

Appendix table 6-1

## Value added of knowledge- and technology-intensive industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	5,351,921	5,738,140	6,320,451	6,601,181	6,995,799	7,747,584	8,037,387	8,136,542	8,285,417	8,769,343
United States	1,878,982	1,997,410	2,137,652	2,249,345	2,364,571	2,504,290	2,680,620	2,886,537	3,102,811	3,315,248
EU	1,811,133	1,902,775	2,099,407	1,977,340	2,080,290	2,389,881	2,480,235	2,370,823	2,467,003	2,534,127
Belgium	54,043	56,942	63,875	62,911	68,762	82,056	81,248	73,701	76,632	78,667
Czech Republic	5,821	4,974	5,454	7,094	8,347	10,011	11,679	10,540	11,985	11,659
Denmark	35,076	35,650	39,433	38,192	42,073	48,430	49,143	46,253	47,925	48,248
Finland	30,461	28,831	26,307	21,030	24,620	31,237	31,350	29,856	32,703	33,917
France	356,868	358,844	401,082	387,008	404,089	467,685	472,761	432,035	446,616	452,364
Germany	442,225	468,434	542,326	543,081	572,387	675,635	671,454	602,590	608,281	618,306
Ireland	12,134	12,758	14,715	14,218	15,650	20,611	22,030	23,500	25,524	29,583
Italy	258,741	275,504	290,614	237,803	235,856	249,368	286,795	275,515	280,250	285,446
Netherlands	78,225	82,300	92,642	92,041	99,338	120,595	122,248	113,201	119,555	124,634
Poland	8,135	10,863	14,318	13,385	17,199	22,192	26,303	28,560	32,393	32,003
Spain	107,549	118,317	133,162	113,727	112,500	130,291	135,831	125,512	132,559	135,839
Sweden	58,925	61,655	63,801	57,349	60,891	69,045	79,552	75,719	76,961	81,325
United Kingdom	277,470	298,464	311,306	288,041	311,071	335,684	362,011	413,117	447,656	471,924
All others	85,459	89,239	100,373	101,459	107,506	127,044	127,831	120,726	127,965	130,213
Japan	717,322	819,721	905,905	1,065,030	1,189,827	1,344,289	1,215,556	1,129,855	1,041,566	1,206,722
China	79,758	86,510	104,347	131,037	126,009	153,042	176,589	202,401	208,641	221,818
Asia-8	180,694	202,811	241,424	258,925	304,855	353,853	396,978	401,493	323,228	378,889
India	43,718	41,524	40,998	42,905	48,000	56,193	59,140	65,460	68,169	76,379
Indonesia	13,989	16,336	18,095	20,490	24,020	26,559	29,499	30,859	12,125	16,849
Malaysia	7,894	9,482	12,198	15,518	17,723	21,320	26,211	26,556	19,733	22,154
Philippines	5,359	5,850	6,839	7,271	8,597	10,417	13,047	13,762	12,472	14,944
Singapore	13,444	16,339	19,202	23,002	27,759	33,159	39,671	41,725	33,621	34,418
South Korea	53,069	60,904	68,512	77,068	93,720	120,087	132,067	124,251	89,877	116,588
Taiwan	31,928	35,375	43,449	47,285	54,203	60,491	66,163	73,222	69,750	80,196
Thailand	11,292	17,000	32,132	25,387	30,833	25,627	31,180	25,659	17,480	17,360
All others	684,032	728,914	831,715	919,504	930,247	1,002,230	1,087,410	1,145,432	1,142,168	1,112,539
Central Asia and Europe	30,565	31,338	42,788	68,720	73,692	93,659	110,158	120,403	109,141	98,032
Russia	4,177	2,575	10,218	29,051	44,812	55,692	66,479	73,710	47,179	30,059
Turkey	25,820	28,393	29,236	33,380	22,529	32,040	36,464	38,578	55,485	63,656
Ukraine	569	371	3,333	6,288	6,352	5,927	7,215	8,116	6,476	4,317
Middle East and North Africa	60,212	58,769	66,700	69,595	76,264	97,475	107,207	113,300	122,882	126,841
Egypt	10,554	6,199	8,137	10,534	12,989	15,799	19,059	20,479	22,410	23,996
Iran	4,941	5,267	6,591	6,256	6,679	6,890	7,189	7,729	9,198	7,876
Israel	14,972	16,371	17,704	17,275	19,219	34,173	38,311	38,961	41,379	42,375
Morocco	3,793	4,025	4,631	4,509	4,848	5,770	5,597	5,285	7,154	7,488
Saudi Arabia	16,314	17,010	17,666	18,266	18,255	19,105	19,804	20,627	20,701	21,762
All others	9,638	9,897	11,970	12,754	14,273	15,739	17,246	20,219	22,040	23,343

Appendix table 6-1

## Value added of knowledge- and technology-intensive industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	9,156,162	9,278,443	9,771,661	10,950,726	12,133,230	13,067,345	14,081,028	15,652,047	16,913,782	16,846,958	18,185,317
United States	3,611,164	3,822,086	3,979,042	4,172,857	4,418,508	4,753,529	5,108,730	5,364,512	5,539,105	5,629,646	5,910,136
EU	2,367,538	2,418,004	2,691,676	3,315,029	3,816,247	4,001,237	4,257,439	4,909,461	5,286,522	5,030,348	5,057,030
Belgium	72,760	74,400	81,669	100,987	117,221	122,592	130,106	150,247	167,676	164,091	166,894
Czech Republic	10,942	12,493	16,199	20,033	23,135	26,501	30,049	37,425	47,647	43,451	42,157
Denmark	44,599	46,247	50,241	63,216	72,634	75,986	80,493	91,476	102,850	103,038	105,870
Finland	33,288	33,424	37,409	44,279	50,970	52,623	56,891	68,840	74,921	66,701	67,583
France	419,522	422,667	468,349	581,100	660,512	688,323	734,319	834,213	922,737	914,870	901,440
Germany	540,956	541,358	593,025	734,063	833,951	850,226	877,944	986,418	1,069,176	1,035,854	1,040,583
Ireland	31,286	33,790	39,303	51,972	60,501	71,685	80,488	93,120	99,692	88,047	81,969
Italy	266,528	276,671	303,556	381,319	429,425	447,182	463,110	529,308	579,800	552,901	545,133
Netherlands	117,029	123,365	137,153	173,878	197,325	208,704	217,036	247,829	277,006	276,077	276,230
Poland	34,291	39,673	41,737	45,396	52,027	62,938	69,988	87,773	110,018	90,649	97,913
Spain	128,667	138,332	156,640	201,753	235,755	254,320	279,710	341,098	392,490	396,730	390,874
Sweden	77,151	72,091	80,147	101,349	120,092	123,905	131,468	150,700	160,621	138,464	156,330
United Kingdom	468,088	476,209	539,729	631,700	746,395	781,863	851,330	988,354	936,527	835,204	862,328
All others	122,430	127,284	146,518	183,985	216,305	234,389	254,507	302,660	345,361	324,273	321,727
Japan	1,327,614	1,179,569	1,149,177	1,260,763	1,357,300	1,367,046	1,319,970	1,313,230	1,440,759	1,480,979	1,614,634
China	251,014	273,045	297,752	334,108	388,499	448,713	543,111	698,897	879,227	1,011,235	1,242,323
Asia-8	420,303	405,978	457,154	512,764	576,271	650,728	739,481	844,160	889,390	868,461	1,066,661
India	78,519	84,835	91,513	106,979	120,692	139,562	156,914	196,976	243,454	260,057	331,904
Indonesia	22,478	20,922	27,150	33,879	36,961	40,681	51,094	59,450	67,236	71,571	95,031
Malaysia	22,926	22,533	24,147	26,259	28,304	27,813	31,226	35,357	37,823	35,483	43,791
Philippines	15,186	13,855	15,152	14,976	16,791	19,222	23,112	28,453	32,209	31,686	36,269
Singapore	39,170	35,713	37,916	39,365	46,780	48,214	56,116	63,048	69,567	68,208	83,019
South Korea	133,494	129,657	154,231	175,163	198,892	236,089	270,254	300,534	271,279	245,969	293,286
Taiwan	91,462	82,417	88,130	95,035	103,728	112,280	120,134	123,593	127,868	115,933	137,136
Thailand	17,068	16,046	18,916	21,108	24,124	26,867	30,631	36,750	39,954	39,555	46,225
All others	1,178,530	1,179,761	1,196,860	1,355,205	1,576,405	1,846,092	2,112,297	2,521,787	2,878,779	2,826,288	3,294,533
Central Asia and Europe	105,725	109,792	125,016	151,710	202,205	254,158	318,234	414,855	511,572	449,082	513,165
Russia	39,301	53,095	66,537	79,496	108,345	139,526	184,750	240,304	305,843	265,002	298,842
Turkey	62,018	50,420	51,001	62,731	80,239	98,093	112,471	144,147	164,836	153,708	179,857
Ukraine	4,406	6,278	7,478	9,483	13,620	16,538	21,013	30,405	40,893	30,372	34,465
Middle East and North Africa	138,285	142,622	149,128	155,810	176,673	205,760	234,594	275,950	326,986	330,548	372,228
Egypt	24,640	23,991	21,216	18,197	19,671	22,473	24,798	23,971	28,673	32,378	34,087
Iran	10,161	13,059	19,504	21,183	26,069	30,281	37,455	47,582	60,023	53,123	60,849
Israel	48,262	47,428	45,609	45,503	50,330	54,839	58,646	69,827	84,894	81,672	90,446
Morocco	7,405	7,628	8,198	9,977	11,461	12,894	14,037	17,434	19,718	20,779	21,625
Saudi Arabia	22,602	23,551	24,599	25,789	27,502	29,586	31,854	34,110	36,900	39,972	45,135
All others	25,215	26,965	30,002	35,161	41,640	55,686	67,804	83,027	96,777	102,626	120,086

Appendix table 6-1

## Value added of knowledge- and technology-intensive industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	227,855	254,456	328,680	392,333	368,978	357,207	387,232	423,999	433,708	388,707
Argentina	31,413	46,246	59,147	52,369	56,891	59,604	60,704	63,935	66,709	67,713
Brazil	125,697	121,641	161,194	208,684	160,585	158,564	183,260	189,591	184,312	127,933
Chile	6,870	7,620	9,745	10,989	12,984	16,231	17,931	19,931	20,000	18,764
Colombia	9,044	9,800	11,643	13,995	19,467	23,927	27,179	31,215	28,641	24,074
Costa Rica	958	1,410	1,644	1,944	2,179	2,372	2,454	2,657	2,852	3,119
Mexico	39,572	49,978	65,276	82,409	90,179	65,159	64,838	75,946	85,241	101,723
Peru	4,151	5,881	6,241	5,066	6,294	7,959	8,567	9,346	9,281	8,529
Venezuela	3,980	4,984	5,609	6,028	7,813	9,744	6,894	13,960	18,366	19,868
All others	6,171	6,897	8,182	10,849	12,587	13,648	15,404	17,418	18,307	16,983
Sub-Saharan Africa	24,402	26,595	29,123	27,637	28,170	34,003	34,507	37,057	36,081	32,681
Kenya	1,818	1,776	1,657	1,096	1,347	1,997	1,879	2,187	2,375	2,138
Nigeria	2,276	2,290	1,669	1,292	1,714	3,328	4,310	4,436	5,536	1,603
South Africa	16,054	18,642	21,970	21,631	22,514	25,749	24,957	26,948	25,024	25,797
All others	4,256	3,886	3,826	3,617	2,596	2,928	3,361	3,485	3,146	3,143
Other developed	331,500	347,030	352,438	348,019	368,434	402,328	429,670	431,261	419,948	445,118
Australia	87,573	89,653	91,028	89,143	100,882	110,424	124,701	127,272	115,029	127,857
Canada	148,566	159,465	157,764	153,740	151,460	156,406	163,637	170,121	167,580	179,354
New Zealand	10,314	10,176	9,530	10,251	12,234	14,666	16,711	16,968	14,484	15,209
Norway	26,175	26,585	29,514	27,138	28,511	33,285	34,835	34,906	35,709	37,244
Switzerland	58,872	61,150	64,603	67,747	75,347	87,547	89,785	81,994	87,146	85,455
Other developing	9,497	10,726	11,985	13,200	14,709	17,558	18,638	19,413	20,408	21,159
Bangladesh	2,894	3,263	3,386	3,695	4,030	4,423	4,781	4,908	5,087	5,375
Pakistan	5,548	6,184	7,013	7,521	8,236	9,325	9,557	9,849	10,117	10,319
Sri Lanka	620	741	839	918	1,090	1,251	1,372	1,539	2,013	2,115
Vietnam	436	537	747	1,065	1,353	2,559	2,927	3,117	3,192	3,350

Appendix table 6-1

## Value added of knowledge- and technology-intensive industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	426,018	425,621	378,797	380,428	417,782	517,784	606,371	729,871	852,782	827,161	986,634
Argentina	68,478	69,394	22,523	23,969	27,715	34,300	42,505	53,477	68,532	70,261	82,582
Brazil	146,117	125,809	116,762	121,237	135,408	185,814	230,963	296,164	353,988	355,980	460,242
Chile	19,001	17,489	17,251	18,358	22,326	26,492	30,306	34,566	38,663	39,537	48,403
Colombia	20,269	20,369	20,433	19,447	23,579	29,712	32,882	42,576	50,020	49,500	60,128
Costa Rica	3,446	3,766	4,055	4,277	4,490	4,829	5,465	6,433	7,690	7,625	9,380
Mexico	120,435	135,900	152,253	149,201	156,493	182,107	199,497	220,738	232,265	197,667	220,542
Peru	8,848	9,049	9,647	10,424	11,281	12,580	14,058	16,285	19,454	19,992	23,537
Venezuela	22,394	25,209	18,526	15,699	17,057	19,566	25,839	31,754	43,778	47,009	36,355
All others	17,030	18,637	17,348	17,817	19,433	22,383	24,857	27,877	38,391	39,590	45,466
Sub-Saharan Africa	32,966	30,563	30,937	43,925	55,552	63,643	71,337	79,767	79,310	82,531	101,800
Kenya	2,041	2,337	2,561	3,098	3,147	3,581	4,279	5,286	5,671	5,813	6,344
Nigeria	1,733	1,922	2,204	2,475	3,432	4,986	7,959	8,564	10,303	9,534	12,102
South Africa	25,903	23,460	22,184	34,076	44,912	51,027	54,502	60,835	57,838	61,797	77,418
All others	3,289	2,844	3,988	4,276	4,061	4,049	4,598	5,083	5,498	5,387	5,937
Other developed	452,809	448,573	488,009	595,433	693,454	769,990	842,599	976,293	1,057,607	1,080,085	1,258,209
Australia	125,544	118,666	133,608	171,348	208,094	232,282	251,438	301,019	325,141	370,249	460,161
Canada	196,762	197,768	203,699	241,442	276,237	312,376	352,559	394,131	417,790	406,717	463,948
New Zealand	13,581	13,730	16,479	22,300	27,490	31,801	31,141	38,041	38,295	34,013	41,531
Norway	35,547	37,629	44,909	55,087	62,764	70,718	75,588	93,030	104,463	98,754	111,100
Switzerland	81,374	80,780	89,313	105,256	118,870	122,813	131,873	150,071	171,919	170,353	181,469
Other developing	22,727	22,590	24,972	27,900	30,739	34,757	39,162	45,050	50,521	56,881	62,496
Bangladesh	5,561	5,588	5,843	6,347	6,787	7,039	7,348	8,401	9,601	11,021	12,430
Pakistan	11,485	11,146	12,669	14,269	15,736	18,251	20,968	24,088	25,389	28,863	31,651
Sri Lanka	2,107	2,093	2,398	2,614	2,838	3,333	3,893	4,539	5,829	6,363	7,493
Vietnam	3,574	3,763	4,062	4,670	5,378	6,133	6,953	8,021	9,702	10,634	10,923

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Knowledge- and technology-intensive industries include knowledge-intensive services and high-technology manufacturing industries classified by Organisation for Economic Co-operation and Development. Knowledge-intensive services include education, health, and business, financial, and communications services. High-technology manufacturing industries include aerospace, communications and semiconductors, computers and office machinery, pharmaceuticals, and scientific instruments and measuring equipment. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-2

## Nominal GDP, by region/country/economy: 1995–2010

(Billions of current dollars)

