

Table 1.1. Real Gross Domestic Product and Real Gross Domestic Product With R&D Treated as Investment, 1959–2007

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	
	Millions of chained (2005) dollars												
GDP (from the NIPAs)	2,762,461	2,830,931	2,896,880	3,072,390	3,206,708	3,392,314	3,610,127	3,845,342	3,942,523	4,133,393	4,261,800	4,269,940	
Adjusted GDP, with R&D adjusted by: ¹													
Input cost index	2,833,282	2,909,687	2,983,007	3,168,682	3,308,906	3,505,674	3,735,009	3,979,444	4,084,463	4,282,764	4,415,977	4,422,085	
Aggregate output price index	2,745,576	2,820,475	2,892,545	3,074,527	3,211,798	3,404,730	3,629,731	3,870,274	3,974,937	4,171,705	4,306,497	4,315,962	
	Percent increase in GDP												
Input cost index	2.6	2.8	3.0	3.1	3.2	3.3	3.5	3.5	3.6	3.6	3.6	3.6	
Aggregate output price index	-0.6	-0.4	-0.1	0.1	0.2	0.4	0.5	0.6	0.8	0.9	1.0	1.1	
	Millions of chained (2005) dollars												
GDP (from the NIPAs)	4,413,263	4,647,730	4,917,010	4,889,916	4,879,519	5,141,295	5,377,652	5,677,624	5,855,049	5,838,979	5,987,189	5,870,945	
Adjusted GDP, with R&D adjusted by: ¹													
Input cost index	4,566,733	4,805,271	5,078,381	5,048,821	5,035,920	5,300,621	5,540,109	5,844,614	6,025,526	6,013,435	6,168,443	6,057,029	
Aggregate output price index	4,460,163	4,698,281	4,971,605	4,941,380	4,925,362	5,185,064	5,420,495	5,719,174	5,895,968	5,881,366	6,029,240	5,918,319	
	Percent increase in GDP												
Input cost index	3.5	3.4	3.3	3.2	3.2	3.1	3.0	2.9	2.9	3.0	3.0	3.2	
Aggregate output price index	1.1	1.1	1.1	1.1	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.8	
	Millions of chained (2005) dollars												
GDP (from the NIPAs)	6,136,170	6,577,116	6,849,265	7,086,509	7,313,277	7,613,888	7,885,927	8,033,908	8,015,143	8,287,072	8,523,449	8,870,673	
Adjusted GDP, with R&D adjusted by: ¹													
Input cost index	6,331,887	6,788,882	7,071,891	7,316,097	7,547,082	7,858,471	8,140,126	8,291,724	8,282,047	8,557,150	8,792,703	9,143,071	
Aggregate output price index	6,185,986	6,630,715	6,906,767	7,144,992	7,373,897	7,680,945	7,961,175	8,116,002	8,110,206	8,387,570	8,624,861	8,974,641	
	Percent increase in GDP												
Input cost index	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.1	
Aggregate output price index	0.8	0.8	0.8	0.8	0.8	0.9	1.0	1.0	1.2	1.2	1.2	1.2	
	Millions of chained (2005) dollars												
GDP (from the NIPAs)	9,093,723	9,433,894	9,854,333	10,283,516	10,779,849	11,225,977	11,347,156	11,552,973	11,840,700	12,263,814	12,638,375	12,976,249	13,228,853
Adjusted GDP, with R&D adjusted by: ¹													
Input cost index	9,381,107	9,736,007	10,172,007	10,611,077	11,121,085	11,580,486	11,697,412	11,890,997	12,181,009	12,607,150	12,995,805	13,350,857	13,622,070
Aggregate output price index	9,218,319	9,584,450	10,032,273	10,485,978	11,008,905	11,483,564	11,619,639	11,826,860	12,129,552	12,568,501	12,967,276	13,334,013	13,623,183
	Percent increase in GDP												
Input cost index	3.2	3.2	3.2	3.2	3.2	3.2	3.1	2.9	2.9	2.8	2.8	2.9	3.0
Aggregate output price index	1.4	1.6	1.8	2.0	2.1	2.3	2.4	2.4	2.4	2.5	2.6	2.8	3.0

1. Adjusted GDP incorporates the impact of treating R&D as investment and the removal of the R&D software investment double-count.
 2. The 2005 chained-dollar values do not match the 2005 current-dollar values because of rounding adjustments.

NOTE: Percent increase is the adjustment to GDP calculated as a percent of unadjusted GDP from the NIPAs.
 GDP Gross domestic product
 NIPAs National income and product accounts
 R&D Research and development

Table 1.2. Gross Domestic Product and Gross Domestic Product With R&D Treated as Investment, 1959–2007

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
	Millions of dollars											
GDP (from the NIPAs)	506,627	526,438	544,758	585,656	617,760	663,639	719,115	787,692	832,445	909,843	984,431	1,038,326
Adjusted GDP (with CFC adjusted by): ¹	517,396	538,650	558,550	601,388	634,912	683,269	741,449	812,539	859,802	940,042	1,017,307	1,072,623
Input cost index	517,723	538,951	558,579	601,081	634,765	682,709	740,574	811,545	858,490	938,377	1,015,059	1,070,198
Aggregate output price index												
	Percent increase in GDP											
Input cost index	2.1	2.3	2.5	2.7	2.8	3.0	3.1	3.2	3.3	3.3	3.3	3.3
Aggregate output price index	2.2	2.4	2.5	2.6	2.8	2.9	3.0	3.0	3.1	3.1	3.1	3.1

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
	Millions of dollars											
GDP (from the NIPAs)	1,126,817	1,237,885	1,382,269	1,499,452	1,637,700	1,824,583	2,030,130	2,293,762	2,562,228	2,788,143	3,126,837	3,253,194
Adjusted GDP (with CFC adjusted by): ¹	1,163,426	1,277,552	1,425,110	1,545,309	1,687,141	1,877,750	2,087,914	2,357,022	2,631,981	2,866,417	3,215,740	3,350,485
Input cost index	1,160,613	1,273,698	1,420,956	1,542,756	1,686,016	1,876,789	2,086,769	2,356,236	2,631,932	2,867,471	3,218,433	3,353,188
Aggregate output price index												
	Percent increase in GDP											
Input cost index	3.2	3.2	3.1	3.1	3.0	2.9	2.8	2.8	2.7	2.8	2.8	3.0
Aggregate output price index	3.0	2.9	2.8	2.9	3.0	2.9	2.8	2.7	2.7	2.8	2.9	3.1

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
	Millions of dollars											
GDP (from the NIPAs)	3,534,606	3,930,895	4,217,470	4,460,067	4,736,354	5,100,422	5,482,146	5,800,527	5,992,094	6,342,306	6,667,350	7,085,160
Adjusted GDP (with CFC adjusted by): ¹	3,641,166	4,050,692	4,347,518	4,597,759	4,880,837	5,256,944	5,651,235	5,977,743	6,181,288	6,538,952	6,867,653	7,291,531
Input cost index	3,643,517	4,053,403	4,349,934	4,599,723	4,882,201	5,257,969	5,650,788	5,974,626	6,177,401	6,532,649	6,860,208	7,282,704
Aggregate output price index												
	Percent increase in GDP											
Input cost index	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.1	3.0	2.9
Aggregate output price index	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.0	3.1	3.0	2.9	2.8

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	Millions of dollars												
GDP (from the NIPAs)	7,414,655	7,838,456	8,332,362	8,793,495	9,353,484	9,951,482	10,286,167	10,642,316	11,142,143	11,867,753	12,638,381	13,398,917	14,061,799
Adjusted GDP (with CFC adjusted by): ¹	7,635,988	8,075,566	8,586,564	9,060,135	9,635,946	10,255,194	10,593,379	10,946,496	11,457,604	12,198,094	12,995,811	13,787,661	14,487,709
Input cost index	7,623,985	8,059,137	8,565,991	9,036,483	9,611,249	10,229,882	10,567,376	10,920,572	11,430,984	12,170,386	12,967,282	13,759,058	14,458,117
Aggregate output price index													
	Percent increase in GDP												
Input cost index	3.0	3.0	3.1	3.0	3.0	3.1	3.0	2.9	2.8	2.8	2.8	2.9	3.0
Aggregate output price index	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.6	2.6	2.6	2.6	2.7	2.8

1. Adjusted GDP incorporates the impact of treating R&D as investment and the removal of the R&D software investment double-count.

Differences based on price indexes are due to the effect of the price indexes on current-cost depreciation.

Note. Percent increase is the adjustment to GDP calculated as a percent of unadjusted GDP from the NIPAs.

CFC Consumption of fixed capital
 GDP Gross domestic product
 NIPAs National income and product accounts
 R&D Research and development

Table 1.3. Gross Domestic Income and Gross Domestic Income With R&D Treated as Investment, 1959–2007

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	
	Millions of dollars												
GDI (from the NIPAs)	506,148	527,390	545,347	585,338	618,584	662,865	717,616	781,519	827,939	905,528	981,560	1,031,449	
Adjusted GDI: ¹													
Input cost index	516,917	539,602	559,139	601,070	635,736	682,495	739,950	806,366	855,296	935,727	1,014,436	1,065,746	
Aggregate output price index	517,244	539,903	559,168	600,763	635,589	681,935	739,075	805,372	853,984	934,062	1,012,188	1,063,321	
	Percent increase in GDI												
Input cost index	2.1	2.3	2.5	2.7	2.8	3.0	3.1	3.2	3.3	3.3	3.3	3.3	
Aggregate output price index	2.2	2.4	2.5	2.6	2.7	2.9	3.0	3.1	3.1	3.2	3.1	3.1	
	Millions of dollars												
GDI (from the NIPAs)	1,115,803	1,228,939	1,374,250	1,489,638	1,621,394	1,801,113	2,008,917	2,267,707	2,515,255	2,742,851	3,090,256	3,248,444	
Adjusted GDI: ¹													
Input cost index	1,152,412	1,268,606	1,417,091	1,535,495	1,670,835	1,854,280	2,066,701	2,330,967	2,585,008	2,821,125	3,179,159	3,345,735	
Aggregate output price index	1,149,599	1,264,752	1,412,937	1,532,942	1,669,710	1,853,319	2,065,556	2,330,181	2,584,959	2,822,179	3,181,852	3,348,438	
	Percent increase in GDI												
Input cost index	3.3	3.2	3.1	3.1	3.0	3.0	2.9	2.8	2.8	2.9	2.9	3.0	
Aggregate output price index	3.0	2.9	2.8	2.9	3.0	2.9	2.8	2.8	2.8	2.9	3.0	3.1	
	Millions of dollars												
GDI (from the NIPAs)	3,484,911	3,899,356	4,175,169	4,392,323	4,703,481	5,109,955	5,426,041	5,716,327	5,912,357	6,232,314	6,531,555	6,976,351	
Adjusted GDI: ¹													
Input cost index	3,591,471	4,019,153	4,305,217	4,530,015	4,847,964	5,266,477	5,595,130	5,893,543	6,101,551	6,428,960	6,731,858	7,182,722	
Aggregate output price index	3,593,822	4,021,864	4,307,633	4,531,979	4,849,328	5,267,502	5,594,683	5,890,426	6,097,664	6,422,657	6,724,413	7,173,895	
	Percent increase in GDI												
Input cost index	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.1	3.0	
Aggregate output price index	3.1	3.1	3.2	3.2	3.1	3.1	3.1	3.0	3.1	3.1	3.0	2.8	
	Millions of dollars												
GDI (from the NIPAs)	7,362,133	7,812,536	8,346,336	8,878,816	9,424,551	10,085,468	10,389,521	10,664,388	11,125,532	11,875,602	12,718,041	13,619,489	14,040,664
Adjusted GDI: ¹													
Input cost index	7,583,466	8,049,646	8,600,538	9,145,456	9,707,013	10,389,180	10,696,733	10,968,568	11,440,993	12,205,943	13,075,471	14,008,233	14,466,574
Aggregate output price index	7,571,463	8,033,217	8,579,965	9,121,804	9,682,316	10,363,868	10,670,730	10,942,644	11,414,373	12,178,235	13,046,942	13,979,630	14,436,982
	Percent increase in GDI												
Input cost index	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.9	2.8	2.8	2.8	2.9	3.0
Aggregate output price index	2.8	2.8	2.8	2.7	2.7	2.8	2.7	2.6	2.6	2.5	2.6	2.6	2.8

1. Adjusted GDI incorporates the impact of treating R&D as investment and the removal of the R&D software investment double-count.
 Note: Percent increase is the adjustment, calculated as a percent of unadjusted GDI from the NIPAs.

GDI Gross domestic income
 NIPAs National income and product accounts
 R&D Research and development

Table 1.4. National Saving and National Saving With R&D Treated as Investment as a Percent of Adjusted Gross National Income, 1959–2007

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	
	Percent of gross national income												
National saving	20.8	21.0	20.8	21.2	21.4	21.5	21.9	21.5	20.5	20.0	20.1	18.6	
	Percent of adjusted gross national income												
Adjusted national saving: ¹ Aggregate output price index	23.1	23.3	23.2	23.5	23.8	23.9	24.3	23.8	22.8	22.3	22.3	20.7	
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	
	Percent of gross national income												
National saving	18.6	19.2	21.1	20.1	18.2	18.8	19.6	20.8	20.9	19.5	20.7	18.9	
	Percent of adjusted gross national income												
Adjusted national saving: ¹ Aggregate output price index	20.6	21.1	22.9	21.8	20.0	20.6	21.3	22.5	22.7	21.4	22.6	21.0	
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
	Percent of gross national income												
National saving	17.1	19.1	17.6	16.1	16.6	17.6	17.0	16.0	16.0	14.9	14.6	15.6	
	Percent of adjusted gross national income												
Adjusted national saving: ¹ Aggregate output price index	19.3	21.3	19.9	18.5	18.9	19.8	19.2	18.2	18.3	17.1	16.7	17.7	
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	Percent of gross national income												
National saving	16.5	17.1	18.2	18.6	18.1	17.8	16.2	14.6	13.9	14.4	14.9	15.9	14.2
	Percent of adjusted gross national income												
Adjusted national saving: ¹ Aggregate output price index	18.5	19.2	20.3	20.6	20.1	19.9	18.4	16.7	16.0	16.5	16.9	18.0	16.5

1. Adjusted national saving incorporates the impact of treating R&D as investment and the removal of the R&D software investment double-count.

NOTE: Slight differences in the saving rate are due to the effect of the alternate price indexes on current-cost depreciation. R&D Research and development

Table 1.5. Aggregate Returns to R&D Assets, 1959–2007

(Millions of dollars)

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	
Nonprofit institutions serving households:													
Net returns	39	39	43	50	58	67	79	89	95	106	111	110	
Depreciation	93	99	107	118	130	144	159	178	201	225	249	277	
Government:													
Net returns	2,004	2,207	2,519	3,001	3,443	4,080	4,816	5,344	5,555	6,060	6,144	5,861	
Depreciation	4,776	5,529	6,281	7,008	7,784	8,722	9,685	10,695	11,810	12,861	13,793	14,807	
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	
Nonprofit institutions serving households:													
Net returns	126	139	153	164	192	215	247	280	303	329	404	422	
Depreciation	309	335	362	429	510	558	614	685	782	913	1,062	1,183	
Government:													
Net returns	6,407	6,809	7,226	7,500	8,470	9,136	10,091	10,987	11,424	11,982	14,270	14,512	
Depreciation	15,748	16,403	17,149	19,671	22,543	23,718	25,139	26,996	29,647	33,523	37,930	41,110	
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
Nonprofit institutions serving households:													
Net returns	484	593	635	662	728	828	899	943	994	1,077	1,181	1,312	
Depreciation	1,280	1,393	1,502	1,625	1,754	1,927	2,127	2,320	2,563	2,775	3,002	3,217	
Government:													
Net returns	16,234	19,499	20,599	21,095	22,620	24,806	25,579	25,338	25,118	25,445	26,150	27,395	
Depreciation	43,417	46,375	49,317	52,419	55,272	58,711	61,621	63,529	65,987	66,774	67,668	68,347	
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Nonprofit institutions serving households:													
Net returns	1,414	1,509	1,623	1,650	1,728	1,821	1,788	1,929	2,184	2,436	2,717	3,031	3,380
Depreciation	3,354	3,429	3,549	3,688	3,912	4,227	4,504	4,882	5,293	5,719	6,219	6,721	7,209
Government:													
Net returns	28,073	28,568	29,229	28,226	28,042	27,957	26,097	27,014	29,710	32,735	36,068	39,740	43,787
Depreciation	67,702	65,936	64,906	64,092	64,512	66,109	67,208	70,176	74,053	78,998	85,201	90,990	95,933

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Note. Aggregate returns are shown as current-cost values. Current-cost depreciation is estimated using the aggregate output price index.

