



## **AN UNMISTAKABLE PATTERN**

### **New government reports underscore that the benefits of regulations far exceed the costs**

BY ISAAC SHAPIRO

**D**uring the first few months of this year, the new House majority has led a wide-scale attack on regulations, claiming that they significantly undermine job creation and dampen economic growth. This perspective is inaccurate, as a forthcoming EPI study will demonstrate. This issue brief takes up a related concern: The critique on regulations is too narrow. Regulations have multiple purposes, including protecting people and the environment from harm. While the effects of regulations on the economy and employment are important to consider, these effects constitute far too limited a frame to assess regulations' merits.

Determining the true value of a regulation requires undertaking a comprehensive assessment of its effects—both positive and negative. One approach to such an assessment is cost-benefit analysis, which all federal executive agencies are required to conduct before releasing major rules.

At the beginning of March, the federal government issued two new cost-benefit reports, both mandated by congressional legislation. One report focuses on the costs and benefits of all major regulations reviewed by the Office of Management and Budget over the past 10 years. The other focuses on the far-reaching Clean Air Act Amendments of 1990. Both show that the benefits to regulations far exceed their costs. Of further interest, when the current OMB data is combined with OMB data covering earlier decades, the pattern is the same: the net benefits of regulations have consistently dominated their costs.

#### **The OMB data show benefits far exceed costs**

Cost-benefit analysis is a complex and controversial undertaking that assigns dollar figures for as many costs and benefits as feasible. This approach attempts to “monetize” certain outcomes, such as the value of saving lives, that by their very nature defy simple measurement.<sup>1</sup> Further, some benefits and costs defy quantification altogether.

While the results from cost-benefit analysis should not be considered precise, they can shed light on the effects of regulations. The Office of Management and Budget's annual report to Congress summarizing the prospective costs and benefits of regulations is the most comprehensive source of information about the effects of regulations.

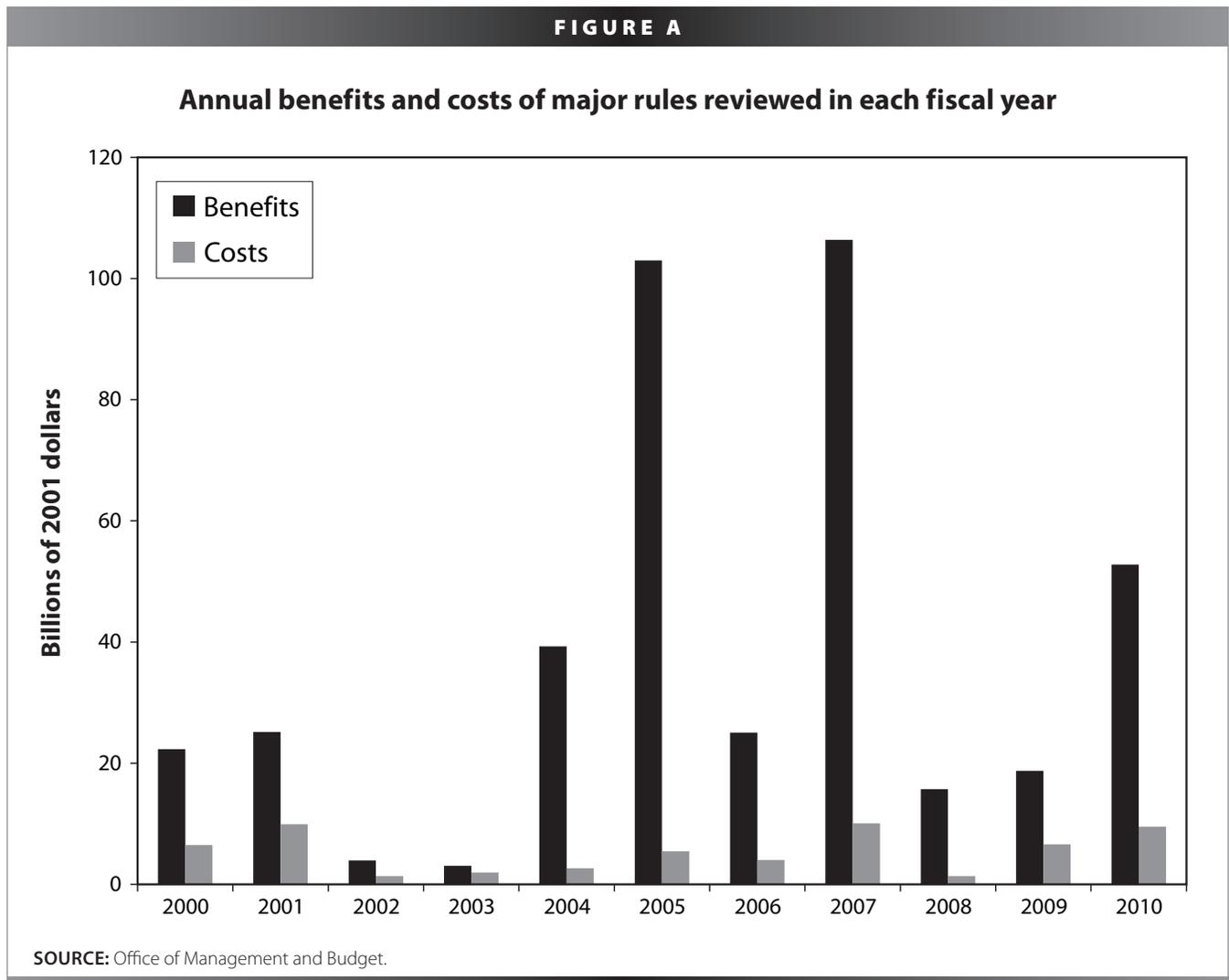
The latest such report focuses on the benefits and costs of major regulations reviewed by OMB over the 10 fiscal years from 2001 to 2010.<sup>2</sup> The report's release is the first of a two-stage release process. OMB initially releases their annual cost-benefit reports as drafts open to public comments; some of the public comments are incorporated into the final report issued later in the year. The OMB figures cited in this issue brief are unlikely to change, however. Last year, for instance, the main cost-benefit tally in the OMB report did not change from the draft to the final report.