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	29,209	29,917	29,799	29,544	30,620	31,557	31,355	32,627	36,628	41,173	44,425	48,044	54,080	59,135	56,112	60,946
United States	7,415	7,838	8,332	8,793	9,354	9,951	10,286	10,642	11,142	11,868	12,638	13,399	14,062	14,369	14,119	14,660
EU	9,105	9,298	8,762	9,057	9,066	8,407	8,516	9,297	11,326	13,036	13,587	14,508	16,744	17,970	16,144	16,008
Belgium	284	275	249	255	254	232	233	253	312	361	377	400	459	503	471	466
Czech Republic	55	62	57	62	60	57	62	75	91	109	124	143	174	216	190	192
Denmark	182	184	170	174	174	160	161	174	213	245	258	274	311	342	309	310
Finland	131	128	123	130	130	122	125	135	164	189	195	208	246	270	238	239
France	1,573	1,573	1,422	1,469	1,456	1,327	1,342	1,457	1,797	2,055	2,133	2,259	2,583	2,824	2,627	2,555
Germany	2,522	2,441	2,164	2,182	2,140	1,899	1,897	2,025	2,450	2,739	2,781	2,920	3,334	3,623	3,330	3,298
Ireland	67	74	81	88	96	97	105	123	158	186	202	224	260	263	223	206
Italy	1,127	1,259	1,193	1,216	1,200	1,097	1,119	1,222	1,511	1,728	1,777	1,866	2,116	2,292	2,112	2,047
Netherlands	420	418	387	403	412	385	402	439	540	610	638	679	783	869	795	778
Poland	139	157	157	173	168	171	190	198	217	253	304	342	425	529	431	469
Spain	597	622	573	601	618	580	610	688	885	1,045	1,129	1,235	1,442	1,591	1,465	1,406
Sweden	254	276	253	255	259	247	227	251	315	362	370	399	462	486	404	459
United Kingdom	1,156	1,221	1,361	1,455	1,503	1,478	1,473	1,617	1,866	2,204	2,279	2,447	2,810	2,648	2,178	2,245
All others	599	606	571	595	595	553	571	639	806	950	1,020	1,112	1,338	1,515	1,370	1,338
Japan	5,265	4,646	4,265	3,855	4,373	4,671	4,097	3,920	4,231	4,607	4,554	4,364	4,377	4,880	5,032	5,460
China	872	1,015	1,129	1,186	1,247	1,368	1,491	1,618	1,800	2,098	2,435	2,903	3,702	4,734	5,200	6,102
Asia-8	1,802	1,947	1,906	1,489	1,720	1,879	1,810	1,974	2,209	2,520	2,875	3,265	3,825	3,977	3,905	4,843
India	368	389	421	424	453	468	483	505	591	715	840	946	1,197	1,283	1,353	1,722
Indonesia	202	227	216	95	140	165	160	196	235	257	286	365	432	510	539	707
Malaysia	89	101	100	72	79	94	93	101	110	125	138	156	186	223	193	238
Philippines	74	83	82	65	76	76	72	78	80	87	99	118	144	167	161	189
Singapore	87	95	99	85	85	94	88	91	96	113	125	145	177	189	183	223
South Korea	539	581	538	360	464	533	505	576	644	722	845	952	1,049	931	834	1,014
Taiwan	275	288	299	275	299	326	294	301	311	341	365	376	392	400	378	431
Thailand	168	182	151	112	123	123	116	127	143	161	176	207	247	273	264	319
All others	4,750	5,173	5,405	5,162	4,862	5,282	5,154	5,176	5,919	7,045	8,336	9,605	11,370	13,206	11,712	13,873
Central Europe/Asia	578	681	710	582	473	557	539	619	784	1,047	1,332	1,627	2,089	2,566	1,951	2,349
Russia	313	392	405	271	194	259	306	345	431	591	764	990	1,300	1,659	1,221	1,479
Turkey	228	244	255	269	248	267	195	232	303	391	482	529	646	727	612	732
Ukraine	37	45	50	42	32	31	38	42	50	65	86	108	143	180	117	138
Middle East/North Africa	515	575	605	591	626	715	712	766	836	976	1,169	1,368	1,598	1,990	1,750	1,967
Egypt	60	68	76	85	90	96	89	82	71	78	93	108	132	165	187	193
Iran	46	55	63	63	60	71	85	134	139	171	204	243	311	395	338	386
Israel	96	105	109	110	111	125	123	113	119	128	134	146	168	202	195	218
Morocco	37	41	37	40	40	37	38	40	50	57	60	66	75	89	91	94
Saudi Arabia	142	158	165	146	161	188	183	189	215	250	315	356	385	476	373	435
All others	133	149	155	148	165	198	195	209	243	292	363	449	528	664	565	643
South and Central America	1,753	1,900	2,076	2,069	1,852	2,039	1,973	1,721	1,792	2,078	2,524	2,975	3,524	4,112	3,811	4,587
Argentina	258	272	293	299	284	284	269	102	128	152	182	213	260	326	307	369

## Appendix table 6-2

**Nominal GDP, by region/country/economy: 1995–2010**

(Billions of current dollars)

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Brazil	769	840	871	844	587	644	552	506	552	664	882	1,089	1,367	1,653	1,593	2,089
Chile	72	76	83	79	73	75	69	67	74	96	118	147	164	171	161	203
Colombia	110	116	127	117	103	100	98	98	95	117	147	163	207	245	236	288
Costa Rica	12	12	13	14	16	16	16	17	18	19	20	23	26	30	29	36
Mexico	335	387	468	487	566	672	710	705	700	760	849	951	1,036	1,094	880	1,035
Peru	54	56	59	57	52	53	54	57	61	70	79	92	107	127	127	154
Venezuela	77	71	86	91	98	117	123	93	85	113	146	184	228	312	327	241
All others	66	71	76	80	73	77	81	76	79	88	100	113	128	153	151	172
Sub-Saharan Africa	275	307	317	298	203	212	196	205	276	352	409	462	516	560	524	656
Kenya	12	12	13	14	13	13	13	13	15	16	19	23	27	30	29	32
Nigeria	92	128	133	129	36	46	44	59	68	88	112	145	166	214	171	221
South Africa	151	144	149	134	133	133	119	111	168	219	247	261	286	276	284	364
All others	21	23	23	21	21	20	20	22	26	29	31	33	37	40	40	39
Other developed	1,498	1,573	1,554	1,477	1,559	1,594	1,572	1,691	2,037	2,372	2,657	2,898	3,328	3,621	3,293	3,886
Australia	382	428	427	382	414	399	379	426	540	658	738	784	952	1,041	974	1,233
Canada	590	614	638	617	661	725	715	734	866	992	1,134	1,279	1,424	1,503	1,339	1,577
New Zealand	60	67	67	55	57	52	51	60	80	100	112	108	131	129	116	140
Norway	149	160	158	151	159	168	171	192	225	259	302	337	387	445	370	413
Switzerland	316	305	265	273	268	250	255	279	326	363	372	391	434	503	493	524
Other developing	131	137	142	145	149	164	162	174	194	219	244	276	315	356	383	427
Bangladesh	38	40	41	43	45	45	45	47	52	56	58	60	69	80	89	99
Pakistan	59	59	59	59	59	71	68	75	84	97	109	126	143	145	156	172
Sri Lanka	13	14	15	16	16	16	16	17	19	21	24	28	32	41	42	50
Vietnam	21	25	27	27	29	31	33	35	39	45	53	61	71	91	96	106

EU = European Union; GDP = gross domestic product

NOTES: GDP data by region/country/economy from IHS Global Insight. EU excludes Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. Detail may not add to total because of rounding. China includes Hong Kong. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of Global Economy and World Industry databases.

Appendix table 6-3

## Value added of commercial knowledge-intensive services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	3,000,572	3,189,987	3,566,791	3,801,075	4,014,410	4,423,899	4,624,855	4,733,747	4,870,773	5,173,395
United States	1,080,550	1,131,575	1,222,995	1,297,776	1,368,885	1,461,355	1,588,650	1,739,040	1,901,510	2,051,862
EU	976,100	1,020,094	1,121,863	1,069,997	1,120,781	1,285,872	1,344,486	1,294,934	1,356,940	1,411,288
Belgium	28,614	30,324	34,710	33,649	37,033	44,529	44,495	40,825	43,388	44,253
Czech Republic	2,980	3,097	3,295	4,396	4,987	5,620	6,509	5,782	7,046	6,638
Denmark	15,178	15,404	16,949	16,597	18,683	20,972	21,171	20,417	20,867	20,712
Finland	12,377	10,913	9,765	8,195	9,494	12,371	12,239	11,676	12,886	13,275
France	199,113	198,447	219,418	208,147	217,475	248,033	253,084	230,459	240,547	247,987
Germany	254,502	266,142	307,438	316,509	330,368	388,059	384,476	345,564	347,731	358,696
Ireland	5,805	6,122	7,124	6,782	7,166	9,272	9,931	10,913	12,460	13,318
Italy	130,297	139,611	147,464	122,777	120,305	131,598	151,243	143,868	148,305	155,059
Netherlands	40,966	43,837	49,582	49,458	54,960	68,806	72,162	67,745	72,195	76,120
Poland	2,415	3,821	6,450	6,325	8,946	11,160	13,675	15,906	18,319	18,469
Spain	58,252	63,741	69,727	59,358	58,265	67,622	69,738	66,261	70,904	72,227
Sweden	29,287	29,932	29,348	25,293	26,874	29,428	34,831	34,358	34,445	37,488
United Kingdom	152,408	162,367	168,704	159,158	170,171	182,439	203,579	236,663	258,975	275,725
All others	43,909	46,337	51,889	53,352	56,053	65,963	67,354	64,498	68,874	71,322
Japan	393,376	450,357	506,992	597,094	675,895	766,967	687,914	642,568	590,486	681,671
China	49,734	53,495	66,021	82,738	81,653	98,765	114,211	129,126	129,006	133,526
Asia-8	103,035	114,077	129,245	145,968	170,579	200,906	225,158	228,673	179,431	205,949
India	25,540	25,029	24,061	26,358	29,626	35,239	35,864	40,197	41,329	46,965
Indonesia	10,183	12,193	13,500	15,425	18,126	19,862	21,408	20,682	7,854	10,365
Malaysia	5,661	6,435	8,209	10,632	11,641	13,837	16,944	17,356	12,702	13,359
Philippines	3,717	3,966	4,157	4,371	5,169	6,092	7,140	7,427	6,255	7,306
Singapore	7,055	8,113	9,563	11,480	13,864	16,132	19,569	21,522	19,104	18,971
South Korea	26,486	32,033	36,547	40,314	47,919	61,232	70,301	67,077	46,006	59,079
Taiwan	18,033	19,212	24,367	26,383	31,080	32,999	35,063	39,560	36,769	41,544
Thailand	6,360	7,096	8,840	11,006	13,155	15,511	18,869	14,852	9,411	8,359
All others	397,776	420,390	519,676	607,501	596,617	610,034	664,437	699,406	713,399	689,099
Central Asia and Europe	20,014	21,784	31,354	51,633	54,081	58,919	66,806	72,955	73,096	72,154
Russia	1,999	1,682	9,059	23,937	34,783	33,667	37,360	40,873	26,473	19,174
Turkey	17,816	19,964	20,802	23,663	15,594	23,053	26,985	29,052	44,074	51,184
Ukraine	199	139	1,493	4,033	3,704	2,198	2,462	3,031	2,549	1,795
Middle East and North Africa	41,590	42,750	49,148	50,974	55,554	64,313	71,091	72,589	81,038	84,449
Egypt	3,471	2,160	3,440	5,245	7,150	8,997	11,358	12,304	13,876	15,477
Iran	4,067	4,342	5,589	5,305	4,625	4,720	5,110	5,620	5,894	5,271
Israel	11,361	12,553	14,025	12,971	14,535	19,675	21,936	20,481	22,720	22,994
Morocco	1,519	1,626	1,878	1,828	1,892	2,335	2,173	2,056	4,873	5,009
Saudi Arabia	13,425	14,061	14,627	15,135	15,646	15,676	16,291	16,966	16,995	17,962
All others	7,746	8,007	9,590	10,490	11,707	12,910	14,223	15,163	16,679	17,735

Appendix table 6-3

## Value added of commercial knowledge-intensive services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	5,426,740	5,570,352	5,829,542	6,488,601	7,161,741	7,762,799	8,396,454	9,383,125	10,096,664	10,106,473	10,900,546
United States	2,260,400	2,424,674	2,492,144	2,591,795	2,734,997	2,971,658	3,204,819	3,353,720	3,424,069	3,421,374	3,606,766
EU	1,321,703	1,357,507	1,514,692	1,869,450	2,160,732	2,261,584	2,418,374	2,816,462	3,025,171	2,891,205	2,890,291
Belgium	41,414	42,343	46,421	57,156	67,440	70,460	75,242	87,334	96,795	94,216	95,746
Czech Republic	6,109	7,147	9,453	11,594	13,388	15,125	17,151	22,240	28,473	25,685	24,470
Denmark	19,552	20,405	22,281	28,148	32,818	34,731	37,174	43,163	48,169	47,920	49,327
Finland	13,624	14,076	15,335	17,020	20,450	20,642	22,918	28,671	31,776	29,522	30,234
France	234,702	235,062	260,968	323,759	369,965	385,148	415,798	475,144	526,960	531,107	522,201
Germany	306,060	308,403	335,695	418,872	477,209	481,728	497,822	555,485	601,550	585,171	585,098
Ireland	15,285	17,344	19,871	28,385	33,249	41,682	47,202	54,834	57,535	47,105	42,578
Italy	146,690	152,963	168,731	215,458	241,943	251,176	256,096	300,031	328,967	312,848	308,456
Netherlands	71,216	75,641	82,277	103,772	117,776	126,149	131,118	149,503	165,671	164,142	163,636
Poland	20,631	23,289	23,972	25,440	30,041	36,413	40,639	52,315	65,286	54,790	58,921
Spain	69,523	76,716	87,631	111,929	130,344	140,677	156,596	195,345	221,987	225,515	217,147
Sweden	36,510	34,459	36,471	45,391	54,555	56,870	60,642	71,160	75,751	64,483	73,772
United Kingdom	272,740	279,348	324,329	383,472	453,727	473,381	519,962	611,976	584,216	529,661	542,107
All others	67,645	70,312	81,258	99,052	117,829	127,401	140,014	169,264	192,036	179,042	176,598
Japan	752,727	685,939	673,598	729,847	776,111	790,009	765,509	761,894	829,687	869,860	915,944
China	148,214	156,738	166,206	178,471	199,814	226,662	281,095	381,463	485,571	576,797	714,275
Asia-8	219,706	221,351	247,764	274,812	300,074	340,371	383,959	447,596	490,825	485,091	598,847
India	48,319	53,463	57,974	68,296	76,704	87,988	99,761	124,777	161,728	174,727	225,068
Indonesia	14,317	13,846	17,615	21,789	23,584	26,107	32,876	37,421	42,591	45,844	60,953
Malaysia	13,142	14,106	15,384	16,211	17,095	18,417	20,888	24,753	27,415	27,401	33,858
Philippines	7,053	6,841	7,394	7,762	8,485	10,405	12,050	14,893	17,038	17,501	20,205
Singapore	19,593	19,315	19,416	20,144	22,763	22,258	26,413	33,926	40,127	40,139	47,051
South Korea	64,221	64,762	80,311	89,680	95,778	114,993	129,832	145,126	130,892	113,895	138,083
Taiwan	45,275	41,697	41,477	41,565	44,922	48,409	48,686	50,867	53,236	47,490	52,120
Thailand	7,786	7,320	8,193	9,365	10,744	11,795	13,453	15,834	17,797	18,094	21,508
All others	723,990	724,144	735,138	844,225	990,012	1,172,515	1,342,698	1,621,989	1,841,341	1,862,146	2,174,422
Central Asia and Europe	77,548	79,652	83,835	105,154	138,148	175,056	218,263	290,465	358,181	320,352	365,862
Russia	26,303	35,974	41,465	53,379	69,651	92,245	121,491	162,374	207,306	183,628	205,044
Turkey	49,311	40,595	38,764	47,165	60,687	74,089	85,629	110,296	126,060	117,681	139,718
Ukraine	1,934	3,083	3,606	4,610	7,810	8,723	11,143	17,795	24,814	19,043	21,100
Middle East and North Africa	91,889	95,447	100,749	106,287	122,943	145,956	168,415	204,450	240,431	246,868	278,943
Egypt	16,159	15,446	12,792	10,978	12,876	13,799	14,915	17,009	20,759	23,520	24,891
Iran	6,941	8,838	13,307	15,007	18,181	20,750	26,068	34,881	43,882	39,282	44,888
Israel	25,702	25,772	25,780	25,073	28,444	32,164	34,281	41,523	49,482	48,599	53,881
Morocco	4,924	4,962	5,408	6,417	7,463	8,375	9,370	11,916	13,350	14,229	14,690
Saudi Arabia	18,656	19,449	20,308	21,313	22,779	24,605	26,497	28,476	30,951	33,707	38,004
All others	19,508	20,981	23,155	27,499	33,201	46,264	57,283	70,644	82,007	87,531	102,591



