

Table RD-2

Annual rates of change in U.S. R&D expenditures, by performing sector: 1990–2020

(Percent)

Expenditures and gross domestic product	Longer-term trends			Most recent years									
	1990–2000	2000–10	2010–19	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20 ^a
Current dollars													
Total R&D, all performers	5.8	4.3	5.7	4.8	1.8	4.7	4.8	3.9	5.5	6.2	9.2	10.3	6.2
Business	6.4	3.4	6.7	5.4	2.8	6.7	5.6	4.4	6.7	6.9	9.8	11.8	6.8
Federal government	1.9	5.9	2.4	5.4	-2.6	-2.0	3.1	0.3	-3.1	2.7	11.0	7.6	4.6
Federal intramural	2.1	5.2	2.5	9.3	-2.7	-1.8	4.1	-1.7	-7.1	1.5	14.2	8.4	5.2
FFRDCs	1.7	7.3	2.2	-1.4	-2.4	-2.5	1.3	4.2	4.2	4.6	6.1	6.3	3.6
Nonfederal government ^b	NA	NA	-0.3	0.4	-4.2	-6.8	-5.9	2.0	4.3	1.9	1.7	5.0	3.1
Higher education	5.9	6.9	3.4	3.4	1.3	1.1	1.3	3.7	4.9	4.9	5.3	4.4	3.8
Nonprofit organizations ^c	8.8	6.6	4.6	-1.3	-0.3	4.1	6.1	5.0	9.6	6.0	6.0	6.7	5.5
Gross domestic product	5.6	3.9	4.0	3.7	4.2	3.6	4.2	3.7	2.7	4.2	5.4	4.1	-2.2
Constant 2012 dollars													
Total R&D, all performers	3.7	2.1	3.8	2.7	-0.1	2.9	2.9	2.9	4.5	4.2	6.6	8.3	4.9
Business	4.3	1.2	4.8	3.3	0.9	4.9	3.7	3.4	5.6	4.9	7.2	9.8	5.5
Federal government	-0.1	3.8	0.6	3.2	-4.4	-3.7	1.2	-0.7	-4.1	0.8	8.5	5.7	3.3
Federal intramural	0.0	3.0	0.7	7.1	-4.5	-3.5	2.2	-2.7	-8.0	-0.4	11.5	6.5	3.9
FFRDCs	-0.4	5.1	0.5	-3.4	-4.2	-4.1	-0.6	3.1	3.1	2.7	3.6	4.5	2.3
Nonfederal government ^b	NA	NA	-2.0	-1.7	-5.9	-8.4	-7.6	0.9	3.3	0.0	-0.7	3.2	1.9
Higher education	3.7	4.6	1.6	1.3	-0.5	-0.7	-0.6	2.6	3.8	2.9	2.9	2.5	2.5
Nonprofit organizations ^c	6.6	4.4	2.8	-3.3	-2.1	2.3	4.2	4.0	8.5	4.0	3.5	4.8	4.2
Gross domestic product	3.4	1.8	2.2	1.5	2.3	1.8	2.3	2.7	1.7	2.3	2.9	2.3	-3.4

NA = not available.

FFRDC = federally funded research and development center.

^a The R&D data for 2020 include estimates and are likely to be later revised.^b Survey data on state intramural R&D performance were not available prior to 2006.^c Some components of the R&D performed by nonprofit organizations are estimated and may later be revised.**Note(s):**

The longer-term trend rates are calculated as compound annual growth rates.

Source(s):

National Center for Science and Engineering Statistics, National Patterns of R&D Resources (2019–20 edition).

Science and Engineering Indicators