Table 2.1. Investment in R&D by Type of Funder, 1959–2007

[Millions of dollars]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Total R&D investment	13,889	15,243	16,072	17,186	19,192	20,892	22,215	24,317	25,718	27,154	28,301	28,510
Private	4,319	4,781	5,039	5,447	5,808	6,280	6,981	7,839	8,705	9,628	10,694	11,220
Business	4,185	4,639	4,872	5,248	5,590	6,056	6,719	7,546	8,383	9,282	10,331	10,816
Chemical (NAICS 325)	781	845	919	980	1,047	1,148	1,249	1,329	1,356	1,526	1,635	1,675
Transportation (NAICS 336)	1,031	1,081	1,151	1,223	1,305	1,358	1,585	1,828	2,229	2,363	2,639	2,619
Computer and electronic (NAICS 334)	896	1,072	1,114	1,201	1,271	1,382	1,525	1,790	2,011	2,241	2,529	2,689
All other for-profit ¹	1,477	1,641	1,688	1,844	1,967	2,168	2,360	2,599	2,788	3,152	3,527	3,833
Universities and colleges	16	18	19	21	22	28	38	46	51	56	59	63
Other nonprofit institutions serving households	118	124	149	178	196	196	224	247	271	291	304	341
Government	9,570	10,462	11,033	11,739	13,384	14,612	15,234	16,479	17,013	17,526	17,607	17,290
Federal government extramural	7,748	8,467	8,855	9,355	10,686	11,519	11,818	12,790	13,106	12,790	13,407	12,725
Federal government intramural	1,665	1,821	1,985	2,170	2,461	2,829	3,127	3,357	3,534	3,595	3,719	4,032
State and local governments ²	113	126	139	153	166	182	196	218	229	260	307	340
Universities and colleges	44	48	54	61	71	82	94	114	144	161	171	193

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Total R&D investment	29,326	31,338	33,765	36,428	38,994	43,028	47,150	53,085	61,130	70,608	81,054	90,072
Private	11,640	12,586	14,272	16,076	17,216	19,270	21,321	24,802	29,338	34,886	40,794	46,172
Business	11,207	12,126	13,797	15,540	16,602	18,579	20,548	23,915	28,327	33,751	39,488	44,716
Chemical (NAICS 325)	1,733	1,830	2,014	2,369	2,653	2,931	3,089	3,515	4,068	4,722	5,519	6,909
Transportation (NAICS 336)	2,607	2,805	3,377	3,623	3,569	4,115	4,768	5,693	6,665	7,706	8,467	9,612
Computer and electronic (NAICS 334)	2,855	3,144	3,466	3,827	4,048	4,528	4,875	5,849	7,192	8,735	10,663	11,249
All other for-profit ¹	4,012	4,347	4,940	5,721	6,332	7,005	7,817	8,859	10,402	12,588	14,840	16,945
Universities and colleges	70	70	68	74	81	89	108	133	155	174	202	229
Other nonprofit institutions serving households	364	390	407	463	533	602	665	754	855	961	1,104	1,227
Government	17,686	18,752	19,493	20,351	21,777	23,758	25,828	28,283	31,793	35,723	40,260	43,900
Federal government extramural	12,687	13,328	13,715	14,165	15,144	16,783	18,496	20,324	23,078	25,997	29,643	32,568
Federal government intramural	4,401	4,766	5,037	5,356	5,717	5,972	6,207	6,656	7,252	8,066	8,739	9,264
State and local governments ²	380	417	465	508	562	608	660	751	826	905	1,004	1,064
Universities and colleges	218	241	276	322	354	395	465	552	637	755	874	1,004

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Total R&D investment	99,762	113,211	126,964	134,107	143,230	151,545	160,095	166,101	174,464	178,244	179,190	182,928
Private	51,433	59,137	65,505	69,603	71,878	78,486	86,372	90,596	100,054	104,342	105,543	108,487
Business	49,834	57,376	63,529	67,362	69,370	75,561	83,092	87,036	96,101	100,117	101,092	103,897
Chemical (NAICS 325)	7,591	8,635	9,255	9,738	10,668	12,098	13,156	14,468	15,877	16,691	18,245	18,492
Transportation (NAICS 336)	10,049	11,615	13,467	15,249	16,406	16,893	17,522	16,494	17,128	19,005	19,064	20,127
Computer and electronic (NAICS 334)	13,383	14,787	15,473	16,319	14,547	15,097	15,228	15,071	15,258	16,245	16,236	18,180
All other for-profit ¹	18,811	22,339	25,335	26,056	27,749	31,473	37,186	41,003	47,838	48,177	47,547	47,098
Universities and colleges	241	267	303	340	383	426	475	541	613	625	625	648
Other nonprofit institutions serving households	1,358	1,494	1,674	1,900	2,126	2,499	2,805	3,019	3,340	3,599	3,826	3,942
Government	48,329	54,075	61,459	64,504	71,352	73,058	73,723	75,505	74,410	73,902	73,647	74,441
Federal government extramural	35,862	40,239	46,049	47,596	54,315	54,993	54,358	55,186	53,914	52,941	51,973	52,432
Federal government intramural	10,210	11,362	12,588	13,683	13,476	14,159	15,071	15,627	15,511	15,845	16,407	16,500
State and local governments ²	1,118	1,214	1,376	1,545	1,683	1,813	1,923	2,042	2,129	2,162	2,173	2,220
Universities and colleges	1,139	1,261	1,445	1,680	1,878	2,093	2,371	2,650	2,856	2,954	3,093	3,289

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total R&D investment	196,503	210,164	225,515	239,058	258,444	281,543	292,378	291,985	306,044	321,455	345,313	371,664	405,665
Private	120,550	133,658	147,501	159,647	177,968	199,988	204,182	197,354	203,415	211,708	229,872	251,245	279,997
Business	115,801	128,644	142,116	153,870	171,841	193,365	197,151	189,731	195,432	203,541	221,068	241,774	269,647
Chemical (NAICS 325)	19,737	20,426	21,918	24,671	27,559	30,119	32,579	36,345	42,489	50,574	53,894	59,037	77,085
Transportation (NAICS 336)	21,839	23,422	22,849	21,857	25,398	24,501	22,858	23,441	28,276	28,536	31,178	32,734	33,998
Computer and electronic (NAICS 334)	22,387	26,029	30,896	32,946	32,589	41,458	45,663	43,806	43,670	42,061	44,302	50,508	51,507
All other for-profit ¹	51,838	58,767	66,653	74,397	86,296	97,288	96,051	86,139	80,998	82,370	91,693	99,495	107,057
Universities and colleges	704	776	792	806	879	977	1,066	1,196	1,316	1,410	1,584	1,782	1,951
Other nonprofit institutions serving households	4,044	4,237	4,593	4,971	5,248	5,646	5,965	6,427	6,667	6,757	7,220	7,688	8,398
Government	75,954	76,506	78,014	79,411	80,476	81,555	88,196	94,631	102,629	109,746	115,440	120,420	125,668
Federal government extramural	53,827	54,043	54,632	55,543	55,482	53,710	57,580	61,657	67,338	73,993	77,645	81,248	84,736
Federal government intramural	16,376	16,303	16,685	16,749	17,283	19,377	21,439	23,123	24,988	25,086	26,493	27,034	27,828
State and local governments ²	2,343	2,472	2,573	2,652	2,821	3,021	3,194	3,397	3,619	3,793	3,873	4,082	4,445
Universities and colleges	3,408	3,688	4,124	4,467	4,889	5,447	5,983	6,454	6,684	6,875	7,429	8,055	8,659

1. "All other for-profit" represents all for-profit business R&D excluding the three industries above.

2. Excludes universities and colleges.

NAICS North American Industry Classification System
R&D Research and development

Table 2.2. Real Investment in R&D by Type of Funder, 1959–2007

[Millions of chained (2005) dollars]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Total R&D investment	34,167	37,758	40,040	43,082	48,515	52,772	55,895	60,641	62,872	65,048	66,566	64,746
Private	10,625	11,842	12,554	13,654	14,682	15,863	17,565	19,547	21,281	23,063	25,153	25,481
Business	10,294	11,491	12,136	13,156	14,130	15,297	16,906	18,817	20,494	22,234	24,299	24,563
Chemical (NAICS 325)	1,920	2,094	2,291	2,456	2,647	2,900	3,143	3,314	3,314	3,655	3,846	3,803
Transportation (NAICS 336)	2,535	2,678	2,868	3,066	3,298	3,431	3,987	4,558	5,448	5,661	6,208	5,947
Computer and electronic (NAICS 334)	2,205	2,655	2,774	3,011	3,214	3,492	3,838	4,464	4,916	5,367	5,949	6,107
All other for-profit ¹	3,634	4,064	4,204	4,622	4,972	5,475	5,939	6,480	6,815	7,551	8,296	8,705
Universities and colleges	40	44	47	51	56	71	96	115	126	133	138	144
Other nonprofit institutions serving households	291	307	370	447	496	496	563	615	661	696	716	774
Government	23,542	25,916	27,486	29,428	33,833	36,908	38,330	41,093	41,591	41,984	41,413	39,264
Federal government extramural	19,060	20,974	22,060	23,451	27,014	29,096	29,735	31,894	32,039	32,366	31,540	28,898
Federal government intramural	4,096	4,510	4,946	5,441	6,220	7,145	7,867	8,372	8,640	8,611	8,747	9,156
State and local governments ²	279	313	346	383	420	459	492	543	561	622	723	772
Universities and colleges	108	119	134	154	180	208	236	284	351	385	403	438

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Total R&D investment	64,114	67,209	70,855	67,569	63,119	66,023	68,421	72,174	76,420	78,942	80,920	83,842
Private	25,447	26,992	29,950	29,820	27,868	29,569	30,940	33,721	36,675	39,003	40,726	42,978
Business	24,500	26,007	28,952	28,825	26,873	28,508	29,819	32,515	35,412	37,734	39,423	41,623
Chemical (NAICS 325)	3,790	3,925	4,227	4,394	4,294	4,498	4,482	4,778	5,086	5,280	5,510	6,432
Transportation (NAICS 336)	5,698	6,015	7,086	6,719	5,777	6,314	6,920	7,740	8,332	8,615	8,453	8,947
Computer and electronic (NAICS 334)	6,241	6,744	7,273	7,099	6,552	6,947	7,074	7,953	8,991	9,765	10,646	10,471
All other for-profit ¹	8,771	9,323	10,367	10,613	10,249	10,749	11,343	12,045	13,003	14,074	14,815	15,773
Universities and colleges	152	149	143	137	132	137	156	181	194	194	201	213
Other nonprofit institutions serving households	795	836	855	858	864	923	965	1,025	1,069	1,075	1,102	1,143
Government	38,666	40,217	40,905	37,749	35,251	36,455	37,481	38,453	39,745	39,939	40,193	40,863
Federal government extramural	27,737	28,584	28,780	26,275	24,514	25,752	26,840	27,632	28,850	29,065	29,593	30,315
Federal government intramural	9,621	10,221	10,569	9,935	9,254	9,164	9,008	9,050	9,065	9,018	8,725	8,623
State and local governments ²	831	895	977	942	910	932	957	1,021	1,033	1,012	1,003	990
Universities and colleges	477	517	579	597	573	606	675	750	797	844	873	934

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Total R&D investment	89,231	96,976	105,757	109,235	115,436	120,074	125,247	130,039	134,904	138,813	139,900	143,449
Private	46,004	50,656	54,564	56,694	57,930	62,187	67,572	70,927	77,367	81,259	82,401	85,074
Business	44,574	49,148	52,918	54,869	55,909	59,870	65,005	68,139	74,310	77,969	78,926	81,474
Chemical (NAICS 325)	6,790	7,396	7,709	7,932	8,598	9,586	10,292	11,327	12,277	12,998	14,244	14,501
Transportation (NAICS 336)	8,988	9,949	11,218	12,421	13,222	13,385	13,708	12,913	13,244	14,801	14,884	15,783
Computer and electronic (NAICS 334)	11,970	12,666	12,888	13,292	11,724	11,962	11,913	11,799	11,798	12,651	12,676	14,256
All other for-profit ¹	16,826	19,136	21,103	21,224	22,364	24,937	29,092	32,101	36,990	37,519	37,122	36,933
Universities and colleges	215	229	252	277	308	337	372	424	474	487	488	508
Other nonprofit institutions serving households	1,215	1,279	1,394	1,548	1,713	1,980	2,195	2,364	2,583	2,803	2,987	3,091
Government	43,227	46,320	51,193	52,541	57,506	57,887	57,675	59,112	57,537	57,553	57,499	58,376
Federal government extramural	32,076	34,468	38,358	38,768	43,775	43,573	42,526	43,204	41,689	41,230	40,578	41,117
Federal government intramural	9,132	9,732	10,486	11,145	10,861	11,219	11,790	12,234	11,994	12,339	12,810	12,939
State and local governments ²	1,000	1,039	1,146	1,259	1,356	1,436	1,504	1,599	1,647	1,684	1,697	1,741
Universities and colleges	1,019	1,080	1,204	1,368	1,514	1,659	1,855	2,074	2,208	2,300	2,415	2,579

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total R&D investment	158,252	177,816	199,620	221,865	247,886	273,997	292,597	295,275	311,315	326,416	345,313	367,673	400,682
Private	97,084	113,086	130,564	148,165	170,698	194,628	204,335	199,578	206,919	214,976	229,872	248,547	276,557
Business	93,259	108,844	125,798	142,803	164,821	188,183	197,298	191,869	198,798	206,683	221,068	239,178	266,335
Chemical (NAICS 325)	15,895	17,282	19,401	22,897	26,433	29,311	32,603	36,755	43,221	51,355	53,894	58,404	76,138
Transportation (NAICS 336)	17,588	19,817	20,225	20,285	24,360	23,845	22,875	23,705	28,763	28,977	31,178	32,382	33,580
Computer and electronic (NAICS 334)	18,029	22,023	27,172	30,576	31,257	40,347	45,698	44,299	44,422	42,710	44,302	49,966	50,875
All other for-profit ¹	41,748	49,722	58,999	69,046	82,770	94,680	96,123	87,110	82,393	83,642	91,693	98,427	105,742
Universities and colleges	567	657	701	748	843	951	1,067	1,209	1,338	1,432	1,584	1,763	1,927
Other nonprofit institutions serving households	3,257	3,585	4,065	4,613	5,033	5,494	5,970	6,500	6,782	6,861	7,220	7,605	8,295
Government	61,168	64,731	69,056	73,700	77,188	79,369	88,262	95,697	104,396	111,440	115,440	119,127	124,125
Federal government extramural	43,349	45,725	48,359	51,548	53,216	52,270	57,623	62,352	68,497	75,135	77,645	80,375	83,695
Federal government intramural	13,188	13,794	14,769	15,545	16,577	18,857	21,455	23,384	25,418	25,473	26,493	26,744	27,486
State and local governments ²	1,887	2,091	2,277	2,461	2,706	2,941	3,197	3,436	3,682	3,851	3,873	4,039	4,391
Universities and colleges	2,745	3,120	3,650	4,146	4,689	5,301	5,988	6,526	6,799	6,981	7,429	7,969	8,552

1. "All other for-profit" represents all for-profit business R&D excluding the three industries above.

2. Excludes universities and colleges.

Note: Implemented using the aggregate output price index.

NAICS North American Industry Classification System

R&D Research and development

Table 2.4. Real Net Stock of R&D by Type of Funder, 1959–2007

[Millions of chained (2005) dollars]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Total R&D net stock	126,856	142,683	158,250	174,301	192,974	212,789	232,524	253,679	273,693	292,679	310,185	323,348
Private	48,510	52,117	55,845	60,036	64,552	69,491	75,265	81,997	89,292	97,103	105,638	113,163
Business.....	47,053	50,553	54,129	58,116	62,411	67,146	72,663	79,110	86,110	93,631	101,897	109,134
Chemical (NAICS 325).....	9,498	10,433	11,450	12,511	13,636	14,877	16,210	17,559	18,759	20,150	21,568	22,790
Transportation (NAICS 336).....	10,062	10,688	11,374	12,117	12,937	13,730	14,887	16,355	18,369	20,214	22,225	23,636
Computer and electronic (NAICS 334).....	8,727	9,723	10,664	11,667	12,690	13,800	15,044	16,658	18,420	20,305	22,413	24,318
All other for-profit ¹	18,766	19,710	20,642	21,822	23,147	24,740	26,522	28,538	30,561	32,962	35,691	38,390
Universities and colleges.....	275	274	277	283	292	314	356	409	464	518	568	615
Other nonprofit institutions serving households	1,182	1,289	1,438	1,636	1,850	2,031	2,246	2,479	2,718	2,954	3,174	3,414
Government	78,345	90,566	102,405	114,266	128,421	143,298	157,259	171,681	184,401	195,576	204,547	210,184
Federal government extramural.....	58,328	68,979	79,037	88,874	100,530	112,364	123,014	134,064	143,591	151,991	158,367	161,342
Federal government intramural.....	18,234	19,671	21,296	23,134	25,418	28,215	31,259	34,314	37,159	39,551	41,709	43,922
State and local governments ²	1,192	1,303	1,428	1,568	1,721	1,887	2,060	2,253	2,434	2,644	2,916	3,193
Universities and colleges.....	591	613	645	690	753	832	925	1,049	1,216	1,390	1,555	1,727

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Total R&D net stock	333,932	345,775	359,184	367,516	370,490	375,724	382,393	391,513	403,156	415,343	427,493	440,508
Private	119,509	126,315	134,806	141,877	146,090	151,263	156,931	164,302	173,263	182,990	192,814	203,232
Business.....	115,208	121,748	130,001	136,872	140,916	145,885	151,322	158,418	167,094	176,572	186,153	196,317
Chemical (NAICS 325).....	23,864	24,949	26,198	27,469	28,506	29,621	30,598	31,748	33,061	34,414	35,835	37,971
Transportation (NAICS 336).....	24,567	25,619	27,456	28,628	28,733	29,307	30,329	31,912	33,751	35,515	36,815	38,330
Computer and electronic (NAICS 334).....	26,032	27,924	29,990	31,555	32,359	33,394	34,374	35,999	38,308	40,947	43,958	46,312
All other for-profit ¹	40,744	43,256	46,357	49,220	51,318	53,563	56,021	58,759	61,973	65,696	69,545	73,704
Universities and colleges.....	664	702	729	747	756	770	799	846	899	944	988	1,037
Other nonprofit institutions serving households	3,637	3,865	4,076	4,258	4,418	4,609	4,811	5,037	5,270	5,474	5,672	5,878
Government	214,423	219,460	224,378	225,639	224,400	224,461	225,462	227,211	229,894	232,353	234,679	237,275
Federal government extramural.....	162,798	164,819	166,717	166,014	163,788	163,040	163,412	164,460	166,477	168,391	170,506	172,972
Federal government intramural.....	46,233	48,753	51,216	52,724	53,375	53,845	54,101	54,357	54,589	54,742	54,601	54,387
State and local governments ²	3,482	3,788	4,123	4,376	4,561	4,739	4,914	5,121	5,308	5,448	5,558	5,640
Universities and colleges.....	1,909	2,101	2,321	2,525	2,677	2,836	3,035	3,274	3,520	3,773	4,014	4,276

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Total R&D net stock	456,555	477,354	503,134	528,223	555,254	582,531	610,545	638,878	667,595	695,739	720,789	745,483
Private	214,886	229,089	244,756	260,001	274,072	289,982	308,528	327,486	349,689	372,282	392,664	412,579
Business.....	207,685	221,573	236,844	251,588	265,051	280,170	297,815	315,800	336,929	358,393	377,644	396,482
Chemical (NAICS 325).....	40,210	42,777	45,356	47,863	50,723	54,202	57,966	62,294	67,043	71,951	77,498	82,676
Transportation (NAICS 336).....	39,610	41,534	44,266	47,601	51,065	54,053	56,798	58,325	59,879	62,569	64,851	67,541
Computer and electronic (NAICS 334).....	49,653	53,082	56,148	59,080	60,069	61,149	61,990	62,587	63,085	64,284	65,307	67,612
All other for-profit ¹	78,212	84,180	91,073	97,044	103,175	110,765	121,060	132,595	146,922	159,589	169,988	178,653
Universities and colleges.....	1,081	1,131	1,194	1,272	1,366	1,473	1,596	1,749	1,925	2,086	2,225	2,361
Other nonprofit institutions serving households	6,120	6,386	6,717	7,141	7,655	8,338	9,118	9,937	10,835	11,803	12,796	13,736
Government	241,669	248,265	258,379	268,222	281,182	292,550	302,017	311,393	317,906	323,457	328,125	332,904
Federal government extramural.....	176,696	182,075	190,244	197,568	208,425	217,467	224,183	230,520	234,504	237,466	239,380	241,506
Federal government intramural.....	54,676	55,477	56,855	58,636	59,887	61,281	62,995	64,862	66,227	67,707	69,400	70,959
State and local governments ²	5,720	5,823	6,010	6,273	6,586	6,927	7,279	7,666	8,039	8,391	8,702	9,007
Universities and colleges.....	4,577	4,890	5,270	5,745	6,283	6,875	7,560	8,344	9,135	9,993	10,643	11,432