Appendix table 6-3

## Value added of commercial knowledge-intensive services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	127,502	138,753	216,919	281,743	247,474	219,827	239,024	257,878	267,258	226,409
Argentina	13,133	18,070	23,687	32,305	35,923	38,228	39,129	41,141	43,356	43,398
Brazil	74,567	72,681	131,697	173,878	122,168	96,329	114,173	120,736	121,911	78,118
Chile	4,123	4,382	5,456	6,085	7,189	8,780	11,313	12,533	12,383	11,240
Colombia	4,479	4,648	7,151	8,589	12,064	14,712	16,353	18,410	16,605	12,560
Costa Rica	700	831	949	1,101	1,218	1,327	1,368	1,483	1,547	1,672
Mexico	20,259	25,925	34,688	44,823	49,891	37,776	34,949	38,374	43,069	52,109
Peru	2,720	3,382	3,175	2,595	3,802	5,204	5,739	6,284	6,178	5,558
Venezuela	3,031	3,873	4,237	4,564	6,363	7,777	5,338	7,117	9,718	10,042
All others	4,490	4,962	5,880	7,804	8,857	9,694	10,662	11,801	12,491	11,712
Sub-Saharan Africa	19,011	20,839	22,852	22,241	23,144	27,444	27,580	29,564	28,778	26,331
Kenya	1,598	1,564	1,143	753	992	1,450	805	934	958	806
Nigeria	1,935	1,783	1,211	1,125	1,517	2,524	3,403	3,402	4,428	1,314
South Africa	13,521	15,739	18,669	18,617	19,259	21,971	21,371	23,178	21,387	22,131
All others	1,956	1,754	1,830	1,746	1,376	1,498	2,001	2,050	2,005	2,080
Other developed	183,964	189,989	192,366	193,220	207,732	229,008	248,897	254,802	250,915	267,024
Australia	53,721	54,248	55,386	54,549	62,313	69,089	78,246	81,632	73,895	83,476
Canada	73,451	77,599	75,497	74,397	75,011	78,831	84,798	90,864	91,684	97,921
New Zealand	6,519	6,304	5,799	6,294	7,697	9,288	10,709	10,901	9,232	9,741
Norway	12,026	11,917	13,146	12,195	12,800	14,615	14,942	15,417	16,043	16,626
Switzerland	38,246	39,921	42,538	45,785	49,910	57,185	60,203	55,988	60,062	59,260
Other developing	5,695	6,273	7,036	7,691	8,632	10,524	11,039	11,617	12,314	12,732
Bangladesh	1,874	1,927	1,992	2,154	2,367	2,609	2,884	3,007	3,047	3,232
Pakistan	3,175	3,567	4,119	4,462	4,926	5,530	5,500	5,698	5,798	5,920
Sri Lanka	507	593	669	717	867	998	1,110	1,265	1,800	1,831
Vietnam	139	187	257	358	472	1,387	1,545	1,647	1,669	1,748

Appendix table 6-3

**Value added of commercial knowledge-intensive services, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	240,955	239,546	216,206	219,741	242,056	308,787	358,511	434,029	500,855	491,063	591,198
Argentina	43,347	44,400	14,745	15,243	17,885	21,811	26,491	32,914	41,908	43,119	51,050
Brazil	83,622	72,965	68,879	72,211	78,139	112,876	137,065	176,402	210,594	216,429	281,353
Chile	11,123	10,188	9,944	11,895	14,453	17,424	19,938	22,763	25,172	25,562	31,600
Colombia	11,276	11,249	12,200	11,673	14,147	17,717	19,295	25,174	29,929	30,195	37,152
Costa Rica	1,876	2,036	2,202	2,342	2,471	2,700	3,108	3,704	4,390	4,406	5,432
Mexico	61,589	68,633	81,374	80,571	87,124	104,614	115,036	129,247	136,596	115,032	128,343
Peru	5,789	5,827	6,252	6,684	7,245	8,154	9,190	10,863	13,183	13,690	16,415
Venezuela	10,499	11,556	8,876	7,370	7,955	8,923	12,306	14,975	20,976	23,358	17,543
All others	11,834	12,691	11,733	11,752	12,636	14,569	16,083	17,987	18,105	19,273	22,312
Sub-Saharan Africa	26,257	24,564	24,255	35,343	44,802	51,652	58,256	65,254	65,108	68,099	84,450
Kenya	983	1,184	1,209	1,450	1,392	1,632	2,063	2,699	2,928	3,191	3,480
Nigeria	1,432	1,579	1,855	2,101	2,994	4,479	7,394	7,916	9,495	8,867	11,254
South Africa	21,984	20,016	18,761	28,639	37,788	42,908	45,836	51,421	49,182	52,566	65,884
All others	1,859	1,785	2,430	3,153	2,629	2,633	2,964	3,218	3,502	3,475	3,833
Other developed	274,070	271,601	295,448	361,471	424,240	470,793	516,128	601,172	646,523	701,660	816,222
Australia	82,851	78,374	87,988	112,944	137,165	152,563	166,868	200,860	217,433	273,005	338,633
Canada	109,224	112,109	115,801	137,128	158,647	180,454	203,176	226,190	236,225	240,754	273,149
New Zealand	8,610	8,838	10,728	14,455	17,702	20,560	20,114	24,768	25,291	22,462	27,429
Norway	16,134	16,953	19,931	24,992	29,515	33,644	35,623	45,484	50,559	46,853	51,983
Switzerland	57,251	55,326	61,001	71,952	81,211	83,573	90,348	103,871	117,015	118,587	125,027
Other developing	13,270	13,333	14,646	16,229	17,823	20,270	23,125	26,619	30,244	34,104	37,746
Bangladesh	3,286	3,309	3,461	3,730	3,965	4,109	4,272	4,823	5,446	6,291	7,037
Pakistan	6,219	6,137	6,861	7,673	8,427	9,885	11,558	13,262	13,899	15,820	17,269
Sri Lanka	1,905	1,901	2,194	2,461	2,690	3,162	3,761	4,406	5,649	6,183	7,284
Vietnam	1,859	1,987	2,129	2,365	2,741	3,114	3,533	4,128	5,250	5,810	6,156

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Knowledge-intensive services classified by Organisation for Economic Co-operation and Development and include education, health, and business, financial, and communications services. Commercial knowledge-intensive services exclude education and health. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-4

## Value added of education services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	854,086	925,588	1,011,034	1,036,107	1,095,490	1,209,926	1,241,865	1,237,420	1,252,757	1,314,352
United States	284,774	307,120	324,611	339,077	355,055	369,337	384,144	401,587	425,500	453,800
EU	308,153	328,534	369,906	343,244	359,995	412,313	421,850	396,813	409,601	412,937
Belgium	11,871	12,381	13,911	13,636	14,594	17,084	16,577	14,761	15,086	14,828
Czech Republic	1,416	884	946	1,269	1,601	2,026	2,359	2,054	2,094	2,156
Denmark	6,309	6,530	7,205	6,972	7,519	8,705	8,891	7,982	8,337	8,381
Finland	6,043	6,117	5,556	4,317	4,977	5,984	5,936	5,395	5,547	5,471
France	55,065	57,308	65,824	64,755	67,816	79,470	78,822	72,030	74,495	74,482
Germany	61,920	66,352	78,363	78,490	82,498	98,806	97,273	86,758	87,873	86,777
Ireland	2,107	2,184	2,624	2,551	2,759	3,178	3,369	3,341	3,243	3,188
Italy	55,997	58,702	62,686	49,763	49,400	50,207	58,810	55,266	55,134	54,418
Netherlands	12,774	12,912	14,603	14,236	14,929	17,464	16,809	15,073	15,736	16,151
Poland	2,523	3,481	3,989	3,386	4,131	5,490	6,386	6,225	6,796	6,650
Spain	20,429	22,661	26,830	23,338	23,520	27,235	28,473	25,689	26,882	27,742
Sweden	8,661	9,160	10,063	9,533	9,937	11,419	12,687	11,718	11,779	12,230
United Kingdom	43,742	49,655	54,336	48,349	52,351	57,023	57,722	64,041	69,049	72,689
All others	19,296	20,207	22,969	22,648	23,965	28,222	27,737	26,480	27,550	27,774
Japan	104,437	119,650	135,235	165,688	178,289	192,062	172,982	158,514	150,454	174,018
China	10,355	11,601	13,898	18,048	17,064	21,040	24,280	28,852	33,414	36,684
Asia-8	28,613	31,166	39,159	42,938	49,087	52,272	59,053	58,815	48,284	56,370
India	6,876	6,161	6,327	6,142	6,694	7,668	8,602	9,345	9,905	10,790
Indonesia	1,430	1,495	1,627	1,827	1,996	2,197	2,470	2,865	1,447	2,146
Malaysia	89	101	125	140	156	173	199	201	154	163
Philippines	480	515	831	967	1,229	1,492	1,787	1,938	1,754	2,260
Singapore	896	1,055	1,219	1,367	1,691	1,954	2,720	2,836	2,560	2,557
South Korea	11,394	13,102	14,712	16,443	19,329	23,715	26,536	24,858	17,239	21,391
Taiwan	4,820	5,796	7,172	7,832	8,744	9,907	10,851	11,560	10,831	12,128
Thailand	2,628	2,942	7,147	8,221	9,248	5,166	5,888	5,212	4,393	4,936
All others	117,755	127,518	128,225	127,112	135,999	162,903	179,555	192,839	185,503	180,543
Central Asia and Europe	6,057	5,174	5,923	7,184	8,331	17,084	21,735	23,556	18,019	12,890
Russia	1,203	421	272	713	3,211	10,052	13,774	15,334	10,085	5,050
Turkey	4,680	4,646	4,760	5,341	3,879	5,155	5,609	5,753	5,921	6,508
Ukraine	174	107	891	1,131	1,242	1,876	2,352	2,470	2,013	1,332
Middle East and North Africa	10,839	8,153	9,377	10,205	11,297	17,686	19,493	21,609	22,687	22,369
Egypt	6,575	3,802	4,441	4,976	5,482	6,378	7,173	7,537	7,752	7,626
Iran	111	113	121	142	529	596	591	667	1,841	1,249
Israel	1,092	1,102	1,227	1,542	1,733	6,490	7,394	7,650	7,556	7,657
Morocco	936	991	1,118	1,095	1,202	1,400	1,392	1,315	908	992
Saudi Arabia	1,245	1,269	1,307	1,347	1,117	1,474	1,507	1,569	1,590	1,629
All others	880	876	1,163	1,103	1,233	1,348	1,436	2,872	3,041	3,216

Appendix table 6-4

## Value added of education services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	1,329,891	1,355,534	1,436,964	1,612,579	1,769,938	1,882,812	2,002,401	2,228,503	2,435,431	2,420,234	2,552,808
United States	483,300	511,500	545,000	581,000	609,800	637,900	674,900	717,000	757,900	782,700	805,682
EU	379,202	387,623	430,238	527,370	600,211	627,638	654,685	750,278	807,813	773,926	763,106
Belgium	13,200	13,547	14,939	18,563	20,907	21,911	23,073	26,335	29,994	29,499	29,455
Czech Republic	2,037	2,248	2,783	3,530	4,056	4,803	5,450	6,504	8,033	7,519	7,249
Denmark	7,590	7,690	8,496	10,513	12,040	12,284	12,863	14,124	16,032	16,280	16,289
Finland	4,912	5,044	5,601	7,008	8,054	8,390	8,688	9,924	11,168	10,993	10,877
France	66,453	67,412	74,048	91,548	101,161	104,664	108,055	122,064	133,076	130,516	125,103
Germany	76,820	76,475	83,627	100,011	113,582	115,238	114,767	128,923	140,895	139,462	135,016
Ireland	3,032	3,392	4,170	5,651	6,645	7,385	8,396	10,042	11,743	11,834	10,979
Italy	48,133	49,279	54,556	68,729	73,802	77,481	80,751	91,562	96,444	94,465	90,950
Netherlands	14,935	15,702	17,864	22,652	25,711	26,457	27,346	31,492	35,410	35,633	34,940
Poland	6,721	7,911	8,298	9,371	11,447	13,690	14,803	17,879	21,885	17,662	18,653
Spain	25,727	27,209	30,557	38,887	45,552	48,368	51,907	61,128	70,405	70,793	71,495
Sweden	11,291	10,788	12,155	15,858	17,926	18,211	19,178	21,670	23,218	20,381	22,317
United Kingdom	72,845	74,477	82,849	95,491	113,488	119,484	127,101	146,989	138,280	119,952	122,020
All others	25,506	26,448	30,295	39,559	45,841	49,273	52,307	61,643	71,229	68,937	67,763
Japan	169,921	150,044	145,679	153,667	163,115	157,982	149,095	145,266	162,298	167,656	177,192
China	40,799	47,004	51,988	56,882	65,716	75,532	84,108	102,539	128,342	144,609	171,602
Asia-8	62,032	62,295	68,843	78,811	88,357	101,484	116,534	134,054	137,498	133,950	157,416
India	11,355	11,716	12,422	14,362	16,305	19,009	21,189	26,850	30,503	32,167	40,163
Indonesia	2,503	2,399	3,091	3,963	4,528	5,083	6,431	7,377	8,080	8,819	11,626
Malaysia	429	481	520	559	601	630	711	880	1,059	1,030	1,222
Philippines	2,370	2,408	2,697	2,982	3,445	3,615	4,632	5,776	6,458	6,362	7,149
Singapore	2,820	2,965	3,166	3,276	3,588	3,759	4,184	4,728	5,489	5,592	6,176
South Korea	24,335	24,239	27,906	32,901	37,745	45,368	53,417	59,779	55,440	49,803	57,967
Taiwan	13,318	13,533	14,122	15,436	15,958	17,034	17,606	18,223	19,130	18,747	20,233
Thailand	4,900	4,553	4,918	5,332	6,187	6,986	8,364	10,442	11,339	11,432	12,882
All others	194,637	197,069	195,216	214,849	242,740	282,275	323,079	379,367	441,579	417,393	477,809
Central Asia and Europe	14,195	14,989	17,219	21,329	27,559	34,813	42,840	55,488	68,958	59,785	65,950
Russia	6,372	8,445	8,943	10,378	13,910	17,471	22,821	30,095	38,976	32,968	36,289
Turkey	6,471	4,887	6,251	8,380	10,599	13,209	14,810	18,856	21,677	20,657	22,705
Ukraine	1,352	1,657	2,025	2,571	3,050	4,133	5,210	6,538	8,305	6,160	6,956
Middle East and North Africa	22,900	23,931	24,594	24,123	25,847	29,005	32,279	32,539	38,597	38,474	42,487
Egypt	7,578	7,525	7,192	6,189	5,659	7,272	8,303	5,242	5,751	6,535	6,793
Iran	1,144	1,660	2,736	2,355	3,248	3,820	4,639	4,876	6,197	5,313	6,054
Israel	8,224	8,531	7,834	7,972	8,607	8,828	9,395	10,986	13,285	12,723	13,982
Morocco	975	1,054	1,096	1,404	1,585	1,748	1,830	2,132	2,465	2,568	2,691
Saudi Arabia	1,690	1,758	1,838	1,914	2,018	2,123	2,226	2,334	2,462	2,606	2,930
All others	3,290	3,403	3,897	4,288	4,730	5,215	5,886	6,969	8,437	8,729	10,038

Appendix table 6-4

## Value added of education services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	44,662	53,798	50,693	49,384	55,712	64,190	70,619	80,794	80,968	79,485
Argentina	9,304	14,555	18,440	10,034	10,833	11,203	11,254	11,716	12,182	12,958
Brazil	21,647	21,719	10,565	12,574	14,377	27,551	31,456	31,215	28,285	22,337
Chile	1,236	1,454	1,912	2,198	2,627	3,387	3,044	3,357	3,463	3,552
Colombia	2,226	2,522	2,133	2,614	3,522	4,516	5,836	7,192	6,643	6,402
Costa Rica	120	298	355	424	486	538	568	616	698	775
Mexico	8,440	10,707	14,114	18,433	20,520	13,174	14,159	17,403	19,145	22,517
Peru	849	1,588	2,003	1,584	1,580	1,748	1,787	1,893	1,965	1,838
Venezuela	102	122	169	181	180	269	223	4,647	5,698	6,473
All others	737	834	1,003	1,342	1,585	1,806	2,293	2,754	2,889	2,633
Sub-Saharan Africa	2,401	2,378	2,672	2,628	2,260	2,764	3,063	3,364	3,285	3,012
Kenya	140	135	362	242	246	384	765	911	1,049	964
Nigeria	69	67	99	115	137	165	173	219	266	73
South Africa	594	682	800	930	1,029	1,215	1,151	1,214	1,160	1,213
All others	1,598	1,495	1,412	1,342	848	1,000	974	1,020	810	762
Other developed	52,234	56,162	57,469	55,367	55,778	58,109	61,346	60,050	56,942	59,044
Australia	13,779	14,458	14,784	14,424	15,785	16,453	18,710	18,727	16,971	17,948
Canada	29,864	33,019	33,383	32,170	30,754	30,755	31,330	30,560	29,319	30,221
New Zealand	1,687	1,683	1,631	1,709	1,951	2,332	2,583	2,588	2,249	2,371
Norway	5,186	5,272	5,832	5,240	5,480	6,384	6,675	6,411	6,608	6,796
Switzerland	1,719	1,730	1,838	1,825	1,809	2,184	2,048	1,764	1,795	1,709
Other developing	1,561	1,851	2,089	2,343	2,621	3,069	3,298	3,465	3,602	3,742
Bangladesh	405	557	588	650	702	763	791	822	882	961
Pakistan	916	1,005	1,114	1,154	1,258	1,458	1,509	1,578	1,654	1,695
Sri Lanka	46	60	70	81	88	97	102	100	71	81
Vietnam	195	229	318	459	572	751	896	965	995	1,004

