

Tenth Annual Science-Engineering-Technology Congressional Visits Day May 10 & 11, 2005

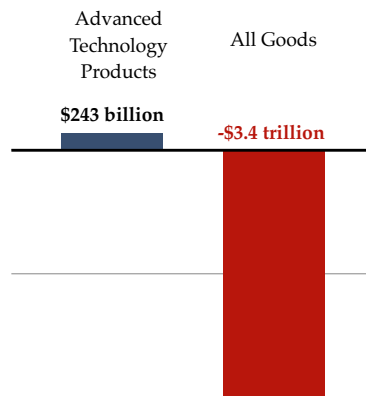


Federally Funded Research Secures The Nation's Future

- Scientific & technological innovation has accounted for roughly half of U.S. economic growth over the past 50 years.
- Growth in the U.S. high-tech industry spurred the economic boom of the 1990s, but competition from abroad is increasing.
- Federally supported research at universities & national laboratories leads to new knowledge on which future technological innovation and economic growth critically depends.

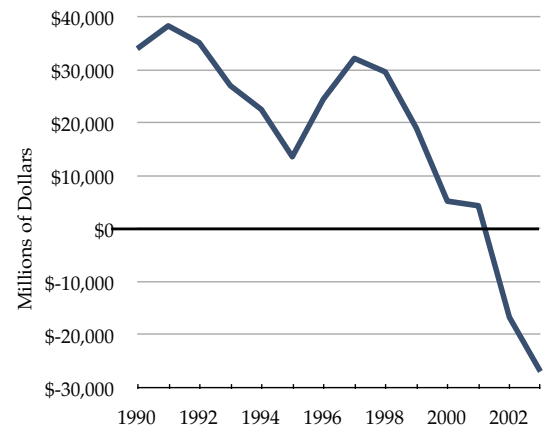
HIGH-TECH HAS DELIVERED FOR THE U.S. ECONOMY ...

Cumulative U.S. Trade Balance, 1990-2003



...BUT WILL IT CONTINUE?

U.S. Trade Balance for High-Tech Products, 1990-2003



Source: U.S. Census Bureau Foreign Trade Statistics, *U.S. International Trade in Goods and Services*.
Compiled by the APS Office of Public Affairs.

The Task Force on the Future of American Innovation -- <http://futureofinnovation.org>

What Should Congress Do?

**Support Strong Federal Investment in
Science & Engineering Research**

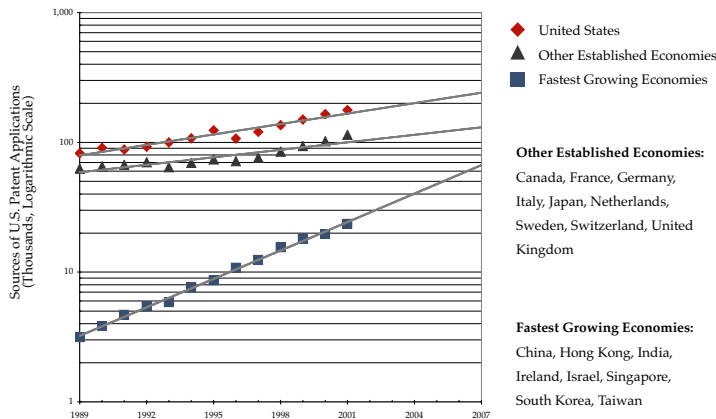
www.setcvd.org

Global competition in scientific discovery and technological innovation is rapidly increasing ...

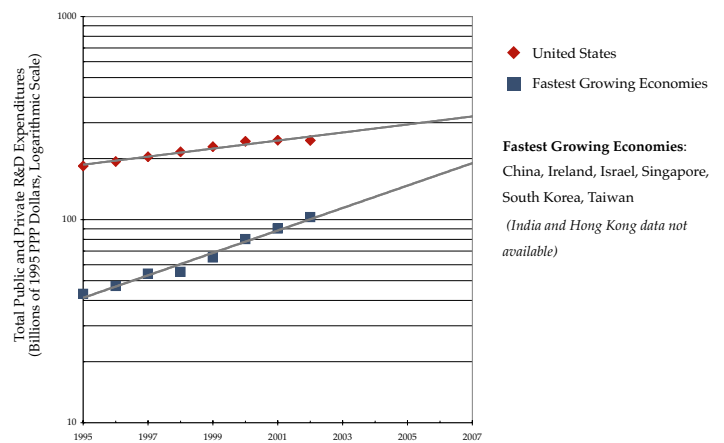
- Federally funded research fuels economic growth. Since 1980, over 4,300 new companies were formed on the strength of research performed at academic institutions.
- However, global competition is increasing. For example, in applications for U.S. patents, the U.S. lead over other nations is rapidly shrinking.

- From Europe to Eastern Asia, many nations are ramping up their investment in science and technology. For example, the EU plans to launch a new research-funding agency to provide grants under a peer-review process modeled on successful U.S. programs.

**U.S. Patent Applications:
Fastest Growing Economies Gaining Rapidly on U.S.**



**Total R&D Investments:
Fastest Growing Economies Gaining Rapidly on U.S.**



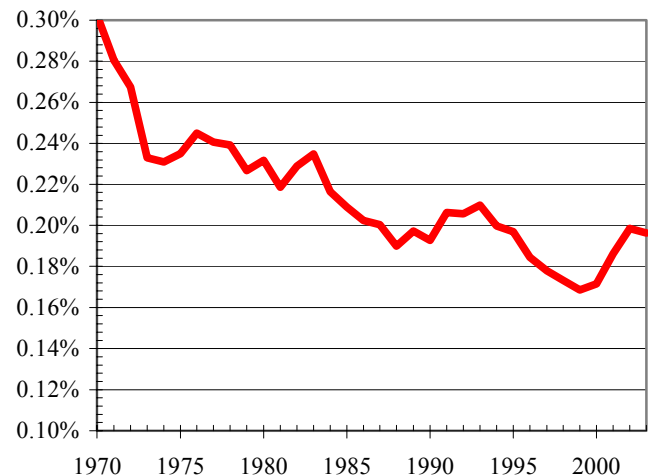
... How will the U.S. respond?

- Federal investment in non-medical research is in a 30-year decline as a fraction of the GDP.

Sources: Charts – Task Force on the Future of American Innovation, www.futureofinnovation.org; National Science Foundation, *Science and Engineering Indicators 2004*, Appendix Table 6-11 (patent applications); Organization for Economic Cooperation and Development, *Main Science and Technology Indicators*, May 2003 (R&D investment); AAAS, www.aaas.org/spp/rd/guidisc.htm (federal research). Bullets – Council on Competitiveness, *Innovate America*, p. 10 (growth since WWII); Association of University Technology Managers, Inc., *AUTM Licensing Survey*, FY 2002, p. 2 (patents since 1980); Gretchen Vogel, “A Framework for Change?” *Science*, April 15, 2005 (EU research).

Federal Funding for Non-Medical Research

Ratio of Federal Funding for research in engineering and the physical, environmental, mathematical and computer sciences to U.S. GDP



Federally Funded Research Secures the Nation's Future
www.setcvd.org