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total R&D net stock	780,229	827,866	888,508	959,393	1,045,108	1,142,240	1,242,180	1,329,909	1,419,742	1,510,698	1,606,254	1,708,899	1,827,724
Private	440,680	479,373	528,413	585,477	655,880	737,980	816,917	879,915	940,680	1,000,414	1,065,729	1,139,261	1,228,717
Business.....	423,460	460,813	508,227	563,400	631,678	711,447	787,855	848,082	906,111	963,358	1,026,088	1,096,901	1,183,255
Chemical (NAICS 325).....	88,603	95,188	103,052	113,162	125,693	139,566	155,024	172,704	194,551	221,680	248,226	276,112	317,690
Transportation (NAICS 336).....	71,388	76,572	81,194	84,897	91,783	96,960	100,323	103,837	111,320	117,651	124,846	131,842	138,668
Computer and electronic (NAICS 334).....	72,997	81,159	92,698	105,295	116,600	134,379	154,134	169,347	182,161	191,292	200,375	213,157	224,664
All other for-profit ¹	190,472	207,894	231,284	260,046	297,602	340,541	378,373	402,194	418,078	432,735	452,641	475,789	502,233
Universities and colleges.....	2,532	2,760	2,994	3,231	3,527	3,877	4,282	4,758	5,283	5,815	6,408	7,078	7,799
Other nonprofit institutions serving households	14,688	15,801	17,191	18,846	20,675	22,656	24,779	27,075	29,287	31,240	33,233	35,283	37,663
Government	339,549	348,493	360,095	373,917	389,228	404,260	425,264	449,994	479,062	510,285	540,524	569,638	599,007
Federal government extramural.....	245,378	250,867	257,969	266,841	276,039	282,983	293,837	307,437	324,681	345,479	365,479	385,004	404,671
Federal government intramural.....	72,514	74,396	76,898	79,571	82,969	87,967	94,617	102,055	110,259	117,282	124,196	130,305	136,184
State and local governments ²	9,401	9,926	10,543	11,216	12,037	12,951	13,966	15,049	16,197	17,330	18,313	19,302	20,468
Universities and colleges.....	12,256	13,304	14,685	16,289	18,183	20,359	22,844	25,454	27,925	30,194	32,537	35,027	37,684

1. "All other for-profit" represents all for-profit business net stock of R&D excluding the three industries above.

2. Excludes universities and colleges.

NOTE: Real net stock is estimated using the aggregate output price index.

NAICS North American Industry Classification System

R&D Research and development

Table 2.5. Current-Cost Depreciation of R&D by Type of Funder, 1959–2007

[Millions of dollars]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Total R&D depreciation	7,910	8,854	9,824	10,783	11,806	13,048	14,372	15,834	17,531	19,228	20,858	22,714
Private	3,135	3,325	3,543	3,775	4,021	4,325	4,686	5,139	5,721	6,367	7,065	7,907
Business.....	3,042	3,226	3,436	3,658	3,891	4,181	4,527	4,961	5,520	6,142	6,816	7,629
Chemical (NAICS 325).....	429	468	511	556	602	657	719	788	865	945	1,032	1,137
Transportation (NAICS 336).....	785	829	876	927	980	1,044	1,125	1,239	1,405	1,593	1,784	1,997
Computer and electronic (NAICS 334).....	612	670	736	801	866	943	1,031	1,143	1,290	1,454	1,633	1,850
All other for-profit ¹	1,216	1,259	1,313	1,373	1,442	1,537	1,652	1,790	1,960	2,150	2,367	2,645
Universities and colleges.....	18	18	18	18	18	19	22	25	29	33	37	42
Other nonprofit institutions serving households.....	74	81	89	99	112	125	138	154	172	192	211	235
Government	4,776	5,529	6,281	7,008	7,784	8,722	9,685	10,695	11,810	12,861	13,793	14,807
Federal government extramural.....	3,500	4,167	4,817	5,431	6,075	6,834	7,585	8,359	9,209	10,005	10,699	11,415
Federal government intramural.....	1,161	1,241	1,333	1,437	1,557	1,722	1,917	2,132	2,371	2,596	2,801	3,057
State and local governments ²	75	82	89	97	105	116	127	140	155	172	192	218
Universities and colleges.....	39	39	41	43	46	51	57	64	75	88	102	117

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Total R&D depreciation	24,485	25,815	27,375	31,936	37,156	39,617	42,554	46,377	51,817	59,708	68,884	76,090
Private	8,737	9,412	10,226	12,264	14,614	15,898	17,416	19,381	22,169	26,186	30,954	34,980
Business.....	8,428	9,077	9,864	11,836	14,104	15,341	16,802	18,696	21,388	25,273	29,892	33,797
Chemical (NAICS 325).....	1,242	1,325	1,419	1,684	2,013	2,205	2,415	2,669	3,017	3,513	4,095	4,615
Transportation (NAICS 336).....	2,181	2,314	2,501	2,990	3,505	3,741	4,064	4,528	5,195	6,127	7,165	7,984
Computer and electronic (NAICS 334).....	2,071	2,262	2,482	2,983	3,550	3,853	4,199	4,654	5,345	6,374	7,647	8,720
All other for-profit ¹	2,935	3,176	3,462	4,178	5,036	5,542	6,123	6,845	7,831	9,259	10,984	12,478
Universities and colleges.....	47	52	55	65	75	81	88	98	113	134	157	176
Other nonprofit institutions serving households.....	262	284	307	364	435	477	526	587	669	779	905	1,006
Government	15,748	16,403	17,149	19,671	22,543	23,718	25,139	26,996	29,647	33,523	37,930	41,110
Federal government extramural.....	12,022	12,386	12,810	14,544	16,520	17,270	18,240	19,553	21,464	24,285	27,524	29,919
Federal government intramural.....	3,344	3,591	3,863	4,543	5,315	5,666	6,031	6,468	7,066	7,929	8,880	9,494
State and local governments ²	248	275	306	372	448	491	539	598	676	780	894	975
Universities and colleges.....	135	152	171	212	261	291	328	376	441	529	632	722

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Total R&D depreciation	81,821	88,931	96,014	103,306	109,691	117,118	124,287	129,911	137,327	142,105	147,105	151,439
Private	38,404	42,556	46,698	50,886	54,419	58,407	62,665	66,382	71,340	75,330	79,437	83,092
Business.....	37,124	41,163	45,196	49,261	52,665	56,480	60,538	64,062	68,777	72,556	76,434	79,874
Chemical (NAICS 325).....	5,087	5,639	6,158	6,661	7,119	7,707	8,345	8,940	9,735	10,388	11,141	11,888
Transportation (NAICS 336).....	8,618	9,369	10,187	11,154	12,108	13,121	14,014	14,543	15,119	15,550	16,141	16,697
Computer and electronic (NAICS 334).....	9,648	10,784	11,791	12,720	13,295	13,759	14,153	14,308	14,614	14,706	14,925	15,241
All other for-profit ¹	13,771	15,371	17,059	18,726	20,143	21,893	24,027	26,270	29,309	31,912	34,227	36,048
Universities and colleges.....	192	209	226	245	265	291	318	346	385	418	448	474
Other nonprofit institutions serving households.....	1,088	1,184	1,275	1,380	1,489	1,637	1,809	1,973	2,178	2,357	2,555	2,743
Government	43,417	46,375	49,317	52,419	55,272	58,711	61,621	63,529	65,987	66,774	67,668	68,347
Federal government extramural.....	31,698	33,960	36,242	38,604	40,844	43,582	45,773	47,092	48,761	49,138	49,521	49,721
Federal government intramural.....	9,887	10,427	10,934	11,496	11,924	12,399	12,880	13,242	13,746	13,944	14,239	14,512
State and local governments ²	1,030	1,093	1,152	1,223	1,294	1,383	1,472	1,548	1,647	1,711	1,775	1,831
Universities and colleges.....	803	896	989	1,096	1,210	1,347	1,496	1,647	1,833	1,981	2,133	2,282

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total R&D depreciation	153,358	153,861	157,006	161,053	169,079	181,736	192,512	205,233	217,732	231,881	249,757	267,905	285,362
Private	85,656	87,926	92,100	96,961	104,567	115,627	125,304	135,057	143,679	152,883	164,556	176,915	189,428
Business.....	82,302	84,497	88,551	93,273	100,655	111,400	120,800	130,175	138,386	147,164	158,338	170,194	182,219
Chemical (NAICS 325).....	12,378	12,643	13,034	13,546	14,494	15,864	17,133	18,862	21,013	23,857	27,349	30,848	34,990
Transportation (NAICS 336).....	17,061	17,295	17,627	17,681	18,218	19,181	19,497	19,967	20,919	22,301	23,983	25,662	27,086
Computer and electronic (NAICS 334).....	15,699	16,383	17,661	19,164	20,802	23,189	25,923	28,763	31,072	33,070	35,218	37,588	39,858
All other for-profit ¹	37,163	38,176	40,228	42,862	47,141	53,166	58,247	62,584	65,382	67,936	71,787	76,095	80,285
Universities and colleges.....	493	507	527	543	571	617	661	725	800	886	991	1,105	1,221
Other nonprofit institutions serving households.....	2,862	2,922	3,022	3,145	3,341	3,610	3,843	4,158	4,492	4,833	5,228	5,616	5,988
Government	67,702	65,936	64,906	64,092	64,512	66,109	67,208	70,176	74,053	78,998	85,201	90,990	95,933
Federal government extramural.....	49,019	47,556	46,609	45,838	45,892	46,574	46,734	48,209	50,385	53,511	57,645	61,510	64,824
Federal government intramural.....	14,445	14,078	13,858	13,652	13,740	14,241	14,793	15,769	16,923	18,169	19,579	20,859	21,876
State and local governments ²	1,853	1,852	1,875	1,899	1,966	2,082	2,181	2,326	2,491	2,677	2,890	3,083	3,265
Universities and colleges.....	2,385	2,449	2,564	2,703	2,914	3,211	3,500	3,872	4,255	4,641	5,086	5,538	5,969

1. "All other for-profit" represents all for-profit business depreciation of R&D excluding the three industries above.

2. Excludes universities and colleges.

NAICS North American Industry Classification System
R&D Research and development

Table 2.6. Real Depreciation of R&D by Type of Funder, 1959–2007

[Millions of chained (2005) dollars]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Total R&D depreciation	19,460	21,931	24,473	27,031	29,843	32,957	36,160	39,486	42,858	46,062	49,060	51,583
Private	7,711	8,236	8,826	9,463	10,165	10,925	11,791	12,815	13,986	15,253	16,618	17,956
Business.....	7,483	7,991	8,560	9,169	9,836	10,562	11,389	12,370	13,494	14,713	16,033	17,326
Chemical (NAICS 325).....	1,055	1,160	1,274	1,395	1,522	1,659	1,809	1,965	2,114	2,265	2,428	2,582
Transportation (NAICS 336).....	1,931	2,052	2,182	2,323	2,478	2,637	2,830	3,090	3,434	3,816	4,197	4,536
Computer and electronic (NAICS 334).....	1,507	1,659	1,833	2,008	2,190	2,382	2,594	2,851	3,154	3,482	3,841	4,202
All other for-profit ¹	2,991	3,120	3,272	3,443	3,646	3,883	4,156	4,464	4,792	5,150	5,566	6,007
Universities and colleges.....	45	45	45	45	47	49	54	62	71	80	88	96
Other nonprofit institutions serving households	183	200	221	249	283	315	347	383	421	460	497	534
Government	11,748	13,695	15,646	17,568	19,677	22,031	24,369	26,671	28,872	30,809	32,442	33,627
Federal government extramural.....	8,611	10,322	12,001	13,614	15,357	17,262	19,085	20,844	22,513	23,966	25,164	25,922
Federal government intramural.....	2,856	3,073	3,322	3,602	3,937	4,349	4,822	5,317	5,795	6,220	6,589	6,943
State and local governments ²	186	202	221	243	267	293	320	350	380	412	451	495
Universities and colleges.....	95	98	102	108	117	129	143	160	184	211	239	266

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Total R&D depreciation	53,529	55,366	57,446	59,237	60,145	60,789	61,753	63,054	64,777	66,756	68,770	70,827
Private	19,102	20,186	21,459	22,749	23,655	24,395	25,273	26,350	27,714	29,276	30,903	32,560
Business.....	18,426	19,467	20,699	21,954	22,830	23,539	24,382	25,419	26,737	28,256	29,842	31,459
Chemical (NAICS 325).....	2,715	2,841	2,977	3,124	3,258	3,383	3,505	3,629	3,772	3,927	4,089	4,296
Transportation (NAICS 336).....	4,767	4,963	5,249	5,547	5,673	5,740	5,898	6,156	6,494	6,850	7,154	7,432
Computer and electronic (NAICS 334).....	4,527	4,852	5,208	5,534	5,747	5,912	6,094	6,328	6,682	7,127	7,635	8,117
All other for-profit ¹	6,416	6,811	7,266	7,749	8,152	8,504	8,885	9,306	9,789	10,352	10,965	11,615
Universities and colleges.....	104	111	116	120	122	124	127	133	142	149	157	164
Other nonprofit institutions serving households	572	608	644	676	703	732	764	798	836	871	904	937
Government	34,428	35,180	35,987	36,488	36,490	36,394	36,480	36,703	37,063	37,479	37,867	38,267
Federal government extramural.....	26,282	26,564	26,881	26,978	26,741	26,500	26,469	26,584	26,833	27,151	27,478	27,850
Federal government intramural.....	7,310	7,702	8,106	8,428	8,603	8,694	8,752	8,794	8,833	8,865	8,866	8,837
State and local governments ²	541	590	641	689	725	754	783	814	846	872	892	908
Universities and colleges.....	295	325	359	393	422	447	476	512	551	591	631	672

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Total R&D depreciation	73,183	76,178	79,977	84,146	88,405	92,797	97,233	101,705	106,188	110,668	114,850	118,756
Private	34,350	36,453	38,898	41,449	43,859	46,278	49,025	51,970	55,164	58,666	62,019	65,159
Business.....	33,205	35,260	37,647	40,125	42,445	44,751	47,361	50,153	53,182	56,505	59,675	62,636
Chemical (NAICS 325).....	4,550	4,830	5,129	5,425	5,738	6,107	6,528	6,999	7,528	8,090	8,698	9,322
Transportation (NAICS 336).....	7,708	8,025	8,486	9,086	9,758	10,396	10,963	11,386	11,691	12,110	12,602	13,094
Computer and electronic (NAICS 334).....	8,629	9,238	9,822	10,361	10,715	10,901	11,072	11,202	11,300	11,453	11,653	11,952
All other for-profit ¹	12,317	13,167	14,210	15,253	16,234	17,346	18,797	20,567	22,663	24,852	26,722	28,268
Universities and colleges.....	172	179	189	200	214	230	249	271	298	325	350	372
Other nonprofit institutions serving households	973	1,014	1,062	1,124	1,200	1,297	1,415	1,545	1,684	1,836	1,994	2,151
Government	38,833	39,724	41,079	42,697	44,546	46,519	48,208	49,736	51,024	52,002	52,831	53,597
Federal government extramural.....	28,351	29,090	30,188	31,444	32,918	34,532	35,809	36,868	37,705	38,268	38,663	38,991
Federal government intramural.....	8,843	8,931	9,108	9,364	9,610	9,824	10,076	10,367	10,629	10,860	11,117	11,380
State and local governments ²	921	936	959	996	1,043	1,096	1,152	1,212	1,273	1,332	1,386	1,436
Universities and colleges.....	718	768	824	893	975	1,067	1,170	1,290	1,417	1,543	1,665	1,790

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total R&D depreciation	123,506	130,180	138,977	149,470	162,171	176,865	192,656	207,546	221,482	235,460	249,757	265,028	281,857
Private	68,983	74,393	81,524	89,988	100,295	112,528	125,398	136,579	146,153	155,243	164,556	175,015	187,102
Business.....	66,281	71,492	78,383	86,565	96,543	108,414	120,890	131,642	140,769	149,436	158,338	168,366	179,981
Chemical (NAICS 325).....	9,969	10,697	11,538	12,571	13,902	15,438	17,145	19,074	21,375	24,225	27,349	30,517	34,560
Transportation (NAICS 336).....	13,740	14,633	15,603	16,409	17,474	18,667	19,512	20,192	21,279	22,646	23,983	25,387	26,754
Computer and electronic (NAICS 334).....	12,643	13,861	15,633	17,786	19,952	22,568	25,943	29,087	31,607	33,580	35,218	37,184	39,368
All other for-profit ¹	29,929	32,300	35,609	39,798	45,215	51,741	58,290	63,289	66,509	68,985	71,787	75,278	79,299
Universities and colleges.....	397	429	467	504	548	600	662	733	814	900	991	1,093	1,206
Other nonprofit institutions serving households	2,305	2,472	2,675	2,919	3,204	3,513	3,846	4,204	4,570	4,908	5,228	5,555	5,915
Government	54,523	55,787	57,453	59,482	61,877	64,337	67,259	70,967	75,329	80,217	85,201	90,013	94,755
Federal government extramural.....	39,477	40,236	41,257	42,541	44,017	45,326	46,769	48,752	51,253	54,337	57,645	60,850	64,028
Federal government intramural.....	11,633	11,912	12,267	12,670	13,179	13,860	14,804	15,946	17,215	18,449	19,579	20,635	21,607
State and local governments ²	1,493	1,567	1,660	1,762	1,885	2,026	2,182	2,353	2,533	2,718	2,890	3,050	3,225
Universities and colleges.....	1,921	2,072	2,269	2,509	2,795	3,125	3,503	3,916	4,328	4,712	5,086	5,478	5,896

1. "All other for-profit" represents all for-profit business depreciation of R&D excluding the three industries above.

