



APPENDIX TABLE 4-1

U.S. gross domestic product, R&D, and ratio of R&D to gross domestic product (and components): 1953–2015

(Billions of current and of constant 2009 dollars and R&D-to-GDP ratio)

Year	GDP			Total R&D		R&D/GDP (%)								
	Current \$billions	Constant 2009 \$billions	Deflator ^a (2009 = 1.00000)	Current \$billions	Constant 2009 \$billions	Total	R&D, by performer				R&D, by source of funding			
							Business	Federal ^b	Higher education	Other ^c	Business	Federal	Other ^d	
1953	389.7	2,571.4	0.15155	5.2	34.0	1.32	0.93	0.29	0.07	0.03	0.58	0.71	0.03	
1954	391.1	2,556.9	0.15296	5.6	36.7	1.44	1.04	0.29	0.08	0.03	0.61	0.79	0.04	
1955	426.2	2,739.0	0.15560	6.2	39.7	1.45	1.04	0.30	0.08	0.03	0.59	0.82	0.04	
1956	450.1	2,797.4	0.16090	8.5	52.8	1.89	1.39	0.38	0.09	0.03	0.74	1.11	0.04	
1957	474.9	2,856.3	0.16626	9.9	59.6	2.09	1.54	0.42	0.09	0.04	0.73	1.31	0.04	
1958	482.0	2,835.3	0.17000	10.9	64.2	2.26	1.67	0.45	0.10	0.04	0.77	1.45	0.05	
1959	522.5	3,031.0	0.17239	12.5	72.5	2.39	1.76	0.47	0.11	0.04	0.78	1.56	0.05	
1960	543.3	3,108.7	0.17477	13.7	78.5	2.52	1.85	0.50	0.13	0.05	0.83	1.64	0.05	
1961	563.3	3,188.1	0.17669	14.6	82.4	2.59	1.84	0.55	0.15	0.05	0.84	1.68	0.06	
1962	605.1	3,383.1	0.17886	15.6	87.4	2.58	1.82	0.54	0.16	0.06	0.85	1.68	0.06	
1963	638.6	3,530.4	0.18089	17.5	96.9	2.74	1.91	0.58	0.18	0.06	0.85	1.82	0.07	
1964	685.8	3,734.0	0.18366	19.1	104.0	2.79	1.90	0.62	0.20	0.06	0.86	1.86	0.07	
1965	743.7	3,976.7	0.18701	20.3	108.3	2.72	1.86	0.59	0.21	0.06	0.88	1.77	0.07	
1966	815.0	4,238.9	0.19227	22.1	114.8	2.71	1.86	0.56	0.22	0.07	0.90	1.74	0.07	



