

Federal R&D Cuts Would Be Another (Massive) Unforced Policy Error

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My fellow pro-growth/progress/abundance Up Wingers,

I see my job, broadly, as having two main parts. First, generate and promote evidenced-based, Up Wing public policy ideas (ones helpful to human flourishing). Second, make the evidence-based case against Down Wing public policy ideas (ones destructive to human flourishing).

Sometimes one part takes precedence over the other part. And right now, it seems, quashing Down Wing stupidity is most important. For whatever reason, too much of the American public and too many American policymakers seem especially receptive to really, really harmful ideas. Such as ... making tariffs central to American economic policy.

But the following doozy of an idea is just as misguided and inexplicable as self-owning trade policy: “NSF layoffs in 2025: Deep budget cuts headed for U.S. research sector.” According to the informative piece in R&D World by reporter Brian Buntz, the National Science

Foundation — currently with an annual budget of \$9 billion and historically funding a quarter of all federally supported basic research — is bracing for a possible draconian reduction of more than half, to \$3–4 billion.

This all comes amid aggressive federal downsizing orchestrated by Elon Musk's Department of Government Efficiency, which mandated staff reductions of 25–50 percent across science agencies. Already operating nearly \$7 billion below spending targets established in the 2022 CHIPS and Science Act, NSF has reinstated most probationary employees terminated in February's shock layoffs. Yet it remains under DOGE's directive to develop formal workforce reduction plans by mid-April.

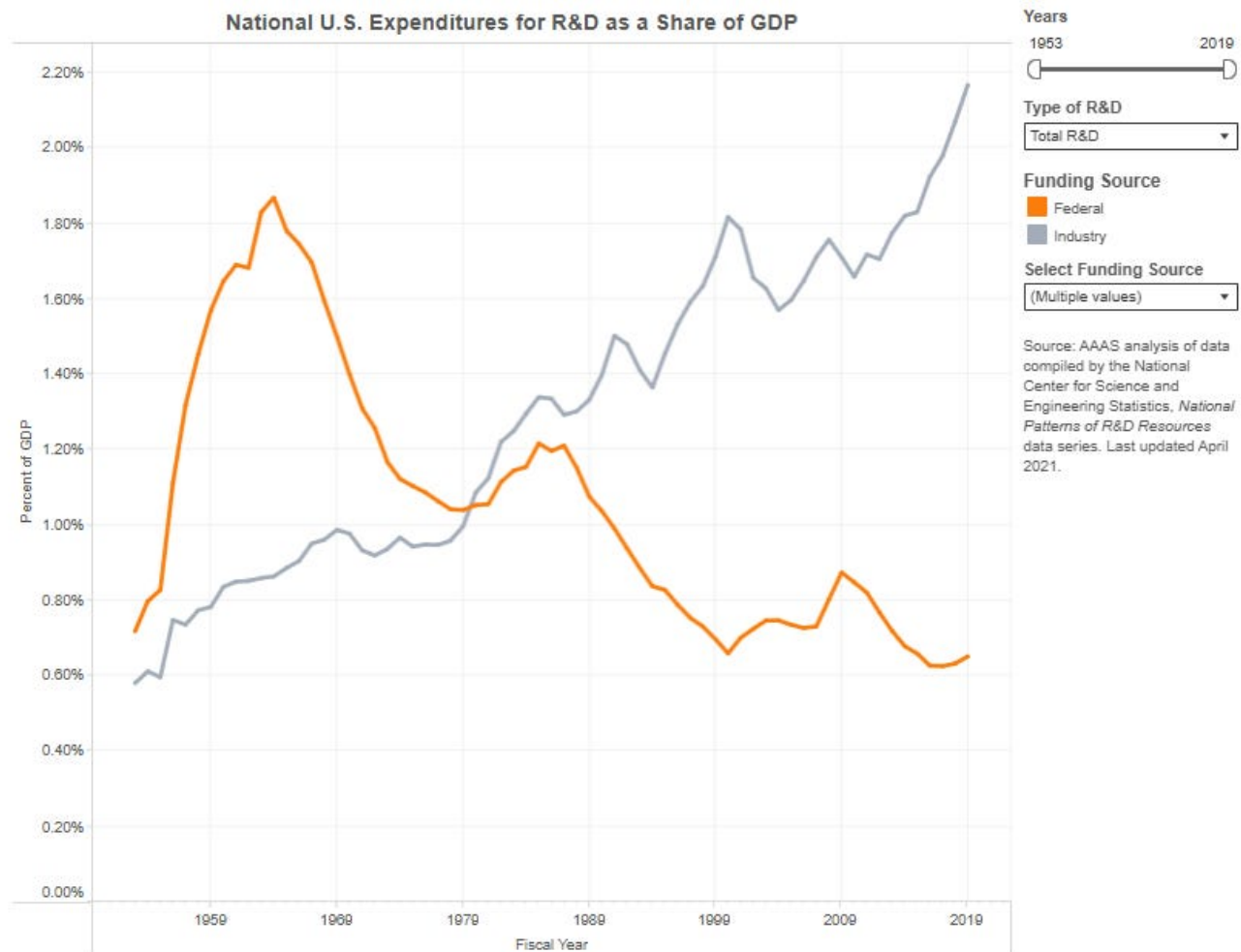
Buntz: "In the face of the cuts, NSF, a major funder of basic research in the U.S., would be forced to considerably reduce or halt grant awards, potentially impacting thousands of researchers, universities, and projects. ... While the U.S. remains the world's research superpower ... China is quickly catching up and could be the world's top R&D spender by 2030. "