## Appendix table 6-4

## Value added of education services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	91,225	92,777	82,022	83,519	90,086	107,805	127,169	152,196	184,264	178,239	206,723
Argentina	13,615	13,542	4,287	4,780	5,451	7,162	9,513	12,348	16,466	16,866	19,384
Brazil	28,479	23,063	21,851	23,158	25,529	32,779	42,203	54,716	65,048	64,429	82,428
Chile	3,731	3,482	3,514	3,630	4,358	5,028	5,698	6,471	7,530	7,825	9,220
Colombia	5,262	5,362	4,764	4,541	5,490	6,951	7,742	9,734	11,271	10,909	12,900
Costa Rica	856	949	1,005	1,050	1,082	1,129	1,220	1,393	1,664	1,627	1,974
Mexico	26,963	32,029	34,781	34,830	35,386	40,098	43,532	47,074	50,136	43,773	49,170
Peru	1,916	2,040	2,122	2,336	2,560	2,793	3,033	3,395	3,884	3,923	4,414
Venezuela	7,934	9,233	6,551	5,617	6,092	7,128	8,865	11,007	14,935	15,607	12,307
All others	2,470	3,076	3,146	3,578	4,137	4,737	5,363	6,058	13,330	13,281	14,925
Sub-Saharan Africa	3,263	2,901	3,411	4,029	4,980	5,388	5,957	6,679	6,632	6,573	7,630
Kenya	748	802	958	1,191	1,266	1,382	1,567	1,838	1,915	1,749	1,882
Nigeria	131	152	147	151	168	194	225	259	326	295	376
South Africa	1,308	1,150	1,121	1,817	2,409	2,756	2,934	3,158	2,872	3,077	3,790
All others	1,076	797	1,185	870	1,138	1,056	1,231	1,425	1,519	1,452	1,582
Other developed	58,814	58,252	63,303	76,607	88,580	98,911	107,662	124,197	134,111	124,122	144,235
Australia	17,255	16,186	18,263	22,976	28,217	31,348	33,162	39,144	41,846	37,794	46,621
Canada	31,501	31,633	32,855	38,590	43,597	49,216	55,612	62,914	68,105	63,541	72,238
New Zealand	2,127	2,022	2,390	3,264	4,038	4,524	4,467	5,508	5,400	4,684	5,564
Norway	6,401	6,848	8,090	9,886	10,780	11,867	12,442	14,442	16,238	15,570	17,182
Switzerland	1,530	1,563	1,704	1,892	1,948	1,956	1,979	2,189	2,522	2,533	2,630
Other developing	4,240	4,219	4,668	5,242	5,687	6,352	7,172	8,266	9,016	10,199	10,783
Bangladesh	1,033	1,049	1,097	1,215	1,323	1,366	1,441	1,710	1,973	2,258	2,563
Pakistan	2,096	2,001	2,318	2,599	2,840	3,238	3,791	4,376	4,653	5,342	5,783
Sri Lanka	64	66	70	48	42	48	20	17	28	30	35
Vietnam	1,048	1,103	1,183	1,380	1,482	1,699	1,921	2,163	2,362	2,569	2,403

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-5

## Value added of health and social services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	942,842	1,026,134	1,135,151	1,158,272	1,242,362	1,394,706	1,436,026	1,422,402	1,441,587	1,506,775
United States	335,449	367,987	403,985	424,712	444,651	465,081	482,905	504,526	528,259	559,018
EU	368,168	391,402	442,724	419,102	446,857	519,635	537,850	502,937	518,008	519,022
Belgium	10,370	11,048	11,858	12,186	13,393	15,728	15,453	13,718	14,085	14,820
Czech Republic	1,103	629	810	1,100	1,388	1,757	1,932	1,835	1,948	1,894
Denmark	11,651	11,709	12,961	12,634	13,377	15,823	16,146	14,841	15,550	15,624
Finland	9,916	10,340	9,397	6,994	7,984	9,725	9,807	8,891	9,046	8,971
France	79,195	79,649	90,916	89,964	94,889	110,924	112,351	100,453	102,303	100,696
Germany	81,662	87,506	106,693	106,349	117,196	142,941	144,116	127,632	129,754	128,048
Ireland	2,180	2,357	2,690	2,698	2,911	3,642	4,177	4,280	4,195	4,481
Italy	47,701	52,883	56,563	46,478	47,064	48,838	55,659	56,330	56,241	55,310
Netherlands	19,638	20,632	23,288	23,143	24,220	28,352	27,688	25,269	26,441	26,835
Poland	1,906	2,603	3,047	2,846	3,004	3,992	4,528	4,654	5,337	4,691
Spain	20,413	23,066	27,829	23,416	23,570	27,577	28,993	26,069	27,369	28,521
Sweden	15,969	16,890	18,555	17,477	18,257	20,809	23,601	21,281	21,340	21,901
United Kingdom	50,804	55,656	59,006	54,680	58,806	64,483	68,378	75,287	80,575	83,473
All others	15,659	16,434	19,111	19,137	20,797	25,045	25,020	22,397	23,824	23,757
Japan	89,178	101,508	116,585	142,280	165,132	191,934	179,021	168,024	158,864	185,815
China	7,261	8,131	9,576	12,256	12,171	14,859	17,088	20,042	22,728	24,641
Asia-8	21,558	22,650	26,980	28,852	32,419	35,435	40,391	42,307	37,123	43,675
India	9,422	8,442	8,670	8,417	9,173	10,507	11,787	12,806	13,572	14,785
Indonesia	1,834	1,917	2,087	2,342	2,560	2,817	3,168	3,673	1,856	2,752
Malaysia	85	96	118	133	148	164	189	191	146	155
Philippines	419	449	778	857	987	1,159	1,288	1,298	1,114	1,360
Singapore	1,149	1,352	1,563	1,753	2,169	2,506	3,488	3,637	3,283	3,280
South Korea	4,912	5,748	6,398	7,196	8,294	10,174	11,482	11,554	8,594	11,511
Taiwan	2,523	3,287	4,064	4,355	4,815	5,721	6,273	6,712	6,548	7,428
Thailand	1,214	1,360	3,303	3,799	4,274	2,388	2,717	2,436	2,011	2,405
All others	121,227	134,456	135,302	131,069	141,132	167,762	178,772	184,566	176,605	174,605
Central Asia and Europe	2,261	1,804	2,404	3,012	4,658	10,975	14,682	16,542	12,626	8,479
Russia	618	218	193	433	2,344	7,677	10,713	12,434	7,850	4,103
Turkey	1,516	1,501	1,515	1,697	1,229	1,737	1,899	1,922	3,233	3,507
Ukraine	126	85	696	882	1,084	1,562	2,069	2,187	1,543	869
Middle East and North Africa	5,306	5,357	5,906	6,053	6,892	11,225	11,717	13,452	13,030	13,296
Egypt	142	82	96	107	118	137	155	190	235	284
Iran	565	573	617	564	1,253	1,294	1,223	1,141	1,214	1,084
Israel	817	824	918	1,154	1,296	4,701	5,120	6,360	6,238	6,354
Morocco	1,282	1,358	1,532	1,500	1,647	1,919	1,908	1,802	1,244	1,359
Saudi Arabia	1,597	1,628	1,676	1,727	1,433	1,890	1,932	2,012	2,039	2,089
All others	903	892	1,067	1,001	1,145	1,284	1,379	1,947	2,061	2,125

Appendix table 6-5

## Value added of health and social services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	1,553,570	1,614,708	1,743,496	1,996,210	2,226,159	2,370,327	2,527,756	2,796,122	3,076,743	3,089,109	3,334,927
United States	592,144	640,500	690,943	741,200	790,375	833,337	886,516	940,990	1,001,909	1,057,948	1,111,747
EU	482,222	496,548	562,532	701,464	812,377	854,110	908,428	1,030,500	1,135,932	1,099,681	1,130,741
Belgium	13,483	13,881	15,367	19,309	22,308	23,294	24,536	28,276	32,557	33,147	34,367
Czech Republic	1,806	2,099	2,805	3,383	3,997	4,555	5,099	5,874	7,752	7,224	7,220
Denmark	14,098	14,529	16,015	20,073	22,993	23,531	24,935	28,235	31,468	31,888	33,045
Finland	8,151	8,537	9,500	11,983	13,875	14,755	15,590	17,997	20,755	20,351	20,908
France	89,533	91,861	104,317	131,913	154,938	162,036	171,923	196,469	220,455	216,214	216,511
Germany	114,241	115,550	129,784	158,917	177,041	182,392	190,441	211,068	235,225	238,865	244,022
Ireland	4,639	5,358	6,372	8,843	11,063	12,051	13,589	14,995	17,418	16,528	15,866
Italy	52,639	54,410	59,127	73,074	86,478	91,706	97,361	105,443	121,206	116,728	116,714
Netherlands	25,075	27,156	32,673	42,208	48,118	49,686	52,241	60,029	68,663	70,206	71,541
Poland	4,973	6,336	7,406	8,385	8,124	9,766	11,115	13,654	17,401	14,043	15,278
Spain	26,690	27,477	31,720	42,584	50,909	55,801	60,764	72,654	86,248	88,182	90,425
Sweden	21,334	20,639	23,899	30,431	34,444	35,201	37,191	43,008	46,696	41,064	46,463
United Kingdom	83,702	85,825	96,974	115,569	137,712	145,340	156,065	176,382	165,932	143,939	156,210
All others	21,858	22,889	26,574	34,792	40,377	43,995	47,577	56,417	64,157	61,302	62,170
Japan	219,825	207,670	206,381	231,199	254,066	260,394	252,423	255,836	295,032	304,774	343,563
China	27,006	30,392	33,134	35,692	40,713	44,725	49,315	59,272	70,794	77,777	93,432
Asia-8	47,965	50,756	54,847	62,055	69,956	81,708	94,113	110,934	116,624	118,493	146,796
India	15,560	16,055	17,022	19,680	22,343	26,048	29,035	36,792	41,797	44,077	55,073
Indonesia	3,210	3,077	3,964	5,083	5,806	6,518	8,247	9,460	10,362	11,038	14,895
Malaysia	391	459	508	587	662	727	826	1,009	1,166	1,133	1,387
Philippines	1,397	1,400	1,583	1,784	2,042	2,239	2,906	3,646	4,225	4,162	4,804
Singapore	3,617	3,803	4,060	4,200	4,601	4,820	5,365	6,062	7,039	7,165	8,181
South Korea	13,075	15,397	16,714	19,456	22,341	27,862	33,092	38,147	34,982	33,825	43,328
Taiwan	8,305	8,207	8,491	8,689	9,261	10,131	10,680	11,068	11,970	11,968	13,083
Thailand	2,410	2,359	2,506	2,575	2,901	3,362	3,960	4,749	5,084	5,125	6,044
All others	184,408	188,843	195,658	224,600	258,672	296,055	336,962	398,591	456,452	430,437	508,649
Central Asia and Europe	9,483	10,393	15,006	18,555	24,201	30,487	40,156	52,480	65,996	57,091	66,459
Russia	5,184	6,718	10,280	12,273	16,446	20,023	28,228	37,156	47,954	41,135	48,184
Turkey	3,501	2,556	3,348	4,578	5,700	7,685	8,409	10,845	12,468	11,881	13,539
Ukraine	797	1,119	1,378	1,705	2,055	2,779	3,518	4,479	5,574	4,075	4,736
Middle East and North Africa	14,570	15,860	16,772	18,112	20,003	22,258	24,418	27,561	32,727	31,495	36,171
Egypt	299	303	304	252	230	296	338	213	234	266	285
Iran	1,731	2,175	2,865	3,170	3,841	4,927	5,823	6,706	8,523	7,308	8,533
Israel	6,897	7,412	7,117	7,315	7,892	8,214	8,802	9,988	11,945	11,440	13,052
Morocco	1,336	1,445	1,502	1,924	2,172	2,395	2,507	2,922	3,378	3,519	3,802
Saudi Arabia	2,167	2,254	2,358	2,454	2,588	2,722	2,854	2,993	3,157	3,330	3,861
All others	2,139	2,270	2,626	2,998	3,279	3,704	4,094	4,738	5,490	5,633	6,638



Appendix table 6-5

**Value added of health and social services, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	36,232	43,715	41,288	38,998	42,998	50,720	53,717	58,306	58,117	56,059
Argentina	7,558	11,825	14,981	8,166	8,815	9,071	9,205	9,661	9,931	10,238
Brazil	16,539	16,594	8,072	9,607	10,985	21,050	24,034	23,850	21,611	17,067
Chile	1,355	1,594	2,096	2,410	2,881	3,713	3,242	3,759	3,826	3,703
Colombia	1,980	2,243	1,852	2,305	3,234	3,864	4,122	4,647	4,494	4,375
Costa Rica	96	238	284	339	388	430	454	493	544	612
Mexico	7,136	9,110	11,412	13,235	13,409	8,692	8,726	10,509	11,553	13,766
Peru	341	651	765	652	675	762	821	923	911	936
Venezuela	491	586	768	867	911	1,290	991	1,874	2,530	2,954
All others	736	872	1,058	1,416	1,700	1,849	2,121	2,592	2,717	2,408
Sub-Saharan Africa	1,536	1,591	1,791	1,892	1,872	2,235	2,262	2,418	2,300	2,283
Kenya	47	45	121	81	82	129	275	304	329	318
Nigeria	18	18	26	30	36	43	45	57	70	19
South Africa	814	934	1,096	1,274	1,410	1,665	1,578	1,663	1,589	1,662
All others	657	594	548	506	344	398	363	393	312	284
Other developed	74,095	79,864	81,575	78,596	81,958	89,435	93,086	90,414	87,006	90,830
Australia	17,434	18,184	17,967	17,336	19,505	21,386	23,796	23,160	20,980	23,040
Canada	35,403	39,361	39,445	38,007	36,505	36,578	36,970	37,125	35,722	37,475
New Zealand	1,931	2,010	1,930	2,058	2,350	2,784	3,131	3,212	2,797	2,887
Norway	8,096	8,602	9,636	8,840	9,296	11,107	11,826	11,860	11,942	12,446
Switzerland	11,232	11,706	12,597	12,356	14,302	17,580	17,362	15,057	15,565	14,981
Other developing	1,798	2,125	2,337	2,519	2,754	3,172	3,309	3,434	3,525	3,659
Bangladesh	480	660	683	739	784	839	871	898	932	986
Pakistan	1,175	1,288	1,428	1,480	1,614	1,870	1,936	2,023	2,121	2,174
Sri Lanka	63	83	95	111	121	133	139	137	97	112
Vietnam	80	94	131	189	235	330	363	375	375	387

Appendix table 6-5

**Value added of health and social services, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	62,346	63,120	54,242	53,594	59,332	70,778	84,958	103,402	122,433	118,504	142,156
Argentina	10,464	10,522	3,165	3,487	3,809	4,649	5,754	7,340	9,153	9,375	11,111
Brazil	21,186	18,216	16,585	17,299	20,429	26,228	34,218	44,619	53,045	52,540	68,300
Chile	3,848	3,565	3,572	2,610	3,216	3,697	4,306	4,936	5,571	5,790	7,151
Colombia	3,054	3,038	2,763	2,593	3,114	4,174	4,856	6,422	7,436	7,197	8,676
Costa Rica	651	710	775	809	852	912	1,038	1,223	1,512	1,478	1,840
Mexico	16,313	19,482	21,292	20,899	21,562	23,861	26,012	28,578	30,295	26,267	29,017
Peru	956	1,009	1,074	1,201	1,304	1,431	1,565	1,700	1,995	2,015	2,337
Venezuela	3,466	3,921	2,757	2,398	2,589	3,001	4,056	5,036	6,833	7,140	5,873
All others	2,408	2,657	2,258	2,297	2,458	2,826	3,154	3,549	6,593	6,703	7,850
Sub-Saharan Africa	2,433	2,171	2,279	3,163	4,039	4,657	5,031	5,485	5,216	5,522	6,853
Kenya	267	305	345	397	419	490	570	674	747	797	903
Nigeria	34	40	38	40	44	51	59	68	82	75	98
South Africa	1,792	1,576	1,536	2,490	3,301	3,776	4,021	4,327	3,936	4,216	5,356
All others	340	250	360	236	274	339	382	416	451	434	496
Other developed	91,346	93,181	102,780	126,071	145,500	161,614	175,320	201,529	221,212	207,684	245,740
Australia	22,520	21,549	24,382	31,720	38,400	43,335	46,035	54,628	58,803	53,109	67,238
Canada	40,561	41,777	43,393	52,053	59,007	66,198	74,912	84,353	91,087	84,983	99,785
New Zealand	2,647	2,662	3,126	4,278	5,385	6,315	6,196	7,325	7,181	6,497	8,114
Norway	11,764	12,627	15,479	18,603	20,658	23,146	25,025	30,261	34,635	33,459	38,584
Switzerland	13,854	14,566	16,400	19,417	22,050	22,620	23,152	24,962	29,506	29,637	32,019
Other developing	4,230	4,118	4,581	5,105	5,598	6,261	7,078	8,135	8,869	10,141	11,271
Bangladesh	1,031	1,025	1,050	1,135	1,209	1,260	1,309	1,496	1,723	1,957	2,253
Pakistan	2,688	2,566	2,973	3,333	3,642	4,153	4,861	5,612	5,967	6,909	7,748
Sri Lanka	88	91	96	65	58	66	27	23	39	41	49
Vietnam	423	436	462	572	689	783	881	1,003	1,140	1,234	1,221

