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Reauthorisation of the SBIR/STTR Programmes –

The Importance of Small Business Innovation
to National and Economic Security



GLOVER, Jere / SCHMIDT, Robert / ORBAN, Alec, Small Business Technology Council,
28 January 2016

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SUMMARY			
Document Title	Reauthorisation of the SBIR/STTR Programmes – The Importance of Small Business Innovation to National and Economic Security		
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Overview

This paper examines the role of Small Business Innovation Research (“SBIR”) and Small-Business Technology Transfer (“STTR”) programmes in the United States. SBIR and STTR are the only Federal programs designed specifically to help small high technology firms to “grow and succeed”.

The SBIR is a highly competitive programme that encourages domestic small businesses to engage in federal research/research and development (R&D) that has the potential for commercialisation, while the STTR is a programme that expands funding opportunities in the federal innovation R&D arena, requiring small businesses to formally collaborate with a research institution.

The authors illustrate that the SBIR has been considered as one of the most significant pieces of legislation ever passed by the U.S. Congress. Seventeen countries around the world have adopted similar laws and, while the programme accounts for only 2.6-3.0% of the federal extramural R&D budget, it has been able to create 25% of key innovations. According to a recent Air Force Economic Impact Study, every dollar spent on the SBIR programme returns 3.6 dollars in sales, 50 cents of additional outside investment or venture capital, and results in over 400 mergers and licenses.

Despite its strong popularity, support from both industry and government, and record of success, the programme’s reauthorisation has occasionally been difficult. In 2000, for instance, the programme was reauthorised for eight years, and after its expiration was not reauthorised again for over three years, until 2011. In between, there were 14 continuing resolutions that kept the programme temporarily alive for months, and sometimes the reauthorisation passed only days before the SBIR programme would have been terminated. This process was incredibly stressful for small businesses, as there was a constant atmosphere of uncertainty over whether or not the programme would still be active. Small businesses had to gamble with their budgets, employees, and long-term plans that the programme would eventually be reauthorised.

After several national academy studies, US Government Accountability Office (GAO) reports and 33 years of positive experience, the authors conclude that it is time to recognise that increasing the size of the programme and making it permanent is a cost-effective investment of the federal budget.

Key messages

The US small business innovation programmes, SBIR/STTR, are a commercial success; 22,000 new firms created; 125,000 patents generated; high quality provision for military and strategic national needs. (Source: Air Force and the Information Technology & Information Foundation, 2014)

- Phase II SBIR programme award winners had \$14.7 billion in sales (more than Google, Apple, Cisco, and Microsoft combined) and added 234,000 jobs to the U.S. economy between 2000 and 2013. Almost 60% of awards end up with commercial sales exceeding \$1 million, making it the most successful innovation commercialisation programme in America. Twenty-five per cent of key innovations in the U.S. come from this programme. All of this with less only 2% of the total Federal R&D budget.
- Successful alumni of the SBIR program include firms such as Qualcomm, Symantec, Genzyme, Affymatix, Amgen, Jarvick Heart, Titan, Chiron, Biogen, iRobot, Nanosys and many others. (Source: Air Force Economic Impact Study, 2014)

An important indication of success of the programme is the number of SBIR/STTR firms that are acquired by larger companies as it shows how the market values SBIR/STTR technology.

- 1,975 SBIR/STTR firms have been already acquired. Companies involved in those acquisitions were - among others - L3 Communications (40 acquisitions), SAIC (13), General Electric (12) and Lockheed Martin (10). (Source: Innovation Development Institute of Swampscott (IDI) database)

The U.S. has been stifling job creation and economic growth by limiting support to small business companies, even when it is proven that such companies drive new innovation and new jobs.

- Small businesses, the recognised leaders in innovation that make up 99.7 per cent of U.S. employer firms and 63 per cent of net new private-sector jobs, still receive less than 5% of the total Federal R&D funding, the majority of which comes from the SBIR/STTR programmes.
- Large firms, universities and government laboratories receive the remaining 95% of Federal funding. Again, despite their small size and limited resources, small and micro entities accounted for almost 30% of all U.S. origin issued U.S. patents in 2015 and according to the Federal Reserve, patents are the number one indicator of regional wealth.

Since neither bank lending nor venture capital is available for most innovative small businesses seeking to fund their inventions, the SBIR/STTR programme seems to be their only option. In addition to providing needed funds to innovative small business the SBIR/STR programmes meet the congressional objectives of stimulating technological innovation and using small businesses to meet federal R&D needs, while increasing the private sector commercialisation of innovations derived from federal R&D.

- Bank lending has declined dramatically since 2007 and, according to Professor Cole at DePaul University, the amount of lending to small businesses is 50% lower than it should be.
- Since 2008, also venture capital has declined significantly, especially for first round financing and for early stage investment. This decline is especially troubling, since about 14% of all SBIR firms eventually received venture capital and one of every eight dollars invested by venture capital is to a SBIR/STTR involved firm.

Furthermore, venture capital investments are statistically located in just two states, California and Massachusetts, and are limited to very few industries. This means that for most small business in most of the country, venture capital is not a realistic option to grow and commercialise their invention.