

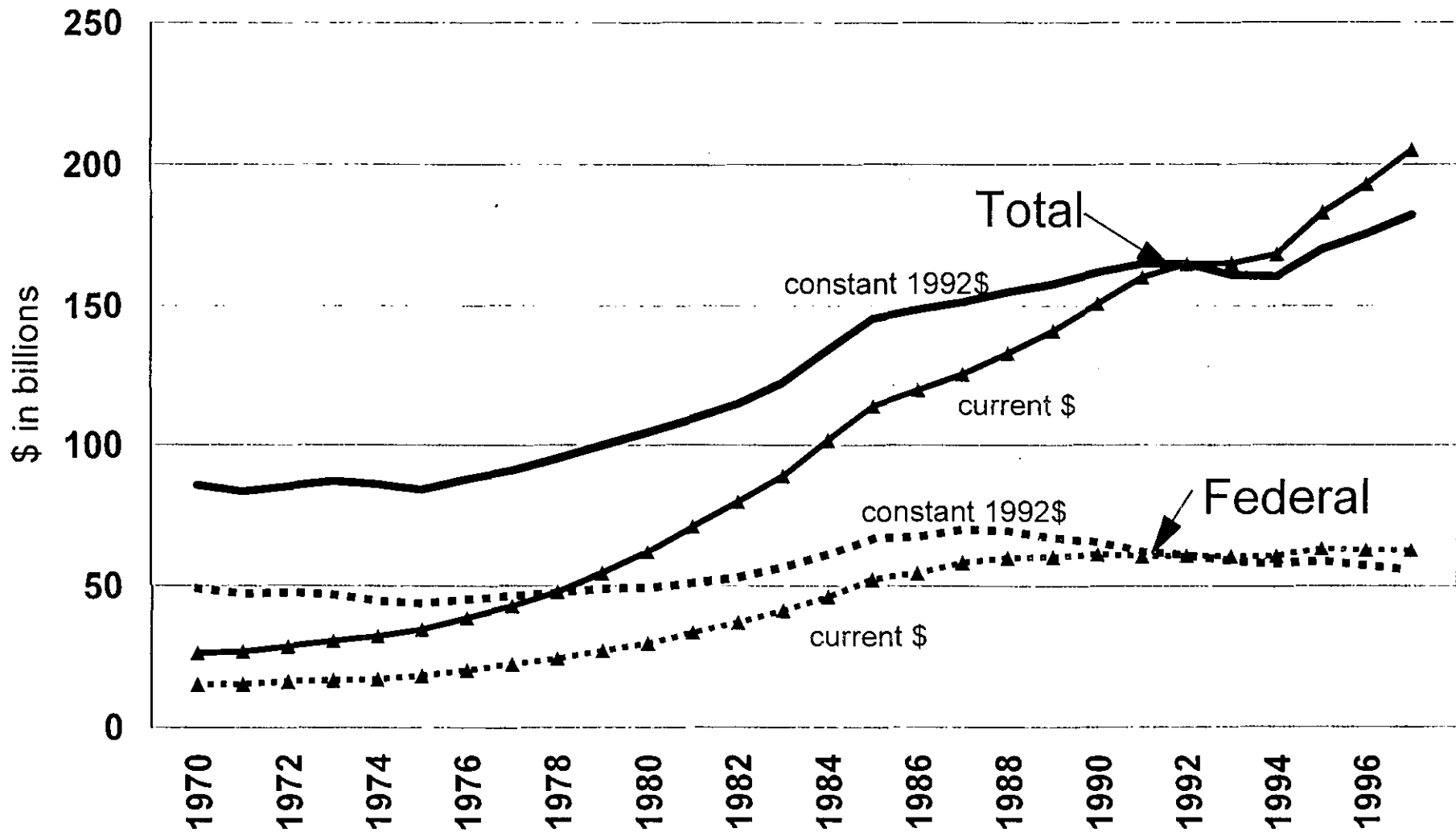
NLWJC - Kagan

DPC - Box 006 - Folder 002

Budget - Research and Development

U.S. R&D spending over 25 