2. Excludes universities and colleges.

NAICS North American Industry Classification System
R&D Research and development

Table 3.1. Domestic R&D Output by Performer, 1959–2007

[Millions of dollars]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Total R&D performance	13,955	15,307	16,137	17,252	19,270	20,980	22,326	24,457	25,898	27,366	28,551	28,775
Private	11,806	12,927	13,502	14,311	15,901	17,099	18,003	19,751	20,857	22,135	23,096	22,865
Business	10,695	11,631	11,957	12,700	14,103	15,065	15,870	17,490	18,310	19,486	20,376	20,051
Universities and colleges	285	345	405	466	527	601	690	778	868	924	948	971
Other nonprofit institutions serving households	179	208	257	311	376	431	496	520	607	612	593	663
Federally funded R&D centers:												
Business	411	469	545	425	414	460	376	359	420	417	465	475
Universities and colleges	192	208	236	271	325	367	373	383	410	433	442	445
Other nonprofit institutions serving households	44	66	102	137	157	174	197	220	242	263	273	260
Public	2,148	2,380	2,635	2,941	3,368	3,881	4,323	4,707	5,041	5,231	5,454	5,910
Federal government	1,665	1,821	1,985	2,170	2,461	2,829	3,127	3,357	3,534	3,595	3,719	4,032
State and local governments ¹	53	58	63	68	69	74	91	108	123	140	155	175
Universities and colleges	288	342	407	499	618	734	860	991	1,117	1,217	1,297	1,419
Federally funded R&D centers:												
Universities and colleges	143	159	181	204	221	244	246	251	267	280	284	285

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Total R&D performance	29,604	31,641	34,113	36,815	39,403	43,483	47,651	53,643	61,755	71,319	81,813	90,977
Private	23,162	24,643	26,649	28,787	30,685	34,185	37,668	42,669	49,595	57,665	66,916	75,084
Business	20,283	21,592	23,484	25,273	26,773	29,777	32,808	36,952	43,079	50,301	58,897	66,711
Universities and colleges	994	1,042	1,096	1,185	1,307	1,409	1,556	1,817	2,114	2,366	2,585	2,751
Other nonprofit institutions serving households	703	755	786	878	983	1,110	1,177	1,414	1,608	1,837	2,038	2,114
Federally funded R&D centers:												
Business	494	550	549	652	735	894	969	1,090	1,177	1,295	1,408	1,509
Universities and colleges	447	475	513	555	629	721	855	1,041	1,195	1,348	1,407	1,422
Other nonprofit institutions serving households	241	229	221	244	258	273	303	356	422	517	580	577
Public	6,441	6,998	7,464	8,028	8,718	9,298	9,983	10,974	12,160	13,654	14,897	15,893
Federal government	4,401	4,766	5,037	5,356	5,717	5,972	6,207	6,656	7,252	8,066	8,739	9,264
State and local governments ¹	206	239	265	282	299	314	345	396	442	481	500	504
Universities and colleges	1,550	1,694	1,843	2,035	2,286	2,512	2,809	3,195	3,636	4,145	4,576	4,942
Federally funded R&D centers:												
Universities and colleges	285	299	320	355	416	500	622	726	830	963	1,082	1,183

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Total R&D performance	100,809	114,490	128,382	135,200	144,300	152,649	161,458	167,759	176,495	180,634	181,436	185,649
Private	83,382	95,141	106,887	111,642	119,955	126,563	133,391	138,062	145,926	148,895	148,361	151,795
Business	74,380	85,170	95,771	99,465	106,910	112,195	117,845	121,425	127,963	129,908	128,774	131,423
Universities and colleges	2,934	3,220	3,585	4,005	4,451	4,922	5,354	5,704	6,083	6,438	6,765	7,067
Other nonprofit institutions serving households	2,278	2,625	3,042	3,496	3,631	4,125	4,632	5,056	5,845	6,294	6,846	6,955
Federally funded R&D centers:												
Business	1,606	1,754	1,876	1,910	2,013	2,141	2,217	2,345	2,308	2,380	2,017	2,240
Universities and colleges	1,552	1,717	1,912	2,138	2,358	2,559	2,658	2,726	2,825	2,910	2,941	3,017
Other nonprofit institutions serving households	632	656	702	627	592	622	684	806	902	965	1,018	1,091
Public	17,427	19,350	21,496	23,558	24,345	26,086	28,067	29,698	30,570	31,739	33,075	33,854
Federal government	10,210	11,362	12,588	13,683	13,476	14,159	15,071	15,627	15,511	15,845	16,407	16,500
State and local governments ¹	508	529	562	584	638	670	662	656	621	601	605	596
Universities and colleges	5,365	5,902	6,617	7,413	8,239	9,177	10,176	11,165	12,081	12,904	13,681	14,424
Federally funded R&D centers:												
Universities and colleges	1,344	1,558	1,729	1,878	1,992	2,080	2,159	2,250	2,356	2,389	2,381	2,334

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total R&D performance	199,458	213,450	228,847	242,519	262,222	285,427	296,181	296,155	309,899	324,618	347,818	374,461	407,513
Private	165,014	178,412	192,593	204,967	222,536	241,554	247,822	243,230	252,743	265,514	285,578	310,189	340,982
Business	144,065	157,206	170,914	182,498	198,798	215,326	219,064	211,737	218,838	229,763	248,032	271,943	301,452
Universities and colleges	7,331	7,546	7,835	8,263	8,801	9,521	10,347	11,338	12,517	13,597	14,333	14,859	15,435
Other nonprofit institutions serving households	7,047	7,065	7,349	7,947	8,353	9,642	10,946	12,148	12,884	13,163	13,904	13,862	14,014
Federally funded R&D centers:													
Business	2,310	2,333	2,176	2,124	2,002	2,011	2,075	2,307	2,526	2,618	2,670	2,696	2,824
Universities and colleges	3,061	3,039	3,076	2,983	2,969	3,031	3,225	3,402	3,504	3,742	3,819	3,885	4,069
Other nonprofit institutions serving households	1,199	1,223	1,243	1,152	1,612	2,023	2,166	2,297	2,475	2,631	2,821	2,944	3,188
Public	34,444	35,038	36,254	37,552	39,686	43,873	48,359	52,925	57,156	59,104	62,240	64,271	66,532
Federal government	16,376	16,303	16,685	16,749	17,283	19,377	21,439	23,123	24,988	25,086	26,493	27,034	27,828
State and local governments ¹	564	527	526	534	528	531	542	541	582	619	601	616	631
Universities and colleges	15,152	15,797	16,563	17,587	19,101	21,116	23,208	25,498	27,663	29,380	31,016	32,511	34,054
Federally funded R&D centers:													
Universities and colleges	2,352	2,411	2,480	2,682	2,775	2,850	3,169	3,764	3,923	4,019	4,129	4,110	4,018

1. Excludes universities and colleges.
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Table 3.2. Real Domestic R&D Output by Performer, 1959–2007

[Millions of chained (2005) dollars]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Total R&D performance	34,330	37,915	40,202	43,248	48,710	52,993	56,174	60,989	63,311	65,556	67,154	65,348
Private	29,044	32,021	33,637	35,876	40,195	43,190	45,297	49,252	50,988	53,024	54,325	51,926
Business.....	26,310	28,810	29,787	31,837	35,650	38,051	39,930	43,614	44,762	46,679	47,927	45,535
Universities and colleges.....	702	855	1,010	1,168	1,331	1,519	1,736	1,941	2,121	2,214	2,229	2,205
Other nonprofit institutions serving households ...	440	515	640	780	951	1,090	1,249	1,297	1,484	1,466	1,394	1,505
Federally funded R&D centers:												
Business.....	1,010	1,161	1,356	1,065	1,046	1,163	946	895	1,026	999	1,094	1,080
Universities and colleges	473	516	589	681	820	928	939	956	1,003	1,036	1,039	1,011
Other nonprofit institutions serving households	108	164	255	344	397	439	496	549	592	631	642	591
Public	5,285	5,894	6,565	7,373	8,515	9,803	10,877	11,737	12,324	12,531	12,829	13,422
Federal government	4,096	4,510	4,946	5,441	6,220	7,145	7,867	8,372	8,640	8,611	8,747	9,156
State and local governments ¹	130	143	156	170	175	188	228	268	302	335	364	396
Universities and colleges.....	709	848	1,013	1,252	1,562	1,854	2,163	2,470	2,730	2,916	3,051	3,222
Federally funded R&D centers:												
Universities and colleges	351	393	450	510	558	615	619	626	652	670	667	647

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Total R&D performance	64,720	67,860	71,587	68,287	63,781	66,722	69,149	72,933	77,201	79,737	81,677	84,683
Private	50,638	52,851	55,923	53,396	49,670	52,454	54,661	58,013	62,000	64,471	66,805	69,890
Business.....	44,342	46,308	49,281	46,879	43,337	45,692	47,610	50,240	53,854	56,238	58,800	62,096
Universities and colleges.....	2,173	2,234	2,300	2,197	2,116	2,163	2,258	2,470	2,643	2,645	2,581	2,560
Other nonprofit institutions serving households ...	1,536	1,619	1,649	1,628	1,591	1,703	1,708	1,922	2,010	2,054	2,035	1,968
Federally funded R&D centers:												
Business.....	1,081	1,179	1,153	1,209	1,190	1,371	1,406	1,482	1,471	1,448	1,406	1,405
Universities and colleges	978	1,019	1,076	1,030	1,018	1,107	1,241	1,415	1,494	1,508	1,405	1,323
Other nonprofit institutions serving households	528	491	465	453	418	419	440	484	527	579	579	537
Public	14,082	15,009	15,663	14,891	14,111	14,268	14,487	14,920	15,201	15,266	14,872	14,794
Federal government	9,621	10,221	10,569	9,935	9,254	9,164	9,008	9,050	9,065	9,018	8,725	8,623
State and local governments ¹	450	512	555	523	484	482	501	538	553	538	499	469
Universities and colleges.....	3,388	3,634	3,867	3,774	3,700	3,854	4,076	4,344	4,545	4,634	4,568	4,600
Federally funded R&D centers:												
Universities and colleges	622	641	672	658	674	767	902	987	1,038	1,076	1,080	1,101

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Total R&D performance	90,167	98,072	106,938	110,125	116,298	120,949	126,313	131,337	136,475	140,674	141,653	145,583
Private	74,580	81,497	89,033	90,936	96,677	100,280	104,355	108,087	112,837	115,956	115,831	119,035
Business.....	66,528	72,956	79,774	81,018	86,164	88,896	92,193	95,062	98,947	101,170	100,538	103,060
Universities and colleges.....	2,625	2,758	2,986	3,263	3,587	3,900	4,189	4,466	4,703	5,013	5,282	5,542
Other nonprofit institutions serving households ...	2,038	2,248	2,534	2,848	2,927	3,268	3,624	3,958	4,520	4,901	5,345	5,454
Federally funded R&D centers:												
Business.....	1,436	1,502	1,563	1,555	1,623	1,696	1,735	1,836	1,785	1,854	1,574	1,757
Universities and colleges	1,388	1,471	1,593	1,742	1,900	2,028	2,080	2,134	2,184	2,266	2,296	2,366
Other nonprofit institutions serving households	565	562	584	511	477	493	535	631	698	752	795	856
Public	15,587	16,575	17,905	19,189	19,621	20,669	21,958	23,250	23,638	24,718	25,822	26,548
Federal government	9,132	9,732	10,486	11,145	10,861	11,219	11,790	12,234	11,994	12,339	12,810	12,939
State and local governments ¹	454	453	468	476	514	531	518	514	480	468	473	467
Universities and colleges.....	4,798	5,055	5,512	6,038	6,640	7,271	7,961	8,741	9,342	10,050	10,681	11,311
Federally funded R&D centers:												
Universities and colleges	1,202	1,334	1,440	1,530	1,606	1,648	1,689	1,761	1,822	1,860	1,859	1,830

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total R&D performance	160,631	180,597	202,570	225,077	251,509	277,777	296,402	299,492	315,237	329,628	347,818	370,440	402,508
Private	132,892	150,952	170,479	190,225	213,444	235,080	248,007	245,971	257,096	269,612	285,578	306,858	336,793
Business.....	116,022	133,010	151,289	169,372	190,677	209,555	219,228	214,123	222,607	233,309	248,032	269,023	297,750
Universities and colleges.....	5,904	6,385	6,936	7,669	8,442	9,266	10,354	11,466	12,733	13,807	14,333	14,700	15,245
Other nonprofit institutions serving households ...	5,675	5,978	6,505	7,375	8,011	9,384	10,954	12,285	13,105	13,366	13,904	13,713	13,842
Federally funded R&D centers:													
Business.....	1,860	1,974	1,926	1,971	1,921	1,957	2,076	2,333	2,569	2,658	2,670	2,667	2,789
Universities and colleges	2,465	2,571	2,723	2,768	2,848	2,949	3,227	3,440	3,565	3,800	3,819	3,843	4,019
Other nonprofit institutions serving households	966	1,035	1,100	1,069	1,546	1,969	2,168	2,323	2,517	2,671	2,821	2,913	3,148
Public	27,739	29,645	32,091	34,852	38,065	42,697	48,395	53,522	58,141	60,016	62,240	63,581	65,714
Federal government	13,188	13,794	14,769	15,545	16,577	18,857	21,455	23,384	25,418	25,473	26,493	26,744	27,486
State and local governments ¹	455	446	466	496	506	516	543	547	592	629	601	609	624
Universities and colleges.....	12,203	13,365	14,661	16,322	18,320	20,550	23,226	25,785	28,140	29,834	31,016	32,162	33,635
Federally funded R&D centers:													
Universities and colleges	1,894	2,040	2,195	2,489	2,661	2,773	3,171	3,806	3,990	4,081	4,129	4,066	3,969

1. Excludes universities and colleges.

NOTE: Implemented using the aggregate output price index.
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Table 4.2. Alternative Price Indexes for R&D Investment, 1959–2007

[Index numbers, 2005=100]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	
Aggregate output price index	40.6	40.4	40.1	39.9	39.6	39.6	39.7	40.1	40.9	41.7	42.5	44.0	
Input price index	16.2	16.2	16.6	16.8	17.1	17.6	18.1	18.7	19.4	20.3	21.4	22.6	
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	
Aggregate output price index	45.7	46.6	47.7	53.9	61.8	65.2	68.9	73.6	80.0	89.4	100.2	107.4	
Input price index	23.9	25.2	26.6	29.0	31.8	33.7	36.0	38.4	41.6	45.5	49.8	52.9	
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
Aggregate output price index	111.8	116.7	120.1	122.8	124.1	126.2	127.8	127.7	129.3	128.4	128.1	127.5	
Input price index	55.0	57.1	58.9	60.4	62.3	64.5	67.0	69.2	71.2	73.1	74.8	76.2	
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Aggregate output price index	124.2	118.2	113.0	107.7	104.3	102.8	99.9	98.9	98.3	98.5	100.0	101.1	101.2
Input price index	77.3	78.7	80.1	81.5	83.0	86.1	88.2	90.5	93.1	96.4	100.0	103.7	108.3

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Table 6.1. Private Industry Value Added and Private Industry Value Added With R&D Treated as Investment, 1987–2007

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
Current-dollar value added:	Millions of dollars										
Unadjusted for R&D as investment ¹	3,894,641	4,192,514	4,508,112	4,748,595	4,870,171	5,158,309	5,433,648	5,802,879	6,085,290	6,455,782	
Adjusted for R&D as investment ²	3,960,114	4,263,789	4,586,528	4,830,564	4,960,817	5,252,580	5,528,505	5,900,151	6,194,077	6,577,022	
	Percent										
Percent change in value added ³	1.7	1.7	1.7	1.7	1.9	1.8	1.7	1.7	1.8	1.9	
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Current-dollar value added:	Millions of dollars										
Unadjusted for R&D as investment ¹	6,895,474	7,296,282	7,776,719	8,284,494	8,531,038	8,767,744	9,148,326	9,761,783	10,424,239	11,060,647	11,603,758
Adjusted for R&D as investment ²	7,029,797	7,441,613	7,936,289	8,462,780	8,712,649	8,941,999	9,325,926	9,944,528	10,622,936	11,280,305	11,849,766
	Percent										
Percent change in value added ³	1.9	2.0	2.1	2.2	2.1	2.0	1.9	1.9	1.9	2.0	2.1
	Percent change from preceding period at annual rates										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
Current-dollar value added:											
Unadjusted for R&D as investment.....		7.6	7.5	5.3	2.6	5.9	5.3	6.8	4.9	6.1	
Adjusted for R&D as investment.....		7.7	7.6	5.3	2.7	5.9	5.3	6.7	5.0	6.2	
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Current-dollar value added:											
Unadjusted for R&D as investment.....	6.8	5.8	6.6	6.5	3.0	2.8	4.3	6.7	6.8	6.1	4.9
Adjusted for R&D as investment.....	6.9	5.9	6.6	6.6	3.0	2.6	4.3	6.6	6.8	6.2	5.0

1. Corresponds to published values.

2. Adjusted value added incorporates the impact of treating R&D as investment and the removal of the R&D software investment double-count.

