### Science & Technology



# ARE REGS BLEEDING THE ECONOMY?

Maybe not. In fact, they sometimes boost competitiveness

tions are like a red cape waved in front of a raging bull. "Our regulatory process is out of control," says House Science Committee Chairman Robert S. Walker (R-Pa.). He and other GOP leaders charge that nonsensical federal rules cripple the economy, kill jobs, and sap innovation. That's often true: Companies must spend enormous sums making toxic-waste sites' soil clean enough to eat or extracting tiny pockets of asbestos from behind thick walls.

That's why GOP lawmakers on Capitol Hill want to impose a seemingly simple test. In a House bill passed earlier this year and a Senate measure scheduled for a floor vote in July, legislators demand that no major regulation be issued unless bureaucrats can show that the benefits justify the costs. "The regulatory state imposes \$500 billion of burdensome costs on the economy each year, and it is simply common sense to call for some consideration of costs when

regulations are issued," says Senate Majority Leader Bob Dole (R-Kan.).

That sounds eminently reasonable. But there's a serious flaw, according to most experts in cost-benefit calculations. "The lesson from doing this kind of analysis is that it's hard to get it right," explains economist Dale Hattis of Clark University. It's so hard, in fact, that estimates of costs and benefits may vary by factors of a hundred or even a thousand. That's enough to make the same regulation appear to be a tremendous bargain in one study and a grievous burden in the next. "If lawmakers think cost-benefit analysis will give the right answers, they are deluding themselves," says Dr. Philip J. Landrigan, chairman of the community medicine department at Mount Sinai Medical Center in New York.

There's a greater problem: The results from these analyses typically make regulations look far more menacing than they are in practice. Costs figured when

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a regulation is issued "almost without exception are a profound overestimate of the final costs," says Nicholas A. Ashford, a technology policy expert at Massachusetts Institute of Technology. For one thing, there's a tendency by the affected industry to exaggerate the regulatory hardship, thereby overstating the costs.

More important, Ashford and others say, flexibly written regulations can stimulate companies to find efficient solutions. Even critics of federal regulation, such as Murray L. Weidenbaum of Washington University, point to this

effect. "If it really comes out of your profits, you will rack your brains to reduce the cost," he explains. That's why many experts say the \$500 billion cost of regulation, bandied about by Dole and others, is way too high.

Take foundries that use resins as binders in moldmaking. When the Occupational Safety & Health Administration issued a new standard for worker exposure to the toxic chemical formaldehyde in 1987, costs to the industry were pegged at \$10 million per year. The assumption was that factories would have to install ventilation systems to waft away the offending fumes, says MIT economist Robert Stone, who studied the regulation's impact for a forthcoming report of the congressional Office

of Technology Assessment (OTA). BOTTOM LINES. Instead, foundry suppliers modified the resins, slashing the amount of formaldehyde. In the end, "the costs were negligible for most firms," says Stone. What's more, the changes boosted the global competitiveness of the U.S. foundry supply and equipment industry, making the regulation a large net plus, he argues.

While federal rules that improve bottom lines are rare, regulatory costs turn out to be far lower than estimated in case after case (table). In 1990, the price tag for reducing emissions of sulfur dioxide-the cause of acid rain-was pegged at \$1,000 per ton by utilities, the Environmental Protection Agency, and Congress. Yet today the cost is \$140

per ton, judging from the open-market price for the alternative, the right to emit a ton of the gas. Robert J. McWhorter, senior vice-president for generation and transmission at Ohio Edison Co., says the expense could rise to \$250 when the next round of controls kicks in, "but no one expects to get to \$1,000." The reason: Low-sulfur coal got cheaper, enabling utilities to avoid costly scrubbers for dirty coal.

Likewise, meeting 1975 worker-exposure standards for vinyl chloride, a major ingredient of plastics, "was nothing like the catastrophe the industry pre-

Regulation Isn't

Costly Burden

Many regulations cost much

less than expected because

industry finds cheap ways to

1978 regulations aimed

at reducing brown lung

in the textile industry,

disease helped speed up

modernization and automa-

tion and boost productivity

making the cost of meeting

the standard far less than

Always a

comply with them.

**COTTON DUST** 

predicted.

#### VINYL CHLORIDE

Reducing worker exposure to this carcinogen was predicted to put a big chunk of the U.S. plastics industry out of business. But automated technology cut exposures and boosted productivity at a much lower cost.

#### **ACID RAIN**

Efficiencies in coal mining and shipping cut prices of low-sulfur coal, reducing the need to clean up dirty coal with costly scrubbers. So utilities spend just \$140 per ton to remove sulfur dioxide, vs. the predicted

\$1,000.

dicted," says Clark University's Hattis. He found in a study he did while at MIT that companies developed technology that boosted productivity while lowering worker exposure.

Of course, it's possible to find examples of underestimated regulatory costs. And even critics of the GOP regulatory reform bills aren't suggesting that costbenefit analysis is worthless. "We should use it as a tool" to get a general sense of a rule's range of possible effects, says Joan Claybrook, president of the Ralph Nader-founded group Public Citizen. But she and other critics strongly oppose the Republican scheme to kill all regs that can't be justified by a cost-benefit exercise. As a litmus test for regulation, "the uncertainties are too broad to make it terribly useful," says Harvard University environmental-health professor Joel Schwartz.

What is useful is moving away from a command-and-control approach to regulation. There's widespread agreement among companies and academic experts that bureaucrats should not specify what technology companies must install. It's far better simply to set a goal, then give industry enough time to come up with clever solutions. "We need the freedom to choose the most economical way to meet the standard," explains Alex Krauer, chairman of Ciba-Geigy Ltd. Krauer, for example, points to new,

cleaner, processes for producing chemicals that end up being far cheaper than installing expensive control technology at the end of the effluent pipe.

DUMB THINGS. But when goals are being set for industry, the proposed costbenefit analysis approach could have a perverse effect. That's because agencies are rarely able to foresee the low-pollution processes industries may concoct. Smokestack scrubbers are a good example. The bean-counters will use the known price of expensive scrubbers in their analyses. Their cost-benefit calculations will then argue for less stringent standards. And those won't help spark cheaper technology. The result can be the worst of both

worlds: costlier regulation without significant pollution reductions. "It's a vicious circle," explains Stone. "If you predict that the costs are high, then you stimulate less of the innovation that can bring costs down."

There's no doubt reform is needed. "Frankly, we have a lot of dumb environmental regulations," says Harvard's Schwartz. But he puts much of the blame on Congress for ordering agencies to do dumb things. Now, Congress is tackling an enormously complex issue without fully understanding the ramifications. Schwartz and other critics worry. Overreliance on cost-benefit analysis could make things worse for business, workers, and the environment.

By John Carey, with Mary Beth Regan, in Washington

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