment" and "lock in" a resolution favorable to their agenda.

B. Arguments Against Setting Goals Without Considering Costs in Any Way

1. The Relationship Between Congressional Goal-Setting and Agency Cost-Consideration

The argument for generic Congressional specification of goals and "budgets" for achieving them in a way that cannot be defeated by agency cost-benefit analysis has considerable force. But even if we accept it, it does not show that consideration of costs should be banished from agency selection of the means for achieving that goal. For example, even if Congress states that air quality standards should be set without considering the costs of attainment or the benefits of compliance, that *still* does not mean that costs should be entirely banished from the setting of any individual standard. Let me explain this seeming paradox.

Congress may be able to describe a social goal in generic terms and direct that it be attained without considering costs. However, given the limits on congressional time and resources, the description of that goal will almost inevitably be general, and will often lack operational significance precisely because of its generality. In such circumstances, agencies will have to evaluate specific facts relevant to the generic Congressional command and issue particularized regulations that will become the actual focus of attainment efforts. So, for example, Congress has specified that the public health must be protected with an "adequate margin of safety" against damage from all widely

occurring air pollutants,[2] but it falls to EPA to give that language meaning by setting particular air quality standards, at particular numerical levels, for particular pollutants.[3]

The data on which such standards must be based almost never points clearly to a given degree of harm at a given level of pollution. Instead, it will depict a blur of probabilities. Often, at any given pollution level, harm can neither be shown to exist nor shown to be absent, much less quantified precisely. When data is uncertain in this manner, allowing the agency to rely on it to set particularized goals without considering costs or other practical consequences runs a real danger of making the agency decision "opaque" to outside analysis and review. The abstract question when uncertain evidence of risk, considered all by itself, is an adequate basis for regulation is too elusive to be consistently answered. Put another way, reliance on only those aspects of uncertain studies that argue for stricter regulation, without any consideration of most of the factors that might induce a reasonable decision-maker to reject such uncertain evidence, allows the agency to be risk-accepting or risk adverse at will without any defining principle. In deciding whether to rely on uncertain data in ordinary life, we all take account of the costs of acting on it. We would be far more likely to have a medical procedure to correct a given harm performed, rather than waiting for more tests, if that procedure were cheap and painless as opposed to costly and painful. By ruling out such a common-sense approach to weighing uncertain data, a "no consideration of costs" approach can result in the delegation of even more arbitrary power to the agency than would result from a full-scale cost-benefit test.

Once a particular goal has been set based on uncertain data, considering costs later, as a guide to, or restriction on, efforts to attain it provides a very imperfect fix to the problem just identified. The essence of that problem is that the agency has arbitrary power to set the goal based on strong or weak data without regard to consequences. Moderation in efforts to attain the goal is not responsive to this problem, since moderation might be appropriate to goals based on weak data but not to goals based on strong data.

Particularized goals that do not consider costs in weighing the data are also likely to be economically inefficient. The decision to set a standard based on uncertain data is properly analogized to the purchase of insurance. But if we are precise about that analogy in the air quality standards context, the public health concerns identified in the uncertain studies is the risk insured against, while the costs and disruptions of implementing the standard are the price of the insurance. In that context, one might well ask how we can "buy the insurance"—that is, set the standard—without evaluating as best we can both

2. 42 U.S.C. § 7409(b)(1).
3. *Id.*

the risk being insured against and the cost of insurance—that is, the cost of the control efforts that an affirmative decision to regulate would trigger.

2. Other Arguments Against Considering Costs

The other arguments raised against agencies considering costs when they regulate are, to my mind, far less substantial than the first.

- Agency Bias Against Action

It is true that agencies often have a strong bias against action. But that has nothing to do with whether they should consider costs or not. "Action forcing" devices can operate equally well with or without considering costs. Action forcing devices consist of statutory deadlines for taking particular actions, such as promulgating regulations, and "hammer" provisions. The Clean Air Act is full of statutory deadlines. When such a deadline is missed, as it often is, it becomes enforceable by "citizen suit" under section 304 as a "nondiscretionary duty." A "hammer" provision states that if an agency does not act by a particular date, very undesirable consequences automatically follow. The prime example is in RCRA, where Congress provided that if treatment standards were not issued by particular dates, any disposal on land of the affected wastes would be forbidden.

- Costs Are Easier to Quantify

The notion that costs in the narrow financial sense are easier to quantify and have greater impact than benefits is certainly incomplete and may often be approximately the reverse of the truth. Direct compliance costs are sometimes overestimated. But often the major costs of compliance are "intangible"—applying for and waiting for a permit, and the loss of staff time and disruption to production schedules if the permit is delayed.[4] Most industries say that for most regulations, these "process costs" are far more significant than the direct costs of compliance.

- Risks Should Be Balanced Against Costs

Risks are not balanced against cost, measured as dollars spent for compliance, as often as you might think. In most regulatory areas practically no provable health cost from a large industrial activity is acceptable, no matter what the costs of abating it. Instead, such costs are considered in that context

4. Among its innovations, the 1990 Amendments instituted a national permit program, which had long been an integral part of the Clean Water Act, but lacking in the Clean Air Act. *See* 42 U.S.C. §§ 7661(a)–(f). As of January 1998, state and local permitting authorities received nearly 14,000 applications for operating permits—representing more than 60% of the estimated 22,000 sources subject to the Title V operating permit program nationwide. ENVIRONMENTAL PROTECTION AGENCY, AIR POLLUTION OPERATING PERMIT PROGRAM UPDATE (EPA/451/K-98/002, Feb. 1998).

almost exclusively as an aid to deciding when to take action based on uncertain data of the sort described above.