years has more than doubled

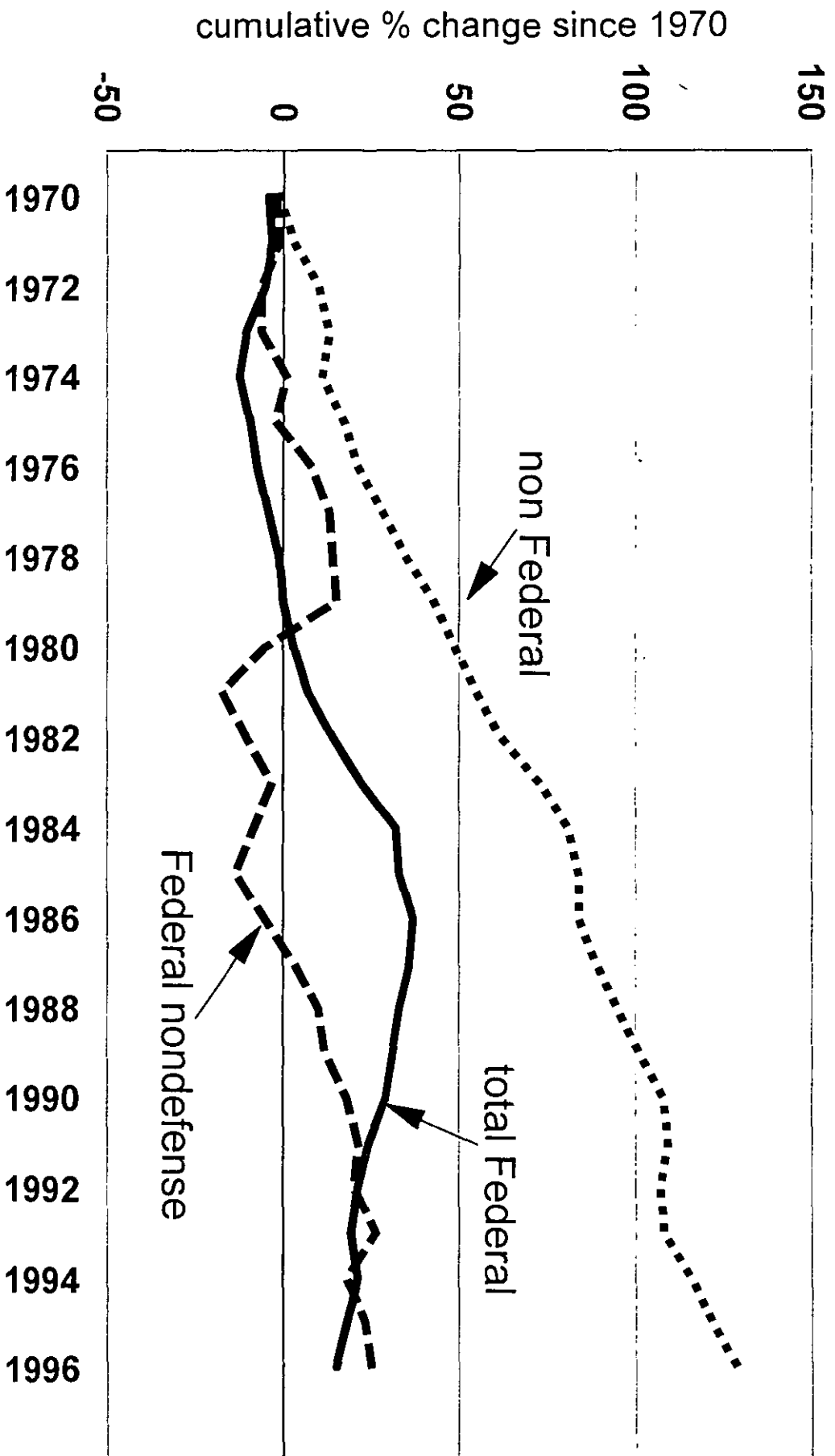
Source: National Science Board, Science and
Engineering Indicators - 1998