3. Calculated as the ratio of the adjustment to unadjusted value added.

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**Table 6.2. Average Annual Effect of Treating R&D as Investment,
Levels and Growth Rates of Gross Output, Intermediate Inputs, and Value Added, 1987–2007**
(Percent)

NAICS code	Industry	Average annual percent effect on levels			Average annual growth rates						
					Gross output		Intermediate inputs		Value added		
		Gross output	Inter- mediate inputs	Value added	Unadjusted ¹	Adjusted for R&D and for R&D software double-count	Unadjusted ¹	Adjusted for R&D and for R&D software double-count	Unadjusted ¹	Adjusted for R&D and for R&D software double-count	
3254	Pharmaceutical and medicine manufacturing:										
	Nominal	6.9	-28.1	36.5	7.7	8.1	6.6	3.0	8.8	10.1	
	Input price index				2.8	3.3	3.6	0.1	2.2	4.3	
	Aggregate performers output price index				2.8	3.6	3.6	-1.4	2.2	5.4	
3251–53, 3255–56, 3259	Chemicals minus pharmaceutical and medicine manufacturing:										
	Nominal	1.4	-1.5	8.2	4.3	4.3	4.7	4.7	3.7	3.6	
	Input price index				1.1	1.1	0.8	0.8	2.5	2.2	
	Aggregate performers output price index				1.1	1.1	0.8	0.7	2.5	2.6	
3341	Computer and peripheral equipment manufacturing:										
	Nominal	4.9	-1.6	16.0	2.0	2.0	1.1	1.0	4.6	4.6	
	Input price index				19.8	18.7	7.2	7.3	47.6	39.4	
	Aggregate performers output price index				19.8	19.0	7.2	7.2	47.6	40.4	
3342	Communications equipment manufacturing:										
	Nominal	6.5	-2.5	29.9	4.1	4.5	3.4	3.1	6.0	7.1	
	Input price index				6.6	6.7	6.0	5.8	9.5	8.0	
	Aggregate performers output price index				6.6	7.0	6.0	5.7	9.5	9.0	
3344	Semiconductor and other electronic component manufacturing:										
	Nominal	10.2	-2.6	26.7	5.0	5.0	3.9	3.7	6.6	6.4	
	Input price index				17.9	16.5	4.9	4.9	42.5	32.8	
	Aggregate performers output price index				17.9	16.9	4.9	4.8	42.5	34.0	
3345	Navigational, measuring, electromedical, and control instruments manufacturing:										
	Nominal	5.2	-2.2	14.8	3.5	3.7	3.3	3.1	3.9	4.4	
	Input price index				2.3	2.4	4.0	4.0	0.1	0.6	
	Aggregate performers output price index				2.3	2.6	4.0	3.9	0.1	1.1	
3343, 3346	Other computer and electronic products manufacturing:										
	Nominal	2.7	-1.0	8.4	0.7	0.8	-0.4	-0.6	3.1	3.1	
	Input price index				2.2	2.3	2.1	2.0	4.1	3.5	
	Aggregate performers output price index				2.2	2.4	2.1	2.0	4.1	3.8	
3361–63	Motor vehicles, bodies and trailers, and parts manufacturing:										
	Nominal	2.6	-1.5	15.2	3.7	3.7	4.1	4.0	3.0	3.2	
	Input price index				2.9	2.8	2.7	2.7	3.5	3.2	
	Aggregate performers output price index				2.9	2.9	2.7	2.7	3.5	3.7	
3364	Aerospace product and parts manufacturing:										
	Nominal	4.5	-1.6	13.4	3.1	3.0	4.0	4.0	2.4	2.4	
	Input price index				0.7	0.6	2.3	2.3	-1.0	-1.0	
	Aggregate performers output price index				0.7	0.8	2.3	2.2	-1.0	-0.5	
3365–66, 3369	Other transportation equipment manufacturing:										
	Nominal	1.6	-0.4	4.5	5.6	5.6	7.3	7.2	4.2	4.4	
	Input price index				3.2	3.2	5.1	5.0	1.3	1.4	
	Aggregate performers output price index				3.2	3.2	5.1	5.0	1.3	1.6	
5112	Software publishers:										
	Nominal	7.0	-0.8	15.1	14.5	14.6	16.3	16.3	14.3	14.4	
	Input price index				21.5	20.7	15.8	15.8	29.5	26.7	
	Aggregate performers output price index				21.5	21.3	15.8	15.8	29.5	27.8	
52-53	Finance, insurance, real estate, rental, and leasing:										
	Nominal	0.0	0.0	0.1	7.0	7.0	8.1	8.1	6.3	6.3	
	Input price index				4.0	4.0	5.5	5.5	3.2	3.2	
	Aggregate performers output price index				4.0	4.0	5.5	5.5	3.2	3.2	
5415	Computer systems design and related services:										
	Nominal	2.0	-1.9	3.6	11.9	12.0	16.6	16.5	10.8	11.1	
	Input price index				10.4	10.4	15.7	15.6	9.3	9.3	
	Aggregate performers output price index				10.4	10.6	15.7	15.6	9.3	9.6	
5417	Scientific R&D services:										
	Nominal	6.8	-3.4	12.6	9.8	9.9	11.5	11.5	8.8	9.2	
	Input price index				6.2	6.2	8.6	8.6	4.8	5.0	
	Aggregate performers output price index				6.2	8.1	8.6	8.5	4.8	7.9	
	All other industries:										
	Nominal	0.4	-0.2	0.9	5.4	5.3	5.3	5.3	5.4	5.4	
	Input price index				2.7	2.6	2.5	2.5	2.8	2.8	
	Aggregate performers output price index				2.7	2.7	2.5	2.5	2.8	2.8	
	Nonprofit industries:										
	Nominal	0.5	-0.8	1.4	6.9	6.9	6.7	6.7	7.0	7.0	
	Input price index				3.1	3.1	3.6	3.6	2.7	2.8	
	Aggregate performers output price index				3.1	3.1	3.6	3.6	2.7	2.8	
	Federal government:										
	Nominal	7.0	-0.8	15.1	4.2	4.1	4.6	5.4	3.9	3.7	
	Input price index				0.7	0.9	2.1	2.8	-0.1	0.2	
	Aggregate performers output price index				0.7	1.2	2.1	0.5	-0.1	1.4	
	State and local government:										
	Nominal	7.0	-0.8	15.1	6.1	6.1	6.9	6.9	5.7	5.7	
	Input price index				2.3	2.3	3.5	3.5	1.7	1.8	
	Aggregate performers output price index				2.3	2.3	3.5	3.5	1.7	1.8	

NAICS North American Industry Classification System
R&D Research and development

1. Corresponds to estimates of gross domestic product by industry.

Table 7.1A. Gross Output by Industry With R&D Treated as Investment, 1987–2007

(Millions of dollars)

NAICS code	Industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
	All industries	8,713,359	9,442,157	10,062,118	10,606,104	10,781,844	11,352,711	11,970,348	12,762,970	13,574,000	14,390,929	
	All for-profit industries.....	7,357,291	7,992,503	8,505,290	8,926,485	8,995,956	9,475,622	10,012,022	10,719,035	11,446,475	12,174,922	
325	Chemical manufacturing.....	241,393	273,940	297,200	305,531	311,639	321,412	330,309	350,139	376,462	382,243	
3254	Pharmaceutical and medicine manufacturing.....	39,720	45,647	51,904	57,246	65,488	68,770	72,261	77,195	82,383	87,351	
3251–53, 3255–56, 3259	Chemicals minus pharmaceutical and medicine manufacturing.....	201,673	228,294	245,295	248,285	246,151	252,642	258,048	272,944	294,079	294,892	
334	Computer and electronic product manufacturing.....	228,521	249,672	254,041	262,719	264,881	281,967	294,598	330,757	385,445	413,888	
3341	Computer and peripheral equipment manufacturing.....	57,525	64,660	62,047	61,491	57,468	63,530	66,045	75,119	88,660	100,252	
3342	Communications equipment manufacturing.....	35,615	37,747	37,560	40,286	39,544	44,450	47,201	55,137	61,547	70,979	
3344	Semiconductor and other electronic component manufacturing.....	54,325	61,230	65,644	66,465	71,186	77,711	84,992	101,614	126,672	134,685	
3345	Navigational, measuring, electromedical, and control instruments manufacturing.....	68,481	72,788	74,913	79,996	81,333	79,953	79,125	79,467	87,016	89,251	
3343, 3346	Other computer and electronic products manufacturing.....	12,575	13,247	13,877	14,480	15,351	16,323	17,234	19,421	21,550	18,722	
336	Transportation equipment manufacturing.....	379,216	405,853	421,275	413,119	401,332	438,873	464,772	506,935	517,871	531,804	
3361–63	Motor vehicles, bodies and trailers, and parts manufacturing.....	246,265	265,729	276,548	255,986	246,308	282,865	318,706	372,640	388,757	394,175	
3364	Aerospace product and parts manufacturing.....	111,576	117,163	120,124	131,770	131,956	131,384	119,035	105,878	100,431	106,814	
3365–66, 3369	Other transportation equipment manufacturing.....	21,375	22,960	24,604	25,363	23,068	24,624	27,030	28,418	28,682	30,815	
5112	Software publishers.....	11,331	14,100	16,351	17,463	19,738	22,683	29,540	36,558	45,452	60,064	
52–53	Finance, insurance, real estate, rental, and leasing.....	1,233,568	1,344,678	1,438,354	1,533,474	1,599,884	1,690,455	1,814,696	1,927,570	2,052,663	2,224,157	
5415	Computer systems design and related services.....	25,142	29,552	34,030	37,216	40,750	44,487	50,817	58,737	67,085	81,158	
5417	Scientific R&D services.....	20,365	24,064	27,070	30,233	30,615	32,227	34,666	36,109	37,885	43,787	
	All other for-profit industries.....	5,217,754	5,650,643	6,016,970	6,326,730	6,327,117	6,643,518	6,992,625	7,472,229	7,963,612	8,437,821	
	Nonprofit industries.....	313,501	347,320	380,131	419,929	450,801	485,084	516,265	543,324	575,457	612,475	
	Government.....	1,042,566	1,102,335	1,176,697	1,259,691	1,335,088	1,392,005	1,442,061	1,500,611	1,552,067	1,603,532	
	Federal government.....	446,255	463,671	488,082	513,183	540,804	550,498	550,709	555,768	555,382	562,756	
	State and local government.....	596,312	638,664	688,615	746,508	794,284	841,507	891,352	944,844	996,685	1,040,776	
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	All industries	15,300,939	16,133,222	17,171,250	18,478,206	18,745,979	19,035,956	19,989,789	21,426,765	23,252,424	24,680,575	25,901,413
	All for-profit industries.....	12,994,980	13,723,144	14,619,535	15,754,987	15,842,403	15,942,805	16,707,654	17,963,908	19,571,831	20,772,634	21,767,187
325	Chemical manufacturing.....	411,575	415,979	423,397	446,574	438,257	463,125	483,655	535,956	595,975	640,160	642,561
3254	Pharmaceutical and medicine manufacturing.....	94,103	105,080	112,851	121,737	134,977	148,993	159,912	167,549	175,926	188,024	186,708
3251–53, 3255–26, 3259	Chemicals minus pharmaceutical and medicine manufacturing.....	317,472	310,899	310,546	324,836	303,280	314,132	323,744	368,406	420,049	452,137	455,853
334	Computer and electronic product manufacturing.....	455,554	456,147	480,974	536,423	451,912	388,032	391,309	403,479	413,020	431,646	433,042
3341	Computer and peripheral equipment manufacturing.....	109,925	111,215	107,797	107,188	87,877	73,638	71,810	68,677	73,233	77,667	78,268
3342	Communications equipment manufacturing.....	83,934	91,051	100,813	129,204	111,312	72,832	69,836	67,399	66,419	77,090	71,901
3344	Semiconductor and other electronic component manufacturing.....	150,337	139,739	155,554	176,272	132,856	123,215	129,122	132,670	137,384	134,012	129,536
3345	Navigational, measuring, electromedical, and control instruments manufacturing.....	93,428	95,152	99,176	106,171	103,020	101,868	104,205	115,267	118,159	126,245	139,664
3343, 3346	Other computer and electronic products manufacturing.....	17,931	18,991	17,633	17,588	16,847	16,479	16,335	19,467	17,825	16,631	13,672
336	Transportation equipment manufacturing.....	583,055	627,523	683,256	635,380	604,893	640,980	663,141	668,727	702,424	712,076	733,644
3361–63	Motor vehicles, bodies and trailers, and parts manufacturing.....	426,750	443,342	505,733	477,796	430,328	472,929	495,713	497,436	502,832	502,184	488,071
3364	Aerospace product and parts manufacturing.....	123,188	148,549	138,882	116,508	134,813	125,769	124,484	124,649	149,070	154,869	183,123
3365–66, 3369	Other transportation equipment manufacturing.....	33,117	35,633	38,640	41,076	39,752	42,282	42,944	46,642	50,522	55,023	62,450
5112	Software publishers.....	70,776	85,781	99,988	112,341	119,739	120,825	123,586	130,674	138,238	151,850	163,282
52–53	Finance, insurance, real estate, rental, and leasing.....	2,358,494	2,559,617	2,791,549	3,107,938	3,228,513	3,341,096	3,541,718	3,843,347	4,226,262	4,507,157	4,717,597
5415	Computer systems design and related services.....	104,391	130,637	157,810	179,690	184,598	179,723	176,730	176,151	191,039	205,275	231,111
5417	Scientific R&D services.....	51,336	59,267	66,063	76,758	85,978	93,855	97,076	104,067	112,515	123,830	132,986
	All other for-profit industries.....	8,959,799	9,388,193	9,916,499	10,659,883	10,728,513	10,715,169	11,230,440	12,101,506	13,192,358	14,000,639	14,712,964
	Nonprofit industries.....	641,289	688,510	729,858	787,952	846,883	902,546	947,895	993,811	1,055,700	1,126,227	1,188,761
	Government.....	1,664,671	1,721,568	1,821,857	1,935,267	2,056,693	2,190,605	2,334,240	2,469,045	2,624,894	2,781,715	2,945,465
	Federal government.....	572,509	571,119	591,389	620,339	650,164	709,724	782,835	846,393	899,734	953,135	997,679
	State and local government.....	1,092,161	1,150,449	1,230,468	1,314,928	1,406,529	1,480,881	1,551,405	1,622,652	1,725,159	1,828,579	1,947,786

NOTE: Gross output with R&D treated as investment and the removal of the R&D software investment double-count.
NAICS North American Industry Classification System
R&D Research and development

Table 7.1B. Gross Output by Industry With R&D Treated as Investment, 1987–2007

(Millions of chained (2005) dollars)

NAICS code	Industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
	All industries	13,160,268	13,787,340	14,147,659	14,400,747	14,310,058	14,790,212	15,256,361	15,961,825	16,530,078	17,250,128	
	All for-profit industries	10,736,322	11,288,154	11,578,889	11,773,674	11,668,928	12,100,299	12,523,701	13,160,995	13,684,330	14,343,247	
325	Chemical manufacturing	419,798	440,770	453,283	459,344	456,413	465,680	469,323	483,853	488,380	494,694	
3254	Pharmaceutical and medicine manufacturing	86,747	92,991	97,665	99,777	106,161	104,898	106,039	110,112	114,499	118,610	
3251–53, 3255–56,	Chemicals minus pharmaceutical and medicine manufacturing	333,243	348,453	356,797	360,920	352,589	362,868	365,401	375,950	376,303	378,713	
3259	Computer and electronic product manufacturing	64,376	70,889	73,062	78,363	80,962	90,349	99,019	116,349	151,453	186,356	
334	Computer and peripheral equipment manufacturing	3,739	4,510	4,600	5,007	5,138	6,512	7,875	9,858	13,568	19,472	
3341	Communications equipment manufacturing	23,076	24,601	24,556	26,657	26,167	29,528	31,421	37,114	43,121	50,544	
3342	Semiconductor and other electronic component manufacturing	7,559	8,400	9,272	10,184	11,432	13,474	15,577	20,109	31,168	41,872	
3344	Navigational, measuring, electromedical, and control instruments manufacturing	82,698	85,533	85,124	88,303	87,272	84,284	82,326	81,972	88,748	90,760	
3345	Other computer and electronic products manufacturing	9,548	10,140	10,526	10,990	11,590	12,471	13,486	15,533	17,541	15,520	
3343, 3346	Transportation equipment manufacturing	472,208	498,521	502,790	481,415	453,655	483,165	501,280	535,133	539,065	548,752	
336	Motor vehicles, bodies and trailers, and parts manufacturing	286,646	304,089	308,041	280,422	262,642	294,959	325,448	372,235	384,166	386,721	
3361–63 3364	Aerospace product and parts manufacturing	165,168	172,420	171,447	181,350	175,166	168,505	149,585	130,243	121,348	127,559	
3365–66, 3369	Other transportation equipment manufacturing	31,856	33,704	34,707	34,454	30,236	31,417	33,923	35,111	33,951	35,805	
5112	Software publishers	3,850	5,338	7,318	8,901	10,555	14,953	20,409	27,503	36,141	50,656	
52–53	Finance, insurance, real estate, rental, and leasing	2,046,737	2,151,713	2,204,980	2,252,802	2,257,739	2,292,685	2,396,500	2,489,847	2,556,066	2,683,570	
5415	Computer systems design and related services	31,795	35,952	40,817	43,366	45,974	49,431	55,310	62,785	69,069	81,619	
5417	Scientific R&D services	27,239	30,910	34,027	37,491	37,117	38,988	41,395	42,673	44,350	51,577	
	All other for-profit industries	8,039,926	8,423,044	8,635,429	8,778,238	8,680,128	9,000,463	9,263,487	9,699,236	10,029,552	10,424,686	
	Nonprofit industries	606,018	635,830	652,229	663,626	656,289	679,684	701,105	733,708	757,926	789,376	
	Government	1,860,848	1,899,494	1,954,551	2,004,765	2,031,786	2,052,174	2,068,506	2,097,500	2,111,755	2,134,109	
	Federal government	730,521	735,491	753,661	771,003	773,387	765,591	750,053	741,597	721,323	717,968	
	State and local government	1,119,906	1,154,839	1,191,872	1,224,727	1,250,017	1,279,628	1,313,337	1,352,179	1,388,524	1,414,975	
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	All industries	18,147,657	19,177,443	20,158,735	21,078,432	21,137,884	21,262,035	21,687,042	22,391,064	23,252,424	23,785,861	24,142,148
	All for-profit industries	15,152,805	16,086,683	16,971,023	17,796,167	17,748,535	17,750,685	18,108,741	18,758,873	19,571,831	20,041,167	20,326,177
325	Chemical manufacturing	527,907	534,702	544,560	544,471	531,574	562,467	562,685	588,571	595,975	604,179	586,685
3254	Pharmaceutical and medicine manufacturing	125,838	127,536	134,473	142,395	154,886	167,334	173,857	175,798	175,926	179,900	173,400
3251–53, 3255–56,	Chemicals minus pharmaceutical and medicine manufacturing	404,838	409,969	412,480	403,766	377,172	395,293	388,260	412,697	420,049	424,295	413,274
3259	Computer and electronic product manufacturing	228,486	268,434	323,197	402,939	382,090	343,949	364,941	390,429	413,020	449,435	475,491
334	Computer and peripheral equipment manufacturing	26,721	35,624	44,792	51,385	51,930	51,443	57,667	60,091	73,233	91,047	107,328
3341	Communications equipment manufacturing	60,344	68,666	79,556	106,993	95,943	65,356	65,716	66,162	66,419	78,504	74,008
3342	Semiconductor and other electronic component manufacturing	54,817	65,873	88,513	123,669	114,946	109,107	120,612	129,647	137,384	138,878	145,508
3344	Navigational, measuring, electromedical, and control instruments manufacturing	94,404	96,351	101,345	108,944	106,177	104,035	105,543	116,042	118,159	124,769	136,853
3345	Other computer and electronic products manufacturing	15,194	16,234	15,338	15,535	15,253	15,430	15,646	19,149	17,825	16,873	14,166
3343, 3346	Transportation equipment manufacturing	603,459	653,753	709,501	654,043	621,273	662,621	682,069	676,697	702,424	705,889	717,676
336	Motor vehicles, bodies and trailers, and parts manufacturing	421,443	442,580	504,171	474,778	429,830	478,505	502,658	499,329	502,832	502,952	483,772
3361–63 3364	Aerospace product and parts manufacturing	146,295	175,676	162,731	132,965	149,875	138,251	132,689	128,485	149,070	149,880	174,241
3365–66, 3369	Other transportation equipment manufacturing	38,035	40,726	43,988	45,828	43,877	46,332	46,511	48,685	50,522	53,011	58,556
5112	Software publishers	65,000	79,518	92,889	102,460	109,016	112,067	118,484	129,676	138,238	150,238	161,503
52–53	Finance, insurance, real estate, rental, and leasing	2,776,602	2,965,294	3,197,791	3,493,676	3,587,074	3,609,686	3,730,581	3,937,298	4,226,262	4,398,204	4,481,333
5415	Computer systems design and related services	101,491	129,598	154,038	170,412	174,337	172,280	172,763	175,755	191,039	202,834	227,165
5417	Scientific R&D services	56,918	66,041	73,594	83,452	93,260	101,284	102,939	107,811	112,515	121,786	127,553
	All other for-profit industries	10,920,276	11,476,954	11,914,315	12,343,558	12,254,152	12,198,503	12,379,502	12,755,112	13,192,358	13,410,386	13,555,342
	Nonprofit industries	826,072	863,792	892,475	928,663	964,648	1,000,737	1,018,781	1,033,304	1,055,700	1,086,967	1,113,198
	Government	2,178,393	2,228,851	2,291,837	2,346,120	2,422,236	2,511,223	2,560,116	2,599,173	2,624,894	2,657,852	2,702,846
	Federal government	723,024	718,925	729,884	745,261	764,428	803,739	851,289	883,161	899,734	913,923	924,398
	State and local government	1,454,773	1,510,335	1,562,709	1,601,674	1,658,692	1,708,279	1,709,132	1,716,067	1,725,159	1,743,935	1,778,403

