

The Cost-Benefit Boomerang

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The right devised cost-benefit analysis to discredit regulation. Now this technique is showing massive net benefits, and the foes of environmental regulation are in a panic.



Alex Milan Tracy/Sipa via AP Images

A department of Environmental Quality air monitoring station near the Bullseye Galss Co. in Portland, Oregon

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Everyone in communications knows how to bury a news story: release it late on a Friday. So it was with the White House's annual report on federal regulations, released months behind schedule on a Friday in February. As it has for many years, the report pegged the benefits of federal regulation in the hundreds of billions of

dollars, swamping the calculated costs of compliance by at least 2 to 1 and possibly as much as 12 to 1—awkward results for the Trump communications team, to say the least. How to square these numbers with the “job-killing regulations” trope was a real head-scratcher.

It might seem like good news that regulatory safeguards actually do save a lot of lives, not to mention preventing a lot of diseases, accidents, and other bad things. But these big numbers on the benefits of federal regulations are driving the right wing crazy. Industry lawyers and lobbyists along with their allies at right-wing think tanks have been hard at work trying to discredit them for years now. The irony is that these are the same people who tried to sell us on the notion that government regulations should be subject to a cost-benefit test to begin with.

It's an idea that traces back to the Cold War-era writings of Ronald Coase, a conservative economist with a penchant for free markets and a deep distrust of government. Cost-benefit analysis was quickly adopted by industry lawyers and lobbyists bristling in response to the wave of environmental health and safety legislation that swept through Congress in the 1970s. They banked on the assumption that imposing a rigid system of cost-benefit analysis would weaken regulatory safeguards, because the benefits of public-health protections—preventing disease, saving lives, preserving ecosystems—would be hard to quantify and so inevitably undercounted in relation to the more easily quantifiable compliance costs to polluters, manufacturers of unsafe products, and so on. But what made cost-benefit so attractive politically was its pedigree in neoliberal economic theory. That lent an air of academic legitimacy to the project and was a perfect fit with the right's larger political strategy of selling the American public on laissez-faire economics.

In the intervening decades, these lawyers, lobbyists, think tanks, and other foot soldiers of the right have worked assiduously and with considerable success to sell the general idea that public policy should be guided by economic theory, as well as the more particular idea that government regulations should be made to pass a cost-benefit test to show that they are consistent with the “efficient” results that the hallowed free market would have produced. But in the last several years, this intellectual edifice the right has so painstakingly built has begun to crumble from within.

The cracks in the foundation began to appear in the 1990s and early 2000s, when air pollution monitoring stations installed throughout the country in the wake of the Clean Air Act began to bear fruit. A wealth of epidemiological studies documented the nasty health

effects of one air pollutant that is widespread and easy to monitor—particulate matter. These tiny specks of airborne stuff produced by combustion, particularly the microscopic ones, get lodged deep in our lungs when we breathe, exacerbating heart disease, asthma, and a host of other respiratory illnesses, and generally pushing hundreds of thousands of Americans each year to an early death.

Using these studies, the EPA began to regularly produce jaw-dropping numbers on the benefits of virtually all its Clean Air Act regulations—numbers that easily swamp the costs. Indeed, the huge, multibillion-dollar benefits estimates attributable to this single pollutant have over the past decade amounted to more than half of the calculated benefits of federal regulation from all the executive branch agencies combined.

As the reality of this situation has begun to sink in over the past several years, the right has begun to react. Like the kid who suddenly realizes she's losing the game she made everybody play in the first place, they've tried to change the rules midgame. They've cooked up various arguments for why the EPA should jettison its big numbers on particulates from its regulatory analyses. But in so doing, they're undermining, and, in some instances, abandoning entirely the neoliberal economic theory that has undergirded right-wing anti-regulatory efforts for so long—straying instead into a new realm entirely untethered from any intellectually coherent theory about how government does or should operate.

AFTER PERCOLATING in academia for a few decades, the idea of a cost-benefit test for government regulation began to appear in industry briefs challenging the first wave of environmental health and safety regulation in the 1970s. The federal courts largely dismissed these arguments. They found that Congress had generally rejected cost-benefit analysis in drafting these laws, fearing that environmental and public-health benefits would inevitably get undercounted in relation to industry costs.