Year	GDP			Total R&D		R&D/GDP (%)								
	Current \$billions	Constant 2009 \$billions	Deflator ^a (2009 = 1.00000)	Current \$billions	Constant 2009 \$billions	Total	R&D, by performer				R&D, by source of funding			
							Business	Federal ^b	Higher education	Other ^c	Business	Federal	Other ^d	
1967	861.7	4,355.2	0.19786	23.3	118.0	2.71	1.85	0.56	0.24	0.07	0.95	1.69	0.07	
1968	942.5	4,569.0	0.20628	24.7	119.6	2.62	1.81	0.52	0.23	0.06	0.96	1.59	0.07	
1969	1,019.9	4,712.5	0.21642	26.0	120.1	2.55	1.75	0.51	0.22	0.06	0.98	1.49	0.07	
1970	1,075.9	4,722.0	0.22785	26.3	115.3	2.44	1.64	0.52	0.22	0.06	0.97	1.39	0.08	
1971	1,167.8	4,877.6	0.23942	27.0	112.6	2.31	1.53	0.50	0.22	0.06	0.93	1.30	0.08	
1972	1,282.4	5,134.3	0.24977	28.7	115.1	2.24	1.48	0.48	0.21	0.06	0.91	1.25	0.08	
1973	1,428.5	5,424.1	0.26336	31.0	117.5	2.17	1.45	0.45	0.21	0.06	0.93	1.16	0.07	
1974	1,548.8	5,396.0	0.28703	33.4	116.2	2.15	1.44	0.45	0.21	0.06	0.96	1.12	0.08	
1975	1,688.9	5,385.4	0.31361	35.7	113.7	2.11	1.39	0.45	0.21	0.06	0.94	1.10	0.08	
1976	1,877.6	5,675.4	0.33083	39.4	119.2	2.10	1.39	0.44	0.21	0.06	0.94	1.08	0.08	
1977	2,086.0	5,937.0	0.35136	43.3	123.3	2.08	1.38	0.43	0.21	0.06	0.94	1.06	0.08	
1978	2,356.6	6,267.2	0.37602	48.7	129.6	2.07	1.37	0.43	0.21	0.06	0.95	1.04	0.08	
1979	2,632.1	6,466.2	0.40706	55.4	136.0	2.10	1.41	0.42	0.22	0.06	0.99	1.03	0.08	
1980	2,862.5	6,450.4	0.44377	63.2	142.5	2.21	1.51	0.42	0.23	0.06	1.08	1.05	0.08	
1981	3,211.0	6,617.7	0.48521	72.3	149.0	2.25	1.57	0.40	0.22	0.06	1.12	1.05	0.08	
1982	3,345.0	6,491.3	0.51531	80.7	156.7	2.41	1.71	0.42	0.23	0.06	1.22	1.11	0.09	



Year	GDP			Total R&D		R&D/GDP (%)							
	Current \$billions	Constant 2009 \$billions	Deflator ^a (2009 = 1.00000)	Current \$billions	Constant 2009 \$billions	Total	R&D, by performer				R&D, by source of funding		
							Business	Federal ^b	Higher education	Other ^c	Business	Federal	Other ^d
1983	3,638.1	6,792.0	0.53564	89.9	167.9	2.47	1.75	0.44	0.23	0.06	1.24	1.14	0.09
1984	4,040.7	7,285.0	0.55466	102.2	184.3	2.53	1.81	0.43	0.23	0.06	1.29	1.15	0.09
1985	4,346.7	7,593.8	0.57240	114.7	200.3	2.64	1.90	0.44	0.24	0.06	1.33	1.21	0.09
1986	4,590.2	7,860.5	0.58396	120.2	205.9	2.62	1.87	0.43	0.25	0.06	1.33	1.19	0.10
1987	4,870.2	8,132.6	0.59885	126.4	211.0	2.59	1.85	0.42	0.26	0.06	1.28	1.20	0.11
1988	5,252.6	8,474.5	0.61981	133.9	216.0	2.55	1.81	0.41	0.27	0.06	1.29	1.14	0.11
1989	5,657.7	8,786.4	0.64392	141.9	220.4	2.51	1.77	0.40	0.28	0.06	1.33	1.07	0.11
1990	5,979.6	8,955.0	0.66774	152.0	227.6	2.54	1.80	0.39	0.28	0.07	1.39	1.03	0.12
1991	6,174.0	8,948.4	0.68996	160.9	233.2	2.61	1.86	0.38	0.29	0.08	1.49	0.98	0.13
1992	6,539.3	9,266.6	0.70568	165.4	234.3	2.53	1.79	0.37	0.30	0.08	1.47	0.93	0.13
1993	6,878.7	9,521.0	0.72248	165.7	229.4	2.41	1.68	0.36	0.30	0.08	1.40	0.88	0.13
1994	7,308.8	9,905.4	0.73786	169.2	229.3	2.32	1.61	0.34	0.30	0.08	1.36	0.83	0.13
1995	7,664.1	10,174.8	0.75324	183.6	243.8	2.40	1.69	0.33	0.30	0.08	1.45	0.82	0.13
1996	8,100.2	10,561.0	0.76699	197.3	257.3	2.44	1.76	0.31	0.29	0.08	1.52	0.78	0.13
1997	8,608.5	11,034.9	0.78012	211.9	271.6	2.46	1.81	0.29	0.29	0.08	1.58	0.75	0.13
1998	9,089.2	11,525.9	0.78859	225.8	286.3	2.48	1.84	0.28	0.28	0.08	1.63	0.73	0.13



