**Policy Memorandum**

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Re: Issue framing in the policy debate about Pub.L. 97-219 The Small Business Innovation Act of 1982

**Introduction**

This memorandum provides an analysis of issue framing in the policy debate about United States Public Law 97-219 The Small Business Innovation Act of 1982 (Pub.L. 97-219). This policy falls within the domain of technology transfer policy, which focuses on promoting the transfer of technologies derived from federally-funded research to the private sector to benefit the public interest. It is redistributive and regulatory in nature. Pub.L. 97-219 established a set-aside of a percentage of extramural research and development budgets of federal agencies in excess of $100 million and $10 billion specifically dedicated to making research and development awards to small businesses under the Small Business Innovation Research (SBIR) program. It must be reauthorized periodically.

The issue was and remains of particular importance for a number of reasons. It has been a concern of presidential administrations since the end of the Second World War, when President Franklin Delano Roosevelt commissioned Vannevar Bush to prepare a report analyzing federal research and development policy and making policy recommendations. In 1982 when the legislation was enacted, total U.S. research and development expenditures were $87.1 billion. This was more than U.S. expenditures for law courts ($1.8 billion), transportation ($20.6 billion), food and nutrition assistance ($15.6 billion), and community development ($8.3 billion) combined. It was an amount equal to 68 percent of the federal deficit ($128 billion) and more than the gross domestic product (GDP) of 127 of the world’s 148 richest countries at the time.

The issue remains an important topic of interest to political leaders to this day. Many political leaders and interest groups remain dissatisfied with the amount and rate of transfer of technologies derived from federally-funded research and development to the private sector to benefit the public interest. Specifically, they argue that technology transfer is slow and requires too much effort and resources (i.e., efficiency issues). Moreover, current technology transfer policy only results in a very small number and percentage of technologies derived from federally-funded research and development being transferred to the private sector to benefit the public interest (i.e., effectiveness issues). Improving technology transfer outcomes has been a stated priority for the presidential administrations of Donald J. Trump, Barrack H. Obama Administration, and George W. Bush.

**Legislative History**

Pub.L. 97-219 was framed as a way to help address two key problems the United States was facing at the time. In the late 1970s and early 1980s, the United States economy was stagnant and its global competitiveness was eroding. Many believed that technological innovation was the remedy for both problems. At the time, academic research suggested that independent innovators and small businesses were responsible for a disproportionate share of significant innovations but received no more than 4 percent of all federal funding for research and development. Many political leaders were dissatisfied with the participation rate of small businesses in federal research and development and identified it as a significant contributing factor in the trends of lost economic prosperity and eroding global competitiveness. They argued that small businesses were an under-utilized resource that could generate the technological innovation needed to reverse economic trends and restore the global competitiveness of the United States. The legislative predecessors of Pub.L. 97-219 were as follows:

* S.881 - Small Business Innovation Development Act of 1981 - 97th Congress (1981-1982)
* H.R.4326 - Small Business Innovation Development Act of 1982 - 97th Congress (1981-1982)

The policy had four stated objectives:

* To stimulate technological innovation;
* To use small business to meet Federal research and development needs;
* To foster and encourage participation by minority and disadvantaged persons in technological innovation; and
* To increase private sector commercialization of innovations derived from Federal research and development.

This analysis highlights key policy provisions primarily related to the first two stated objectives. Most of the debate seemed to focus on the role of small business in technological innovation and the country could make better use of it.

The original policy design established gradually increasing set-aside of that would reach 1.25% of extramural research and development (R&D) budgets in excess of $100 million. This set-aside was dedicated for making R&D awards to small businesses. The schedule for increasing the set-aside was as follows:

* 0.2% in fiscal year 1983
* 0.6% in fiscal year 1984
* 1.0% in fiscal year 1985
* 1.25% thereafter

The legislation also established a gradually set-aside that would settle at 0.3% of extramural R&D budgets in excess of $10 billion for R&D awards to small businesses. The schedule for increasing the set-aside in this provision of the legislation was as follows:

* 0.1% in fiscal year 1983
* 0.3% in fiscal year 1984
* 0.5% in fiscal year 1985
* 1.25% thereafter

The original policy design was also structured so that the legislation would have to be reauthorized after a period of about 10 years.

Currently, policy seems to be firmly established. It has been in place for nearly 40 years. There have been no significant modifications to the basic design of the policy since its original enactment. Since it was originally passed, the legislation has been modified to increase the set-aside to 2.5% of extramural research and development budgets in excess of $100 million and set maximum award amounts. The policy has been reauthorized four times under the following legislation:

* Public Law 102-564 - Small Business Research and Development Enhancement Act of 1992 - 102nd Congress
* Public Law 106-554 - Small Business Innovation Research Program Reauthorization Act of 2000 - 106th Congress
* Public Law 112-81 - 2012 Defense Reauthorization Act - 112th Congress (2011-2012)
* Public Law 114-328 - 2017 National Defense Authorization Act - 114th Congress (2015-2016)

