



COUNCIL OF SCIENTIFIC SOCIETY PRESIDENTS

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ISSUE PAPER: FEDERAL SUPPORT OF UNIVERSITY-BASED RESEARCH

The Federal Government Should Sustain Its Investment In University-Based Research

The scientific and technological leadership invested in now will determine the security and economic competitiveness of the nation in the 21st century. Without the research, education, and *training* provided by universities, the United States *cannot* produce the workforce needed to develop and lead in the highest growth industries of the future. Strong Federal support to sustain a robust, university-based research enterprise underpins the future welfare of the *nation*.

Americans understand that scientific research is a proper function of the Federal Government. 75% or more of the American public agrees that "scientific research that advances the frontiers of knowledge is necessary and should be supported by the government," according to six separate polls conducted by the Public Opinion Laboratory in Chicago, Illinois from 1982 to 1994, and one in 2000 and 2001. This same sentiment is reinforced by recent petitions signed by the Conference of Mayors, by eighteen state governors, and by the CEO's of 15 major U.S. corporations.

For each dollar originally invested, federally supported fundamental scientific research repays the economy 20% to 50% annually in each succeeding year. This has been established by more than a dozen independent studies. A very large portion of US company patents derive from university research.

Almost half of the fundamental scientific research conducted in the nation is university-based. Historically, the research university enterprise has produced not only new wealth, but more importantly, new sources of wealth for the future. The good health, military superiority, and economic leadership we enjoy today are readily traceable to investments in university-based research made a generation or more ago.

The Federal Government invested some \$19 billion in university-based research in 2000: the payoff is immense. Industrial sectors now heavily dependent on discoveries in science and on a well educated workforce include electronic components, plastics and new materials, computers and software, telecommunications equipment and services, pharmaceutical and medical equipment and supplies and aeronautics. These 21st-century enterprises create millions of jobs and contribute over \$1 trillion per year to the economy.

Real growth in U.S. R&D in the period 1981-1993 was only three-quarters that of other G-7 nations, our primary competitors for world markets. Research investment in the United States has been virtually flat during most of the 1990s, just when it should have been growing to compete with the other G-7 nations. This bodes ill for the future U.S. balance of trade.

CSSP CONCLUSION

The federal investment in scientific research has provided enormous benefit to our national security, economy, and society for over half a century. The federal responsibility for this investment has been undisputed throughout this era. Today, this successful enterprise--that creates not only wealth, but, uniquely, new sources of wealth--is threatened.

The federal budget proposals threaten to reduce this investment. Thus, an enterprise of unquestioned productivity and economic benefits is severely threatened, just at the time the government needs to increase its support of universitybased research.

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