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							Business	Federal ^b	Higher education	Other ^c	Business	Federal	Other ^d
1999	9,660.6	12,065.9	0.80065	244.5	305.3	2.53	1.88	0.28	0.28	0.08	1.70	0.69	0.14
2000	10,284.8	12,559.7	0.81887	267.9	327.2	2.61	1.94	0.28	0.29	0.09	1.81	0.65	0.14
2001	10,621.8	12,682.2	0.83754	278.5	332.6	2.62	1.90	0.31	0.31	0.10	1.77	0.69	0.15
2002	10,977.5	12,908.8	0.85039	277.9	326.8	2.53	1.77	0.32	0.33	0.11	1.65	0.72	0.17
2003	11,510.7	13,271.1	0.86735	291.4	335.9	2.53	1.74	0.32	0.35	0.11	1.62	0.74	0.17
2004	12,274.9	13,773.5	0.89120	302.7	339.7	2.47	1.70	0.31	0.35	0.11	1.56	0.74	0.17
2005	13,093.7	14,234.2	0.91988	325.3	353.6	2.48	1.73	0.30	0.35	0.11	1.59	0.73	0.17
2006	13,855.9	14,613.8	0.94814	350.9	370.1	2.53	1.79	0.30	0.34	0.10	1.64	0.72	0.17
2007	14,477.6	14,873.7	0.97337	377.9	388.2	2.61	1.86	0.30	0.34	0.10	1.70	0.73	0.18
2008	14,718.6	14,830.4	0.99246	404.8	407.8	2.75	1.97	0.31	0.35	0.11	1.75	0.80	0.20
2009	14,418.7	14,418.7	1.00000	402.9	402.9	2.79	1.96	0.33	0.38	0.13	1.71	0.87	0.21
2010	14,964.4	14,783.8	1.01222	406.6	401.7	2.72	1.86	0.34	0.39	0.13	1.66	0.85	0.21
2011	15,517.9	15,020.6	1.03311	426.2	412.5	2.75	1.90	0.34	0.39	0.12	1.72	0.82	0.21
2012	16,155.3	15,354.6	1.05215	433.6	412.1	2.68	1.87	0.32	0.38	0.11	1.71	0.77	0.21
2013	16,691.5	15,612.2	1.06913	454.0	424.6	2.72	1.93	0.31	0.37	0.11	1.78	0.72	0.22
2014	17,427.6	16,013.3	1.08832	475.4	436.8	2.73	1.96	0.30	0.36	0.11	1.83	0.68	0.22



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							Business	Federal ^b	Higher education	Other ^c	Business	Federal	Other ^d
2015 ^e	18,120.7	16,471.5	1.10012	495.1	450.1	2.73	1.96	0.30	0.36	0.11	1.84	0.67	0.23

GDP = gross domestic product.

^a Implicit price deflator for GDP.

^b Includes federal intramural R&D and that by federally funded R&D centers.

^c Includes R&D in the United States performed by nonfederal government and other nonprofit organizations.

^d Includes funding for U.S. R&D by nonfederal government, higher education, and other nonprofit organizations.

^e Data are preliminary and may later be revised.

Note(s)

Detail may not add to total because of rounding.

Source(s)

GDP figures from Bureau of Economic Analysis, National Economic Accounts, Gross Domestic Product, <https://www.bea.gov/national/>, accessed 29 August 2017; R&D figures from National Science Foundation, National Center for Science and Engineering Statistics, National Patterns of R&D Resources (annual series).

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