

U.S. SBIR Program and Its Impact on the Commercialization Activities of Small Companies

presented to:

**UNECE Team of Specialists on Innovation
and Competitiveness Policies**

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Background on SBIR

- Public/private partnership that provides grants to fund private R&D projects in small businesses
- Small Business Innovation Development Act of 1982:
 - All government departments and agencies with external research programs > \$100 billion establish own SBIR program equal to 0.20 percent of external research budget; 1983 = \$45 million total.
 - Through reauthorizations, now 2.50% set aside; 2007 = greater than \$2 billion total

Objectives of the Act

- Stimulate technological innovation
- Use small businesses to meet Federal R&D needs
- Foster and encourage minority and disadvantaged persons in technological innovation
- **Increase private sector commercialization** of innovation derived from Federal R&D

Types of Awards

- **Phase I** – assist businesses assess feasibility of an idea’s scientific and commercial potential in response to funding agency’s mission; generally less than \$100,000 over 6 months
- **Phase II** – assist the business develop further its research, ideally leading to a commercializable product, process, or service; “generally” up to \$750,000 over two years

National Academy of Sciences Evaluation Study

- Congressionally-mandated evaluation of 5 agencies; findings will be used in the 2008 reauthorization of the program
 - Department of Defense
 - **National Institutes of Health**
 - Department of Energy
 - NASA
 - National Science Foundation

Data Collected

- Between 1992 and 2001 detailed information on representative sample of 405 completed Phase II projects, and the results of those projects
- 51% of the projects resulted in a commercialized product, product, service or sale of rights to the technology by 2005 – approximately equal to the flip of a fair coin!

Policy Question

- Given an objective of the enabling legislation is to increase private sector commercialization of Federally-funded R&D projects, then:

Why have some projects been more commercially successful than others?

What We Found

- Probability of commercialization increases when:
 - The project studied is related to previously funded projects
 - The owner of the company adds personal or company funds to supplement the research award
 - A university (e.g., faculty or university technology) is involved in the research project

Empirical Impact

Scenarios	Prob. of Commercialization
Baseline Case no previous awards, own funds, university	26%
One Previous Award no own funds or university	34%
University Involvement no previous award or own funds	38%
Own Funds (\$200K) no previous award or university	57%
Own Funds and University Involvement no previous award	70%
One Previous Award, University Involvement, and Own Funds	77%

Policy Recommendation

- If the NIH is interested in increasing the probability of commercialization, it should consider conditioning new Phase II awards on university involvement and a commitment of own resources → increase in probability of commercialization from 26% to 70%