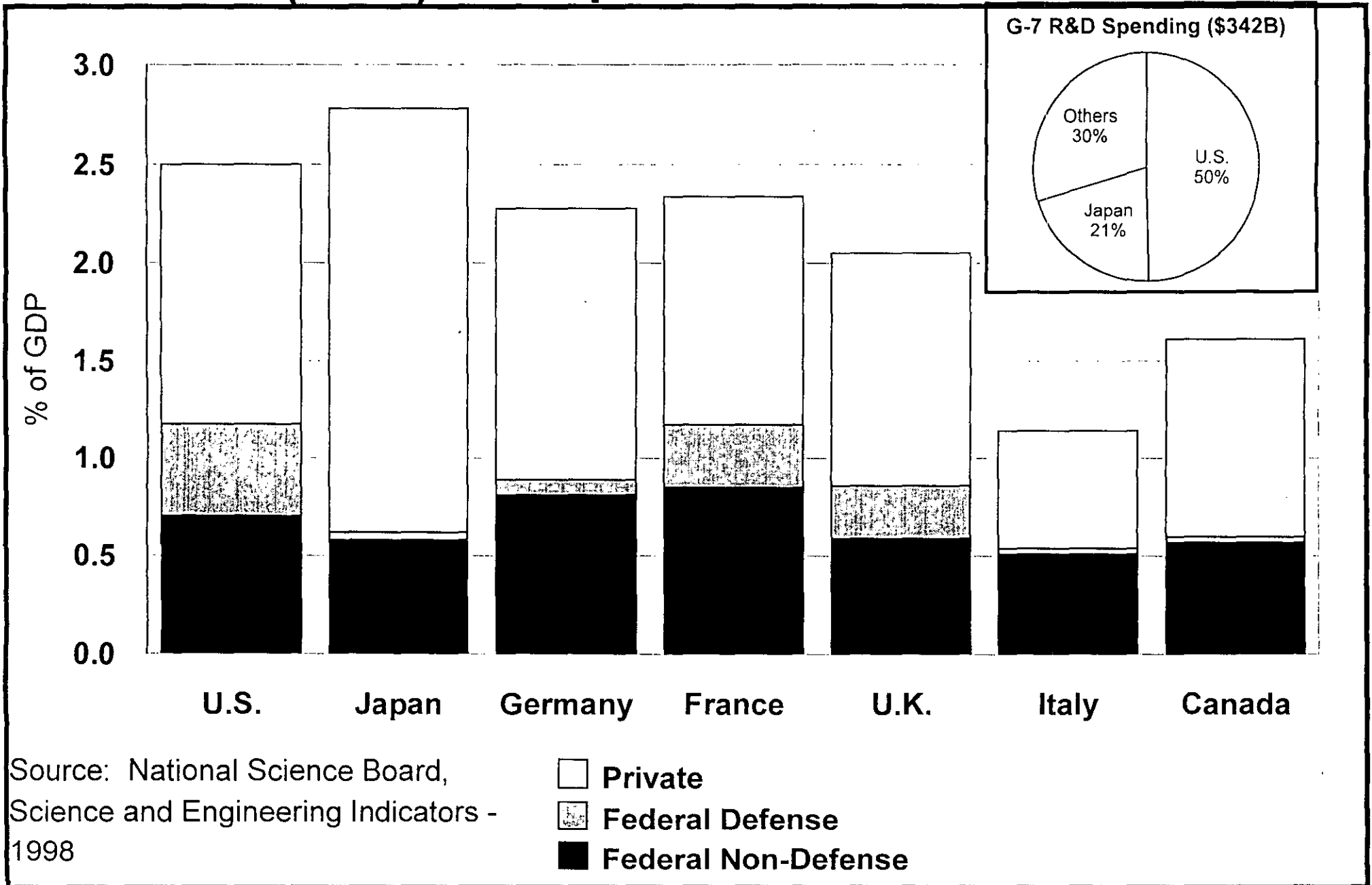
Research - R&D

R&D Funding:

Non Federal R&D has increased steadily

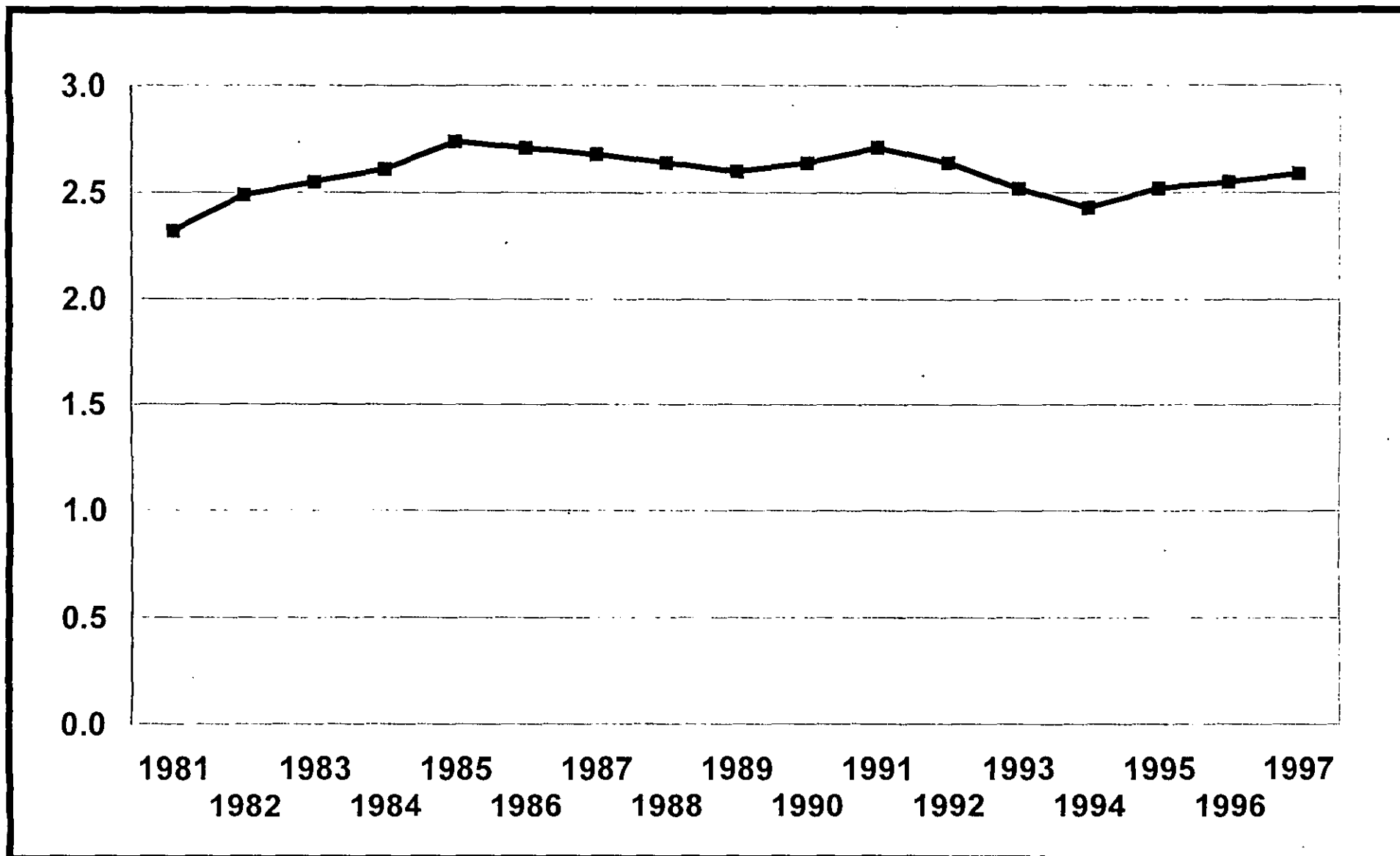


U.S. compares well with G-7 in R&D as % of GDP (1995) - and provides half of total \$

