



COMPETITIVE ENTERPRISE INSTITUTE

Tech Briefing 2001

*A Free-Market Guide to Navigating Tech Issues
in the 107th Congress*

Direct Research & Development Grants

by
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This section assesses the strategy of giving corporations direct grants to support innovative research. Such grants are often called “corporate welfare,” the use of taxpayer dollars to provide direct subsidies, payments, grants, and the like to specific corporations.

The programs. The Advanced Technology Program (ATP) of the National Institute of Standards and Technology provides funds to private companies to conduct innovative research programs that are expected to bear fruit in three to five years.¹ It is one of several federal programs providing subsidies for research,² and lessons learned from ATP are relevant to these other programs as well. Because the companies doing the research keep the intellectual property, this is a true subsidy—the government is not buying research services.

ATP was founded in 1988 as a response to Japanese and other nations’ industrial policies, on the theory that “if you can’t beat ‘em, join ‘em.”³ While these industrial policies have generally failed worldwide, ATP is going strong. ATP received \$142.6 million for FY2000, and the administration requested \$175.5 million for FY2001.⁴ During 2001, ATP will consider about 417 proposals, pick 60 winners, and distribute up to \$65 million among them.⁵ (The balance of its budget will continue funding of previous winners.) Since its inception, ATP has funded 468 projects, about 100 of which were ultimately commercialized.⁶

Policy background. ATP is controversial. The House of Representatives sought to deny it funding for FY2000, ultimately cutting 30 percent from its budget.⁷ Defenders of the program urge the necessity to fund ventures that promise big economic benefits in the long term that would not be funded by venture capitalists looking for short-term payoffs. Not surprisingly, companies that have received grants are enthusiastic about the program.

The law that created ATP stipulates that its administrators should not fund research that could find other funding sources. Data from a recent series of GAO reports, however, suggest ongo-

ing problems with satisfying this requirement (described in more detail below), and leading to questions about federally funded subsidies as a whole.

The offer of grants creates a “moral hazard” for industry. The availability of federal grants gives companies strong incentives to refuse to pay for undertaking their own research, and/or to claim that “no one” would fund research except the government.

In a survey of ATP applicants, GAO found that 63 percent did not even look for funding from other sources before approaching ATP; half of the near-winners later found private funding.⁸ And about half the winners estimated they would have continued their projects without ATP funding.⁹ These figures support the view that ATP is not limited to “good” ideas that could not get private funding.

But even these figures are misleading. The very existence of ATP displaces efforts by private investors to pull together private funding for more marginally “good” ideas. It is simply easier to ask the government for free money.

Welfare for the wealthy. The underlying premise that there are “good” ideas that promise significant future returns but that cannot find private backing is belied by the channeling of many grants to large, wealthy companies well able to pay for research themselves. ATP has provided grants to Amoco Corp., AT&T, Citicorp, DuPont, General Electric, General Motors, IBM, and Motorola.

Privately funded ventures face unfair competition from ATP. A recent GAO report found that each of the three completed ATP projects it studied had unwittingly funded projects similar to research already funded by the private sector.¹⁰ GAO expects this pattern to continue, as private research projects are usually kept confidential and will be unknown to ATP reviewers. This is further evidence of the weakness of the premise that there are “good” projects that private entrepreneurs would somehow overlook in the absence of federal funding.

Duplicating private research thus creates unfair competition as well as waste. An example comes from the world of video compression (which makes it possible to have digital TV and small-dish satellites). One of the pioneers in the area was C-Cube Microsystems Inc., funded by patient venture capitalists who watched the firm lose money for years while wait-

ing for its technology to take off. Silicon Valley entrepreneur T.J. Rodgers reports, “Shortly after C-Cube started making a profit, we were shocked to find out that the government had funded one of our competitors. An ATP grant went to LSI Logic Corporation, one of America’s top 10 semiconductor companies, to help fund their effort in video compression.”¹¹ ATP funds other video-compression research, as well, such as that of Cvideo.¹²

The system penalizes competitors who choose to fund research themselves. This effect may suppress research expenditures by the private sector worth more than the total subsidies provided by ATP. It also creates an environment in which numerous companies have no rational choice but to lobby for increasing pots of federal money, and entrepreneurial energy is directed out of creative activity and into seeking special subsidies.