NOTES. Implemented using the aggregate output price index.
Gross output with R&D treated as investment and the removal of the R&D software investment double-count.
NAICS North American Industry Classification System
R&D Research and development

Table 7.2A. Gross Output by Industry Unadjusted for R&D as Investment, 1987–2007

(Millions of dollars)

NAICS code	Industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
	All industries	8,639,922	9,359,516	9,969,567	10,511,114	10,676,472	11,242,426	11,857,619	12,647,199	13,451,594	14,259,899	
	All for-profit industries	7,307,760	7,938,747	8,445,959	8,865,529	8,928,209	9,405,202	9,941,937	10,647,593	11,367,116	12,085,424	
325	Chemical manufacturing	236,496	268,352	291,094	298,866	304,314	313,776	321,937	341,850	368,021	373,654	
3254	Pharmaceutical and medicine manufacturing	37,856	43,423	49,391	54,573	62,331	65,169	68,087	72,777	77,814	82,997	
3251–53, 3255–56, 3259	Chemicals minus pharmaceutical and medicine manufacturing	198,640	224,929	241,703	244,293	241,983	248,607	253,850	269,073	290,207	290,657	
334	Computer and electronic product manufacturing	216,424	237,145	241,451	250,464	252,548	268,828	281,528	316,066	367,266	392,624	
3341	Computer and peripheral equipment manufacturing	54,488	61,517	58,887	58,472	54,432	60,302	62,835	71,520	84,200	95,031	
3342	Communications equipment manufacturing	34,572	36,668	36,476	39,499	38,770	43,627	46,409	54,225	60,352	69,534	
3344	Semiconductor and other electronic component manufacturing	48,454	55,149	59,532	60,209	64,871	70,978	78,268	94,071	117,408	123,898	
3345	Navigational, measuring, electromedical, and control instruments manufacturing	66,544	70,782	72,897	78,020	79,343	77,832	77,014	77,089	84,075	85,812	
3343, 3346	Other computer and electronic products manufacturing	12,365	13,030	13,658	14,263	15,131	16,090	17,002	19,160	21,230	18,349	
336	Transportation equipment manufacturing	366,590	392,927	407,959	400,835	388,617	424,553	450,697	492,230	502,210	515,049	
	Motor vehicles, bodies and trailers, and parts manufacturing	240,617	259,634	269,769	249,481	239,465	275,865	310,611	363,580	378,593	383,174	
3361–63 3364	Aerospace product and parts manufacturing	104,960	110,686	113,920	126,298	126,392	124,451	113,410	100,571	95,259	101,400	
3365–66, 3369	Other transportation equipment manufacturing	21,013	22,607	24,270	25,056	22,760	24,237	26,676	28,079	28,358	30,475	
5112	Software publishers	10,644	13,131	15,162	16,976	18,791	21,716	28,047	35,039	43,584	55,622	
52–53	Finance, insurance, real estate, rental, and leasing	1,233,429	1,344,489	1,438,098	1,533,290	1,599,571	1,690,151	1,814,372	1,927,300	2,052,355	2,223,400	
5415	Computer systems design and related services	24,897	29,025	33,319	37,289	40,452	44,233	50,476	58,555	66,831	80,564	
5417	Scientific R&D services	20,039	23,799	26,380	28,667	28,208	29,774	32,129	33,579	35,399	40,871	
	All other for-profit industries	5,199,241	5,629,878	5,992,497	6,299,143	6,295,708	6,612,171	6,962,751	7,442,973	7,931,449	8,403,640	
	Nonprofit industries	311,932	345,599	378,270	417,957	448,650	482,733	513,669	540,452	572,375	609,283	
	Government	1,020,231	1,075,171	1,145,338	1,227,628	1,299,614	1,354,492	1,402,012	1,459,154	1,512,103	1,565,192	
	Federal government	426,218	439,047	459,465	484,000	508,449	516,350	514,314	518,253	519,463	528,502	
	State and local government	594,013	636,124	685,873	743,628	791,165	838,142	887,699	940,901	992,641	1,036,691	
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	All industries	15,160,533	15,987,354	17,017,398	18,305,713	18,576,451	18,874,218	19,829,425	21,265,803	23,073,576	24,481,237	25,689,561
	All for-profit industries	12,895,125	13,615,032	14,503,672	15,623,752	15,709,338	15,817,404	16,584,863	17,842,214	19,438,643	20,625,212	21,612,843
325	Chemical manufacturing	402,529	405,403	412,471	434,414	425,085	448,636	467,232	516,413	574,390	617,198	615,664
3254	Pharmaceutical and medicine manufacturing	88,941	100,235	106,742	114,609	126,660	138,440	147,671	152,366	159,035	169,335	164,256
3251–53, 3255–56, 3259	Chemicals minus pharmaceutical and medicine manufacturing	313,588	305,168	305,729	319,804	298,425	310,196	319,561	364,046	415,355	447,863	451,408
334	Computer and electronic product manufacturing	430,257	429,479	455,314	503,611	415,838	353,246	357,364	371,564	378,466	392,086	393,526
3341	Computer and peripheral equipment manufacturing	103,695	104,621	104,918	103,768	86,028	71,241	70,012	65,102	70,060	72,459	73,808
3342	Communications equipment manufacturing	82,161	84,603	95,688	119,494	97,164	63,684	61,338	61,793	58,779	68,454	63,159
3344	Semiconductor and other electronic component manufacturing	137,569	131,390	145,992	165,235	120,033	109,774	114,642	117,284	121,057	117,776	113,444
3345	Navigational, measuring, electromedical, and control instruments manufacturing	89,345	90,342	91,678	97,751	96,603	92,498	95,571	108,778	111,466	117,568	130,089
3343, 3346	Other computer and electronic products manufacturing	17,487	18,523	17,038	17,364	16,011	16,050	15,800	18,606	17,105	15,828	13,025
336	Transportation equipment manufacturing	566,789	612,172	666,289	619,544	590,241	625,632	644,604	650,749	682,367	690,314	711,472
	Motor vehicles, bodies and trailers, and parts manufacturing	416,162	433,183	492,612	464,288	418,304	461,402	482,979	486,125	491,146	490,049	476,517
3361–63 3364	Aerospace product and parts manufacturing	117,838	143,678	135,541	114,744	132,892	122,738	119,575	118,930	141,824	146,458	173,780
3365–66, 3369	Other transportation equipment manufacturing	32,789	35,310	38,136	40,512	39,045	41,493	42,049	45,694	49,397	53,807	61,174
5112	Software publishers	65,527	78,772	92,280	103,574	110,362	111,176	112,140	119,640	129,762	141,239	152,529
52–53	Finance, insurance, real estate, rental, and leasing	2,357,532	2,558,329	2,790,547	3,104,700	3,226,767	3,339,794	3,540,934	3,842,573	4,224,191	4,505,964	4,716,342
5415	Computer systems design and related services	103,322	129,858	156,835	177,669	177,237	168,464	167,444	170,496	183,732	197,075	223,114
5417	Scientific R&D services	47,637	53,941	60,296	68,935	77,841	87,214	91,607	97,709	106,079	117,137	126,750
	All other for-profit industries	8,921,532	9,347,079	9,869,639	10,611,306	10,685,967	10,683,240	11,203,538	12,073,070	13,159,656	13,964,199	14,673,447
	Nonprofit industries	638,006	685,211	726,465	784,384	843,312	898,704	943,472	988,827	1,050,137	1,120,098	1,182,212
	Government	1,627,402	1,687,111	1,787,261	1,897,577	2,023,801	2,158,111	2,301,090	2,434,763	2,584,795	2,735,927	2,894,505
	Federal government	539,493	541,022	561,374	587,580	622,379	682,821	755,990	819,019	867,480	916,063	956,179
	State and local government	1,087,909	1,146,089	1,225,887	1,309,997	1,401,423	1,475,290	1,545,199	1,615,744	1,717,315	1,819,865	1,938,327

NAICS North American Industry Classification System
R&D Research and development

Table 7.2B. Gross Output by Industry Unadjusted for R&D as Investment, 1987–2007

(Millions of chained (2005) dollars)

NAICS code	Industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
	All industries	13,166,700	13,787,674	14,137,065	14,386,064	14,281,101	14,754,640	15,219,061	15,923,115	16,478,365	17,178,489	
	All for-profit industries	10,725,118	11,274,755	11,560,089	11,753,058	11,639,355	12,068,324	12,493,422	13,131,112	13,642,848	14,285,118	
325	Chemical manufacturing	419,966	440,340	452,390	457,696	453,843	462,740	465,342	480,184	484,267	489,917	
3254	Pharmaceutical and medicine manufacturing	87,672	93,557	97,956	99,872	105,774	103,685	103,965	107,805	111,956	116,195	
3251–53, 3255–56, 3259	Chemicals minus pharmaceutical and medicine manufacturing	331,597	346,511	354,656	358,224	349,639	360,158	362,463	373,533	373,748	375,442	
334	Computer and electronic product manufacturing	57,198	63,254	65,327	70,407	72,880	81,493	89,711	105,609	137,608	169,306	
3341	Computer and peripheral equipment manufacturing	3,153	3,838	3,920	4,296	4,416	5,650	6,902	8,686	12,002	17,367	
3342	Communications equipment manufacturing	21,921	23,402	23,368	25,617	25,152	28,418	30,289	35,793	41,461	48,505	
3344	Semiconductor and other electronic component manufacturing	5,809	6,522	7,280	8,054	9,149	10,881	12,744	16,637	26,202	35,467	
3345	Navigational, measuring, electromedical, and control instruments manufacturing	81,905	84,750	84,354	87,633	86,597	83,403	81,418	80,768	86,980	88,336	
3343, 3346	Other computer and electronic products manufacturing	9,368	9,955	10,342	10,806	11,406	12,274	13,288	15,309	17,260	15,185	
336	Transportation equipment manufacturing	462,691	489,261	493,327	472,899	444,480	472,426	490,949	524,384	526,878	534,618	
	Motor vehicles, bodies and trailers, and parts manufacturing	282,817	300,025	303,330	275,755	257,540	289,903	319,463	365,552	376,193	377,413	
3361–63 3364	Aerospace product and parts manufacturing	159,734	167,570	167,115	178,329	171,954	163,267	145,593	126,224	117,116	122,774	
3365–66, 3369	Other transportation equipment manufacturing	31,590	33,478	34,524	34,306	30,059	31,143	33,706	34,920	33,759	35,584	
5112	Software publishers	3,466	4,806	6,662	8,554	9,958	14,349	19,452	26,573	34,922	47,236	
52–53	Finance, insurance, real estate, rental, and leasing	2,047,070	2,151,998	2,205,187	2,253,129	2,257,886	2,292,858	2,396,668	2,490,108	2,556,272	2,683,207	
5415	Computer systems design and related services	31,696	35,534	40,245	43,741	45,938	49,508	55,311	63,018	69,195	81,373	
5417	Scientific R&D services	36,774	41,290	44,325	46,755	44,306	45,841	48,264	49,313	49,697	55,487	
	All other for-profit industries	8,032,405	8,413,603	8,621,536	8,760,250	8,657,130	8,978,023	9,243,472	9,680,775	10,006,868	10,397,999	
	Nonprofit industries	605,560	635,263	651,518	662,770	655,176	678,330	699,465	731,764	755,655	786,827	
	Government	1,890,162	1,922,997	1,972,044	2,020,302	2,042,670	2,057,477	2,069,153	2,095,121	2,107,276	2,125,457	
	Federal government	769,446	768,181	780,565	796,129	793,523	779,270	757,760	745,235	721,301	713,417	
	State and local government	1,119,320	1,153,998	1,190,851	1,223,570	1,248,605	1,277,880	1,311,229	1,349,721	1,385,853	1,412,024	
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	All industries	18,058,548	19,071,699	20,035,676	20,928,086	20,980,327	21,108,607	21,530,897	22,231,398	23,073,576	23,586,823	23,927,546
	All for-profit industries	15,081,151	15,999,973	16,870,635	17,674,687	17,618,427	17,626,785	17,985,787	18,636,437	19,438,643	19,894,849	20,171,470
325	Chemical manufacturing	522,425	526,704	535,739	533,868	519,192	548,510	546,303	568,786	574,390	581,483	560,422
3254	Pharmaceutical and medicine manufacturing	122,214	124,057	129,350	136,058	147,065	156,969	161,589	160,408	159,035	161,434	151,468
3251–53, 3255–56, 3259	Chemicals minus pharmaceutical and medicine manufacturing	401,924	404,374	407,875	398,751	372,122	391,386	384,000	408,278	415,355	420,054	408,888
334	Computer and electronic product manufacturing	207,379	244,479	297,611	370,045	346,208	309,367	330,699	358,012	378,466	410,227	436,542
3341	Computer and peripheral equipment manufacturing	23,958	32,290	42,426	48,581	49,876	49,034	55,608	56,539	70,060	85,770	103,245
3342	Communications equipment manufacturing	57,805	62,426	73,902	97,014	82,187	56,322	57,210	60,431	58,779	69,960	65,341
3344	Semiconductor and other electronic component manufacturing	46,661	58,537	79,289	112,057	101,949	95,564	105,900	114,028	121,057	122,823	129,713
3345	Navigational, measuring, electromedical, and control instruments manufacturing	91,178	92,179	94,232	100,786	99,847	94,578	96,778	109,452	111,466	116,179	127,374
3343, 3346	Other computer and electronic products manufacturing	14,784	15,782	14,764	15,277	14,439	14,982	15,096	18,276	17,105	16,076	13,525
336	Transportation equipment manufacturing	589,306	639,929	693,517	638,778	606,668	647,158	663,200	658,434	682,367	684,332	695,709
	Motor vehicles, bodies and trailers, and parts manufacturing	412,179	433,305	491,647	461,646	417,806	466,856	489,714	487,842	491,146	490,944	472,357
3361–63 3364	Aerospace product and parts manufacturing	141,482	171,386	159,909	131,653	148,322	135,387	127,724	122,677	141,824	141,546	164,946
3365–66, 3369	Other transportation equipment manufacturing	37,819	40,508	43,555	45,322	43,185	45,545	45,602	47,724	49,397	51,807	57,292
5112	Software publishers	60,718	73,357	85,746	94,056	99,653	102,328	106,921	118,499	129,762	139,655	150,663
52–53	Finance, insurance, real estate, rental, and leasing	2,775,951	2,964,215	3,196,996	3,490,306	3,585,269	3,608,349	3,729,784	3,936,514	4,224,191	4,397,010	4,480,071
5415	Computer systems design and related services	100,737	129,074	153,180	168,362	166,973	161,116	163,406	169,994	183,732	194,668	219,126
5417	Scientific R&D services	62,173	68,412	74,447	80,507	88,661	97,855	99,632	102,480	106,079	114,790	119,333
	All other for-profit industries	10,887,139	11,438,584	11,867,446	12,293,932	12,209,792	12,165,774	12,352,210	12,726,279	13,159,656	13,374,334	13,516,356
	Nonprofit industries	823,286	860,847	889,312	925,265	961,157	996,917	1,014,307	1,028,247	1,050,137	1,080,908	1,106,744
	Government	2,164,971	2,213,338	2,272,353	2,320,102	2,398,298	2,485,754	2,531,581	2,567,074	2,584,795	2,611,222	2,649,498
	Federal government	713,659	706,964	714,055	723,301	744,787	783,312	828,851	858,024	867,480	875,895	880,347
	State and local government	1,451,412	1,506,643	1,558,606	1,597,087	1,653,772	1,702,757	1,702,878	1,709,069	1,717,315	1,735,326	1,769,104

NAICS North American Industry Classification System
R&D Research and development

Table 7.3A. Value Added by Industry With R&D Treated as Investment, 1987-2007

(Millions of dollars)