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

## Appendix table 6-6

## Value added of business services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	1,501,256	1,589,751	1,789,703	1,857,371	2,000,268	2,244,384	2,386,887	2,468,183	2,602,060	2,771,687
United States	590,366	596,592	643,959	683,763	729,449	783,132	863,572	956,484	1,053,443	1,144,732
EU	527,317	555,126	628,467	590,157	623,180	735,737	775,699	756,737	811,829	848,941
Belgium	14,340	15,374	17,908	17,741	19,618	23,600	24,227	23,052	25,216	26,132
Czech Republic	1,667	1,459	1,646	2,288	2,734	3,199	3,752	3,228	3,712	3,576
Denmark	7,741	7,896	8,359	8,419	9,381	10,351	10,380	10,555	10,653	11,117
Finland	5,545	4,964	4,229	3,385	4,342	5,648	6,111	6,196	6,813	7,210
France	122,520	123,192	136,446	127,218	133,795	157,903	160,995	147,234	157,261	163,593
Germany	156,381	163,734	192,872	195,888	202,719	241,638	239,752	215,980	223,251	225,841
Ireland	2,922	2,852	3,133	2,823	3,287	3,294	4,242	5,296	6,242	6,144
Italy	66,223	71,087	78,783	63,546	62,184	71,151	84,395	84,917	84,434	89,567
Netherlands	23,694	25,451	28,845	28,708	31,481	39,262	42,525	40,743	44,309	47,074
Poland	1,217	2,175	4,030	3,538	4,966	6,533	7,727	8,514	10,689	10,224
Spain	24,077	26,571	29,477	26,096	26,622	31,220	33,485	31,777	33,969	36,381
Sweden	11,393	13,145	15,265	11,575	13,231	15,979	18,877	18,029	19,784	22,150
United Kingdom	73,145	79,050	85,710	77,040	85,561	97,966	109,506	131,940	153,608	166,708
All others	16,452	18,177	21,765	21,891	23,258	27,992	29,727	29,275	31,886	33,223
Japan	172,105	211,097	247,958	291,067	317,589	358,572	329,212	307,874	298,856	341,667
China	20,401	22,321	27,912	35,473	35,642	41,643	47,240	52,853	52,280	52,238
Asia-8	33,009	36,238	40,414	45,086	52,334	62,002	70,500	72,215	56,572	64,502
India	11,746	10,736	10,556	11,424	12,140	13,119	13,343	14,612	15,170	17,127
Indonesia	2,274	2,729	3,019	3,433	4,079	4,488	4,796	4,773	1,783	2,316
Malaysia	1,030	1,164	1,506	1,977	2,144	2,540	3,117	3,199	2,308	2,437
Philippines	1,789	1,878	1,922	2,055	2,448	2,882	3,227	3,280	2,676	3,098
Singapore	2,344	2,767	3,252	3,601	4,476	5,572	6,353	6,605	5,570	5,496
South Korea	10,224	12,759	14,464	16,414	20,000	25,294	29,702	29,885	20,175	23,872
Taiwan	2,773	3,292	4,106	4,476	5,184	5,908	6,431	6,976	6,753	7,760
Thailand	828	914	1,589	1,706	1,864	2,199	3,531	2,886	2,138	2,396
All others	158,059	168,377	200,994	211,825	242,075	263,298	300,663	322,020	329,080	319,607
Central Asia and Europe	4,531	5,025	6,896	12,779	14,829	19,417	22,580	25,061	26,999	25,541
Russia	558	749	2,117	7,584	10,860	14,318	17,373	19,597	14,465	10,578
Turkey	3,850	4,220	4,479	4,624	3,211	4,295	4,321	4,386	11,593	14,156
Ukraine	123	56	300	570	758	804	887	1,077	941	808
Middle East and North Africa	17,576	18,617	21,584	21,271	22,873	26,652	28,856	29,048	31,745	32,160
Egypt	138	77	350	622	888	1,157	1,429	1,525	1,657	1,882
Iran	3,349	3,543	4,634	4,300	4,041	3,969	4,340	4,822	4,937	4,318
Israel	5,400	6,008	6,776	6,163	6,957	9,678	10,762	9,882	11,111	11,319
Morocco	399	458	541	520	542	711	619	583	1,946	2,088
Saudi Arabia	4,887	5,179	5,404	5,593	5,817	5,875	6,375	6,522	6,267	6,492
All others	3,403	3,351	3,877	4,073	4,628	5,262	5,333	5,715	5,827	6,060

Appendix table 6-6

## Value added of business services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	2,930,993	3,003,335	3,119,666	3,471,567	3,848,316	4,161,345	4,523,090	5,066,099	5,506,066	5,354,407	5,704,298
United States	1,252,037	1,330,243	1,373,904	1,434,641	1,533,430	1,651,224	1,802,379	1,919,079	1,990,410	1,920,735	2,040,217
EU	819,737	853,022	929,181	1,134,917	1,303,436	1,383,708	1,492,855	1,748,831	1,909,566	1,784,680	1,789,298
Belgium	24,793	26,396	27,996	35,044	41,017	43,559	47,485	56,591	64,751	61,242	62,403
Czech Republic	3,484	3,953	5,588	6,486	7,614	9,160	10,293	12,894	17,060	15,380	14,828
Denmark	10,693	11,433	12,250	14,929	17,888	19,063	20,751	23,839	26,394	25,983	26,711
Finland	6,702	7,615	8,143	10,230	12,442	13,483	14,775	18,401	21,581	19,731	20,163
France	155,505	161,551	175,884	216,261	247,723	259,730	284,225	329,460	370,210	366,414	359,047
Germany	208,242	212,589	226,005	277,361	307,215	323,933	338,929	395,885	439,557	417,660	416,569
Ireland	7,421	8,941	9,660	12,567	14,476	20,514	24,156	27,284	29,980	24,135	23,007
Italy	85,441	87,032	98,467	125,987	141,083	145,566	148,405	169,457	188,387	180,729	176,940
Netherlands	44,237	47,242	48,789	58,150	65,873	70,502	78,471	95,189	107,881	98,941	98,194
Poland	10,705	12,227	12,610	13,184	15,173	18,925	21,307	26,329	32,972	27,976	30,092
Spain	35,118	39,115	44,766	58,521	68,370	75,359	85,383	104,839	120,867	113,333	107,473
Sweden	23,014	22,382	23,875	29,409	35,131	36,641	41,290	49,761	53,240	43,712	49,997
United Kingdom	172,676	178,607	195,195	228,524	272,769	285,224	308,673	354,250	339,292	297,685	312,927
All others	31,703	33,938	39,952	48,265	56,661	62,048	68,713	84,653	97,394	91,760	90,944
Japan	390,185	350,716	335,731	360,165	387,102	397,790	393,817	404,039	463,922	490,600	504,980
China	54,137	56,063	58,209	59,379	68,193	77,431	89,831	109,433	135,126	160,140	195,267
Asia-8	72,959	71,235	79,323	90,309	101,305	118,754	136,981	160,639	187,116	188,405	234,798
India	19,124	20,511	22,049	25,928	30,188	35,558	39,626	49,187	73,978	81,892	106,095
Indonesia	3,502	3,355	4,491	5,666	6,318	7,121	9,093	10,370	11,765	12,877	16,917
Malaysia	2,376	2,435	2,582	2,721	2,859	3,227	3,723	4,792	5,086	5,193	6,407
Philippines	2,922	2,730	2,901	3,027	3,267	3,980	4,573	5,643	6,564	6,856	8,000
Singapore	5,842	5,522	5,629	5,766	6,188	7,015	8,322	10,648	13,690	13,663	15,839
South Korea	28,088	26,062	30,786	35,698	40,022	48,398	56,658	63,522	58,266	50,263	61,473
Taiwan	8,779	8,493	8,579	9,032	9,765	10,610	11,808	12,880	14,007	13,780	15,423
Thailand	2,326	2,126	2,305	2,472	2,699	2,846	3,178	3,597	3,760	3,880	4,642
All others	341,939	342,057	343,319	392,156	454,849	532,439	607,226	724,078	819,926	809,848	939,737
Central Asia and Europe	32,518	33,278	35,781	45,176	56,988	74,641	94,579	130,937	163,472	151,209	173,485
Russia	14,394	18,894	18,927	23,658	28,444	37,677	49,010	69,940	93,188	82,452	90,987
Turkey	17,300	13,025	15,238	19,702	25,999	33,513	41,122	53,700	61,141	61,150	74,007
Ukraine	824	1,360	1,616	1,816	2,546	3,450	4,447	7,298	9,143	7,606	8,492
Middle East and North Africa	35,263	37,199	41,580	43,010	48,784	56,161	66,721	80,946	96,519	97,742	110,264
Egypt	1,845	1,810	1,665	1,363	1,279	1,792	2,221	2,360	2,835	3,400	3,617
Iran	5,271	6,884	9,935	10,564	12,578	14,771	18,789	25,003	31,582	28,290	32,250
Israel	12,783	12,875	12,987	12,520	14,268	16,306	17,585	21,320	25,449	25,520	28,283
Morocco	2,087	2,059	2,327	2,945	3,444	3,853	4,323	5,420	6,022	6,573	6,816
Saudi Arabia	6,620	6,756	6,918	7,070	7,373	7,690	8,030	8,422	9,174	10,335	11,589
All others	6,657	6,815	7,748	8,548	9,842	11,749	15,774	18,421	21,458	23,624	27,709

Appendix table 6-6

**Value added of business services, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	42,577	49,268	75,615	82,618	97,203	95,704	117,510	134,021	135,888	118,297
Argentina	8,119	11,229	14,904	19,702	23,000	23,918	24,539	25,710	26,078	25,678
Brazil	16,059	15,653	31,462	27,799	32,422	33,711	50,342	56,612	55,399	35,077
Chile	2,177	2,255	2,792	3,100	3,659	4,508	5,883	6,527	6,378	5,734
Colombia	2,258	2,330	3,780	4,522	6,169	7,073	7,611	8,485	7,778	5,998
Costa Rica	283	358	383	410	445	467	481	518	544	580
Mexico	8,328	11,004	15,175	19,553	22,742	15,320	17,761	23,178	25,596	31,472
Peru	1,925	2,333	2,219	1,753	2,498	3,049	3,336	3,549	3,495	3,242
Venezuela	1,529	2,005	2,512	2,564	2,466	3,320	2,726	3,557	4,444	4,823
All others	1,899	2,100	2,388	3,214	3,802	4,337	4,831	5,885	6,176	5,692
Sub-Saharan Africa	5,994	6,711	7,277	7,355	7,902	9,403	9,926	10,621	10,999	9,445
Kenya	439	434	274	186	245	193	231	261	274	248
Nigeria	277	276	197	245	747	1,308	1,741	1,736	2,701	863
South Africa	4,591	5,367	6,158	6,344	6,546	7,468	7,222	7,905	7,284	7,586
All others	687	636	648	580	365	434	733	719	740	748
Other developed	84,743	85,955	86,621	84,577	95,644	107,579	116,919	118,177	118,131	128,675
Australia	30,312	29,664	30,419	28,777	35,186	39,039	44,526	45,696	42,721	47,715
Canada	28,996	30,045	28,541	28,046	28,296	30,491	32,746	35,755	37,656	41,828
New Zealand	2,639	2,611	2,569	2,977	3,628	4,516	5,491	5,585	4,700	5,093
Norway	4,694	4,830	5,374	5,189	5,686	6,914	7,557	8,034	8,748	9,610
Switzerland	18,102	18,805	19,718	19,588	22,847	26,619	26,598	23,107	24,305	24,429
Other developing	2,637	2,802	3,002	3,224	3,623	4,544	4,871	5,092	5,317	5,490
Bangladesh	1,391	1,418	1,463	1,582	1,720	1,875	2,084	2,141	2,167	2,301
Pakistan	1,067	1,166	1,278	1,321	1,487	1,690	1,727	1,791	1,733	1,783
Sri Lanka	147	171	202	230	284	333	354	403	649	651
Vietnam	32	46	59	92	133	647	706	758	768	755

## Appendix table 6-6

**Value added of business services, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	127,567	125,280	107,037	110,013	120,492	142,677	160,413	185,595	209,436	201,529	238,177
Argentina	25,673	24,632	7,545	8,288	9,034	10,615	12,498	15,483	19,419	20,408	24,318
Brazil	35,365	28,387	25,010	25,783	28,910	37,543	44,124	53,943	64,339	66,687	87,989
Chile	5,730	5,272	5,122	6,074	7,394	8,952	10,183	11,597	12,894	13,005	16,004
Colombia	5,904	5,595	6,711	6,322	7,558	9,298	10,378	13,285	15,120	15,355	18,795
Costa Rica	649	741	773	786	827	864	1,021	1,228	1,459	1,458	1,790
Mexico	40,317	45,709	48,828	50,228	53,038	60,155	65,087	70,242	74,247	60,665	64,840
Peru	3,400	3,601	3,740	3,937	4,252	4,668	5,106	5,826	6,871	7,273	8,718
Venezuela	5,082	5,625	4,028	3,142	3,414	3,717	4,396	5,398	7,525	8,369	6,094
All others	5,447	5,718	5,279	5,454	6,066	6,865	7,619	8,593	7,563	8,308	9,627
Sub-Saharan Africa	9,349	8,863	9,096	14,239	18,150	21,959	24,037	27,632	27,756	29,032	35,870
Kenya	404	431	455	511	529	603	705	825	897	914	999
Nigeria	975	1,007	1,092	1,346	2,030	3,152	3,650	4,273	5,182	4,834	6,117
South Africa	7,284	6,714	6,725	10,886	14,424	16,989	18,339	21,025	19,985	21,611	27,001
All others	686	712	825	1,495	1,167	1,215	1,344	1,509	1,693	1,673	1,754
Other developed	131,557	131,986	143,813	173,212	203,399	229,160	252,278	288,411	310,736	316,940	367,095
Australia	47,649	43,895	49,911	63,880	76,979	85,884	95,778	112,920	124,273	116,421	144,112
Canada	47,343	49,121	51,249	60,835	69,587	79,951	89,200	95,115	94,997	111,949	125,612
New Zealand	4,395	4,580	5,535	7,522	9,377	10,897	10,616	13,080	13,314	12,292	15,002
Norway	9,638	10,212	11,952	13,827	16,058	19,174	21,512	28,014	30,987	28,356	31,420
Switzerland	22,531	24,177	25,166	27,147	31,399	33,253	35,172	39,281	47,166	47,923	50,948
Other developing	5,686	5,450	6,012	6,506	7,035	7,842	9,197	10,557	12,006	13,397	14,847
Bangladesh	2,338	2,311	2,390	2,546	2,674	2,666	2,690	2,924	3,189	3,636	4,007
Pakistan	1,887	1,625	1,877	2,022	2,229	2,814	3,798	4,485	4,907	5,336	5,898
Sri Lanka	680	670	822	924	985	1,140	1,382	1,590	2,003	2,281	2,704
Vietnam	780	845	923	1,014	1,146	1,223	1,327	1,558	1,907	2,144	2,237

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Business activities consist of computer programming and related services, R&D services, legal, accounting, bookkeeping, auditing, tax, market research, public opinion polling, business and management, consulting, architectural, engineering, and advertising. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-7