Government cannot pick winners and losers better than private entrepreneurs. No one spends someone else’s money as carefully as he spends his own. This applies to government-employed experts as well as to teenagers with their parents’ credit cards. Private investors and entrepreneurs have rich “local knowledge” of the prospects for their company and industry that cannot be duplicated by outsiders. In particular, private investors are aware of the opportunity cost of choosing to invest in one area as opposed to another.

It is more likely than not that a substantial proportion of ATP funds will be wasted on failed projects, or in duplicating existing research. There is no reason for taxpayers to bear the burden of speculation in marginal projects.

Policy recommendation. ATP and other “corporate welfare” programs that subsidize specific companies’ research projects should be abolished. There are better ways to ensure that innovation continues at a healthy pace.

Tax credits for research and development are sometimes dismissed as “loopholes.” They are not a perfect solution, but they are far preferable to “corporate welfare” research subsidies. Unlike direct grants to companies, tax credits for research and development are open to all. Also, the company still has its own money at stake, so it has an incentive to make sound decisions. Tax credits also let companies keep more of their own money—they do not let researchers dabble at taxpayers’ expense.

The best solution, however, is to use the money that goes to ATP to pay for tax cuts that would allow companies to keep more of their profits and

invest more of those profits in research. Lower taxes would also lower the barrier to entry for small technology firms.

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¹ For information on the Advanced Technology Program, see its website, www.atp.nist.gov/.

² Some, such as those funded by the National Science Foundation and the National Institute of Health, are in the business of funding research projects with a time line of about 10 years. Other funding projects include Technology Reinvestment Project, a military program that funds civilian technologies, and the New Generation of Vehicles program.

³ ATP was created by The Omnibus Trade and Competitiveness Act of 1988 (P.L. 100-418). Louise Keyhoe, "Japanese Electronics Threatens the American Way," *The Financial Times*, 9 March 1989 (describing calls for an "American equivalent" to Japanese industrial policy); John S. McClenahan, "Standards Czar Eyes Technology: Advanced Technology Program Promises to Boost Industrial Competitiveness," *Industry Week*, 2 July 1990, p. 51.

⁴ *The Budget of the United States Government, Fiscal Year 2001*, Appendix, Department of Commerce, pp. 229-230; available at w3.access.gpo.gov/usbudget/fy2001/app_down.html.

⁵ Nick Wakeman, "Uncle Sam Promotes Innovative Investments," *Washington Technology*, 11 September 2000, pp. 16, 26.

⁶ Scott Nance, "ATP Turns 10 Hoping to Grow," *New Technology Week*, 10 April 2000.

⁷ *Ibid.*

⁸ GAO, "Measuring Performances: The Advanced Technology Program and Private-Sector Funding," *Letter Report*, 11 January 1996, p. 1 (a survey of 123 ATP applicants who submitted bids between 1990 and 1993).

⁹ *Ibid.*

¹⁰ GAO, "Advanced Technology Program: Inherent Factors in Selection Process Could Limit Identification of Similar Research," *Letter Report*, 24 April 2000, p. 1 (a study of a project to develop on-line handwriting recognition, a project to increase the carrying capacity of fiber-optic cable, and a project to turn collagen into fibers for use in prostheses).

¹¹ T.J. Rodgers, "Silicon Valley Versus Corporate Welfare," *Cato Institute Briefing Paper*, no. 37, 27 April 1998; available at www.cato.org//pubs/briefs/bp-037es.html.

¹² Wakeman, "Uncle Sam Promotes Innovative Investments," p. 26.