NAICS code	Industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
	Gross domestic product	4,882,201	5,257,969	5,650,788	5,974,626	6,177,401	6,532,649	6,860,208	7,282,704	7,623,985	8,059,137	
	All for-profit industries	3,960,114	4,263,789	4,586,528	4,830,564	4,960,817	5,252,580	5,528,505	5,900,151	6,194,077	6,577,022	
325	Chemical manufacturing	92,423	101,759	111,289	119,458	124,452	130,615	135,270	150,220	159,437	162,014	
3254	Pharmaceutical and medicine manufacturing	24,710	27,815	31,583	35,448	40,314	43,121	45,540	51,726	55,764	57,922	
3251-53, 3255-56, 3259	Chemicals minus pharmaceutical and medicine manufacturing	67,713	73,944	79,707	84,009	84,139	87,494	89,730	98,494	103,673	104,092	
334	Computer and electronic product manufacturing	99,011	108,405	112,222	114,779	116,892	120,911	123,681	137,913	156,394	166,035	
3341	Computer and peripheral equipment manufacturing	21,119	23,546	23,417	23,172	22,005	23,837	24,464	27,967	32,328	36,224	
3342	Communications equipment manufacturing	11,530	12,320	12,578	13,184	13,150	14,461	15,069	17,518	18,971	21,662	
3344	Semiconductor and other electronic component manufacturing	27,719	31,847	34,027	34,525	36,375	38,979	41,391	49,208	59,752	63,821	
3345	Navigational, measuring, electromedical, and control instruments manufacturing	33,466	35,216	36,373	37,876	38,945	36,918	35,771	35,330	36,865	37,087	
3343, 3346	Other computer and electronic products manufacturing	5,177	5,476	5,828	6,021	6,417	6,715	6,986	7,890	8,478	7,241	
336	Transportation equipment manufacturing	138,424	141,781	141,933	133,047	142,521	147,906	158,123	165,795	159,224	169,286	
	Motor vehicles, bodies and trailers, and parts manufacturing	71,321	75,459	74,827	63,487	65,881	81,131	95,021	113,044	108,404	109,434	
3361-63 3364	Aerospace product and parts manufacturing	56,090	55,379	55,650	58,138	64,762	56,300	51,482	42,318	40,633	47,009	
3365-66, 3369	Other transportation equipment manufacturing	11,013	10,943	11,457	11,422	11,878	10,474	11,620	10,433	10,186	12,843	
5112	Software publishers	5,981	7,895	9,509	9,484	10,981	12,955	16,062	20,007	22,388	31,746	
52-53	Finance, insurance, real estate, rental, and leasing	826,212	887,276	949,996	1,014,993	1,075,992	1,155,630	1,220,894	1,280,250	1,363,272	1,442,506	
5415	Computer systems design and related services	21,650	24,499	27,806	30,084	32,479	36,046	40,454	45,576	50,847	60,724	
5417	Scientific R&D services	14,144	16,640	18,537	21,336	21,899	23,358	25,150	25,985	26,925	30,495	
	All other for-profit industries	2,762,270	2,975,534	3,215,236	3,387,383	3,435,600	3,625,159	3,808,872	4,074,405	4,255,590	4,514,216	
	Nonprofit industries	185,753	205,516	224,630	248,951	266,613	287,501	306,465	321,541	339,487	361,706	
	Government	736,333	788,664	839,631	895,111	949,972	992,567	1,025,238	1,061,012	1,090,423	1,120,410	
	Federal government	330,972	351,677	368,889	383,281	407,115	420,068	423,043	427,164	426,759	429,945	
	State and local government	405,362	436,986	470,741	511,830	542,857	572,499	602,195	633,848	663,664	690,465	
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	Gross domestic product	8,565,991	9,036,483	9,611,249	10,229,882	10,567,376	10,920,572	11,430,984	12,170,386	12,967,282	13,759,058	14,458,117
	All for-profit industries	7,029,797	7,441,613	7,936,289	8,462,780	8,712,649	8,941,999	9,325,926	9,944,528	10,622,936	11,280,305	11,849,766
325	Chemical manufacturing	172,573	174,645	180,284	182,177	185,589	205,760	213,716	237,171	236,413	266,926	301,661
3254	Pharmaceutical and medicine manufacturing	63,057	70,690	79,349	83,291	89,749	103,888	114,818	129,854	129,702	146,236	167,372
3251-53, 3255-56, 3259	Chemicals minus pharmaceutical and medicine manufacturing	109,516	103,955	100,935	98,886	95,840	101,872	98,898	107,317	106,711	120,691	134,289
334	Computer and electronic product manufacturing	185,268	185,424	177,467	211,224	171,533	174,019	177,899	198,526	225,354	248,278	246,772
3341	Computer and peripheral equipment manufacturing	40,745	50,855	40,261	44,906	26,576	29,631	31,262	35,782	40,533	46,210	40,489
3342	Communications equipment manufacturing	25,988	32,353	28,977	40,116	35,132	28,133	26,158	25,214	30,010	33,667	38,447
3344	Semiconductor and other electronic component manufacturing	71,892	53,585	55,819	69,241	56,346	58,742	62,295	73,439	83,926	89,134	83,256
3345	Navigational, measuring, electromedical, and control instruments manufacturing	39,543	39,246	45,442	50,350	48,273	51,985	51,993	56,283	62,532	70,284	76,639
3343, 3346	Other computer and electronic products manufacturing	7,100	9,385	6,968	6,610	5,207	5,528	6,192	7,808	8,354	8,984	7,940
336	Transportation equipment manufacturing	172,308	187,328	203,587	205,928	198,292	210,283	216,825	210,865	217,290	219,506	229,940
	Motor vehicles, bodies and trailers, and parts manufacturing	111,294	122,560	132,746	137,001	125,249	138,168	144,586	134,969	130,447	126,067	122,798
3361-63 3364	Aerospace product and parts manufacturing	48,852	52,224	55,490	52,001	56,800	55,659	55,535	58,403	67,641	72,792	83,081
3365-66, 3369	Other transportation equipment manufacturing	12,162	12,543	15,352	16,925	16,963	16,456	16,704	17,493	19,202	20,647	24,062
5112	Software publishers	36,775	46,914	64,956	54,126	55,085	65,293	68,963	74,025	76,708	71,595	75,436
52-53	Finance, insurance, real estate, rental, and leasing	1,559,478	1,643,447	1,777,168	1,939,571	2,092,019	2,156,435	2,244,855	2,332,546	2,524,110	2,687,356	2,810,007
5415	Computer systems design and related services	76,905	90,133	102,759	116,297	124,705	122,590	120,382	124,584	138,144	154,103	170,944
5417	Scientific R&D services	35,328	40,423	44,277	52,038	56,113	58,328	60,434	65,229	71,125	76,661	80,303
	All other for-profit industries	4,791,162	5,073,300	5,385,791	5,701,419	5,829,312	5,949,292	6,222,853	6,701,581	7,133,791	7,555,880	7,934,704
	Nonprofit industries	380,719	403,478	428,486	457,643	486,027	528,413	565,972	606,441	637,174	680,210	722,068
	Government	1,155,476	1,191,392	1,246,473	1,309,459	1,368,700	1,450,160	1,539,085	1,619,417	1,707,173	1,798,543	1,902,112
	Federal government	434,758	437,521	447,004	464,868	470,449	505,145	541,577	579,872	611,708	644,827	678,288
	State and local government	720,718	753,871	799,469	844,591	898,251	945,015	997,509	1,039,635	1,095,464	1,153,716	1,223,824

NOTES. Value added with R&D treated as investment and the removal of the R&D software investment double-count.

GDP for 2007 is consistent with the release of national data on July 30, 2010.

Industry estimates for 2007 are consistent with the release of revised industry data on May 25, 2010.

NAICS North American Industry Classification System

R&D Research and development

Table 7.3B. Value Added by Industry With R&D Treated as Investment, 1987–2007

(Millions of chained (2005) dollars)

NAICS code	Industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
	Gross domestic product	7,373,897	7,680,945	7,961,175	8,116,002	8,110,206	8,387,570	8,624,861	8,974,641	9,218,319	9,584,450	
	All for-profit industries	5,750,451	6,025,763	6,253,544	6,363,486	6,365,513	6,614,929	6,796,683	7,115,863	7,314,809	7,650,023	
325	Chemical manufacturing	147,962	144,699	147,561	159,025	158,018	163,241	165,541	178,030	175,243	180,648	
3254	Pharmaceutical and medicine manufacturing	56,320	58,774	60,590	62,075	64,327	63,783	64,649	71,670	76,581	78,240	
3251–53, 3255–56, 3259	Chemicals minus pharmaceutical and medicine manufacturing	85,895	81,992	83,265	91,622	89,339	94,151	95,502	101,109	95,264	98,689	
334	Computer and electronic product manufacturing	9,409	10,893	11,626	12,457	13,016	14,317	15,969	19,431	27,123	34,935	
3341	Computer and peripheral equipment manufacturing	104	139	157	185	209	289	412	568	876	1,508	
3342	Communications equipment manufacturing	8,677	10,224	10,474	10,674	9,861	10,263	10,323	12,129	13,536	13,926	
3344	Semiconductor and other electronic component manufacturing	431	506	580	678	773	945	1,118	1,555	2,892	4,639	
3345	Navigational, measuring, electromedical, and control instruments manufacturing	64,924	67,440	65,930	63,488	60,794	54,369	50,864	49,097	48,371	43,295	
3343, 3346	Other computer and electronic products manufacturing	5,764	6,543	7,044	6,813	7,209	7,148	7,653	8,736	9,185	5,769	
336	Transportation equipment manufacturing	167,425	177,725	173,491	158,102	159,250	155,818	160,584	164,219	160,133	164,331	
	Motor vehicles, bodies and trailers, and parts manufacturing	71,127	78,731	76,660	64,687	62,494	72,034	80,580	93,176	92,197	89,845	
3361–63 3364	Aerospace product and parts manufacturing	96,881	98,160	95,625	94,910	100,397	82,845	73,835	59,336	56,385	63,239	
3365–66, 3369	Other transportation equipment manufacturing	18,166	18,472	18,530	17,559	17,225	14,461	15,773	14,122	13,058	15,606	
5112	Software publishers	809	1,336	2,189	2,765	3,500	5,928	7,914	11,434	14,172	22,039	
52–53	Finance, insurance, real estate, rental, and leasing	1,423,596	1,474,537	1,511,908	1,547,336	1,571,899	1,621,731	1,668,300	1,707,260	1,751,726	1,792,070	
5415	Computer systems design and related services	27,916	30,324	33,944	35,546	36,955	40,284	44,034	48,501	51,465	59,030	
5417	Scientific R&D services	17,496	19,838	21,735	24,583	24,541	25,991	27,745	28,567	29,721	34,400	
	All other for-profit industries	4,253,360	4,455,939	4,641,847	4,712,059	4,679,279	4,866,582	4,976,965	5,212,200	5,313,537	5,535,878	
	Nonprofit industries	390,829	409,841	425,066	432,159	429,110	445,270	457,579	478,901	488,618	509,142	
	Government	1,278,543	1,313,947	1,349,447	1,386,590	1,396,463	1,411,452	1,416,258	1,426,164	1,434,444	1,452,866	
	Federal government	479,011	488,083	498,611	511,780	514,475	518,332	513,346	509,975	500,445	502,823	
	State and local government	790,581	818,127	843,786	867,733	875,120	886,618	898,021	912,780	933,104	949,895	
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	Gross domestic product	10,032,273	10,485,978	11,008,905	11,483,564	11,619,639	11,826,860	12,129,552	12,568,501	12,967,276	13,334,013	13,623,183
	All for-profit industries	8,057,199	8,474,223	8,951,475	9,396,706	9,527,020	9,666,248	9,890,022	10,274,468	10,622,936	10,957,685	11,214,109
325	Chemical manufacturing	189,690	183,010	194,732	198,391	196,723	215,052	220,243	244,230	236,413	259,930	294,148
3254	Pharmaceutical and medicine manufacturing	84,255	83,746	94,004	97,790	103,662	114,369	121,495	133,216	129,702	140,187	157,189
3251–53, 3255–56, 3259	Chemicals minus pharmaceutical and medicine manufacturing	102,157	96,743	98,988	99,149	92,638	100,363	98,772	111,022	106,711	119,788	137,118
334	Computer and electronic product manufacturing	45,561	60,489	76,367	117,219	120,230	133,442	151,337	184,056	225,354	271,390	296,360
3341	Computer and peripheral equipment manufacturing	2,597	5,087	6,529	9,619	8,865	15,132	21,204	28,292	40,533	60,290	68,292
3342	Communications equipment manufacturing	15,230	19,461	18,730	28,037	25,135	21,974	22,639	24,108	30,010	35,426	41,112
3344	Semiconductor and other electronic component manufacturing	6,873	8,599	14,325	31,307	40,516	43,907	52,303	68,962	83,926	97,011	103,397
3345	Navigational, measuring, electromedical, and control instruments manufacturing	41,914	39,978	46,460	52,016	49,347	51,881	51,333	55,939	62,532	70,440	76,511
3343, 3346	Other computer and electronic products manufacturing	4,581	5,998	4,576	4,595	3,806	4,400	5,318	7,313	8,354	9,490	8,759
336	Transportation equipment manufacturing	167,273	180,552	191,234	191,601	179,896	195,867	202,004	202,518	217,290	230,293	243,361
	Motor vehicles, bodies and trailers, and parts manufacturing	92,397	102,015	107,766	111,943	101,368	117,526	125,233	124,097	130,447	139,214	138,548
3361–63 3364	Aerospace product and parts manufacturing	64,545	67,235	69,224	62,076	63,021	61,453	58,764	59,997	67,641	70,913	80,694
3365–66, 3369	Other transportation equipment manufacturing	14,366	14,474	17,531	18,815	18,220	17,499	17,620	18,282	19,202	20,240	23,095
5112	Software publishers	29,597	38,396	53,518	43,823	44,409	54,494	61,801	71,733	76,708	72,048	77,933
52–53	Finance, insurance, real estate, rental, and leasing	1,872,222	1,928,169	2,056,076	2,196,074	2,330,433	2,322,830	2,353,808	2,385,397	2,524,110	2,628,491	2,683,940
5415	Computer systems design and related services	70,969	85,626	95,879	104,774	111,835	112,750	114,658	123,144	138,144	153,084	170,215
5417	Scientific R&D services	37,129	43,255	47,919	55,196	59,794	62,172	63,417	67,280	71,125	76,607	78,971
	All other for-profit industries	5,783,569	6,051,947	6,302,213	6,514,497	6,508,995	6,583,176	6,730,209	6,999,241	7,133,791	7,268,916	7,377,997
	Nonprofit industries	530,689	539,784	551,912	561,068	567,961	592,467	611,917	632,174	637,174	655,199	674,525
	Government	1,481,533	1,510,948	1,537,872	1,573,060	1,593,611	1,632,173	1,659,942	1,684,456	1,707,173	1,725,292	1,758,309
	Federal government	512,353	521,764	527,843	541,175	542,113	560,304	579,950	598,801	611,708	619,876	632,491
	State and local government	969,087	989,180	1,010,298	1,032,087	1,051,902	1,072,182	1,080,137	1,085,684	1,095,464	1,105,418	1,125,824

NOTES. Implemented using the aggregate output price index.

Value added with R&D treated as investment and the removal of the R&D software investment double-count.

GDP for 2007 is consistent with the release of national data on July 30, 2010.

Industry estimates for 2007 are consistent with the release of revised industry data on May 25, 2010.

NAICS North American Industry Classification System

R&D Research and development

Table 7.4A. Value Added by Industry Unadjusted for R&D as Investment, 1987–2007

(Millions of dollars)

