

To: Administrator Howard Shelanski, OMB  
From: Professor Wayne Gray, Clark University  
Re: OMB draft 2014 report on benefits and costs of federal regulation  
Date: December 8, 2014

I read through the draft report. It provides a great amount of information on new and recent federal regulations, and the discussion of the economic impacts of regulation is well-organized. I did have a few comments and suggestions which you might want to consider incorporating.

I was struck by one labeling issue. In the table of contents, the heading for chapter I, section D mentions wages, but not employment. This seems odd. The I.D.3.b subsection heading on p. 40 mentions the impact on “wages and employment”, and nearly all of the empirical studies looking at environmental regulation in that area focus on employment effects. Yes, employment effects on regulated industries might be offset by effects on other industries (including those providing pollution control equipment), and in a general equilibrium model there might be little long-run employment effects. However, the policy debate in recent years has focused on employment effects, so I think that should be reflected in the table of contents (by adding “and employment” after wages).

I was surprised that the discussion of measuring employment effects of environmental regulation didn't mention anything about the Morgenstern, Pizer, and Shih article (*Journal of Environmental Economics and Management*, 2002). My impression was that the results of this article has been used frequently by EPA in calculating the employment effects of new environmental regulations. It is true that this represented a misuse of the article's results, since it involved taking a single number from one study, reflecting the average employment impact of pollution abatement costs on a small number of industries, and applying it to new regulations on different industries. Still, if one wanted to discuss how regulatory agencies have tried to implement the requirement for considering employment effects, it seems odd not to mention a paper that has been used extensively in that area.

I have a recent publication that measures employment effects of a specific regulation, the EPA's Cluster Rule affecting the pulp and paper industry. I'm not sure it belongs here (section I.D.3.b), since the other papers you cite are looking at employment effects of environmental regulation on a wider set of industries – but I thought I'd mention it, just in case. Gray, Wayne B., Ronald J. Shadbegian, Chunbei Wang, Merve Meral, "Do EPA regulations affect labor demand? Evidence from the pulp and paper industry", *Journal of Environmental Economics and Management*, 68(2014), pp. 188–202.

Your request mentioned a focus on the retrospective review of regulation, which is timely since I was at a workshop last week at Resources For the Future on this topic. I was surprised to see so little space in the report devoted to retrospective review – one paragraph in the executive summary (p.3) and one page in the body of the report (section II.A, pp. 53-54). I know you've got lots of tables you need to include in the report, but this treatment (especially in the body of the report) seemed a bit thin.

This section could mention existing efforts by regulatory agencies (or others) to do retrospective analyses – including EPA's 2012 efforts to do retrospective cost analyses on five existing regulations. Those efforts would clarify the existing difficulties in doing retrospective analyses and help motivate some suggestions for improvements in the process.

I see three broad areas in which regulatory agencies can facilitate retrospective analysis. First, the text of the regulation can commit the agency to doing a retrospective review, including the data and methods that would be used for this review. This would provide an opportunity for public comment ahead of time, possibly generating suggestions that would be useful in planning the review. It would also enable the agency to identify the necessary data ahead of time, including baseline data for measuring the impacts,

and possibly justify some effort of data collection and reporting by the regulated firms. Much of this area is already covered in the report.

Second, the initial prospective analysis of the regulation (RIA) should be conducted in a way that facilitates future retrospective analysis. The RIA should be clear about the possible methods that firms could use to comply with the regulation, what factors would influence the choices of these methods, and any heterogeneity across firms in the methods expected to be used. Where possible, this should include a broad range of compliance methods, not just those that are currently feasible and economical. The RIA should also be clear about other assumptions and consider the sensitivity of its conclusions to potential changes in conditions, such as industry structure and key prices (wages, oil prices, etc.). The data and methods used in the analysis should be archived and made available for retrospective analysis (current retrospective analyses often have difficulty in reproducing the results of the initial RIA, which calls into question the comparison of results between the prospective and retrospective numbers).

Finally, agencies should actively plan for and support retrospective analysis after the regulation takes effect. These analyses could be done by agency personnel, but some might also be done by external researchers interested in measuring the benefits and costs of regulation. In any event, there are several ways in which agencies could help:

Most agencies conduct inspections of regulated firms to ensure their compliance. During the years before and after implementation of a new major regulation, inspectors could be asked to identify the compliance methods being used at different firms. These compliance methods could then be compared to those anticipated in the RIA.

Many agencies also collect data on regulatory outcomes which are needed for measuring benefits. For environmental regulation these include pollution emissions from facilities and ambient air/water quality; for workplace safety regulation these include workplace injuries and illnesses. Improving the quality of these data with an eye towards improving their use in retrospective analyses could be very helpful.

On the cost side, it can often be difficult to develop consistent data sources over time. In this context, I'd like to note the possibility of resuming the Census Bureau's Pollution Abatement Costs and Expenditures Survey, which was conducted annually from 1973 to 1994, but then only in 1999 and 2005. This was a valuable resource for identifying cost impacts of environmental regulation and formed the basis for much of the research that has been done in that area. For retrospective analysis, its regular collection would provide a baseline of costs before the regulation to help identify the incremental costs of new regulations.

While funding for retrospective analysis is helpful, it would also be valuable to know that the agency would be paying attention to the results of the analysis and potentially incorporating lessons learned into future regulations, since that would raise the visibility (and value) of retrospective analyses in both the policy-making and research communities.

I hope these comments are helpful. I'd be happy to provide further information or feedback if necessary.