Government-University-Research Roundtable

List of selected reports from the National Academies related to the meeting topic

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ADVANCING CONCEPTS AND MODELS FOR MEASURING INNOVATION: PROCEEDINGS OF A WORKSHOP (DBASSE 2017)

Because of the role of innovation as a driver of economic productivity and growth and as a mechanism for improving people's well-being in other ways, understanding the nature, determinants, and impacts of innovation has become increasingly important to policy makers. To be effective, investment in innovation requires this understanding, which, in turn, requires measurement of the underlying inputs and subsequent outcomes of innovation processes. In May 2016, at the request of the National Center for Science and Engineering Statistics of the National Science Foundation, the Committee on National Statistics of the National Academies of Sciences, Engineering, and Medicine convened a workshop - bringing together academic researchers, private and public sector experts, and representatives from public policy agencies - to develop strategies for broadening and modernizing innovation information systems. This publication summarizes the presentation and discussion of the event.

USING NARRATIVE AND DATA TO COMMUNICATE THE VALUE OF SCIENCE: PROCEEDINGS OF A WORKSHOP—IN BRIEF (COSEMPUP 2017)

How should we convey science—both its findings and its value to society—to the many members of the public who lack either scientific training or intense interest in scientific progress? In October 2016 the National Academies of Sciences, Engineering, and Medicine convened a workshop to explore ways of better presenting science—both specific findings and the processes of discovering and confirming—to the public. Participants discussed ways to develop data-enriched narratives that communicate to the public and policy makers in an engaging and rigorous way the work of basic research. They also explored the varied ways in which research provides the foundation for products, services, and activities that are of broad benefit to humanity. This publication briefly summarizes the presentations and discussions from the workshop.

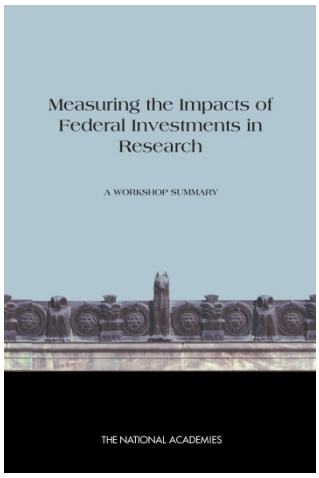
The National Academies of
SCIENCES · ENGINEERING · MEDICINE

OPTIMIZING THE NATION'S INVESTMENT IN ACADEMIC RESEARCH: A NEW REGULATORY FRAMEWORK FOR THE 21ST CENTURY (CSTL, BHEW, and PGA 2017)

Research universities are critical contributors to our national research enterprise. They are the principal source of a world-class labor force and fundamental discoveries that enhance our lives and the lives of others around the world. These institutions help to create an educated citizenry capable of making informed and crucial choices as participants in a democratic society. However many are concerned that the unintended cumulative effect of federal regulations undercuts the productivity of the research enterprise and diminishes the return on the federal investment in research. *Optimizing the Nation's Investment in Academic Research* reviews the regulatory framework as it currently exists, considers specific regulations that have placed undue and often unanticipated burdens on the research enterprise, and reassesses the process by which these regulations are created, reviewed, and retired. This review is critical to strengthen the partnership between the federal government and research institutions, to maximize the creation of new knowledge and products, to provide for the effective training and education of the next generation of scholars and workers, and to optimize the return on the federal investment in research for the benefit of the American people.