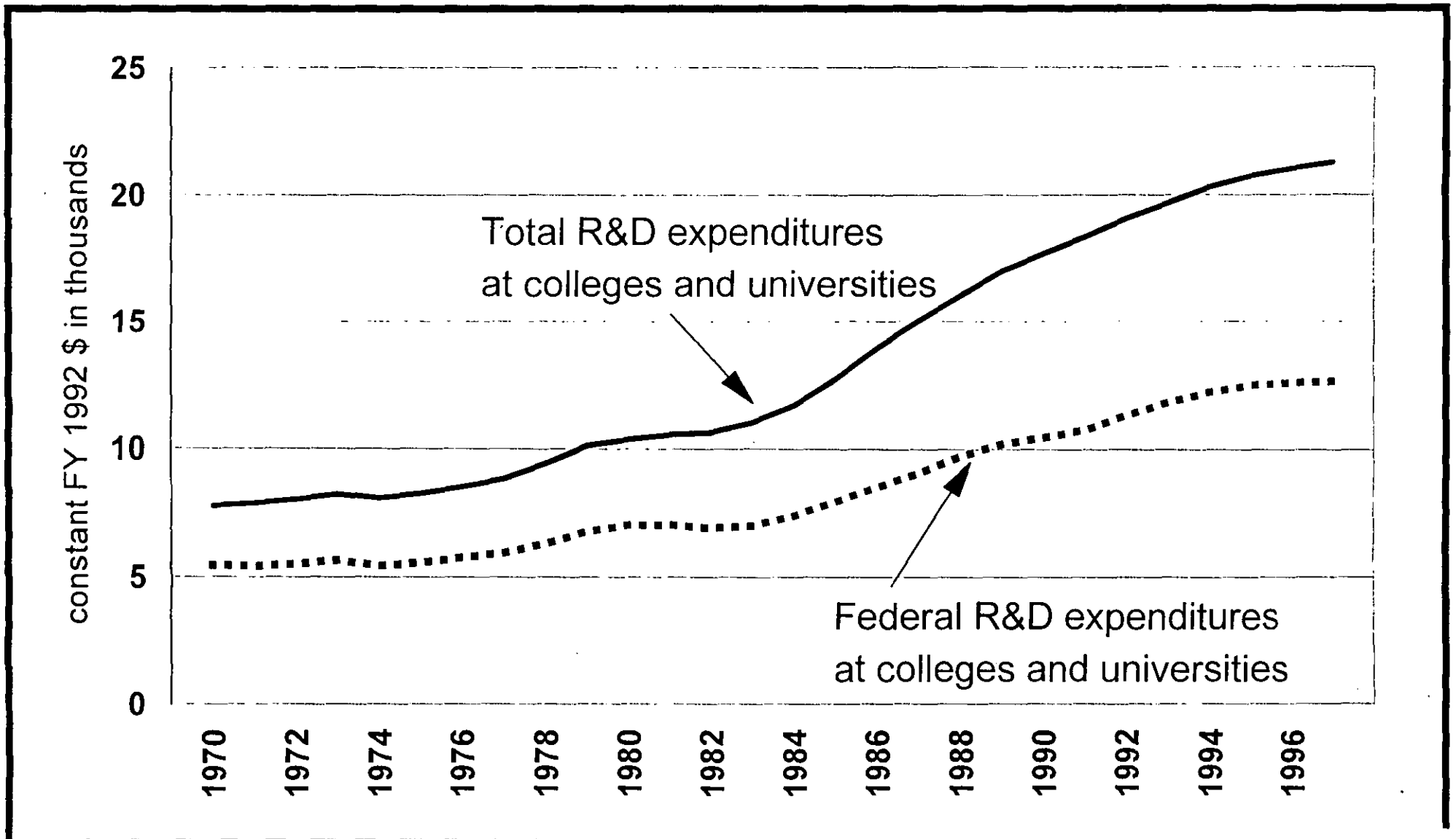


U.S. R&D spending, as percent of GDP, has remained fairly constant for 16 years

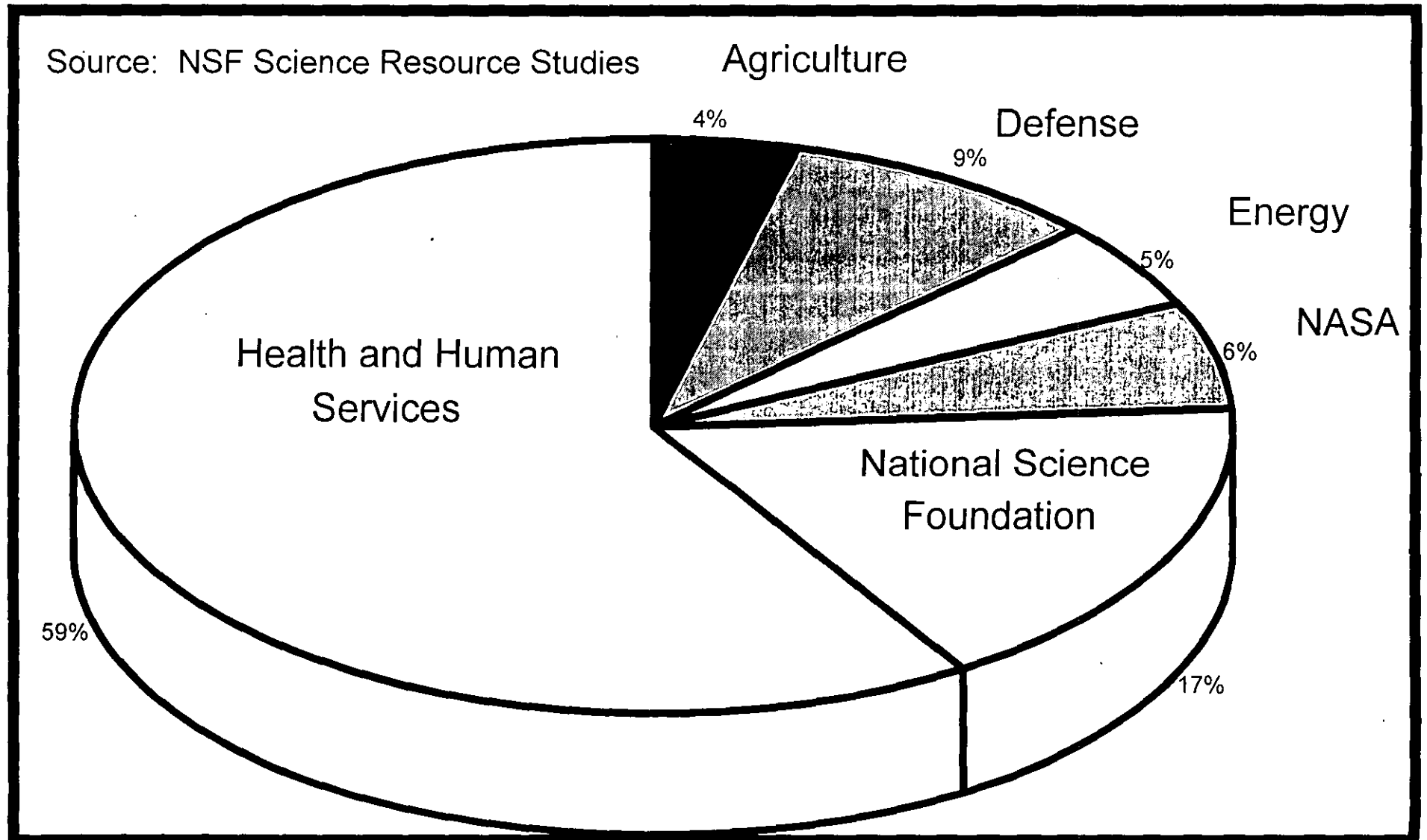
Source: National Science Board, Science and Engineering Indicators - 1998