There have also been the following unsuccessful attempts to significantly modify the policy:

* H.R.448 - SBIR Enhancement Act of 2011 - 112th Congress (2011-2012)
  + Increase minimum set-aside for SBIR from 2.5% to 5% of extramural research and development budgets in excess of $100 million
  + Increase minimum set-aside from 0.3% to 0.6% of extramural research and development budgets in excess of $1 billion.
  + Increases maximum award amounts from $100,000 to $200,000 for Phase 1 grants and from $750,000 to $1.5 million for Phase 2 grants.
* H.R.2772 - SBIR and STTR Enhancement Act - 111th Congress (2009-2010)
  + Increases award levels.
  + Provides authority for agencies to award sequential Phase 2 grants.
  + Provides authority for agencies to award Phase 2 grants to applicants that have not been awarded Phase 1 grants.
  + Requires agencies to issue solicitations at least twice per year.
  + Establishes reporting requirements.
* H.R.4213 - Amend the SBIR program to increase award amounts - 110th Congress (2007-2008)
  + Allows agencies to increase award amounts.
  + Requires agencies to adjust award amounts every five years to reflect economic adjustments and programmatic considerations.
* H.R.4684 - Amend the SBIR program to increase award amounts - 109th Congress (2005-2006)
  + Allows agencies to increase award amounts.
  + Requires agencies to adjust award amounts every five years to reflect economic adjustments and programmatic considerations.

There were several key stakeholders that were focused on the issue at the time the original policy was being debated. Proponents of the legislation seemed to outnumber opponents. By the time of the first hearing on the S.881 by the Senate Subcommittee on Technology and Innovation, the bill had more than 50 co-sponsors. Upon final passage by voice vote, the Senate bill had 84 co-sponsors. Proponents of the legislation included Roland Tibbetts, the senior program officer at the National Science Foundation (NSF) who championed the NSF initial pilot SBIR program; several influential U.S. Senators including Senator Paul Tsongas (D-MA) and Senator Edward “Ted” M. Kennedy (D-MA); leaders of small business advocacy groups; leaders of economic and community development organizations, and senior executives of several large businesses.

The legislation was not without opposition. Opponents included senior leaders, tenured and tenure-track faculty, and research faculty at research universities; senior leaders and researchers at research laboratories that compete for federal funding; senior executives at research hospitals and medical colleges; and the leadership of the Association of American Medical Colleges.

**The Framing Arguments of Key Stakeholders**

Stakeholders in the debate about Pub.L. 97-219 used various approaches to frame their arguments. Proponents linked the policy to urgent issues that the nation was facing at the time, namely the economic stagnation that began in the late 1970s. In doing so, they made the issue thematic rather than episodic and leveraged the Mob at the Gates morality tale essentially arguing that America’s enemies would use that nation’s weakened economic position and flagging technological advantages to threaten the American way of life. Proponents argued that the system led contract administrators to distribute research and development funding in a way that was efficient for them but in doing so they discriminated against small businesses. In addition to alluding to the Rot at the Top morality tale, this argument was also a prelude to what would eventually be described by policy researchers as administrative evil. According to proponents of the policy, technological innovation was the solution to America’s economic troubles and would restore its global dominance. However, since most significant technological innovations were developed by independent innovators and small businesses, the only way to leverage technological innovation to solve the nation’s problems was to remove the barriers that impeded their participation in federal research and development.

Opponents of the legislation primarily framed their arguments around their fundamental opposition to using set-asides as a method for distributing federal research and development funding. They argued that the policy fundamentally violated the principle of equal treatment for all, which essentially intimates the Benevolent Community morality tale. According to opponents of the policy, it changed the selection criteria for distributing research and development funding from research excellence to membership in a privileged class, which would result in the funding of sub-par research and development. They also argued the policy unfairly reduced funding opportunities for others in the research and development community and would reduce basic research, which is the foundation of future technological innovation.

Possible questions to answer in approaching this analysis are: do any of the frames follow the rubrics suggested by the Frameworks Institute? Did the issue move from episodic to thematic? Is the policy category being contested - redistributive, regulatory, etc.? What major morality tale is being appealed to? How are context, numbers, messengers, etc. being used? Is the policy branch or root?

* Context:
  + Proponents
    - Economic stagnation that began in the late 1970s
    - Loss of global competitiveness
  + Opponents
    - Did not seem to establish a social context for their argument.
* Numbers:
  + The facts seemed to fit the frame of proponents.
  + Neither side seemed to discuss numbers in a social context to provide meaning and enhance comprehension.
* Messengers:
  + Proponents
    - Prominent U.S. Senators who supported the policy seemed to be viewed as being above the fray and primarily concerned with the well-being of the nation rather than any particular interest group.
    - Presidents of businesses with more than 1,000 employees who would not directly benefit from the policy advocated for it.
* Approach (branch or root):
  + Branch approach
  + Originally began as a pilot program only within the National Science Foundation.
  + The policy did not radically change the process and mechanisms for disbursing research and development funding.