NAICS code	Industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
	Gross domestic product	4,736,354	5,100,422	5,482,146	5,800,527	5,992,094	6,342,306	6,667,350	7,085,160	7,414,655	7,838,456	
	All for-profit industries	3,894,641	4,192,514	4,508,112	4,748,595	4,870,171	5,158,309	5,433,648	5,802,879	6,085,290	6,455,782	
325	Chemical manufacturing	81,793	89,703	98,180	105,039	108,629	113,982	117,086	131,794	139,768	141,660	
3254	Pharmaceutical and medicine manufacturing	19,022	21,246	24,332	27,578	31,315	33,131	34,275	39,761	42,631	44,726	
3251–53, 3255–56,	Chemicals minus pharmaceutical and medicine manufacturing	62,771	68,457	73,848	77,462	77,314	80,851	82,811	92,032	97,137	96,934	
3259	Computer and electronic product manufacturing	85,058	93,961	97,707	100,480	102,466	105,557	108,395	120,743	135,077	141,135	
334	Computer and peripheral equipment manufacturing	17,598	19,905	19,757	19,630	18,439	20,046	20,693	23,735	27,084	30,092	
3341	Communications equipment manufacturing	10,227	10,977	11,235	12,120	12,091	13,338	13,978	16,273	17,336	19,704	
3342	Semiconductor and other electronic component manufacturing	21,192	25,086	27,234	27,547	29,322	31,462	33,886	40,782	49,372	51,739	
3344	Navigational, measuring, electromedical, and control instruments manufacturing	31,112	32,772	33,910	35,418	36,456	34,272	33,128	32,372	33,188	32,803	
3345	Other computer and electronic products manufacturing	4,930	5,220	5,571	5,764	6,157	6,439	6,711	7,582	8,097	6,798	
3343, 3346	Transportation equipment manufacturing	122,475	125,392	124,960	117,148	126,033	129,587	139,792	146,446	138,208	146,734	
336	Motor vehicles, bodies and trailers, and parts manufacturing	63,329	66,868	65,314	54,289	56,198	71,238	83,619	100,271	93,891	93,695	
3361–63 3364	Aerospace product and parts manufacturing	48,534	47,972	48,559	51,780	58,301	48,305	44,947	36,120	34,497	40,579	
3365–66, 3369	Other transportation equipment manufacturing	10,612	10,552	11,087	11,079	11,534	10,044	11,225	10,055	9,820	12,460	
5112	Software publishers	5,237	6,863	8,253	8,920	9,945	11,895	14,467	18,381	20,379	27,117	
52–53	Finance, insurance, real estate, rental, and leasing	826,038	887,053	949,708	1,014,766	1,075,625	1,155,272	1,220,515	1,279,923	1,362,873	1,441,624	
5415	Computer systems design and related services	21,347	23,890	26,997	30,028	32,010	35,618	39,923	45,205	50,369	59,860	
5417	Scientific R&D services	13,597	16,124	17,581	19,462	19,162	20,563	22,252	23,074	23,982	27,070	
	All other for-profit industries	2,739,096	2,949,529	3,184,727	3,352,752	3,396,301	3,585,834	3,771,219	4,037,314	4,214,634	4,470,582	
	Nonprofit industries	183,271	202,761	221,604	245,688	263,056	283,650	302,282	317,011	334,718	356,768	
	Government	658,442	705,147	752,430	806,244	858,867	900,348	931,420	965,270	994,648	1,025,906	
	Federal government	256,619	272,060	285,914	298,912	320,847	332,979	334,674	337,217	337,013	341,647	
	State and local government	401,823	433,087	466,516	507,332	538,020	567,369	596,746	628,053	657,635	684,259	
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	Gross domestic product	8,332,362	8,793,495	9,353,484	9,951,482	10,286,167	10,642,316	11,142,143	11,867,753	12,638,381	13,398,917	14,061,799
	All for-profit industries	6,895,474	7,296,282	7,776,719	8,284,494	8,531,038	8,767,744	9,148,326	9,761,783	10,424,239	11,060,647	11,603,758
325	Chemical manufacturing	150,731	150,058	152,846	152,206	153,163	169,567	171,402	186,801	182,650	207,932	224,725
3254	Pharmaceutical and medicine manufacturing	47,857	55,747	60,244	61,970	65,833	74,858	80,284	87,636	84,580	95,450	99,958
3251–53, 3255–56,	Chemicals minus pharmaceutical and medicine manufacturing	102,874	94,311	92,601	90,236	87,330	94,709	91,118	99,165	98,071	112,482	124,767
3259	Computer and electronic product manufacturing	155,760	153,780	146,749	172,065	128,239	132,573	136,948	159,635	183,273	200,024	197,657
334	Computer and peripheral equipment manufacturing	33,449	43,124	36,761	40,762	24,234	26,666	28,944	31,347	36,558	39,725	34,754
3341	Communications equipment manufacturing	23,626	24,316	22,394	27,968	17,633	16,693	15,384	17,823	20,467	22,753	27,350
3342	Semiconductor and other electronic component manufacturing	57,603	44,162	44,967	56,765	41,774	43,413	45,631	55,691	65,036	70,072	63,944
3344	Navigational, measuring, electromedical, and control instruments manufacturing	34,508	33,347	36,370	40,233	40,390	40,795	41,452	48,016	53,828	59,540	64,510
3345	Other computer and electronic products manufacturing	6,574	8,830	6,257	6,336	4,207	5,005	5,536	6,758	7,384	7,934	7,099
3343, 3346	Transportation equipment manufacturing	150,374	166,473	179,630	183,197	177,259	188,659	190,642	184,770	188,652	189,053	198,183
336	Motor vehicles, bodies and trailers, and parts manufacturing	96,118	107,913	113,595	117,438	107,684	121,309	125,550	117,583	112,622	107,561	104,573
3361–63 3364	Aerospace product and parts manufacturing	42,465	46,383	51,248	49,484	53,419	51,770	49,387	50,777	58,101	62,347	71,276
3365–66, 3369	Other transportation equipment manufacturing	11,790	12,177	14,786	16,275	16,156	15,579	15,704	16,410	17,929	19,145	22,334
5112	Software publishers	31,318	39,656	56,931	45,017	45,330	55,251	57,008	62,445	67,719	60,319	63,643
52–53	Finance, insurance, real estate, rental, and leasing	1,558,379	1,641,989	1,775,951	1,935,991	2,089,998	2,154,895	2,243,799	2,331,428	2,521,596	2,685,771	2,808,338
5415	Computer systems design and related services	75,514	89,031	101,337	113,691	116,245	109,835	109,653	117,740	129,320	144,278	160,205
5417	Scientific R&D services	31,052	34,478	37,742	43,374	47,078	50,706	53,837	57,628	63,018	68,249	71,900
	All other for-profit industries	4,742,346	5,020,816	5,325,533	5,638,953	5,773,727	5,906,259	6,185,037	6,661,334	7,088,012	7,505,022	7,879,108
	Nonprofit industries	375,547	398,140	422,846	451,595	479,734	521,602	558,495	598,286	628,238	670,459	711,479
	Government	1,061,341	1,099,074	1,153,919	1,215,393	1,275,395	1,352,970	1,435,322	1,507,684	1,585,904	1,667,812	1,762,392
	Federal government	347,110	351,881	361,507	378,399	385,084	416,585	447,295	478,415	501,809	526,507	552,052
	State and local government	714,231	747,193	792,412	836,994	890,311	936,385	988,027	1,029,269	1,084,095	1,141,305	1,210,340

NOTES. GDP for 2007 is consistent with the release of national data on July 30, 2010.
Industry estimates for 2007 are consistent with the release of revised industry data on May 25, 2010.
NAICS North American Industry Classification System
R&D Research and development

Table 7.4B. Value Added by Industry Unadjusted for R&D as Investment, 1987–2007

(Millions of chained (2005) dollars)

NAICS code	Industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
	Gross domestic product	7,313,277	7,613,888	7,885,927	8,033,908	8,015,143	8,287,072	8,523,449	8,870,673	9,093,723	9,433,894	
	All for-profit industries	5,732,526	6,004,337	6,226,181	6,332,005	6,323,493	6,569,861	6,752,090	7,070,743	7,252,751	7,567,382	
325	Chemical manufacturing	145,815	140,130	141,920	152,511	149,689	154,087	154,440	167,446	162,343	166,081	
3254	Pharmaceutical and medicine manufacturing	60,302	61,333	62,169	62,613	63,300	60,581	59,327	66,571	69,981	70,793	
3251–53, 3255–56, 3259	Chemicals minus pharmaceutical and medicine manufacturing	82,459	77,870	78,843	86,641	84,087	89,165	90,227	96,414	90,227	92,778	
334	Computer and electronic product manufacturing	5,222	6,171	6,660	7,223	7,598	8,390	9,507	11,692	16,529	21,449	
3341	Computer and peripheral equipment manufacturing	38	53	61	75	86	126	192	275	440	816	
3342	Communications equipment manufacturing	6,260	7,518	7,741	8,095	7,437	7,730	7,793	9,175	10,063	10,136	
3344	Semiconductor and other electronic component manufacturing	119	146	174	209	247	311	383	557	1,124	1,918	
3345	Navigational, measuring, electromedical, and control instruments manufacturing	67,521	70,234	68,574	65,862	62,877	55,503	51,644	49,205	47,206	40,630	
3343, 3346	Other computer and electronic products manufacturing	5,476	6,251	6,756	6,524	6,921	6,840	7,344	8,388	8,746	5,268	
336	Transportation equipment manufacturing	156,987	167,726	162,735	147,731	148,472	142,658	147,551	150,180	143,642	145,251	
	Motor vehicles, bodies and trailers, and parts manufacturing	65,473	72,903	69,869	57,700	55,048	64,576	71,916	83,457	80,687	76,656	
3361–63 3364	Aerospace product and parts manufacturing	92,630	94,584	92,582	93,138	99,128	77,339	69,820	54,624	51,252	57,612	
3365–66, 3369	Other transportation equipment manufacturing	18,000	18,343	18,447	17,493	17,154	14,194	15,583	13,916	12,832	15,377	
5112	Software publishers	571	971	1,676	2,357	2,897	5,183	6,827	10,215	12,593	18,426	
52–53	Finance, insurance, real estate, rental, and leasing	1,424,035	1,474,925	1,512,220	1,547,760	1,572,131	1,622,006	1,668,563	1,707,611	1,751,976	1,791,672	
5415	Computer systems design and related services	27,732	29,778	33,216	35,735	36,677	40,113	43,755	48,434	51,227	58,339	
5417	Scientific R&D services	27,367	30,558	32,268	34,251	32,051	33,244	35,088	35,641	35,343	38,461	
	All other for-profit industries	4,244,568	4,444,738	4,625,689	4,690,394	4,651,593	4,839,553	4,952,585	5,189,512	5,284,987	5,502,196	
	Nonprofit industries	390,667	409,449	424,400	431,136	427,628	443,434	455,330	476,290	485,551	505,639	
	Government	1,302,360	1,335,997	1,368,588	1,402,082	1,409,678	1,417,941	1,417,941	1,422,175	1,421,208	1,427,567	
	Federal government	516,116	522,524	529,735	539,555	540,097	537,121	525,700	515,057	493,293	483,102	
	State and local government	790,223	817,223	842,569	866,214	873,184	884,231	895,202	909,491	929,373	945,569	
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	Gross domestic product	9,854,333	10,283,516	10,779,849	11,225,977	11,347,156	11,552,973	11,840,700	12,263,814	12,638,375	12,976,249	13,228,853
	All for-profit industries	7,956,694	8,353,888	8,809,300	9,229,659	9,348,809	9,493,461	9,711,491	10,090,037	10,424,239	10,739,900	10,969,286
325	Chemical manufacturing	172,711	161,502	169,477	169,936	164,571	178,711	177,301	193,132	182,650	201,561	218,310
3254	Pharmaceutical and medicine manufacturing	73,650	72,428	77,519	78,410	80,667	85,522	86,538	90,372	84,580	89,981	91,268
3251–53, 3255–56, 3259	Chemicals minus pharmaceutical and medicine manufacturing	96,464	87,853	91,073	90,790	84,170	93,107	90,864	102,754	98,071	111,670	127,714
334	Computer and electronic product manufacturing	28,221	38,668	51,137	81,501	81,169	94,227	111,249	144,814	183,273	223,815	248,676
3341	Computer and peripheral equipment manufacturing	1,513	3,338	4,922	7,397	7,128	12,598	18,683	23,985	36,558	53,778	63,392
3342	Communications equipment manufacturing	10,913	11,444	11,443	15,760	10,100	11,183	12,207	16,593	20,467	24,636	30,319
3344	Semiconductor and other electronic component manufacturing	2,971	4,272	7,724	20,158	26,800	29,239	35,921	51,041	65,036	78,373	84,793
3345	Navigational, measuring, electromedical, and control instruments manufacturing	38,024	34,803	37,842	42,236	41,584	40,674	40,705	47,550	53,828	59,797	64,495
3343, 3346	Other computer and electronic products manufacturing	4,041	5,353	3,896	4,190	2,937	3,860	4,643	6,255	7,384	8,454	7,944
336	Transportation equipment manufacturing	147,821	161,241	168,193	169,299	158,628	173,651	175,371	176,007	188,652	200,150	211,969
	Motor vehicles, bodies and trailers, and parts manufacturing	79,079	88,434	89,978	93,497	84,391	100,516	106,120	106,475	112,622	120,963	120,635
3361–63 3364	Aerospace product and parts manufacturing	58,587	61,675	65,493	60,174	60,791	57,775	52,548	52,254	58,101	60,557	68,969
3365–66, 3369	Other transportation equipment manufacturing	14,110	14,204	17,041	18,226	17,430	16,621	16,607	17,184	17,929	18,755	21,388
5112	Software publishers	25,051	32,008	45,922	35,361	35,099	44,493	49,887	60,048	67,719	60,789	66,053
52–53	Finance, insurance, real estate, rental, and leasing	1,871,518	1,926,967	2,055,102	2,192,351	2,328,358	2,321,259	2,352,736	2,384,265	2,521,596	2,626,909	2,682,268
5415	Computer systems design and related services	69,675	84,463	94,214	101,804	103,324	100,252	103,930	116,172	129,320	143,310	159,472
5417	Scientific R&D services	42,307	45,456	48,320	51,776	54,459	57,736	58,947	60,687	63,018	67,912	68,624
	All other for-profit industries	5,741,729	6,003,434	6,242,647	6,451,470	6,451,713	6,539,310	6,691,815	6,958,418	7,088,012	7,218,608	7,323,176
	Nonprofit industries	526,672	535,247	546,792	555,359	561,769	585,644	604,338	623,901	628,238	645,559	664,093
	Government	1,443,109	1,461,845	1,479,441	1,507,126	1,519,784	1,549,263	1,564,849	1,576,297	1,585,904	1,593,247	1,614,082
	Federal government	479,955	479,013	475,908	482,475	475,461	485,562	494,274	501,131	501,809	500,113	501,594
	State and local government	964,064	983,561	1,003,958	1,024,993	1,044,173	1,063,583	1,070,541	1,075,168	1,084,095	1,093,153	1,112,560

NOTES. GDP for 2007 is consistent with the release of national data on July 30, 2010.
Industry estimates for 2007 are consistent with the release of revised industry data on May 25, 2010.
NAICS North American Industry Classification System
R&D Research and development

Table 8. Gross Output, Intermediate Inputs, and Value Added for Pharmaceutical and Medicine Manufacturing Unadjusted and Adjusted for R&D as Investment, 2007

Line	Steps	Description	2007
			(Millions of dollars)
1	Industry gross output before adjustments	Tabulation of BEA GDP-by-industry data, including unpublished detail¹	164,256
2	Plus: Own-account R&D investment, which is calculated as		22,487
3	National Science Foundation (NSF) R&D expenditures from the Survey of Industrial R&D (SIRD) ²	Funds for industrial R&D performed in the United States. ³	47,741
4	Plus: Adjustments to account for the full cost of production and to create a consistent time series	(1) A capital consumption adjustment is made to convert business depreciation to the national accounting concept—consumption of fixed capital (CFC). (2) Expenditures for Federally funded research and development centers (FFRDCs) are removed for years when they are included in the industry performance total.	1,073
5	Less: The cost for R&D performed in company headquarters (NAICS 551), R&D services subsidiary establishments, and auxiliary R&D services establishments (both in NAICS 5417)	This estimate is based on R&D payroll in company headquarters (NAICS 551) and R&D services subsidiary establishments, and auxiliary R&D services establishments (both in NAICS 5417), using unpublished data from the Census Bureau and SIRD.	22,377
6	Less: The cost of R&D funded by the Federal Government	Federally funded industry performed R&D adjusted for CFC. ³	(D)
7	Less: The cost of R&D funded by state and local (S&L) governments	Total funding estimated in the NIPA-based R&D satellite account, less an estimate of the gap between funder outlays and costs. ⁴ Total costs distributed across industries using the distribution of Federally funded R&D, excluding the aerospace product and parts manufacturing industry (NAICS 3364) and the navigational, measuring, electromedical, and control instruments manufacturing industry (NAICS 3345). These types of R&D are assumed to be primarily defense related.	(D)
8	Less: The cost of R&D funded by nonprofit institutions serving households	Assumed to be zero.	0
9	Less: The cost of (1) R&D sold to other domestic businesses and (2) exported R&D	For both domestic purchases and exports, costs are calculated for this step using an estimate of the gap between funder outlays and costs. ⁴ Total R&D sold to other domestic businesses is estimated with industry purchases from other domestic for-profit companies. The industry is assumed to sell R&D in proportion to their performance. ⁵ Cost of exports are based on BEA international services trade data for research, development, and testing services. ⁶	(D)
10	Plus: R&D expenses to create software that are not accounted for in NSF data	Special tabulation of BEA own-account software R&D. These expenses are added for time series consistency. They are removed in the step below in the double-count adjustment.	No adjustment necessary
11	Less: The double-counting of own-account R&D software investment	Special tabulation of BEA own-account software data.	35
12	Equals: Gross output adjusted for own-account R&D as investment		186,708
13	Intermediate inputs before capitalization	Tabulation of GDP-by-industry data, including unpublished detail.¹	64,298
14	Less: Total purchased R&D, calculated as the sum of		44,962
15	Cost of R&D performed in a company headquarters (NAICS 551) or R&D services auxiliary (NAICS 5417) and transferred for use in pharmaceutical and medicine manufacturing establishments (line 5)	The costs incurred in NAICS 5417 and NAICS 551 establishments, described in line 5, are transferred as the sum of production costs. The auxiliary establishment component of NAICS 5417 output is estimated with the ratio of auxiliary output to total private output of NAICS 5417 data from the Economic Census.	9,813
16	Plus: R&D purchased from a R&D services (NAICS 5417) domestic subsidiary for use in pharmaceutical and medicine manufacturing establishments (line 5)	These costs are adjusted with an estimate of the gap between receipts and costs to represent the purchase value of R&D output. ⁴	15,488
17	Plus: Purchases of nonscience and engineering R&D from for-profit R&D services establishments (NAICS 54172)	Total purchases for all industries are based on BEA's annual input-output values. Capitalized R&D should include social science R&D, and this measure provides a partial estimate. This industry share is proxied with the distribution of business purchases of R&D from non-profits and universities and colleges from SIRD. ⁵	5,930
18	Plus: Industry-funded R&D performed by academic institutions	Total for all industries from unpublished detail from the NIPA-based R&D satellite account estimate. Industry share comes from SIRD data on company-funded R&D performed by universities and colleges. ⁵	1,809
19	Plus: Industry-funded R&D performed by nonprofit institutions serving households	Total for all industries from unpublished detail from the NIPA-based R&D satellite account estimate. Industry share comes from SIRD data on company-funded R&D performed by nonprofit organizations (other than universities and colleges). ⁵	643
20	Plus: Industry-funded R&D performed by FFRDCs	Total for all industries from unpublished detail from the NIPA-based R&D satellite account estimate. Industry share assumes that the same industries purchase R&D from FFRDCs as perform R&D for the Federal government.	(D)
21	Plus: Industry-funded R&D performed by S&L governments	Total for all industries from unpublished detail from the NIPA-based R&D satellite account estimate. Industry share is proxied with SIRD data on company-funded R&D performed by academic and nonprofit organizations. ⁵	(D)
22	Plus: (1) Domestic purchases of R&D from other for-profit companies and (2) imports of R&D	Industry purchases are estimated based on SIRD data on business purchases of R&D from other domestic for-profit companies. ⁵ Industry imports are estimated based on BEA data on international trade in R&D services. ⁶	(D)
23	Intermediate inputs including R&D adjustments (line 13 less line 14)		19,336
24	Value added before adjustments (line 1 less line 13)	Tabulation of BEA GDP-by-industry data, including unpublished detail.¹	99,958
25	Plus: Total R&D investment less the double-counting of own-account R&D software investment (line 2 plus line 14 less line 11)	Special tabulation of BEA own-account software data.	67,414
26	Value added including R&D adjustments (line 12 less line 23)		167,372
27	Addendum: Total R&D investment including software R&D (line 2 plus line 14)		67,449

1. BEA GDP-by-industry data are available at <www.bea.gov/industry/gdpbyind_data.htm>.
2. NSF SIRD data are available at <www.nsf.gov/statistics/industry>. Historical data are provided in the Industrial Research and Development Information System at <www.nsf.gov/statistics/iris>.
3. 2007 SIRD, table 1.
4. Estimated with the ratio of net operating surplus to gross output for miscellaneous professional, scientific, and technical services (NAICS 5412OP) from BEA's GDP-by-industry data, various years.
5. 2007 SIRD, table 13.
6. BEA international services trade data are available at <www.bea.gov/international/intlserv.htm>. Industry

detail is based on a tabulation of unpublished data for the years 1997–2007 for both affiliated and unaffiliated trade.
GDP Gross domestic product
NIPAs National income and product accounts
NAICS North American Industry Classification System
R&D Research and development
D Suppressed to avoid disclosure of data from individual companies.