Total R&D at universities has nearly tripled since 1970; Federal R&D portion has more than doubled

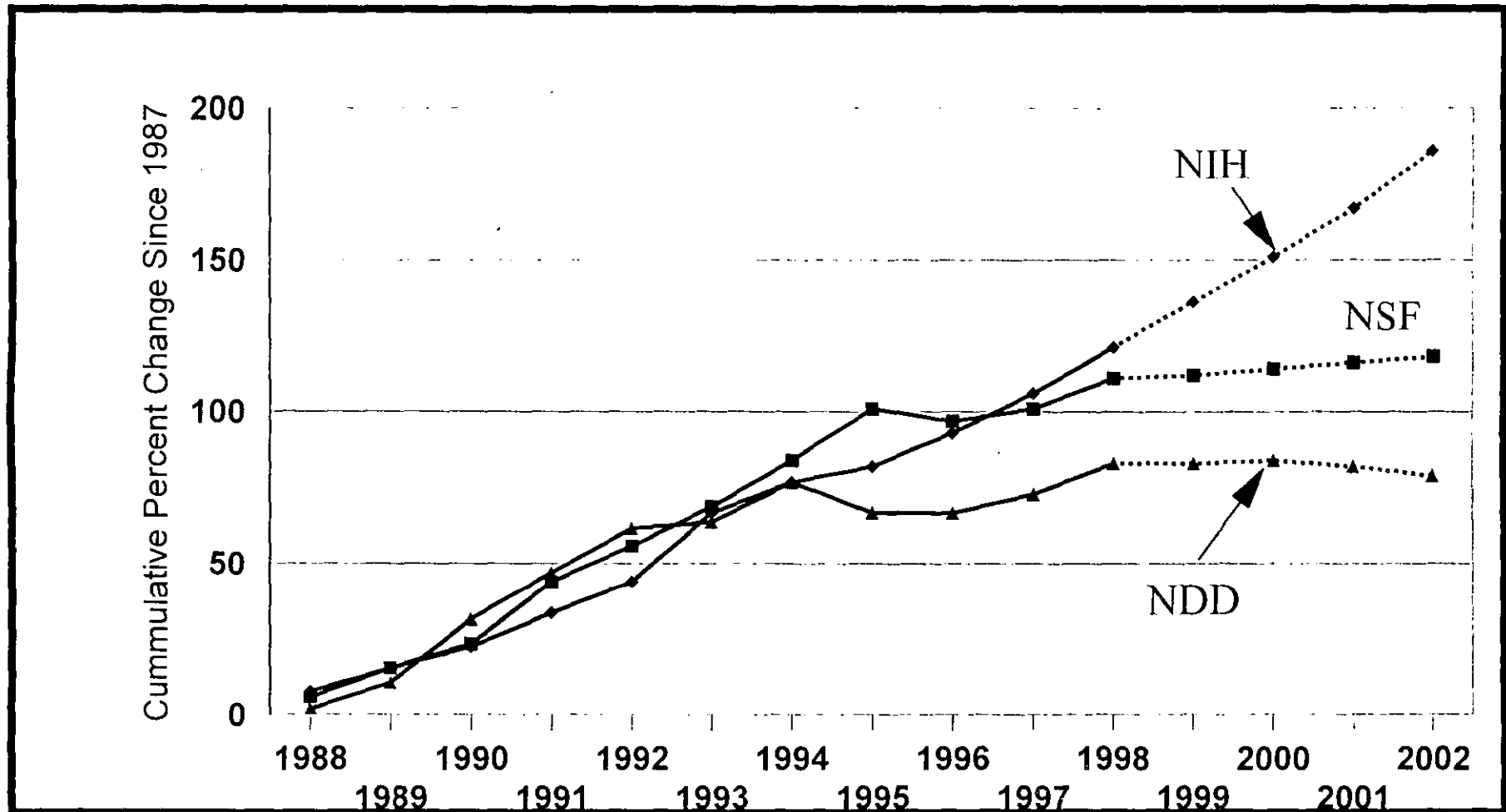


HHS and NSF dominate Federal funding at colleges and universities (FY 1997 total: \$10.4 billion)



NIH and NSF have grown more than overall NDD spending in the past 10 years

Source: OMB, Mid Session Review



R&D Budget Summary

03-Dec-97

NOTE: Data below is an incomplete measure of R&D investments (e.g., does not include DoD development nor smaller civil investments (DoT, DOI, EPA, DoEd) which constitute roughly 10% of civil total). Also some items below include more than "R&D" (e.g., salaries).

(BA in billions)	1993	1997	1998	1998		Percent		Percent
	Actual	Actual	Request	Enacted	1999	Change	2002	Change
						'98 to '99		'98 to '02
Department of Defense *								
Basic Research (6.1)	1.3	1.1	1.2	1.0	1.1	9%	1.1	--
Applied Research (6.2)	3.5	2.9	2.8	3.0	3.0	-0%	3.0	--
TOTAL Passback	4.9	4.0	4.0	4.1	4.2	2%	4.2	--
Pending Proposal: None					--	--	--	--
TOTAL incl. Proposal					4.2	2%	4.2	--
* - DoD budget still being reviewed. FY98 enacted still being adjusted (and includes many earmarks).								
DHHS/ National Institutes of Health								
TOTAL Passback	10.3	12.7	13.1	13.6	13.6	0%	13.6	0%
Pending Proposal: "NIH Biomedical Research" *					1.0	--	4.1	--
* - includes funding for new initiative in National Cancer Institute								
TOTAL incl. Proposal					14.6	7%	17.7	30%
National Aeronautics & Space Admin.								
Space Station	2.3	2.3	2.2	2.4	2.1	-9%	1.6	-32%
Space Science	1.8	2.0	2.0	2.0	2.0	-5%	2.2	7%
Mission to Planet Earth	1.1	1.4	1.4	1.4	1.3	-6%	1.5	2%
Adv. Space Transportation	0.0	0.3	0.4	0.4	0.5	18%	0.5	24%
Aeronautics	0.8	0.8	0.9	0.9	0.8	-17%	0.3	-63%
Other Activities	9.2	7.7	7.5	7.4	7.4	-1%	6.9	-7%
TOTAL Passback	14.3	13.7	13.5	13.6	13.2	-3%	12.6	-8%
