

**The Evolution of Science Policy in the United States**  
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**Abstract**

The federal government invests billions of dollars every year in scientific research and development (R&D). Deciding how to allocate this money among fields, institutions, researchers, and projects is a central concern of science and innovation policy. This project describes and analyzes how the field of science and innovation policy has evolved and matured. Beyond resource allocation, science and innovation policy deals with such problems as how to nurture the talent needed to conduct research at the frontiers of science, how to assess the results, how to translate those results into marketable products, and how to manage the relations between the federal government and the institutions where R&D is conducted and innovation takes place - universities, national laboratories, non-profit and for-profit organizations.

The size of the U.S. scientific R&D and innovation enterprise and its economic importance have grown enormously in the post-World War Two era. The complexity of the issues facing science policymakers has increased proportionately, requiring more sophisticated methods and techniques to support decision-making. Recognizing these developments, in 2005, John Marburger, science advisor to President George W. Bush, called on the members of the science and innovation policy community to apply the latest scientific methods to their research in order to make it more rigorous and systematic. In response, the National Science Foundation (NSF), which has long been a focus such work, established the Science of Science and Innovation Policy (SciSIP) program. SciSIP builds on NSF's fifty-plus year history of science and innovation policy studies. Beginning in the mid-1960s, NSF established programs aimed at cultivating science policy research and teaching at academic institutions. Later, in the mid-1970s, it created a Division of Policy Research and Analysis (PRA) to conduct and support studies of the social returns to R&D. While some of the results of PRA and related programs have found their way into the practice of science and innovation policy, the majority have not. SciSIP is designed to change this.

Drawing on unpublished archival materials, published sources, interviews and correspondence, this project is examining the range of past science and innovation policy research programs, their strengths and weaknesses, and their contributions to policy and to the development of the field. Interviews are being conducted with participants in these programs as well as external science policy experts who have observed the programs and can help place them in long-term perspective. It is looking at how NSF and other agencies laid the foundations of U.S. science and innovation policy research, how institutional support was used to seed academic science policy programs and build capacity both inside and outside of the federal government, and finally, how the advent of SciSIP has affected the course of science and innovation policy research. The outcome of this project is expected to be a white paper to be published online and used in the preparation of several journal articles and conference presentations. The project strengthens the management and direction of the SciSIP program and its impact by providing a better understanding of its genesis and broader scientific context. It is also helping to build a stronger foundation for both graduate and undergraduate education in science and innovation policy.