## Value added of computer programming and related services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	164,307	181,809	208,332	215,111	234,406	269,335	298,824	325,088	368,687	406,200
United States	48,080	50,547	55,958	61,839	69,695	77,028	88,891	105,302	122,855	130,864
EU	67,153	70,494	78,652	73,499	78,925	93,613	102,732	107,060	127,763	140,364
Belgium	1,056	1,133	1,319	1,307	1,445	1,739	1,787	1,885	2,393	2,766
Czech Republic	155	136	154	213	255	298	463	585	632	618
Denmark	1,336	1,327	1,407	1,351	1,526	1,515	1,359	1,792	1,828	2,011
Finland	991	945	861	694	858	1,070	1,133	1,183	1,596	1,761
France	19,248	19,358	21,713	20,142	21,278	25,666	26,157	25,202	29,364	32,307
Germany	15,049	15,757	17,722	18,253	19,139	22,764	23,590	22,637	26,298	26,384
Ireland	319	311	342	308	359	360	643	950	1,344	1,397
Italy	10,241	10,993	12,183	10,117	10,194	10,980	13,974	13,418	14,590	15,953
Netherlands	2,007	2,112	2,362	2,367	2,576	3,415	4,255	4,930	6,010	6,978
Poland	119	213	395	347	487	641	758	836	1,049	1,004
Spain	3,122	3,445	3,822	3,384	3,452	4,048	4,528	4,460	5,085	6,062
Sweden	1,980	2,285	2,653	2,012	2,413	3,184	4,061	4,187	4,842	5,707
United Kingdom	10,053	10,865	11,780	11,048	12,788	15,314	17,167	22,058	29,211	33,457
All others	1,476	1,613	1,937	1,954	2,156	2,620	2,857	2,938	3,523	3,959
Japan	21,983	31,815	39,661	43,103	43,766	51,510	52,398	53,744	59,643	75,730
China	1,740	1,949	2,400	2,902	3,048	3,376	3,905	4,554	4,676	4,698
Asia-8	4,274	4,643	5,146	5,746	6,636	7,787	9,708	10,669	8,877	11,204
India	1,629	1,489	1,464	1,584	1,683	1,819	1,850	2,026	2,103	2,375
Indonesia	315	378	419	476	566	622	665	662	247	321
Malaysia	143	161	209	274	297	352	432	444	320	338
Philippines	248	260	266	285	339	400	448	455	371	430
Singapore	325	384	451	499	621	773	881	916	772	762
South Korea	1,167	1,414	1,575	1,800	2,183	2,743	4,112	4,657	3,494	4,944
Taiwan	332	430	541	591	688	773	831	1,110	1,273	1,703
Thailand	115	127	220	237	258	305	490	400	296	332
All others	21,076	22,363	26,516	28,022	32,337	36,021	41,190	43,759	44,873	43,340
Central Asia and Europe	628	697	956	1,772	2,056	2,692	3,131	3,475	3,744	3,541
Russia	77	104	294	1,052	1,506	1,985	2,409	2,717	2,006	1,467
Turkey	534	585	621	641	445	596	599	608	1,607	1,963
Ukraine	17	8	42	79	105	111	123	149	130	112
Middle East and North Africa	2,415	2,558	2,962	2,921	3,145	3,670	3,973	3,996	4,369	4,431
Egypt	19	11	49	86	123	160	198	211	230	261
Iran	442	468	612	568	534	524	573	637	652	570
Israel	749	833	940	855	965	1,342	1,492	1,370	1,541	1,570
Morocco	55	64	75	72	75	99	86	81	270	290
Saudi Arabia	678	718	749	776	807	815	884	904	869	900
All others	472	465	538	565	642	730	739	792	808	840

Appendix table 6-7

## Value added of computer programming and related services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	432,045	455,963	488,235	538,250	606,594	639,559	692,450	768,182	849,060	828,204	887,803
United States	137,568	152,460	168,228	173,484	195,774	202,911	226,415	232,558	247,632	245,640	268,812
EU	138,676	151,315	166,239	197,555	229,013	240,396	258,845	304,360	335,737	311,399	312,415
Belgium	2,620	3,328	3,475	4,164	4,661	4,914	5,335	6,597	7,736	7,317	7,413
Czech Republic	630	747	1,106	1,142	1,238	1,686	2,152	2,750	3,859	3,556	3,605
Denmark	1,989	2,316	2,635	3,201	3,691	3,472	4,134	5,012	6,407	6,307	6,515
Finland	1,673	2,105	2,165	2,625	3,338	3,593	3,900	4,738	5,434	5,060	5,219
France	30,304	31,372	33,507	40,136	46,018	46,765	51,621	59,715	68,633	67,117	66,129
Germany	25,616	28,704	29,423	32,975	37,732	39,162	40,774	49,092	56,887	54,053	54,008
Ireland	2,675	2,899	3,088	3,384	3,772	6,868	8,088	9,135	10,037	8,080	7,791
Italy	14,975	16,317	20,113	24,115	25,684	26,157	26,800	31,302	34,215	32,298	31,316
Netherlands	6,774	7,361	7,333	8,794	10,018	10,967	12,312	15,268	17,387	15,926	15,813
Poland	1,051	1,507	1,754	2,062	2,574	2,691	3,029	3,743	4,688	4,004	4,333
Spain	5,979	7,210	8,699	11,077	12,688	13,355	14,583	17,238	19,892	18,746	17,208
Sweden	5,684	6,077	6,137	7,497	9,470	9,921	10,173	11,821	13,402	11,004	12,575
United Kingdom	34,768	36,935	40,923	49,448	59,710	61,384	65,388	75,168	72,417	63,608	66,314
All others	3,940	4,438	5,880	6,935	8,416	9,462	10,556	12,782	14,741	14,322	14,177
Japan	91,143	87,897	87,590	92,443	95,325	94,985	91,293	93,293	107,120	113,280	117,604
China	5,148	5,649	6,164	6,771	7,772	8,782	9,969	11,709	14,063	14,665	18,070
Asia-8	13,642	13,455	15,052	16,547	18,386	21,685	25,205	29,142	32,163	32,134	39,586
India	2,652	2,844	3,057	3,595	4,186	4,930	5,494	6,820	10,340	11,539	14,973
Indonesia	486	465	623	786	876	987	1,261	1,438	1,702	1,953	2,628
Malaysia	329	338	358	377	396	447	516	665	703	720	892
Philippines	405	379	402	420	453	552	634	782	917	936	1,074
Singapore	810	766	781	799	858	973	1,154	1,476	1,921	1,887	2,155
South Korea	6,433	6,071	7,232	7,842	8,681	10,688	12,693	13,962	12,050	10,531	12,713
Taiwan	2,205	2,298	2,279	2,386	2,562	2,713	3,012	3,499	4,002	4,031	4,513
Thailand	322	295	320	343	374	395	441	499	528	537	639
All others	45,869	45,187	44,964	51,449	60,324	70,800	80,723	97,120	112,345	111,086	131,317
Central Asia and Europe	4,509	4,614	4,961	6,264	7,902	10,350	13,114	18,155	23,463	21,606	26,709
Russia	1,996	2,620	2,624	3,280	3,944	5,224	6,796	9,698	13,320	11,725	14,980
Turkey	2,399	1,806	2,113	2,732	3,605	4,647	5,702	7,446	8,821	8,761	10,466
Ukraine	114	189	224	252	353	478	617	1,012	1,321	1,120	1,263
Middle East and North Africa	4,855	5,113	5,700	5,895	6,682	7,691	9,129	11,060	13,361	13,337	15,022
Egypt	256	251	231	189	177	248	308	327	412	493	524
Iran	696	910	1,313	1,396	1,662	1,951	2,482	3,303	4,206	3,640	4,118
Israel	1,772	1,785	1,801	1,736	1,978	2,261	2,438	2,956	3,546	3,509	3,858
Morocco	289	286	323	408	478	534	599	752	843	915	953
Saudi Arabia	918	937	959	980	1,022	1,066	1,113	1,168	1,310	1,472	1,662
All others	923	945	1,074	1,185	1,365	1,629	2,187	2,554	3,044	3,308	3,907



Appendix table 6-7

## Value added of computer programming and related services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	5,146	5,959	9,260	10,204	12,352	12,848	15,761	17,685	17,721	14,898
Argentina	1,126	1,557	2,067	2,732	3,189	3,316	3,403	3,565	3,616	3,560
Brazil	2,227	2,170	4,362	3,855	4,496	4,674	6,980	7,850	7,682	4,864
Chile	302	313	387	430	507	625	816	905	884	795
Colombia	313	323	524	627	855	981	1,055	1,177	1,078	832
Costa Rica	39	50	53	57	62	65	67	72	75	80
Mexico	407	666	896	1,477	2,043	1,724	1,948	2,339	2,457	2,890
Peru	267	324	308	243	346	423	463	492	485	450
Venezuela	202	265	332	339	326	439	360	470	587	637
All others	263	291	331	446	527	601	670	816	856	789
Sub-Saharan Africa	830	929	1,008	1,019	1,095	1,303	1,374	1,470	1,522	1,307
Kenya	61	60	38	26	34	27	32	36	38	34
Nigeria	38	38	27	34	104	181	241	241	375	120
South Africa	637	744	854	880	908	1,035	1,001	1,096	1,010	1,052
All others	94	87	89	79	50	60	99	97	100	101
Other developed	11,692	11,833	11,915	11,660	13,188	14,880	16,278	16,429	16,783	18,406
Australia	4,203	4,113	4,218	3,990	4,879	5,413	6,174	6,336	5,924	6,616
Canada	3,932	4,072	3,878	3,860	3,893	4,198	4,521	4,841	5,094	5,622
New Zealand	358	355	349	409	503	624	763	792	665	713
Norway	690	685	736	685	745	953	1,132	1,257	1,731	2,068
Switzerland	2,510	2,608	2,734	2,716	3,168	3,691	3,688	3,204	3,370	3,387
Other developing	365	387	415	446	501	628	673	703	733	757
Bangladesh	193	197	203	219	239	260	289	297	300	319
Pakistan	148	162	177	183	206	234	240	248	240	247
Sri Lanka	19	23	27	30	38	44	47	53	86	86
Vietnam	4	6	8	13	18	90	98	105	107	105

Appendix table 6-7

**Value added of computer programming and related services, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	15,565	14,675	11,669	11,769	12,940	15,472	17,453	20,693	23,890	23,794	29,056
Argentina	3,560	3,415	1,046	1,149	1,253	1,472	1,733	2,147	2,721	2,842	3,389
Brazil	4,904	3,936	3,468	3,575	4,009	5,206	6,118	7,480	9,173	9,371	12,434
Chile	794	731	710	842	1,025	1,241	1,412	1,608	1,847	1,864	2,321
Colombia	819	776	931	877	1,048	1,289	1,439	1,842	2,125	2,107	2,616
Costa Rica	90	103	107	109	115	120	142	170	200	201	250
Mexico	3,500	3,679	3,624	3,500	3,609	4,054	4,264	4,733	4,739	4,041	4,552
Peru	471	499	519	546	590	647	708	808	950	1,009	1,216
Venezuela	671	743	532	415	451	491	581	713	1,066	1,193	915
All others	755	793	732	756	841	952	1,057	1,191	1,067	1,166	1,364
Sub-Saharan Africa	1,294	1,227	1,259	1,970	2,513	3,041	3,329	3,827	3,921	4,046	5,059
Kenya	56	60	63	71	73	84	98	114	126	127	139
Nigeria	135	140	151	187	281	437	506	593	730	672	886
South Africa	1,010	931	932	1,509	2,000	2,356	2,543	2,915	2,833	3,025	3,801
All others	93	96	112	203	158	164	182	204	232	224	233
Other developed	18,862	18,807	20,545	24,656	29,318	33,167	36,432	41,931	46,040	46,433	53,383
Australia	6,607	6,086	6,921	8,858	10,674	11,909	13,280	15,657	17,559	16,200	19,809
Canada	6,383	6,552	6,851	8,173	9,382	10,810	12,451	13,310	13,680	15,985	17,912
New Zealand	606	631	751	1,015	1,251	1,446	1,405	1,710	1,742	1,620	1,993
Norway	2,142	2,185	2,533	2,846	3,658	4,392	4,419	5,807	6,423	5,878	6,525
Switzerland	3,124	3,352	3,489	3,764	4,354	4,611	4,877	5,447	6,636	6,750	7,144
Other developing	784	751	828	896	969	1,080	1,266	1,453	1,670	1,869	2,088
Bangladesh	324	320	331	353	371	370	373	405	449	522	588
Pakistan	262	225	260	280	309	390	527	622	682	729	803
Sri Lanka	90	88	109	122	130	151	183	210	270	311	370
Vietnam	108	117	128	141	159	170	184	216	269	308	327

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Computer programming and related services consists of hardware, software and related services, data processing, database activities, maintenance and repair of computers and related equipment, and other computer-related activities. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-8

## Value added of R&amp;D services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	98,281	103,945	117,792	121,417	134,151	151,081	163,356	167,214	170,144	176,021
United States	25,184	25,465	27,476	29,001	30,706	32,918	36,086	39,770	43,520	48,056
EU	29,421	31,156	34,570	32,170	34,412	39,357	41,669	38,881	40,760	41,808
Belgium	252	270	315	312	345	414	398	428	392	482
Czech Republic	87	76	86	119	143	167	203	160	176	167
Denmark	437	458	424	351	427	404	469	403	438	466
Finland	485	516	466	340	399	483	520	518	545	550
France	13,219	13,866	15,275	14,628	14,650	16,734	17,293	14,735	14,532	14,425
Germany	3,940	4,125	4,897	5,134	5,375	6,401	6,447	5,967	6,524	6,484
Ireland	13	13	14	13	15	15	27	24	36	102
Italy	2,465	2,646	2,932	2,454	3,592	3,944	4,535	4,639	5,087	5,552
Netherlands	1,370	1,359	1,446	1,361	1,372	1,699	1,694	1,460	1,476	1,565
Poland	73	130	241	211	296	390	461	508	638	610
Spain	142	157	174	154	157	184	198	188	189	191
Sweden	1,747	2,016	2,341	1,775	2,031	2,440	2,864	2,723	2,995	3,324
United Kingdom	4,370	4,723	5,121	4,457	4,698	5,007	5,345	5,806	6,194	6,386
All others	821	802	839	860	913	1,075	1,214	1,322	1,536	1,504
Japan	7,591	9,209	10,850	12,891	14,814	18,005	16,295	15,551	14,769	17,908
China	1,188	1,328	1,638	1,963	2,469	2,305	2,609	3,059	2,644	2,125
Asia-8	5,213	5,481	6,131	6,826	7,742	9,016	10,090	10,155	7,891	8,798
India	2,367	2,164	2,127	2,302	2,447	2,644	2,689	2,945	3,057	3,452
Indonesia	458	550	609	692	822	905	967	962	359	467
Malaysia	208	235	304	398	432	512	628	645	465	491
Philippines	361	379	387	414	493	581	650	661	539	624
Singapore	472	558	655	726	902	1,123	1,280	1,331	1,123	1,108
South Korea	946	1,202	1,475	1,683	1,977	2,452	2,746	2,621	1,562	1,831
Taiwan	234	210	253	266	293	357	418	409	354	342
Thailand	167	184	320	344	376	443	712	582	431	483
All others	29,684	31,306	37,126	38,566	44,008	49,479	56,607	59,799	60,560	57,326
Central Asia and Europe	913	1,013	1,390	2,576	2,989	3,913	4,551	5,051	5,442	5,148
Russia	112	151	427	1,529	2,189	2,886	3,501	3,950	2,915	2,132
Turkey	776	850	903	932	647	866	871	884	2,337	2,853
Ukraine	25	11	60	115	153	162	179	217	190	163
Middle East and North Africa	3,601	3,814	4,431	4,362	4,681	5,441	5,892	5,939	6,484	6,557
Egypt	28	16	71	125	179	233	288	307	334	379
Iran	733	776	1,015	942	885	869	950	1,056	1,081	946
Israel	1,088	1,211	1,366	1,242	1,402	1,951	2,169	1,992	2,239	2,281
Morocco	80	92	109	105	109	143	125	117	392	421
Saudi Arabia	985	1,044	1,089	1,127	1,172	1,184	1,285	1,315	1,263	1,308
All others	686	675	781	821	933	1,060	1,075	1,152	1,174	1,221