Actually, that freeze scenario outlined in the April 10 R&D World piece *seems to now be happening*, as Nature reports today: "All new research grants have been frozen at the NSF — an action apparently ordered by DOGE." Yikes.

What's going on here? I fear this isn't just an issue of fiscal rectitude or an ill-informed efficiency obsession gone wild.

I wonder how much of the reasoning at play is of the sort put forward by this article featured today in RealClearMarkets, "Science Subsidy Trap: Why Public Research Funding Needs to End." The author advocates eliminating all federal science funding, claiming a) widespread fraud, b) replication failures, and c) politically-motivated research. Hey, the private sector already funds two-thirds of national R&D, let it handle the whole megillah?

Reality check: America's economic advantage has long rested on its formidable innovation machine, powered by a symbiotic relationship between public- and private-sector research. Yet federal R&D spending has been declining as a share of GDP since the Cold War's end — a trend that demands urgent reversal.



The economics of government R&D are incredibly compelling. Research by the Federal Reserve Bank of Dallas finds government R&D to have generated returns of 140–210 percent over the post-war period, contributing at least one-fifth of America’s business productivity growth. What’s more, this public investment complements rather than displaces private efforts. While businesses naturally gravitate toward commercial applications with clear profit potential, governments fund higher-risk fundamental science with uncertain payoffs and longer timelines — research that has repeatedly underpinned transformative industries.

Few policy activists conduct themselves with as much bad faith as those who criticize government science spending. They delight in mocking superficially absurd-sounding concepts — “shrimp on treadmills” — that make for easy political point-scoring. Yet such derision typically betrays a profound misunderstanding of scientific inquiry. The infamous treadmill-running crustaceans were actually part of a decade-long study with huge impact for the multi-billion-dollar aquaculture industry.

What R&D opponents also conveniently omit is that these deliberately mischaracterized projects often consume tiny fractions of research budgets. In any event, scientific progress often arrives via unexpected routes, such as the the theory of relativity leading to the

incredibly valuable Global Positioning System. Mockery makes for effective politics but disastrous innovation policy.

Better than hair-on-fire, helter-skelter budget cutting is this: Federal funding should return to Apollo-era levels of two percent of GDP. Yet money alone is insufficient; the system requires structural reform. Bureaucracy stifles innovation. Grant applications consume scientists' precious time.

Solutions include lottery-based funding for novel ideas, DARPA-like models that prioritize problem-solving, and public-private partnerships modeled on Operation Warp Speed's vaccine triumph. (More about this in my 2023 book.) The prize: faster innovation-driven productivity growth and economic competitiveness.

Adam Smith, the Great Economist, once said, "There is a great deal of ruin in a nation." The United States in 2025 seems bizarrely determined to test the extent of that proposition.