Pending Proposal: "Restore FY98 Outyear Funding"					0	--	0.6	--
TOTAL incl. Proposal					13.2	-3%	13.2	5%

(BA in billions)	1993 Actual	1997 Actual	1998 Request	1998 Enacted	1999	Percent Change '98_to_'99	2002	Percent Change '98_to_'02
Department of Energy								
Basic Sciences	3.1	2.5	2.3	2.5	2.5	2%	2.5	2%
Applied Research	1.6	1.4	1.4	1.4	1.7	24%	1.4	5%
Stockpile Stewardship	1.8	1.7	1.7	1.9	2.1	14%	2.2	19%
Environmental Technology Dev.	0.4	0.3	0.3	0.2	0.2	0%	0.2	0%
Naval Reactor Development	0.7	0.7	0.6	0.7	0.7	-2%	0.6	-7%
Arms_Control R&D	0.2	0.2	0.2	0.2	0.2	0%	0.2	0%
TOTAL Passback	7.7	6.7	6.6	6.8	7.4	9%	7.2	6%
Pending Proposal: "National Spallation Neutron Source"					0.2	--	0.3	--
"Multi-Agency Climate Change Initiative" *					0.2	--	0.4	--
* - Over the 5-yrs, 1999-2003, the total resources (spending and tax expenditures) will be \$5b. Some of these resources are targeted within base programs of several Federal agencies.								
TOTAL incl. Proposal					7.8	14%	7.8	15%
National Science Foundation								
Research & Related Activities	2.0	2.4	2.5	2.5	2.4	-4%	2.4	-6%
Education and Human Resources	0.5	0.6	0.6	0.6	0.6	-5%	0.6	-7%
Major Research Equipment	0.1	0.1	0.1	0.1	0.1	-43%	0.1	-43%
Salaries and Expenses (&IG)	0.1	0.1	0.1	0.1	0.1	0%	0.1	0%
TOTAL Passback	2.8	3.3	3.4	3.4	3.2	-5%	3.2	-7%
Pending Proposal: "Investments in Basic Research"					0.2	--	0.5	--
TOTAL incl. Proposal					3.5	1%	3.7	7%
Department of Agriculture								
Agricultural Research	1.7	1.7	1.7	1.8	1.7	-4%	1.7	-4%
Forest Service R&D	0.2	0.2	0.2	0.2	0.2	0%	0.2	0%
TOTAL Passback	1.9	1.9	1.9	1.9	1.9	-4%	1.9	-4%
Pending Proposal: None *					--		--	--
* - Broad, agriculture-wide initiative may include some R&D funding, but exact amount is TBD.								
TOTAL incl. Proposal					1.9	-4%	1.9	-4%