- Environmental Advocates Have No Power

Contrary to any claims of powerlessness, environmental advocates have been extremely successful in obtaining the passage of legislation that imposes major compliance costs on industry without any cost benefit test. But sometimes "costs" do not consist of anonymous balance sheet impacts, but changes to long-established life-styles and expectations. People are far more reluctant to give up their freedom to drive when and where they wish, or use land as they wish, than they are to pay money.

- The Impact of Public Opinion

The practice of setting regulations without considering costs helps create a regulatory system that cannot deal with these primal elements of public opinion. The inevitable pressure to consider costs somewhere tends to restrict regulations that do not consider costs to addressing activities, which can practicably be regulated without considering costs very much. The result is a set of rules targeted on some, but not all, "major sources" of environmental damage.[5] We can imagine a rule that requires major factories to abate the risks they create without regard to costs. No such rule applicable to farmers can be imagined. Yet farming, not factories, is now the country's major source of water pollution.[6] The political system, in its fixation on not considering costs, is on the path to trading away the prospect of rules that could address all sources of an environmental problem, precisely because they did so in a manner that was balanced across the board, for rules that have limited applicability precisely because of their unrealistic stringency.

C. Application to the NAAQS Debate

In the particular air quality standards context, the question whether Congress intended a full cost-benefit balancing test to establish NAAQS is something of a straw man. The specific evidence against that is strong. The

5. The Clean Air Act defines "major source" in various ways. It is a source with the potential to emit more than ten tons a year of hazardous air pollutants or more than twenty-five tons per year of all hazardous air pollutants taken together, or a source in an "attainment area" with the potential to emit 250 or 100 tons a year, *see* CAA §169(1), or sources with smaller but still substantial emissions potentials in "nonattaiment" areas. *See, e.g.,* CAA §181.

6. Nonpoint source pollution remains the nation's largest source of water quality problems today. The latest National Water Quality Inventory indicates agriculture is the leading contributor to water quality impairments, degrading 60% of the impaired river miles and half of the impaired lake acreage surveyed by states, territories, and tribes. NONPOINT SOURCE POLLUTION: THE NATION'S LARGEST WATER QUALITY PROBLEM (citing Water National Quality Inventory, 1994), *available at* http://www.epa.gov/OWOW/NPS/facts/point1.htm.

real question is whether Congress denied costs (in the larger sense) *any role* in setting NAAQS. The second is that the relevant statutory language directs EPA to set air quality standards that "protect the public health" with an "adequate margin of safety."[7] Under the rule laid down in the *Chevron* case,[8] EPA may consider costs in setting NAAQS unless the text of the statute makes "unmistakably clear" that Congress meant to bar cost consideration.[9]

One might argue whether the reference to "public health" displayed that intent or not. By contrast, I cannot think of any reasonable argument that the use of the term "adequate margin of safety" denotes intent to exclude costs. A standard that incorporates a "margin of safety" is one that goes beyond addressing provable harms. In common parlance, an "adequate margin" is one set after weighing *all* the consequences of a setting a lower standard than the "hard evidence" justifies, not a standard based on only a partial consideration of some of the consequences. If a standard set to provide a "margin of safety" is insurance, then, for the reasons given above, that analogy, too, supports considering the "cost" of the "insurance." Moreover, the fact that costs can be weighed, for limited purposes, during the implementation process does nothing to show that Congress meant to rule out considering costs in setting the "margin of safety" because it does nothing to correct the defects that would arise from not considering them. Those defects concern the establishment of a standard that does not rest on responsibly evaluated evidence and thus is thinly justified. Moderation in the means for achieving such a standard does nothing to correct its basic defects.

Apart from the plain meaning of the statutory language, the legislative history affirmatively suggests that costs and practical impacts should be considered in evaluating ambiguous data. Discussing the original "margin of safety language," the Senate Report on the 1970 Clean Air Act Amendments said that "margins of safety are essential to any health-related environmental standards if a reasonable degree of protection is to be provided against hazards which research has not yet identified."[10] I cannot see any way to read the language directing the establishment of "reasonable" protection against "unidentified" hazards that would rule out consideration of costs as a matter of law. On the contrary—if the risk is "unidentified" how other than by considering costs could the "reasonable" degree of protection be identified?

When Congress amended the Act in 1977, it emphasized the importance of protecting public health, but made clear that "public health" protection did not embrace a "no-risk philosophy" because that "ignores all economic and social

7. 42 U.S.C. § 7409(b)(1).
8. Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837 (1984).
9. *Id.* at 842-43.
10. S. REP. NO. 91-1196, at 10 (1970).

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consequences and is impractical."[11] But if Congress did not adopt the "impractical philosophy" of ignoring "all economic and social consequences" for setting NAAQS, then it must have intended economic and social consequences to be considered in some manner when NAAQS were established.

III. CONCLUSION

Let me conclude with an open question. If the evidence above shows that EPA is not precluded from considering costs in setting NAAQS, at least when it assesses the regulatory significance of uncertain data, does that mean that EPA *may* consider costs in that context, or that it *must* do so?

In my tentative view, it means that EPA *must* consider them. That is so because even if EPA has the legal freedom under *Chevron* not to consider these costs, the law also requires the agency in these circumstances to give a reasonable justification for refusing to consider them. But precisely because considering costs in evaluating the meaning of uncertain data corresponds so precisely to how such decisions are ordinarily made in the absence of legal constraint, it is hard to see what justification EPA could offer for departing from that course if it could not rely on the trump card of legislative command.

11. H.R. REP. NO. 95-294, at 127 (1977).