OMB reviews major regulations produced by executive agencies (such as the Environmental Protection Agency, the Department of Health and Human Services, and the Department of Transportation) and, as noted, subjects such regulations to mandatory cost-benefit analysis.<sup>3</sup> Federal law does not require cost-benefit analyses or OMB review of regulations by independent regulatory agencies, such as the Federal Reserve Board or the Securities and Exchange Commission.

The central finding of the new OMB report is that the combined value of the benefits of the major regulations reviewed by OMB far exceeds their combined cost. OMB estimated that the value of the annual benefits from these 10 years of regulations total \$136 billion to \$651 billion and the annual costs total between \$44 billion and \$62 billion (OMB expressed all figures in 2001 dollars).<sup>4</sup> This positive relationship (of benefits exceeding costs) held true for the regulations of every agency considered, but the majority of the total benefits were from EPA's clean air regulations.

OMB also broke out its findings by the regulations reviewed in every single year during this period, as well as in fiscal year 2000 (the annual estimated benefits of the major regulations reviewed that year totaled \$13 billion to \$32 billion, exceeding estimated annual costs of \$6.3 billion to \$6.6 billion).<sup>5</sup>

Consistent with the general finding, the value of the annual benefits of the major rules reviewed in each individual year by OMB exceeded their annual costs. OMB's graph of this trend (a version of which is reproduced in **Figure A**)



uses the midpoints of the range of costs and benefits of the regulations reviewed each year. For example, the estimated combined annual benefits of the major regulations reviewed by OMB in fiscal year 2010 ranged from \$23 billion to \$82 billion, with a midpoint of \$53 billion; combined costs ranged from \$6.5 billion to \$12.5 billion, with a midpoint of \$9.5 billion.<sup>6</sup>

On average, the value of the estimated annual benefits of the major regulations reviewed each year was seven times their cost.

For information about analogous regulations issued by executive agencies prior to fiscal year 2000, it is helpful to examine an earlier OMB report. In its report to Congress in 2000, OMB estimated the annual costs and benefits of all “social regulations” in place in early 1999 (social regulations include the rules issued by executive agencies such as the EPA; the nature of rules covered correspond to the data cited for 2000 onwards).

The previous OMB analysis found that the benefits of these earlier regulations were also substantially greater than their costs. Specifically, the report estimated that the annual measured benefits of all social regulations in place as of the first quarter of 1999 ranged from \$254 billion to \$1.8 trillion, while the annual costs ranged from \$146 billion to \$229 billion (these figures are in 1996 dollars).<sup>7</sup>

In sum, the recent OMB report covering the past 10 years of major regulations, information for fiscal year 2000, as well as an earlier report covering prior years, share a main finding. According to the OMB cost-benefit analyses, the value of the benefits of the regulations put in place in recent decades have far exceeded their costs. (See **Table 1**.)

**TABLE 1**

**Benefits from regulations consistently exceed costs**

<b>Regulations covered</b>	<b>Estimated annual benefits</b>	<b>Estimated annual costs</b>
Major regulations reviewed by OMB in fiscal years 2001-2010	\$136 billion to \$651 billion (2001 dollars)	\$44 billion to \$66 billion (2001 dollars)
Major regulations reviewed by OMB in fiscal year 2000	\$13 billion to \$32 billion (2001 dollars)	\$6 billion to \$7 billion (2001 dollars)
Social regulations in place as of the first quarter of 1999	\$254 billion to \$1.8 trillion (1996 dollars)	\$146 billion to \$229 billion (1996 dollars)

**NOTE:** The figures for the different periods should not be added together.

**SOURCE:** Office of Management and Budget.

## The EPA study shows significant benefits of the Clean Air Act Amendments of 1990

On March 1, the Environmental Protection Agency released a comprehensive study of the costs and benefits of the Clean Air Act Amendments of 1990. These wide-ranging amendments to the 1970 Clean Air Act (which had also been amended in 1977) established new programs to control acid rain and the depletion of the stratospheric ozone. The amendments also strengthened and tightened up already existing aspects of the act, refined permitting requirements, and reformed the hazardous air pollutant regulatory program.