(BA in billions)	1993 Actual	1997 Actual	1998 Request	1998 Enacted*	1999	Percent Change '98_to_'99	2002	Percent Change '98_to_'02
Department of Commerce								
NIST: Adv. Technology Program	0.1	0.2	0.3	0.2	0.3	30%	0.3	71%
NIST: Mfg Extension Partnerships	0.0	0.1	0.1	0.1	0.1	-7%	0.1	-25%
NIST: Other R&D	0.3	0.3	0.3	0.4	0.3	-18%	0.3	-18%
NOAA: Oceanic & Atmos. Rsrch	0.2	0.3	0.3	0.3	0.3	-10%	0.3	-8%
NTIA: Nat'l Info. Infrastructure	0.0	0.0	0.0	0.0	0.0	0%	0.0	0%
TOTAL Passback	0.6	0.8	1.0	1.0	0.9	-5%	1.0	2%
Pending Proposal: "NIST-Construct Adv. Measurement Lab"					0.1	--	0.0	--
TOTAL incl. Proposal					1.0	2%	1.0	4%
Department of Transportation								
Federal Aviation Admin. (FAA)	0.2	0.2	0.2	0.2	0.2	1%	0.3	49%
Natl Hwy Traffic Safety (NHTSA)	NA	0.0	0.0	0.0	0.1	11%	0.1	11%
Federal Hwy Admin. (FHWA)*	NA	0.2	0.2	0.2	0.2	-30%	0.2	-30%
TOTAL Passback	0.2	0.5	0.4	0.5	0.4	-13%	0.5	7%
Pending Proposal: "Accelerate Flight 2000 Free Flight Demonstration"					0.1	--	-0.0	--
* - Does not include contract authority provided for R&D through Intermodal Surface Transportation Efficiency Act (ISTEA). Significant increase in FY98 Enacted reflects severe Congressional earmarking of Intelligent Transportation Systems (ITS) program.								
Department of Education								
Pending Proposal: "ED/NSF - Education Research"					0.1	--	0.1	--
TOTAL FOR ALL AGENCIES								
Passback	42.6	43.6	43.8	45.0	44.9	-0%	44.2	-2%
Passback + Proposals					46.7	4%	49.9	11%

NSTC Multi-Agency R&D Crosscuts (funding included primarily in base described above)

(BA in billions)	1993	1997	1998	1998	1999
	Actual	Actual	Request	Enacted	
High Perf. Computing & Comm. incl. Next Generation Internet	0.8	1.0	1.1	TBD	TBD
	0.0	0.0	0.1	0.1	100
US Global Change Research Pgm	1.5	1.8	1.9	TBD	TBD
Partnership for New Gen. Vehicles	NA	0.3	0.3	TBD	TBD
Education Technologies	NA	0.5	0.5	TBD	TBD
Emerging Infectious Diseases	NA	0.3	0.3	TBD	TBD

**Agenda for R&D Principals Meeting
December 3, 1997, 1:00 p.m - 2:00 p.m.
Roosevelt Room, the White House**

1. Current levels of R&D investment in FY99 budget
 - DoD
 - NIH
 - NASA
 - Energy
 - NSF
 - Commerce/NIST
 - Transportation
2. Potential addbacks or new initiatives
 - Climate Change
 - NIH
 - Energy (e.g. Spallation Source)
 - University-based research (e.g. NSF, DoD 6.1)
 - NASA
 - Next Generation Internet, other information & communications initiatives
 - "Dual-use"
 - Education and Training R&D
3. R&E tax credit
4. R&D "wedge" for FY2000
5. Congressional proposals to double R&D