

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

STTR: An Assessment of the Small Business Technology Transfer Program

Tyrone Taylor
Capitol Advisors on Technology, LLC
April 12, 2016

Overall, STTR is meeting the congressional objective.

- STTR is meeting its congressional objective of fostering cooperation between small business concerns and research institutions.
 - Overall, the university connection is much deeper and richer for STTR awards than for SBIR.
 - 32% of STTR respondents surveyed reported that the PI was a university faculty member, compared to only 3 percent for SBIR
 - STTR projects generate wider and deeper linkages between small businesses and research institutions than do SBIR projects.
 - 70% of projects surveyed reported that a faculty member at a research institution was a consultant on the project, compared to 26 percent for SBIR.
 - STTR projects fully participate in the dissemination of knowledge through patents and publications.

Agency Perspectives on STTR

- Perspectives on STTR use and management vary by agency.
- **Acquisition Agencies:** Program managers at NASA and at DoD (in particular the Army and Navy) see STTR as filling a gap between basic research and acquisition programs.
 - STTR is used a means of addressing potentially valuable technologies at lower TRLs that are not necessarily aligned immediately with the needs of acquisition programs.
 - STTR is seen as conduit between NASA and DOD and leading research universities.
- **Non-Acquisition Agencies:** Program managers at NIH, NSF, and DoE do not see an additional value in the STTR program.
 - They see STTR as having similar objectives to SBIR and therefore operate the two programs in tandem.

Small Business Perspective on STTR

- Small business concerns in general see STTR as harder to use and thus less attractive than SBIR.
 - This is because STTR awards require a formal partnership between the small business and the research institution.
 - About 45 percent of small business survey respondents indicated that the STTR program was more difficult to use than SBIR. Only 3 percent thought the opposite.
 - Case studies reveal that PI's applied for STTR only when absolutely necessary.
- But SBIR requires that PIs spend at least 51% of their time with the SBC.
 - This makes it hard for university PIs to participate in SBIR.

Women & Minority Participation

- Survey shows that participation of women in the STTR program is low
 - Woman-owned firms accounted for only 8% of all STTR Phase II firms and for 10% of STTR principal investigators.
- Survey shows that participation of Black, Hispanic, and Native Americans in the STTR program is extremely low.
 - 14.1% of principal investigators were reported to be from socially or economically disadvantaged groups.
 - But these included 0.7 percent Black, 3 percent Hispanic, and 0.7 percent Native American.
- SBA definition obscures the extremely low level of participation from other disadvantaged groups by including Asian Americans.

Recommendations

The committee finds that STTR meets the specific congressional objective of increasing the linkages between small business concerns and research institutions. The recommendations suggest how these linkages can be improved.

Ease SBC-RI Collaborations

- Small businesses often struggle to deal with RI bureaucracies.
 - University conflict of interest rules, upfront royalty payments, and slow bureaucracies are hurdles.
- Use templates for royalties and licensing agreements.
 - SBCs and RIs should consult leading research institutions to learn more about effective templates for royalty and licensing schemes.
- Resolve challenges of RI-SBC cooperation:
 - Sponsoring agencies should consider seeking SBA authority to act in special circumstances to protect participants from the effects of unexpected delays or related problems with contract agreements or deliverables.

Ease SBC-RI Collaborations (2)

- Agencies should develop an STTR Strategy
 - Need to ensure that the STTR program plays an identifiable role in the agency's R&D strategy--one that differs from the role played by the SBIR program.
- Relax the SBIR small business employment requirement.
 - Allow waivers in exceptional circumstances of the SBIR 51% small business employment requirement.
 - Develop an appropriate mechanism for addressing these special requests and report on the number of waiver requests and the number granted

Address Congressional intent on Minority Participation

- SBA should change its definitions to address congressional intent with regard to minorities.
 - SBA should act immediately to change its definitions to ensure that efforts in this area are focused on activities that meet congressional intent.
 - SBA should also require that agencies collect data—and report annually—on the participation of each SBA subgroup in the SBIR and STTR programs.

Thank you.