

TABLE 4-2

Annual rates of change in U.S. R&D expenditures, total and by performing sectors: 1990–2017

(Percent)

Expenditures and gross domestic product	Longer-term trends			Most recent years						
	1990–2000	2000–10	2010–17	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Current \$										
Total R&D, all performers	5.8	4.3	4.4	4.8	1.8	4.7	4.7	3.8	4.4	6.3
Business	6.4	3.4	5.3	5.4	2.8	6.7	5.6	4.4	5.3	6.8
Federal government	1.9	5.9	0.5	5.4	-2.6	-2.0	3.1	0.3	-3.1	2.7
Federal intramural ^a	2.1	5.2	0.1	9.3	-2.7	-1.8	4.1	-1.7	-7.1	1.5
FFRDCs	1.7	7.3	1.1	-1.4	-2.4	-2.5	1.3	4.2	4.2	4.6
Nonfederal government ^b	NA	NA	-1.1	0.4	-4.2	-6.8	-5.9	2.0	4.7	2.9
Higher education	5.9	6.9	3.0	3.5	1.3	1.1	1.3	3.6	4.9	5.1
Other nonprofit organizations ^c	8.8	6.6	3.8	-1.5	-0.6	2.9	4.9	3.8	7.8	9.3
Gross domestic product	5.6	3.9	3.8	3.7	4.2	3.6	4.4	4.0	2.7	4.3
Constant 2012 \$										
Total R&D, all performers	3.7	2.1	2.7	2.7	-0.2	2.9	2.8	2.8	3.4	4.3
Business	4.3	1.3	3.6	3.3	0.8	4.9	3.7	3.4	4.2	4.8
Federal government	-0.1	3.8	-1.1	3.2	-4.4	-3.7	1.3	-0.7	-4.1	0.8
Federal intramural ^a	0.0	3.0	-1.5	7.1	-4.5	-3.5	2.2	-2.7	-8.1	-0.4
FFRDCs	-0.4	5.1	-0.5	-3.4	-4.2	-4.2	-0.6	3.1	3.1	2.7
Nonfederal government ^b	NA	NA	-2.7	-1.7	-6.0	-8.4	-7.6	0.9	3.6	1.0
Higher education	3.7	4.7	1.3	1.3	-0.6	-0.7	-0.5	2.6	3.8	3.1
Other nonprofit organizations ^c	6.6	4.4	2.1	-3.5	-2.4	1.2	3.0	2.7	6.7	7.3
Gross domestic product	3.4	1.7	2.2	1.6	2.2	1.8	2.5	2.9	1.6	2.4

NA = not available.

FFRDC = federally funded research and development center.

^a Includes expenditures of federal intramural R&D, as well as costs associated with administering extramural R&D procurements.^b Survey data on state intramural R&D performance were not available prior to 2006.^c Some components of the R&D performed by other nonprofit organizations are projected and may later be revised.**Note(s)**

Longer-term trend rates are calculated as compound annual growth rates. Data for 2017 are preliminary and may later be revised.

Source(s)

National Center for Science and Engineering Statistics, National Science Foundation, National Patterns of R&D Resources (annual series).

Science and Engineering Indicators