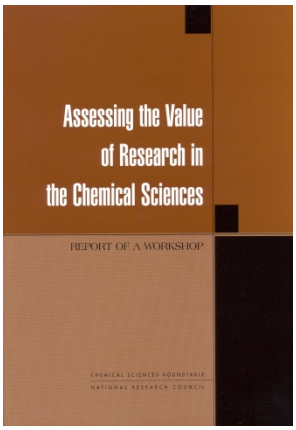
FURTHERING AMERICA'S RESEARCH ENTERPRISE (DBASSE 2014)

Scientific research has enabled America to remain at the forefront of global competition for commercially viable technologies and other innovations. For more than 65 years, the United States has led the world in science and technology. Discoveries from scientific research have extended our understanding of the physical and natural world, the cosmos, society, and of humans - their minds, bodies, and economic and other social interactions. Through these discoveries, science has enabled longer and healthier lives, provided for a better-educated citizenry, enhanced the national economy, and strengthened America's position in the global economy. At a time of budget stringency, how can we foster scientific innovation to ensure America's unprecedented prosperity, security, and quality of life? Although many studies have investigated the impacts of research on society, *Furthering America's Research Enterprise* brings to bear a fresh approach informed by a more holistic understanding of the research enterprise as a complex, dynamic system. This understanding illuminates why America's research enterprise has historically been so successful; where attention should be focused to increase the societal benefits of research investments; and how those who make decisions on the allocation of funds for scientific research can best carry out their task. This report will be of special interest to policy makers who support or manage the research enterprise, to others in public and private institutions who fund research, to scholars of the research enterprise, and to scientists and engineers who seek to better understand the many pathways through which their research benefits society.



MEASURING THE IMPACTS OF FEDERAL INVESTMENTS IN RESEARCH: A WORKSHOP SUMMARY (STEP, COSEMPUP 2011)
The enactment of the America COMPETES Act in 2006 (and its reauthorization in 2010), the increase in research expenditures under the 2009 American Recovery and Reinvestment Act (ARRA), and President Obama's general emphasis on the contribution of science and technology to economic growth have all heightened interest in the role of scientific and engineering research in creating jobs, generating innovative technologies, spawning new industries, improving health, and producing other economic and societal benefits. Along with this interest has come a renewed emphasis on a question that has been asked for decades: Can the impacts and practical benefits of research to society be measured either quantitatively or qualitatively? On April 18-19, 2011, the Board on Science, Technology, and Economic Policy (STEP) and the Committee on Science, Engineering and Public Policy (COSEPUP) of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine, held a workshop to examine this question. The workshop sought to assemble the range of work that has been done in measuring research outcomes and to provide a forum to discuss its method. *Measuring the Impacts of Federal Investments in Research* provides the key observations and suggestions made by the speakers at the workshop and during the discussions that followed the formal presentations.

ASSESSING THE VALUE OF RESEARCH IN THE CHEMICAL SCIENCES: REPORT OF A WORKSHOP (BCST, NRC 1998)
This book captures the messages from a workshop that brought together research managers from government, industry, and academia to review and discuss the mechanisms that have been proposed or used to assess the value of chemical research. The workshop focused on the assessment procedures that have been or will be established within the various organizations that carry out or fund research activities, with particular attention to the Government Performance and Results Act (GPRA). The book presents approaches and ideas from leaders in each area that were intended to identify new and useful ways of assessing the value and potential impact of research activities.



THE FEDERAL ROLE IN RESEARCH AND DEVELOPMENT (COSEMPUP 1986)
This report summarizes two days of intensive discussions on two overlapping topics: (1) capabilities for measuring economic returns on federal investments in research and development (R&D), and (2) principles for federal support of applied research. Fourteen papers on the history, politics, and economics of federal R&D were commissioned, and about 80 leaders from government, industry, and academia were invited to discuss the papers at the workshop. Predictably, while both topics were illuminated and the questions about them sharpened, in neither case did firm answers appear.

About the Government-University-Industry Research Roundtable (GUIRR)

GUIRR's mission is to convene senior-most representatives from government, universities, and industry to define and explore critical issues related to the national and global science and technology agenda that are of shared interest; to frame the next critical question stemming from current debate and analysis; and to incubate activities of on-going value to the stakeholders. The forum is designed to facilitate candid dialogue among participants, to foster self-implementing activities, and, where appropriate, to carry awareness of consequences to the wider public.

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For more information about GUIRR, visit our web site at www.nas.edu/guirr
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