But in 1981, the newly inaugurated President Reagan and his Office of Management and Budget (OMB) chief, David Stockman, turned a friendly ear to industry lobbyists who convinced them to enshrine a cost-benefit test in an executive order. The order required all major federal regulations to undergo a cost-benefit test at the agency and then run a gauntlet of economists at the Office of Information and Regulatory Affairs, a little-known

office within the OMB charged with overseeing agency compliance with the executive order's new cost-benefit mandate.

While greeted initially with considerable skepticism, the cost-benefit requirement has had incredible staying power. It has survived to this day, through two Democratic presidents and four Republicans. Even some moderate voices in academia have been seduced by its utopian vision of hardworking technocrats crunching numbers and bringing scientific objectivity to government decision-making. And politicians have found it hard to resist. As cost-benefit proponents are fond of pointing out, Ben Franklin said he liked to make decisions by drawing a line down the middle of a piece of paper and comparing pros and cons. And who can argue against Ben Franklin?

Still, there are deep theoretical difficulties with cost-benefit analysis that economists have been unable to resolve. It has an awkward tendency, for example, to value the interests of the rich (whose lives are "worth" more) above those of the poor and to sacrifice future generations for marginal increases in the material comforts of those currently living.

Even setting aside the theoretical difficulties, many of the benefits of regulation—particularly those affecting the environment and public health—are simply impossible to quantify in dollar terms. In most instances, we just don't have the data to come up with hard numbers. We know the pollutants at issue are causing harm. We just can't say precisely how much. Water pollution regulations at the EPA, for example, routinely hit roadblocks because of the agency's inability to quantify most of their benefits. Even under the Clean Air Act, the EPA has been unable to generate dollar estimates of benefits for the vast majority of the pollutants the agency is charged with regulating because the data simply don't exist.

The upshot is that the right's decades-long campaign to sell the American people on the idea of a cost-benefit litmus test for regulation and the edifice of neoliberal economic theory on which it rests has been remarkably successful. Despite its purported neutrality, it continues to have a decidedly deregulatory impact, as career economists at the OMB parse the details of rulemakings and slow down or block rules for which agencies cannot identify dollar benefits exceeding costs.

The exception is rules reducing particulate matter, which lend themselves to precise quantification on the benefit side. So particulates have not just gummed up people's lungs. They have gummed up the right's strategy.

THE CLEAN AIR ACT of 1970 required states to install an extensive network of air pollution monitoring stations throughout the country that produced an unprecedented wealth of data. These data revealed actual levels of particulates over many years in specific locations—in cities, rural areas, and in between. Epidemiologists used the data to conduct rigorous studies, comparing health outcomes for otherwise similar groups of people living in areas with higher and lower levels of pollution. The results were startling. Several major studies came out in the 1990s showing clear links between particulate exposure and early death from respiratory ailments and heart disease.

Using these studies, the EPA soon began to produce enormous dollar figures for the benefits of most air pollution regulations. Benefits estimates for such rules are now almost always in the billions or tens of billions of dollars and typically swamp costs estimates by at least 2 to 1, but often even 10 to 1 or higher.

These huge benefits estimates are all the more striking when one considers that they typically leave out whole categories of benefits the agency considers significant but didn't have the data to quantify. It turns out that particulate matter is unique. For one thing, it is especially easy to monitor, so we have more hard data on it than on other pollutants. In addition, it causes diseases that occur relatively quickly after exposure and are therefore possible to capture in short-term studies. Diseases like cancer, in contrast, are exceedingly difficult to study; subjects must be followed over decades.



Susan Walsh/AP Image

Former EPA chief Scott Pruitt

So the right is fixated on the EPA's big numbers on particulate matter and desperate to make them go away—so desperate that they seem willing to sacrifice the edifice of intellectual legitimacy they spent so long constructing. Their first tactic, which flies in the face of economic theory, challenges the EPA's long-established practice of counting “co-benefits” in cost-benefit analysis.

Not surprisingly, policies that reduce some pollutants also reduce others. This is known as co-benefits. Consider the case of mercury. In the 1950s, in the quiet Japanese fishing village of Minamata, people began to suspect something was amiss when the cats started acting strangely. Seized with convulsions, they seemed to perform delirious dances before dropping dead or appearing to throw themselves into the sea. Then on April 21, 1956, a five-year-old girl was hospitalized with strange symptoms—difficulty walking and speaking, convulsions, and other signs of neurological damage. Two days later, her little sister showed up with the same symptoms, followed shortly thereafter by the girl next door. By the time it was all over, thousands of people had suffered severe brain damage or death. The cause? Consumption of fish contaminated by the 27 tons of mercury dumped in the bay by a nearby petrochemical plant.

