



TABLE 4-2

Annual rates of growth in U.S. R&D expenditures, total and by performing sectors: 1988–2015

(Percent)

| Expenditures and gross domestic product | Longer-term trends | | | Most recent years | | | | | | |
|--|--------------------|-----------|---------|-------------------|---------|---------|---------|---------|---------|---------|
| | 1988–98 | 1998–2008 | 2008–15 | 2008–09 | 2009–10 | 2010–11 | 2011–12 | 2012–13 | 2013–14 | 2014–15 |
| Current \$ | | | | | | | | | | |
| Total R&D, all performers | 5.4 | 6.0 | 2.9 | -0.5 | 0.9 | 4.8 | 1.8 | 4.7 | 4.7 | 4.1 |
| Business | 5.8 | 5.7 | 2.9 | -2.9 | -1.2 | 5.4 | 2.8 | 6.7 | 5.6 | 4.4 |
| Federal government | 1.8 | 5.9 | 2.5 | 4.2 | 6.8 | 5.4 | -2.6 | -2.0 | 3.1 | 3.1 |
| Federal intramural ^a | 1.9 | 5.6 | 2.6 | 2.4 | 4.6 | 9.3 | -2.7 | -1.8 | 4.1 | 2.6 |
| FFRDCs | 1.6 | 6.4 | 2.4 | 7.6 | 10.7 | -1.4 | -2.4 | -2.5 | 1.3 | 4.2 |
| Nonfederal government ^b | NA | NA | 3.1 | NA | 14.1 | 0.4 | -4.2 | -6.8 | -5.9 | 4.6 |
| Higher education | 6.0 | 7.4 | 3.1 | 5.5 | 5.8 | 3.5 | 1.3 | 1.1 | 1.3 | 3.7 |
| Other nonprofit organizations ^c | 8.5 | 8.2 | 3.1 | 9.8 | 3.3 | -1.5 | -0.6 | 3.0 | 4.9 | 3.5 |
| Gross domestic product | 5.6 | 4.9 | 3.0 | -2.0 | 3.8 | 3.7 | 4.1 | 3.3 | 4.4 | 4.0 |
| Constant 2009\$ | | | | | | | | | | |
| Total R&D, all performers | 2.9 | 3.6 | 1.4 | -1.2 | -0.3 | 2.7 | -0.1 | 3.0 | 2.9 | 3.0 |
| Business | 3.3 | 3.3 | 1.4 | -3.6 | -2.4 | 3.3 | 0.9 | 5.0 | 3.8 | 3.3 |
| Federal government | -0.6 | 3.4 | 1.0 | 3.4 | 5.5 | 3.2 | -4.3 | -3.6 | 1.3 | 2.0 |
| Federal intramural ^a | -0.5 | 3.2 | 1.1 | 1.6 | 3.4 | 7.1 | -4.4 | -3.4 | 2.3 | 1.5 |
| FFRDCs | -0.8 | 4.0 | 0.9 | 6.8 | 9.3 | -3.3 | -4.2 | -4.0 | -0.5 | 3.0 |
| Nonfederal government ^b | NA | NA | 1.6 | NA | 12.7 | -1.6 | -5.9 | -8.3 | -7.5 | 3.5 |
| Higher education | 3.5 | 4.9 | 1.6 | 4.7 | 4.5 | 1.4 | -0.5 | -0.5 | -0.5 | 2.6 |
| Other nonprofit organizations ^c | 5.9 | 5.7 | 1.6 | 8.9 | 2.1 | -3.5 | -2.4 | 1.3 | 3.0 | 2.4 |
| Gross domestic product | 3.4 | 2.2 | 1.5 | -2.8 | 2.5 | 1.6 | 2.2 | 1.7 | 2.6 | 2.9 |

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.



^b Survey data on state internal 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 2015 are preliminary and may later be revised.

Source(s)

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

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