Appendix table 6-8

## Value added of R&amp;D services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	184,294	186,531	197,928	222,461	247,480	269,795	299,076	341,798	383,239	391,362	431,483
United States	54,835	62,474	70,588	74,145	77,513	83,493	91,969	99,090	108,142	112,916	119,234
EU	39,588	38,190	41,935	51,636	58,543	60,279	64,815	75,173	80,966	76,815	78,067
Belgium	420	441	508	707	857	920	965	1,070	1,243	1,176	1,210
Czech Republic	163	184	224	255	299	387	417	497	619	659	630
Denmark	462	437	483	686	672	699	684	676	393	387	399
Finland	503	494	565	821	879	923	929	914	1,146	1,172	1,208
France	12,196	11,663	12,863	15,444	17,301	17,311	18,314	20,706	21,569	21,839	21,510
Germany	6,851	6,006	6,632	8,425	9,408	9,020	9,274	11,442	13,056	12,405	12,465
Ireland	145	104	109	226	213	193	227	257	282	227	220
Italy	5,640	5,555	6,274	7,900	8,925	9,242	10,208	11,301	12,291	11,602	11,444
Netherlands	1,417	1,517	1,568	2,028	2,412	2,466	2,619	2,872	3,213	3,288	3,286
Poland	639	798	778	800	881	1,296	1,459	1,803	2,258	1,966	2,126
Spain	197	238	325	494	582	650	747	964	1,113	840	809
Sweden	3,508	3,385	3,612	4,422	5,081	5,313	5,942	7,311	7,762	6,373	7,313
United Kingdom	6,000	5,794	6,132	7,018	8,108	8,463	9,226	10,411	10,065	9,150	9,712
All others	1,449	1,575	1,863	2,410	2,927	3,396	3,805	4,949	5,957	5,731	5,735
Japan	17,970	15,278	14,487	15,027	15,957	14,347	13,722	13,332	15,308	16,189	17,168
China	2,051	1,923	1,838	1,805	2,024	2,219	2,364	2,719	2,303	2,480	2,835
Asia-8	9,711	9,719	10,631	12,080	13,685	16,059	18,404	22,072	28,188	30,184	38,070
India	3,854	4,134	4,444	5,226	6,084	7,167	7,987	9,914	14,946	17,003	22,015
Indonesia	706	676	905	1,142	1,273	1,435	1,833	2,090	2,392	2,654	3,471
Malaysia	479	491	520	548	576	650	750	966	1,030	1,077	1,328
Philippines	589	550	585	610	658	802	922	1,137	1,334	1,429	1,670
Singapore	1,177	1,113	1,135	1,162	1,247	1,414	1,677	2,146	2,845	2,880	3,378
South Korea	2,077	1,975	2,229	2,530	2,921	3,604	4,149	4,628	4,354	3,796	4,640
Taiwan	360	351	349	363	381	413	446	467	520	530	592
Thailand	469	429	465	498	544	574	641	725	767	815	977
All others	60,139	58,947	58,450	67,767	79,757	93,397	107,802	129,411	148,331	152,778	176,110
Central Asia and Europe	6,554	6,707	7,212	9,105	11,486	15,044	19,062	26,390	33,120	31,632	33,682
Russia	2,901	3,808	3,815	4,768	5,733	7,594	9,878	14,096	18,591	16,985	16,064
Turkey	3,487	2,625	3,071	3,971	5,240	6,755	8,288	10,823	12,680	13,050	15,827
Ukraine	166	274	326	366	513	695	896	1,471	1,849	1,598	1,791
Middle East and North Africa	7,199	7,617	8,554	8,853	10,052	11,577	13,775	16,751	20,041	20,665	23,364
Egypt	372	365	336	275	258	361	448	476	577	707	754
Iran	1,154	1,508	2,176	2,313	2,754	3,235	4,115	5,475	6,905	6,387	7,306
Israel	2,576	2,595	2,618	2,523	2,876	3,286	3,544	4,297	5,182	5,345	5,935
Morocco	421	415	469	594	694	777	871	1,092	1,222	1,380	1,435
Saudi Arabia	1,334	1,362	1,394	1,425	1,486	1,550	1,618	1,698	1,853	2,134	2,397
All others	1,342	1,373	1,562	1,723	1,984	2,368	3,179	3,713	4,302	4,710	5,537

Appendix table 6-8

## Value added of R&amp;D services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	7,091	7,959	12,522	13,135	15,488	16,547	20,486	22,844	22,796	18,190
Argentina	1,636	2,263	3,004	3,971	4,636	4,821	4,946	5,182	5,256	5,175
Brazil	3,237	3,155	6,341	5,603	6,535	6,794	10,146	11,410	11,166	7,070
Chile	439	455	563	625	738	909	1,186	1,316	1,286	1,156
Colombia	455	470	762	911	1,243	1,425	1,534	1,710	1,568	1,209
Costa Rica	57	72	77	83	90	94	97	104	110	117
Mexico	161	212	296	379	437	288	334	442	490	606
Peru	388	470	447	353	503	614	672	715	704	653
Venezuela	335	439	550	562	540	727	597	779	973	1,056
All others	383	423	481	648	766	874	974	1,186	1,245	1,147
Sub-Saharan Africa	1,212	1,356	1,470	1,485	1,594	1,897	2,007	2,147	2,224	1,910
Kenya	88	87	55	38	49	39	46	53	55	50
Nigeria	56	56	40	49	150	264	351	350	544	174
South Africa	925	1,082	1,241	1,279	1,319	1,505	1,456	1,593	1,468	1,529
All others	143	132	134	120	75	89	154	151	156	158
Other developed	16,334	16,596	16,705	16,355	18,522	20,760	22,683	22,785	22,530	24,403
Australia	6,109	5,979	6,131	5,800	7,092	7,868	8,974	9,210	8,610	9,617
Canada	5,715	5,919	5,637	5,611	5,659	6,102	6,571	7,036	7,404	8,172
New Zealand	520	516	507	594	731	908	1,109	1,151	966	1,036
Norway	341	393	456	402	435	517	668	731	652	654
Switzerland	3,648	3,790	3,974	3,948	4,605	5,365	5,361	4,657	4,899	4,924
Other developing	534	568	608	654	735	922	988	1,033	1,083	1,118
Bangladesh	280	286	295	319	347	378	420	431	437	464
Pakistan	215	235	258	266	300	341	348	361	349	359
Sri Lanka	32	37	44	50	62	73	78	88	142	143
Vietnam	6	9	12	18	27	130	142	153	155	152

Appendix table 6-8

**Value added of R&D services, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	18,455	17,029	12,764	13,100	14,860	18,047	20,637	24,783	28,891	30,829	37,617
Argentina	5,174	4,965	1,521	1,670	1,821	2,139	2,519	3,121	3,901	4,220	5,026
Brazil	7,128	5,721	5,041	5,196	5,827	7,567	8,893	10,872	13,020	13,947	18,385
Chile	1,155	1,063	1,032	1,224	1,490	1,804	2,052	2,337	2,602	2,704	3,319
Colombia	1,190	1,128	1,353	1,274	1,523	1,874	2,092	2,678	3,022	3,203	3,917
Costa Rica	131	149	156	158	167	174	206	248	296	303	373
Mexico	781	893	962	995	1,206	1,350	1,347	1,440	1,473	1,351	1,444
Peru	685	726	754	793	857	941	1,029	1,174	1,399	1,516	1,813
Venezuela	1,113	1,232	882	688	748	814	963	1,182	1,643	1,875	1,362
All others	1,098	1,152	1,064	1,099	1,223	1,384	1,536	1,732	1,536	1,711	1,979
Sub-Saharan Africa	1,890	1,793	1,839	2,881	3,668	4,436	4,856	5,582	5,656	6,056	7,504
Kenya	81	87	92	103	107	122	142	166	182	190	207
Nigeria	196	203	220	271	409	635	736	861	1,048	1,003	1,262
South Africa	1,468	1,353	1,355	2,194	2,907	3,424	3,696	4,238	4,067	4,505	5,657
All others	144	150	172	312	245	255	282	317	358	359	378
Other developed	24,883	24,691	26,855	32,501	38,256	42,693	47,594	53,750	58,149	60,769	70,802
Australia	9,604	8,847	10,059	12,875	15,515	17,310	19,304	22,759	25,049	24,096	29,959
Canada	9,279	9,524	9,959	11,879	13,638	15,713	18,098	19,348	19,598	23,020	25,822
New Zealand	880	917	1,092	1,476	1,818	2,103	2,043	2,485	2,544	2,408	2,950
Norway	579	531	673	800	956	866	1,060	1,241	1,373	1,257	1,402
Switzerland	4,541	4,873	5,072	5,471	6,328	6,702	7,089	7,917	9,586	9,989	10,668
Other developing	1,158	1,110	1,226	1,327	1,435	1,600	1,878	2,155	2,474	2,827	3,141
Bangladesh	471	466	482	513	539	537	542	589	647	755	830
Pakistan	380	327	378	408	449	567	765	904	999	1,113	1,236
Sri Lanka	149	147	180	202	216	250	303	348	441	516	613
Vietnam	157	170	186	204	231	246	267	314	387	442	462

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-9

## Value added of financial services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	1,135,069	1,210,224	1,351,851	1,496,650	1,531,024	1,648,628	1,680,078	1,701,494	1,692,861	1,799,788
United States	346,519	382,033	414,295	441,339	456,317	489,579	527,114	582,413	634,698	681,747
EU	343,109	353,051	370,335	363,180	375,683	411,920	428,937	402,684	399,085	414,606
Belgium	11,273	11,875	13,485	12,638	13,830	16,524	15,783	13,568	13,664	13,459
Czech Republic	888	1,325	1,337	1,527	1,586	1,605	1,775	1,518	2,114	1,923
Denmark	5,515	5,635	6,413	6,147	7,084	8,150	7,914	7,248	7,526	6,808
Finland	4,934	4,123	3,872	3,554	3,748	5,029	4,344	3,783	4,109	3,768
France	60,300	58,289	64,464	62,597	63,999	67,983	69,986	62,560	62,072	62,513
Germany	70,126	73,423	80,981	86,984	92,344	105,084	107,346	96,412	90,196	102,176
Ireland	2,065	2,470	3,115	3,134	2,937	4,842	4,830	4,718	5,280	6,019
Italy	51,318	54,567	52,989	45,123	45,821	47,702	51,626	44,137	47,863	48,359
Netherlands	13,392	14,415	16,139	16,229	18,639	23,860	23,837	21,431	21,709	22,744
Poland	365	654	1,386	1,737	2,701	3,162	4,218	5,349	5,223	5,916
Spain	27,417	29,400	31,198	25,216	23,197	26,683	25,771	24,121	25,775	24,625
Sweden	14,781	13,498	10,443	10,837	10,686	9,983	12,032	12,553	10,728	11,355
United Kingdom	59,759	61,752	61,643	63,453	64,456	63,151	72,086	80,231	76,759	78,567
All others	20,975	21,626	22,869	24,005	24,653	28,163	27,389	25,056	26,068	26,373
Japan	184,621	198,480	215,636	253,666	297,106	335,984	288,571	265,142	226,216	265,312
China	26,171	27,251	33,240	40,540	38,665	46,977	54,266	60,715	60,072	63,120
Asia-8	54,505	60,098	68,840	78,445	91,991	108,242	120,378	122,432	94,793	108,684
India	11,551	12,111	11,037	12,303	14,222	18,336	18,344	20,752	20,986	24,541
Indonesia	4,958	5,951	6,584	7,486	8,895	9,787	10,459	10,407	3,888	5,050
Malaysia	3,893	4,399	5,690	7,470	8,100	9,596	11,778	12,086	8,721	9,207
Philippines	1,601	1,665	1,753	1,813	2,148	2,553	3,084	3,252	2,660	2,984
Singapore	2,691	2,929	3,717	4,910	5,846	6,354	8,743	10,321	9,388	8,937
South Korea	12,756	15,276	17,962	19,352	22,555	29,205	32,762	29,885	20,427	27,902
Taiwan	12,244	12,464	15,925	17,100	20,524	21,124	22,259	25,871	23,032	25,926
Thailand	4,810	5,303	6,172	8,013	9,701	11,288	12,950	9,858	5,693	4,137
All others	180,145	189,311	249,505	319,481	271,261	255,925	260,811	268,108	277,998	266,319
Central Asia and Europe	6,771	8,670	13,968	24,331	21,648	15,891	15,397	17,085	22,433	27,543
Russia	344	396	4,690	11,075	13,966	5,242	2,026	2,898	1,065	1,774
Turkey	6,395	8,211	8,196	9,934	5,007	9,645	12,390	13,191	20,510	25,287
Ukraine	32	63	1,082	3,322	2,674	1,004	981	996	858	482
Middle East and North Africa	14,885	15,613	18,736	20,392	22,604	26,576	29,810	30,461	35,627	37,889
Egypt	712	400	1,810	3,212	4,586	5,979	7,383	7,900	9,367	10,487
Iran	524	554	725	728	305	509	522	525	703	744
Israel	3,998	4,449	5,017	4,563	5,151	7,166	7,968	7,317	8,227	8,381
Morocco	373	428	506	486	507	665	578	545	1,932	1,881
Saudi Arabia	6,466	6,641	6,873	7,079	7,278	7,205	7,273	7,671	7,844	8,427
All others	2,812	3,141	3,805	4,323	4,777	5,054	6,087	6,502	7,554	7,968

Appendix table 6-9

## Value added of financial services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	1,852,423	1,911,026	2,025,086	2,263,259	2,468,012	2,699,600	2,928,662	3,259,733	3,423,973	3,574,000	3,906,754
United States	762,012	838,678	863,537	903,148	929,247	1,028,515	1,105,548	1,110,433	1,100,398	1,171,612	1,235,184
EU	365,892	363,430	423,141	538,454	632,071	653,567	696,776	814,185	848,175	856,412	852,984
Belgium	12,482	11,727	13,684	16,211	19,412	19,785	20,496	22,829	23,494	25,322	25,712
Czech Republic	1,457	1,820	2,103	2,969	3,448	3,402	3,943	5,905	7,180	6,640	6,228
Denmark	6,477	6,542	7,431	9,806	11,171	11,772	12,484	15,013	17,376	17,902	18,454
Finland	4,718	3,986	4,293	3,489	4,314	4,212	5,271	6,961	6,610	6,556	6,746
France	61,167	54,798	62,584	80,095	90,341	93,531	99,406	109,477	116,915	120,525	119,498
Germany	71,599	69,733	79,703	104,184	126,408	118,965	117,829	118,481	116,362	126,517	127,833
Ireland	6,259	7,197	8,331	12,987	16,011	18,013	20,253	24,315	24,198	19,806	16,652
Italy	45,857	48,254	50,050	65,197	72,975	76,849	79,225	99,544	108,432	102,448	103,001
Netherlands	20,876	21,821	25,380	34,925	40,040	43,596	40,674	41,072	44,349	53,132	53,489
Poland	7,503	7,699	7,287	7,986	9,397	11,660	13,544	19,577	24,324	19,630	21,036
Spain	24,197	27,045	30,798	38,151	44,243	46,839	51,917	68,490	77,201	89,668	88,988
Sweden	9,670	8,595	8,733	11,245	14,434	15,309	14,268	15,821	16,644	15,768	18,131
United Kingdom	68,119	69,471	95,282	117,105	137,644	144,593	167,256	207,342	198,576	191,198	187,403
All others	25,510	24,741	27,483	34,104	42,232	45,040	50,209	59,361	66,513	61,299	59,814
Japan	282,506	262,619	267,195	294,482	311,006	317,183	302,604	291,392	288,763	292,313	315,028
China	68,507	70,595	73,879	79,271	84,790	96,177	130,668	200,892	244,417	289,530	358,197
Asia-8	109,533	111,027	126,950	137,673	146,943	165,815	184,872	216,279	230,185	221,271	271,824
India	23,523	26,493	29,788	34,773	37,035	40,934	46,937	58,376	69,022	72,788	93,405
Indonesia	7,637	7,375	8,798	10,469	10,792	11,404	13,593	15,382	17,535	17,649	22,969
Malaysia	8,586	9,195	10,213	10,521	10,971	11,654	13,261	15,512	17,366	16,877	20,910
Philippines	2,743	2,523	2,623	2,614	2,797	3,597	4,283	5,437	6,247	6,153	7,202
Singapore	8,783	9,030	9,149	9,078	10,283	11,516	14,026	18,544	21,197	21,073	25,276
South Korea	27,531	28,838	38,349	41,856	43,489	52,092	57,811	65,761	59,254	52,042	63,298
Taiwan	27,094	24,166	24,073	23,486	25,766	28,032	27,407	28,317	29,049	24,087	26,116
Thailand	3,636	3,407	3,958	4,875	5,811	6,586	7,556	8,949	10,515	10,600	12,648
All others	263,973	264,677	270,383	310,231	363,955	438,343	508,194	626,553	712,035	742,862	873,536
Central Asia and Europe	22,399	24,579	20,872	25,063	34,771	44,304	58,901	78,339	99,155	86,450	96,532
Russia	3,239	6,779	9,505	12,956	17,747	26,833	38,620	49,012	61,958	54,276	59,555
Turkey	18,632	16,819	10,207	10,359	13,036	13,596	15,241	20,905	24,032	22,902	26,848
Ukraine	528	980	1,160	1,748	3,988	3,874	5,040	8,423	13,165	9,272	10,130
Middle East and North Africa	41,445	42,101	42,554	45,754	54,355	66,843	75,854	92,294	106,661	108,752	123,400
Egypt	11,327	10,581	8,184	6,878	8,636	7,964	8,621	9,163	10,984	12,481	13,260
Iran	1,148	1,303	2,461	3,416	4,385	4,375	5,277	7,389	9,391	8,052	9,349
Israel	9,465	9,533	9,616	9,270	10,564	12,074	13,020	15,786	18,794	17,998	20,072
Morocco	1,905	1,889	1,966	2,348	2,670	3,030	3,437	4,449	5,049	5,259	5,391
Saudi Arabia	8,839	9,317	9,889	10,630	11,538	12,739	14,020	15,110	16,039	16,912	19,142
All others	8,761	9,478	10,438	13,212	16,561	26,661	31,478	40,397	46,404	48,049	56,186