In the intervening decades, scientific research has revealed significant harms linked to even low levels of mercury exposure—neurological damage, particularly in children and developing fetuses, as well as heart disease in adults. For most of us, the pathway by which mercury enters our bodies begins at the smokestacks of coal-fired power plants. Mercury in the air then settles on the surface of lakes, rivers, and oceans, where it is absorbed by aquatic organisms and bioaccumulates up the food chain. We encounter it by biting into a piece of tuna or salmon.

Accordingly, the finalization of the Obama EPA's mercury rule in 2011 came as welcome (and long overdue) news to many observers. It would reduce emissions from coal plants of a whole slate of nasty toxins by up to 90 percent, including dropping mercury levels by 25 tons. But with estimated costs of nearly \$10 billion, it was projected to be one of the most expensive rules ever to come out of a federal agency, and it quickly became the right's poster child for an overzealous agency run amok. (Now that the pollution control equipment required by the rule has all been installed, it appears that the actual cost was only a third of that estimate, which amounts to roughly 1 percent of industry revenues, but never mind.)

The inevitable industry court challenges quickly followed. While right-wing think tanks had been fuming about the EPA's high particulate matter numbers for nearly a decade, it was in various briefs filed by industry groups and their supporters (including Scott Pruitt, before he took over the EPA) that the right's first tactic for attacking those numbers was initially deployed in a public forum.

They complained about the rule's \$10 billion cost, but the benefits were many times higher—\$37 billion to \$90 billion. As is typically the case, the vast majority of those calculated benefits (99 percent) were attributable to reductions in particulate matter that were not the rule's principal purpose—reducing mercury and other air toxics was. But coincidentally, the same pollution control equipment that reduces emissions of toxics also reduces particulates—a classic case of regulatory “co-benefits.” The industry briefs argued that co-benefits like these should be jettisoned from cost-benefit analysis altogether.

Because particulate matter is really the only pollutant for which the EPA has precise and extensive data, this move would, in a single stroke, plunge the majority of Clean Air Act rules into the red. Their benefits estimates would suddenly shrink drastically—to levels well below the calculated costs, and in many instances to zero. This is not because these rules actually produce little or no benefit. Congress specifically named 189 air toxics in the

1990 amendments to the Clean Air Act, for example, because they are known to cause severe public-health harms. Yet, with only one very small exception, the EPA has been unable to quantify in dollar terms any of the benefits of reducing those toxics. For these rules, the particulate matter benefits have come to stand in as a kind of imprecise but useful proxy.

Industry's challenge to the EPA's mercury rule came before a panel of three federal judges on the D.C. Circuit. (Seven years later, two of them would be household names.) Chief Judge Merrick Garland joined Bush appointee Janice Rogers Brown to largely uphold the rule. Then-Judge Brett Kavanaugh wrote a lengthy dissent. The co-benefits argument was not central to the legal question at issue, but Judge Kavanaugh picked up on it nonetheless and highlighted it in his opinion, helping to push it further into public view.

He opened with professed shock at the EPA's nearly \$10 billion cost figure ("that's billion with a b."). It took him another nine pages to acknowledge that these costs were dwarfed by the EPA's estimate of the rule's benefits. But he called the agency's benefits estimate "disputed," citing industry's view that only the \$4 million to \$6 million (that's million with an m) in benefits attributable specifically to quantifiable reductions in mercury emissions should be counted. (One problem here was that the \$4-to-\$6-million figure was far from a complete accounting of the air toxics benefits at which the rule was aimed, representing just one narrow slice of a narrow slice of the benefits of reducing mercury levels, not to mention all the other air toxics.) When the case got to the Supreme Court, the co-benefits argument got another shot in the arm when Justice Scalia, writing for the Court, picked up on Kavanaugh's tee-up of the issue and highlighted it again.

With Trump in the White House and former coal lobbyist Andrew Wheeler at the agency's helm, the EPA has now picked up the co-benefits tactic and is running with it. It has proposed to amend the Obama administration's rulemaking not by rescinding the mercury rule outright, but by revising the cost-benefit analysis on which it rested to remove the particulate matter co-benefits. This would then set up the rule itself to be challenged by the coal industry and likely struck down in court.

