

Table 10. International R&D expenditures in constant dollars and as a percentage of GDP: 1981–2001

Year	Total R&D expenditures							Total non-defense R&D expenditures <sup>1</sup>						
	United States	Japan <sup>2</sup>	Germany <sup>3</sup>	France	United Kingdom	Italy	Canada	United States	Japan <sup>2</sup>	Germany <sup>3</sup>	France	United Kingdom	Italy	Canada
	Billions of constant 1996 dollars <sup>4</sup>													
1981.....	115.9	40.4	28.6	17.4	19.1	7.9	6.1	88	40	28	14	15	8	6
1982.....	122.0	43.3	29.3	18.6	NA	8.2	6.7	90	43	28	15	NA	8	6
1983.....	130.8	46.8	29.8	19.4	18.6	8.7	6.7	95	46	29	16	14	8	6
1984.....	143.3	50.2	30.6	20.6	NA	9.5	7.3	102	50	29	17	NA	9	7
1985.....	155.8	55.6	33.6	21.5	20.1	10.9	7.9	109	55	32	17	16	10	8
1986.....	159.8	56.6	34.7	21.8	21.1	11.2	8.3	109	56	33	18	17	11	8
1987.....	162.8	60.6	36.4	22.7	21.4	12.2	8.3	111	60	35	18	18	12	8
1988.....	167.0	65.3	37.7	23.8	22.0	12.9	8.6	116	65	36	19	19	13	8
1989.....	170.4	71.4	39.1	25.3	22.6	13.5	9.2	123	71	37	21	17	13	9
1990.....	175.8	77.2	39.6	26.9	22.7	14.4	9.6	131	76	38	22	18	14	9
1991.....	179.5	79.0	42.2	27.2	21.6	13.9	9.8	139	78	41	22	18	14	10
1992.....	180.1	78.1	41.0	27.7	21.2	13.5	10.3	141	77	40	23	18	13	10
1993.....	176.2	76.1	39.6	27.7	22.0	12.7	10.8	138	75	38	24	19	13	11
1994.....	176.2	75.3	38.9	27.6	22.5	12.1	11.7	141	74	38	23	19	12	12
1995.....	187.2	80.1	39.6	27.6	22.5	11.9	11.9	152	79	38	24	19	12	12
1996.....	197.3	85.5	39.9	27.8	22.3	12.1	11.7	163	85	38	24	19	12	12
1997.....	208.1	89.0	41.1	27.4	22.1	12.9	12.4	173	88	40	25	19	13	12
1998.....	219.3	91.3	42.3	27.6	22.7	13.3	13.5	185	90	41	25	19	13	13
1999.....	232.7	91.8	45.5	28.7	24.2	13.2	14.3	199	91	45	26	21	13	14
2000.....	247.6	95.4	47.7	29.0	24.6	NA	15.3	214	95	47	NA	21	NA	NA
2001.....	257.5	NA	48.7	NA	NA	NA	16.2	222	NA	48	NA	NA	NA	NA
	Percent of national GDP													
1981.....	2.31	2.11	2.47	1.93	2.38	0.88	1.24	1.7	2.1	2.4	1.6	1.9	0.9	1.2
1982.....	2.48	2.19	2.56	2.02	NA	0.90	1.38	1.8	2.2	2.5	1.6	NA	0.9	1.3
1983.....	2.55	2.32	2.56	2.06	2.20	0.95	1.36	1.8	2.3	2.5	1.7	1.7	0.9	1.3
1984.....	2.60	2.40	2.56	2.16	NA	1.01	1.40	1.9	2.4	2.5	1.8	NA	1.0	1.3
1985.....	2.72	2.54	2.75	2.22	2.24	1.12	1.44	1.9	2.5	2.6	1.8	1.8	1.1	1.4
1986.....	2.70	2.51	2.77	2.21	2.26	1.13	1.47	1.9	2.5	2.6	1.8	1.8	1.1	1.4
1987.....	2.66	2.57	2.87	2.24	2.20	1.19	1.42	1.8	2.6	2.7	1.8	1.8	1.2	1.4
1988.....	2.62	2.60	2.86	2.24	2.14	1.22	1.40	1.8	2.6	2.7	1.8	1.8	1.2	1.3
1989.....	2.59	2.70	2.86	2.29	2.15	1.24	1.47	1.9	2.7	2.7	1.9	1.7	1.2	1.4
1990.....	2.62	2.78	2.75	2.37	2.15	1.29	1.53	2.0	2.8	2.6	1.9	1.7	1.3	1.5
1991.....	2.69	2.75	2.53	2.37	2.07	1.23	1.59	2.1	2.7	2.4	1.9	1.7	1.2	1.6
1992.....	2.62	2.70	2.41	2.38	2.02	1.18	1.65	2.1	2.7	2.3	2.0	1.7	1.2	1.6
1993.....	2.49	2.62	2.35	2.40	2.05	1.13	1.70	2.0	2.6	2.3	2.0	1.7	1.1	1.7
1994.....	2.40	2.57	2.26	2.34	2.01	1.05	1.76	1.9	2.5	2.2	2.0	1.7	1.0	1.7
1995.....	2.48	2.69	2.26	2.31	1.95	1.00	1.73	2.0	2.7	2.2	2.0	1.7	1.0	1.7
1996.....	2.53	2.77	2.26	2.30	1.88	1.01	1.69	2.1	2.7	2.2	2.0	1.6	1.0	1.7
1997.....	2.55	2.83	2.29	2.22	1.81	1.05	1.70	2.1	2.8	2.2	2.0	1.5	1.1	1.7
1998.....	2.58	2.94	2.31	2.17	1.80	1.07	1.79	2.2	2.9	2.3	2.0	1.5	1.1	1.8
1999.....	2.63	2.94	2.44	2.19	1.88	1.04	1.80	2.2	2.9	2.4	2.0	1.6	1.0	1.8
2000.....	2.69	2.98	2.48	2.15	1.86	NA	1.84	2.3	3.0	2.4	NA	1.6	NA	NA
2001.....	2.79	NA	2.52	NA	NA	NA	1.93	2.4	NA	2.5	NA	NA	NA	NA

<sup>1</sup> Nondefense R&D data are estimates. Foreign nondefense R&D/GDP ratios are obtained directly from OECD reports or are estimated by NSF from OECD data for:

Japan for 1995 and later years; Germany for 1990 and earlier years; United Kingdom for 1988 and earlier years (except 1985); Italy for 1986 and earlier years; and Canada for 1990 and later years.

<sup>2</sup> Due to changes in methodology, data on Japanese R&D in 1996 and later years may not be consistent with data in earlier years.

<sup>3</sup> Germany's data for 1981-90 are for West Germany.

<sup>4</sup> Conversions of foreign currencies to U.S. dollars are calculated with OECD purchasing power parity exchange rates. Constant 1996 dollars are based on OECD implicit GDP price indices.

KEY: GDP = gross domestic product; NA = not available

SOURCES: Organisation for Economic Co-operation and Development, Main Science and Technology Indicators data base (Paris, May 2002) and National Science Foundation/ Division of Science Resources Statistics.