This study—which was extensively reviewed by an outside panel of experts—found these amendments to be enormously beneficial. The study’s central cost-benefit estimate is that the Clean Air Act Amendments of 1990 had net benefits in 2010 of \$1.2 trillion (expressed in 2006 dollars), with benefits exceeding costs by a ratio of 25-to-1. The central estimate found costs of \$53 billion in 2010 and benefits of \$1.3 trillion.<sup>8</sup> (The low estimate for benefits provided by the

study—reflecting the 5th percentile results from a statistical uncertainty analysis—is \$160 billion; the high estimate for benefits—reflecting the 95th percentile results from a statistical uncertainty analysis—is \$3.8 trillion.)

Other information in this study describes the estimated health benefits produced by the Clean Air Act Amendments of 1990. In 2010 alone, these include:

- 165,000 lives saved
- 13 million additional days of work (and productivity) because employees were healthier
- 3.2 million additional days of school attended because students were healthier
- 130,000 heart attacks prevented
- 86,000 fewer hospital admissions
- 54,000 fewer cases of chronic bronchitis

The information in the EPA study also makes it possible to ballpark the cumulative effects of the Clean Air Act Amendments of 1990 to date. For example, the figures suggest that the amendments have already saved in the range of 1.8 million lives (see **Table 2**). By the end of this year, the estimated number of lives saved will grow to nearly 2 million.

**TABLE 2**

**Clean Air Act Amendments of 1990 provided enormous health benefits**

<b>Health benefits</b>	<b>2010</b>	<b>Cumulative through 2010</b>
<i>Lives saved</i>	165,000	1,797,000
<i>Additional work days</i>	13,000,000	136,000,000
<i>Additional school days</i>	3,200,000	27,200,000
<i>Heart attacks prevented</i>	130,000	1,347,000
<i>Fewer hospital admissions</i>	86,000	841,000
<i>Fewer cases of chronic bronchitis</i>	54,000	569,000

**SOURCE:** Environmental Protection Agency. The figures for 2010 are directly from the EPA study. The cumulative estimates were calculated by the author based on the EPA figures.<sup>9</sup>

Of further interest, the health benefits listed above do not include all the benefits that were monetized for the study; the table does not include, for instance, the fewer number of emergency room visits (86,000 in 2010) or fewer asthma “exacerbations” (1.7 million). The discussion above also does not include any of the considerable benefits from the Clean Air Act Amendments of 1990 that the study was unable to quantify in dollars.

## **An unmistakable pattern**

The information here portrays an unmistakable pattern: For decades the value of the benefits of regulations has consistently and significantly outweighed their costs. The Clean Air Act Amendments of 1990 stand out as a particularly meritorious example, yielding enormous health benefits, including benefits of direct aid to the economy (through increased work days and productivity) and saving an extraordinary number of lives.

---

## Endnotes

1. Some of the fundamental problems with cost-benefit analysis, especially when applied to environmental issues, are summarized by Professor Lisa Heinzerling at <http://www.grist.org/article/cost-benefit-environmentalism-an-oxymoron>.
2. See [http://www.whitehouse.gov/sites/default/files/omb/legislative/reports/Draft\\_2011\\_CBA\\_Report\\_AllSections.pdf](http://www.whitehouse.gov/sites/default/files/omb/legislative/reports/Draft_2011_CBA_Report_AllSections.pdf)
3. Major regulations are those that, for example, produce an annual effect on the economy of more than \$100 million (in 1996 dollars). OMB has found that the majority of the costs and benefits resulting from the regulations it reviews are from major regulations: "...our evaluation of a few representative agencies [for its 2004 report] found that major rules represented the vast majority of the benefits and costs of all rules promulgated by these agencies and reviewed by OMB." Office of Management and Budget, Office of Information and Regulatory Affairs, *Draft 2011 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities*, March 2011, page 21.
4. Ibid., page 13.
5. Ibid., page 114.
6. Ibid., page 20.
7. <http://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/2000fedreg-charts.pdf> see Table 4. The wide range for aggregate benefits largely reflects different estimates of the benefits of environmental regulations.
8. United States Environmental Protection Agency, Office of Air and Radiation, *The Benefits and Costs of the Clean Air Act: 1990 to 2020*, Final Report, March 2011, page 7-9.
9. Ibid., page 5-25. The EPA study provides annual health benefits for three years: 2000, 2010, and 2020. Assuming that significant effects from the 1990 amendments began to occur in 1995, the author estimated cumulative effects through 2010 using linear interpolation. The author first noticed this cumulative approach in analyses by the Natural Resources Defense Council; see <http://www.nrdc.org/media/2011/110301.asp>.