This is one of several instances in which the Trump administration has embraced a level of ideological zeal that goes beyond even what industry is asking them to do. The electric utility industry has made very clear that they oppose full repeal of the Obama mercury rule because they've already spent the money to install the required pollution control equipment.

THE EPA'S PROPOSAL rests on two distinct arguments. The first flouts common sense, but also flies in the face of the basic tenets of the neoliberal economic theory that the right has spent so much energy promoting. The second flouts the science.

The first argument says simply that because the co-benefits of reducing particulate matter emissions do not reflect the primary purpose of the regulation, counting them—to quote Chief Justice Roberts at oral argument—amounts to an “end run,” calculated to hide the true costs to industry. The central problem here is that under the basic tenets of economic theory, the whole point of cost-benefit analysis is supposed to be to measure the extent to which a rule increases or decreases the thing economists call “efficiency.” Measuring economic efficiency involves adding up the extent to which any given change either harms or helps every individual member of society. Society reaches the magical state of “efficiency” when the aggregate benefits to everyone in society outweigh aggregate harms by the biggest margin possible. Because the idea is to measure the effects of a rule on every member of society, for an economist, co-benefits are no different from direct benefits. All must be counted in order to understand a rule’s impact on economic efficiency. (Not surprisingly, a guidance memo issued by the Bush White House, which has since become the bible for government practitioners of cost-benefit analysis, says exactly that.)



EPA Administrator Andrew Wheeler

There's also an asymmetry to the right's argument that's hard to square with logic and common sense. They have spent considerable energy over the past few decades making sure agencies know that the economic theory behind cost-benefit requires them to consider the indirect *costs* of regulation. What if fuel efficiency regulations, for example, result in car manufacturers selling smaller cars, with the unintended consequence that cars are less safe and more people are killed in traffic accidents? Having spent decades making sure that agencies give full consideration to these *indirect costs*, the right is in a decidedly awkward position arguing that the *indirect benefits* of regulation should not be counted.

The second argument on co-benefits goes like this: Most of the particulate matter co-benefits counted by the EPA are for emissions reductions that will bring particulate levels down below the threshold set by the EPA's own ambient air quality standards. The statute requires those standards to be set at the level "requisite to protect the public health with an adequate margin of safety." Ergo, lowering pollution below those levels cannot, by definition, cause any further improvement in public health.

This logic might work if particulate matter were what's known as a "threshold pollutant"—if, in other words, there were some safe level of exposure below which no one in the population would suffer adverse effects. But the current, overwhelming scientific consensus is that it's not. Expert panels convened by the National Academy of Sciences, the EPA, and the American Heart Association have repeatedly rejected the idea that there's a safe population-wide threshold for exposure to particulates. And over the course of three and a half decades, beginning with the Reagan administration, the EPA has consistently confirmed that view under administrations from both parties.

Their second tactic doesn't stop at co-benefits but tries to jettison particulate matter from the analysis entirely. It takes a page out of the right-wing playbook on climate change and simply denies the science on the health effects of particulates altogether. This is well-worn territory for the right. Their track record on science denial stretches back more than half a century—beginning with cigarettes and then moving on to flame retardants and climate change. The beauty of this tactic is that it doesn't require convincing anyone of anything. As Naomi Oreskes, an eminent historian of science at Harvard, is fond of saying, simply

planting a seed of doubt in the public dialogue can be enough to completely derail public policy.

The science establishing a causal link between particulates and death from heart disease and various respiratory ailments is extensive and well established. Two major studies were completed in the 1990s after following thousands of subjects for many years in multiple locations with different levels of particulate matter in the air. The results of these studies have since been replicated over and over again. There are now thousands of papers supporting the causal link between particulate matter and disease.

A small number of scientific papers questioning these findings have been produced in recent years. These papers come by and large from a growing group of consulting firms “whose business model is providing corporations and trade associations with studies that manufacture and magnify uncertainty about the risks of exposure to pollutants and other dangerous products,” as former OSHA administrator and George Washington University professor David Michaels details in his forthcoming book, *The Triumph of Doubt: Dark Money and the Science of Deception*. These firms engage in what might be called product defense, performing reviews of the scientific literature that cherry-pick results in order to reach conclusions friendly to industry.

