

Initiatives in technology policy: The US Small Business Innovation Research Program (SBIR)

David C. Mowery
Haas School of Business
University of California, Berkeley

What is the “SBIR”?

- Created in 1982
- Program requiring that 2.5% of agency R&D budgets go to small firms (fewer than 500 employees).
- Does not involve “new money,” rather a “set-aside” of funds in existing budgets.
- Program provides up to \$100K in “Phase I” grants, up to \$750K in “Phase II” grants.
 - Grant proposals are evaluated for their technical and commercial potential.
- SBIR program now spends more than \$1 billion per year, and accounted for more than \$17 billion in R&D spending through 2004.
- SBIR grants cannot be awarded to firms receiving venture capital funding.
 - SBIR grants accordingly provide an important source of early-stage funding.

Concerns over the SBIR

- Other than purely political reasons, why should small firms receive a “set-aside” of R&D funds?
 - Small firms are more innovative: Evidence is mixed.
 - Small firms create more jobs: Yes, and they also disproportionately account for job losses.
 - Small firms face serious disadvantages in federal procurement/R&D contract competitions. True or false?
- Lack of information on allocation of funds among technical areas, industries, etc.
 - Oversight agency is more than 5 years overdue in providing a comprehensive database that enables grants to be tracked by granting agency, field of work, etc.
 - Anecdotal evidence suggests that SBIR grants account for early-stage funding of many university spinoffs, and/or startup firms in nanotechnology. Data vacuum, however, means that these claims cannot be evaluated.

Concerns over the SBIR (2)

- Few evaluations of SBIR program.
 - Leading federal evaluator (GAO) relies on “success stories,” criticizes some federal agencies for producing commercial failures.
 - Other anecdotes suggest that a few firms have received many SBIR grants, suggesting the existence of “SBIR mills,” firms that know how to “work the system.”
 - Lerner (1999) compared performance of SBIR recipients with a sample of “similar” firms, found that recipients grew faster only in regions with substantial venture capital activity.
 - Analysis can’t exclude possibility that some otherwise unobserved difference distinguishes grant recipients from “control” firms.
 - Wallsten (2000) study adopts a stronger experimental design that compares behavior of grant-competition winners and losers, finding that grant-competition winners reduce self-funded R&D.
 - Implication is that public funds are leading to reductions in own-financed R&D, the opposite of intended goals.
- Administration of SBIR is responsibility of individual agencies; which may manage “their” SBIR programs differently from one another.

Broader issues in the SBIR program

- SBIR program => reallocation of existing R&D funds and may reduce funding for longer-term R&D.
- Ideally, public funds should supplement, rather than substitute for, private funds.
 - SBIR projects should be riskier than those attracting private funds.
 - Why should SBIR proposals be assessed for their commercial potential, since commercially promising projects are more likely to attract public funding?
 - And why should agencies be criticized for “commercial failures”?
 - If the public funds are really supporting high-risk undertakings, we expect to see relatively high failure rates.
 - But high failure rates are politically difficult.
- The majority of SBIR funds are associated with R&D spending by “mission agencies,” R&D programs designed to support agency missions.
 - Why should R&D funds devoted to support of agency missions support commercially promising projects?

Conclusion

- SBIR is a relatively large, politically popular program of public subsidies for potentially commercial R&D projects.
 - Far larger than programs such as the Advanced Technology Program, which has been severely criticized as “corporate welfare.”
- Economic basis for SBIR is not based on hard evidence, and evaluations are inconclusive.
- Broader issues raised by the program are relevant across many public programs supporting R&D for commercial applications.