

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
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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	
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	
	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	
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	

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 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.

R&D Research and development

**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	Intermediate 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 7.4B. 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 54120P) 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.