Like the co-benefits tactic, this argument has been incubating on the fringes of the right-wing policy world for years but has only recently begun to gain momentum. It helps, of course, to have friends in high places. Scott Pruitt began laying the groundwork for this new brand of science denial to take root at the EPA soon after taking office. And his successor, Andrew Wheeler, has been quietly finishing the job. He’s been stacking—and in some instances, entirely disbanding—the scientific advisory committees and panels that are supposed to help the agency review the scientific literature. And this year, he’s slated to finalize the agency’s controversial and inaptly named “Strengthening Transparency in Regulatory Science” rule, which would prevent the agency from relying on a whole host of scientific studies inconvenient to industry, including the two biggest and most comprehensive epidemiological studies on the health impacts of particulate matter.

THEIR THIRD TACTIC goes even one better, jettisoning from regulatory analysis not just co-benefits or particulate matter benefits, but *all* benefits. For many of us, our first introduction to this idea came with one of Trump’s first acts as president—what has come

to be known as his “2-for-1” executive order. In it, Trump announced that before a federal agency would be allowed to issue a new regulation, it would first have to rescind *two* pre-existing regulations. And the cost savings from scrapping those two would have to equal or exceed the costs of the new one.

The striking thing about this executive order was that you could look in vain through its entire three pages without seeing any reference to regulatory benefits. The right’s half-century-long obsession with measuring and comparing both costs and benefits in the pursuit of economic efficiency seemed to have suddenly vanished into thin (or perhaps thick) air.

It turns out that Trump’s executive order drew on a set of ideas that have been percolating in the dark corners of the right-wing think tank world for several decades. The idea, dubbed “regulatory budgeting,” is that each agency should have a fixed “budget” or cap for the amount of regulatory “costs” it is allowed to impose on society each year. The proponents of this idea are a bit vague on the criteria to be used in setting these caps, but they are clear that they should be set without reference to regulatory benefits.

It’s an odd idea. And it’s particularly odd coming from a president who promised to run government like a business. Imagine Trump deciding whether to open a new casino by looking only at the costs he would incur to build it, without considering expected revenues. Or imagine him imposing a rule on his business that for every new casino they opened, they had to close two existing ones. Regulations, like casinos, have both costs and benefits, and “budgets” usually have two columns, not one.

Two years in, it’s hard to identify the exact impact the 2-for-1 order has had on agency rulemaking as the Trump administration has been singularly non-transparent in its implementation. But one good candidate is the Department of Transportation’s long-awaited vehicle-to-vehicle communications rule. The idea is pretty much like it sounds—to prevent crashes by having cars talk to each other. Once fully deployed, this technology could prevent hundreds of thousands of crashes and over 1,000 deaths annually.

The department first floated the idea in 2014, and, after comments, was expected to move forward with the rule early in 2017, announcing it was halting work on the rule in early 2017. In 2018, under the 2-for-1 order, the agency moved it to the category of “low priority” and “undetermined.”

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The rule's estimated \$2 billion to \$5 billion in costs would undoubtedly prove challenging to offset under the executive order. But these are costs that industry is willing to accept. In fact, they want this rule, because the thing about vehicle-to-vehicle communications technology is that it's, well, vehicle to vehicle. That means, in order for it to work to prevent collisions, two vehicles have to use the same language. And industry needs the government to say what that language is going to be. This rule's delay, then, is another instance in which the Trump administration's deregulation goes further than even their friends in industry would like to go.

It doesn't appear to have occurred to the architects of this deregulation that regulations might sometimes serve a useful purpose or might prove necessary for industry to innovate and grow. But the most striking aspect of the 2-for-1 order is the idea of "regulatory budgeting" on which it rests is that it represents a radical departure from the right's decades-long campaign to sell the policy establishment on a cost-benefit test for regulation and the neoliberal economic theory that offers no coherent theoretical or empirical foundation.

In all three of these tactics, there's a new tenor to the right's arguments—an apparent willingness to abandon even the appearance of intellectual legitimacy. Maybe this is the beginning of a fairy-tale ending in which truth vanquishes greed: Scientific evidence emerges that finally stretches the right's dogged defense of laissez-faire to its breaking point and shows the anti-regulatory movement for what it is—a brazen campaign of bald self-interest by industry to avoid accountability. But there's more here, evidenced in part by the Trump administration's eagerness to take deregulation even beyond where its industry allies want to go. These may be the indicia of a more dystopian vision: a brave new politics of populism in which expertise in all forms is suspect and intellectual integrity (or even just its pretense) is vilified and dispensable.

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