## Appendix table 6-9

## Value added of financial services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	74,071	76,735	126,196	180,428	129,344	106,588	100,583	99,584	102,186	79,496
Argentina	3,391	4,690	6,225	9,080	8,760	9,872	9,835	10,121	11,129	11,524
Brazil	54,123	52,754	95,819	140,527	83,993	59,070	58,172	57,795	57,808	36,468
Chile	1,612	1,670	2,067	2,296	2,710	3,338	4,356	4,833	4,723	4,246
Colombia	1,707	1,761	2,755	3,372	4,903	6,382	7,207	8,050	6,828	4,935
Costa Rica	211	266	320	401	452	498	509	549	568	641
Mexico	9,244	11,108	14,498	19,250	20,469	18,348	12,779	10,154	11,636	13,412
Peru	500	692	504	461	822	1,349	1,481	1,746	1,745	1,410
Venezuela	1,333	1,618	1,302	1,466	3,361	3,673	1,843	2,053	3,327	2,776
All others	1,949	2,176	2,708	3,575	3,875	4,059	4,403	4,283	4,422	4,082
Sub-Saharan Africa	9,110	9,864	10,191	10,066	10,343	12,369	12,161	13,219	12,431	11,556
Kenya	830	820	518	352	463	884	412	496	520	434
Nigeria	1,609	1,463	983	849	737	1,178	1,617	1,614	1,668	435
South Africa	5,965	6,972	8,000	8,242	8,505	9,702	9,383	10,271	9,463	9,856
All others	706	609	691	623	638	605	750	837	779	831
Other developed	74,070	77,091	78,956	82,701	85,541	92,157	100,380	105,177	102,578	106,948
Australia	16,765	17,101	17,817	18,347	19,450	21,333	23,768	25,479	21,732	25,891
Canada	32,480	34,774	34,322	34,524	35,056	36,192	39,110	42,314	41,415	42,682
New Zealand	2,802	2,584	2,219	2,294	2,885	3,255	3,521	3,534	3,059	3,225
Norway	5,387	5,219	5,685	5,137	5,187	5,608	5,180	5,057	5,000	4,600
Switzerland	16,637	17,413	18,913	22,399	22,963	25,770	28,801	28,792	31,372	30,550
Other developing	1,238	1,339	1,457	1,563	1,782	2,344	2,479	2,583	2,743	2,887
Bangladesh	399	407	421	456	499	558	602	629	638	683
Pakistan	709	775	849	878	988	1,123	1,148	1,190	1,152	1,185
Sri Lanka	109	127	149	170	210	246	262	298	480	482
Vietnam	20	30	38	59	85	417	467	466	473	537

## Appendix table 6-9

**Value added of financial services, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	73,823	75,443	76,149	75,162	80,225	113,077	135,500	171,812	202,566	196,169	239,888
Argentina	11,523	13,768	5,399	4,661	5,846	7,351	9,122	11,671	15,381	15,755	18,540
Brazil	32,371	31,400	31,632	32,872	32,137	51,841	65,410	87,567	104,103	103,112	132,168
Chile	4,242	3,903	3,792	4,498	5,475	6,628	7,618	8,715	9,678	9,471	11,752
Colombia	3,838	3,868	3,698	3,660	4,580	5,942	6,162	8,338	10,968	10,616	13,130
Costa Rica	725	774	859	939	981	1,116	1,265	1,518	1,814	1,774	2,168
Mexico	12,552	12,693	22,262	20,340	22,686	30,500	33,940	39,950	42,968	37,158	43,758
Peru	1,457	1,340	1,628	1,811	1,947	2,355	2,695	3,215	4,101	4,142	4,995
Venezuela	2,763	3,058	2,594	2,241	2,309	2,346	3,765	4,675	6,343	6,628	4,693
All others	4,350	4,638	4,285	4,139	4,264	4,998	5,524	6,162	7,210	7,513	8,684
Sub-Saharan Africa	11,458	10,499	10,186	14,073	17,679	19,404	22,389	25,849	25,430	26,036	32,378
Kenya	449	536	472	644	560	660	889	1,308	1,414	1,679	1,822
Nigeria	441	502	675	642	782	1,003	2,323	2,730	3,328	3,020	3,767
South Africa	9,898	8,991	8,089	11,680	15,495	16,987	18,337	21,023	19,923	20,550	25,778
All others	670	469	950	1,106	841	755	840	789	765	787	1,012
Other developed	111,816	109,184	117,400	146,640	173,031	190,129	209,931	251,688	270,623	317,213	372,218
Australia	26,010	26,069	28,766	37,546	46,484	52,718	56,894	70,918	75,457	132,721	165,766
Canada	47,516	48,418	49,577	58,685	68,955	77,768	88,689	103,011	111,499	102,219	117,903
New Zealand	2,931	2,999	3,714	5,023	6,067	7,105	7,089	8,729	8,885	7,434	9,154
Norway	4,500	4,531	5,212	7,877	9,896	10,614	10,220	13,257	15,235	15,028	16,717
Switzerland	30,859	27,167	30,132	37,510	41,630	41,924	47,039	55,773	59,547	59,811	62,679
Other developing	3,033	2,871	3,222	3,539	3,893	4,587	5,618	6,571	7,600	8,241	9,120
Bangladesh	700	701	727	811	873	923	970	1,124	1,305	1,473	1,669
Pakistan	1,254	1,080	1,247	1,344	1,481	1,870	2,524	2,981	3,163	3,355	3,655
Sri Lanka	504	496	609	684	730	844	1,023	1,178	1,462	1,560	1,829
Vietnam	575	595	639	700	809	950	1,101	1,289	1,669	1,853	1,967

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

## Appendix table 6-10

## Value added of communications services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	364,247	390,012	425,237	447,054	483,118	530,887	557,890	564,069	575,852	601,920
United States	143,666	152,950	164,741	172,674	183,119	188,645	197,964	200,143	213,369	225,383
EU	105,674	111,918	123,061	116,660	121,918	138,215	139,849	135,513	146,027	147,740
Belgium	3,000	3,076	3,317	3,270	3,585	4,404	4,485	4,205	4,507	4,661
Czech Republic	425	314	311	582	667	816	982	1,036	1,220	1,140
Denmark	1,922	1,873	2,177	2,032	2,218	2,471	2,877	2,614	2,689	2,787
Finland	1,898	1,826	1,665	1,256	1,404	1,695	1,785	1,698	1,964	2,297
France	16,292	16,966	18,509	18,332	19,682	22,147	22,102	20,666	21,215	21,881
Germany	27,995	28,986	33,585	33,637	35,305	41,338	37,377	33,171	34,283	30,678
Ireland	817	800	876	824	942	1,135	860	899	938	1,154
Italy	12,757	13,956	15,692	14,108	12,299	12,745	15,223	14,814	16,008	17,133
Netherlands	3,881	3,971	4,597	4,521	4,840	5,684	5,800	5,571	6,177	6,302
Poland	832	991	1,034	1,050	1,279	1,465	1,730	2,043	2,407	2,328
Spain	6,758	7,769	9,052	8,046	8,445	9,720	10,482	10,363	11,160	11,221
Sweden	3,113	3,289	3,640	2,880	2,957	3,466	3,922	3,775	3,932	3,983
United Kingdom	19,503	21,566	21,351	18,665	20,153	21,322	21,987	24,492	28,608	30,449
All others	6,481	6,534	7,255	7,456	8,142	9,808	10,238	10,168	10,919	11,726
Japan	36,651	40,780	43,397	52,362	61,200	72,410	70,130	69,552	65,415	74,692
China	3,163	3,923	4,870	6,725	7,346	10,144	12,704	15,558	16,654	18,169
Asia-8	15,521	17,741	19,990	22,437	26,254	30,661	34,280	34,025	28,066	32,763
India	2,243	2,182	2,467	2,632	3,265	3,784	4,177	4,833	5,174	5,297
Indonesia	2,951	3,513	3,897	4,506	5,152	5,588	6,153	5,502	2,184	2,999
Malaysia	738	872	1,014	1,185	1,397	1,702	2,049	2,070	1,673	1,715
Philippines	327	423	482	503	573	657	828	895	919	1,225
Singapore	2,020	2,417	2,594	2,969	3,541	4,206	4,473	4,596	4,146	4,539
South Korea	3,506	3,998	4,121	4,549	5,364	6,733	7,838	7,308	5,404	7,305
Taiwan	3,015	3,456	4,336	4,807	5,373	5,967	6,372	6,713	6,985	7,858
Thailand	722	879	1,079	1,286	1,590	2,024	2,389	2,108	1,580	1,826
All others	59,572	62,702	69,177	76,196	83,281	90,811	102,963	109,278	106,321	103,172
Central Asia and Europe	8,712	8,090	10,489	14,523	17,604	23,611	28,829	30,810	23,663	19,070
Russia	1,097	536	2,251	5,277	9,956	14,107	17,962	18,378	10,942	6,823
Turkey	7,571	7,533	8,127	9,105	7,376	9,113	10,274	11,475	11,971	11,741
Ukraine	44	20	111	142	272	390	594	957	750	506
Middle East and North Africa	9,129	8,520	8,828	9,311	10,078	11,085	12,425	13,081	13,666	14,401
Egypt	2,621	1,682	1,279	1,411	1,676	1,861	2,547	2,879	2,852	3,108
Iran	195	245	230	278	278	242	249	273	254	209
Israel	1,962	2,096	2,231	2,244	2,426	2,832	3,206	3,282	3,382	3,294
Morocco	748	740	831	822	844	959	976	928	995	1,040
Saudi Arabia	2,073	2,241	2,349	2,463	2,552	2,597	2,644	2,773	2,885	3,043
All others	1,531	1,515	1,908	2,094	2,302	2,594	2,803	2,946	3,298	3,706

Appendix table 6-10

## Value added of communications services, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	643,324	655,991	684,790	753,776	845,412	901,854	944,702	1,057,293	1,166,626	1,178,065	1,289,494
United States	246,351	255,753	254,703	254,006	272,320	291,919	296,892	324,208	333,261	329,027	331,365
EU	136,074	141,055	162,371	196,079	225,225	224,309	228,743	253,447	267,430	250,113	248,009
Belgium	4,138	4,219	4,741	5,901	7,010	7,116	7,261	7,914	8,549	7,652	7,632
Czech Republic	1,168	1,373	1,762	2,139	2,325	2,563	2,916	3,441	4,232	3,664	3,414
Denmark	2,382	2,430	2,599	3,413	3,758	3,895	3,939	4,312	4,399	4,035	4,161
Finland	2,204	2,475	2,899	3,302	3,694	2,947	2,873	3,309	3,585	3,235	3,324
France	18,030	18,713	22,500	27,403	31,901	31,887	32,167	36,207	39,835	44,168	43,656
Germany	26,218	26,080	29,988	37,328	43,586	38,830	41,064	41,119	45,630	40,994	40,696
Ireland	1,605	1,206	1,880	2,831	2,762	3,155	2,792	3,234	3,357	3,164	2,919
Italy	15,392	17,677	20,214	24,273	27,886	28,761	28,466	31,030	32,148	29,670	28,515
Netherlands	6,103	6,579	8,108	10,697	11,863	12,051	11,972	13,241	13,441	12,069	11,952
Poland	2,424	3,363	4,076	4,270	5,471	5,828	5,789	6,409	7,990	7,184	7,792
Spain	10,208	10,556	12,066	15,257	17,730	18,479	19,296	22,017	23,920	22,513	20,687
Sweden	3,826	3,481	3,863	4,737	4,990	4,920	5,084	5,579	5,867	5,003	5,645
United Kingdom	31,944	31,270	33,852	37,844	43,313	43,563	44,032	50,384	46,349	40,778	41,776
All others	10,432	11,632	13,823	16,683	18,936	20,313	21,092	25,250	28,128	25,983	25,840
Japan	80,036	72,604	70,672	75,200	78,003	75,037	69,088	66,463	77,003	86,946	95,936
China	25,571	30,080	34,118	39,822	46,831	53,054	60,596	71,139	106,028	127,127	160,810
Asia-8	37,214	39,089	41,490	46,830	51,826	55,802	62,105	70,678	73,524	75,416	92,225
India	5,672	6,459	6,136	7,595	9,481	11,496	13,198	17,213	18,728	20,047	25,568
Indonesia	3,179	3,117	4,326	5,654	6,474	7,582	10,190	11,669	13,291	15,317	21,066
Malaysia	2,180	2,477	2,588	2,969	3,265	3,537	3,904	4,448	4,963	5,331	6,541
Philippines	1,388	1,588	1,870	2,122	2,421	2,828	3,195	3,813	4,228	4,492	5,003
Singapore	4,968	4,762	4,638	5,301	6,292	3,727	4,065	4,734	5,241	5,402	5,936
South Korea	8,601	9,862	11,176	12,125	12,267	14,502	15,363	15,843	13,372	11,590	13,312
Taiwan	9,402	9,038	8,826	9,047	9,390	9,767	9,472	9,670	10,180	9,623	10,581
Thailand	1,824	1,787	1,930	2,017	2,235	2,363	2,719	3,287	3,522	3,614	4,218
All others	118,078	117,410	121,436	141,838	171,209	201,732	227,279	271,359	309,380	309,437	361,149
Central Asia and Europe	22,632	21,795	27,181	34,915	46,388	56,112	64,783	81,189	95,554	82,693	95,844
Russia	8,670	10,301	13,034	16,765	23,460	27,734	33,861	43,423	52,160	46,900	54,502
Turkey	13,379	10,751	13,318	17,104	21,651	26,979	29,266	35,692	40,887	33,629	38,863
Ukraine	583	743	830	1,046	1,277	1,398	1,656	2,074	2,506	2,165	2,479
Middle East and North Africa	15,181	16,148	16,615	17,522	19,804	22,953	25,840	31,210	37,251	40,374	45,280
Egypt	2,986	3,055	2,942	2,737	2,961	4,042	4,073	5,486	6,940	7,638	8,013
Iran	522	651	911	1,026	1,217	1,604	2,002	2,489	2,909	2,940	3,289
Israel	3,455	3,363	3,176	3,283	3,611	3,784	3,676	4,418	5,240	5,080	5,526
Morocco	932	1,013	1,114	1,124	1,349	1,493	1,611	2,047	2,278	2,397	2,483
Saudi Arabia	3,196	3,376	3,501	3,613	3,868	4,176	4,447	4,944	5,738	6,460	7,272
All others	4,090	4,689	4,970	5,739	6,797	7,854	10,032	11,827	14,145	15,858	18,697

Appendix table 6-10

**Value added of communications services, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	10,854	12,750	15,108	18,697	20,926	17,535	20,930	24,273	29,184	28,617
Argentina	1,623	2,151	2,559	3,523	4,163	4,438	4,755	5,309	6,149	6,196
Brazil	4,385	4,274	4,416	5,551	5,753	3,547	5,659	6,329	8,704	6,573
Chile	334	457	597	689	820	933	1,074	1,173	1,282	1,260
Colombia	513	557	616	695	992	1,258	1,535	1,875	1,998	1,627
Costa Rica	206	206	246	290	321	361	378	416	436	451
Mexico	2,687	3,812	5,015	6,020	6,680	4,108	4,409	5,042	5,837	7,225
Peru	295	357	452	380	482	807	922	990	938	905
Venezuela	169	250	423	534	535	785	769	1,507	1,947	2,443
All others	642	687	784	1,014	1,180	1,298	1,428	1,633	1,893	1,938
Sub-Saharan Africa	3,907	4,264	5,384	4,820	4,899	5,672	5,493	5,724	5,348	5,329
Kenya	330	311	351	215	285	373	163	177	164	123
Nigeria	48	44	31	30	33	38	45	52	59	16
South Africa	2,965	3,400	4,511	4,032	4,208	4,801	4,767	5,002	4,639	4,689
All others	563	509	491	543	374	458	518	494	486	501
Other developed	25,151	26,944	26,790	25,941	26,547	29,273	31,598	31,448	30,206	31,401
Australia	6,644	7,484	7,149	7,425	7,677	8,717	9,952	10,457	9,443	9,869
Canada	11,975	12,780	12,635	11,826	11,659	12,148	12,941	12,795	12,612	13,411
New Zealand	1,079	1,109	1,011	1,023	1,184	1,517	1,696	1,781	1,472	1,424
Norway	1,946	1,868	2,087	1,869	1,928	2,094	2,205	2,326	2,295	2,417
Switzerland	3,508	3,703	3,907	3,798	4,100	4,797	4,803	4,089	4,384	4,280
Other developing	1,820	2,133	2,578	2,904	3,226	3,636	3,688	3,942	4,254	4,355
Bangladesh	83	102	108	116	148	177	198	238	243	249
Pakistan	1,399	1,626	1,992	2,263	2,451	2,717	2,625	2,717	2,913	2,952
Sri Lanka	251	295	318	317	373	419	493	564	671	698
Vietnam	87	110	160	207	254	323	372	423	428	456

## Appendix table 6-10

**Value added of communications services, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	39,566	38,823	33,020	34,566	41,339	53,033	62,598	76,622	88,852	93,365	113,134
Argentina	6,151	5,999	1,802	2,293	3,005	3,845	4,871	5,760	7,108	6,956	8,191
Brazil	15,885	13,179	12,237	13,556	17,092	23,492	27,531	34,891	42,152	46,630	61,195
Chile	1,151	1,013	1,031	1,324	1,585	1,844	2,137	2,451	2,601	3,085	3,843
Colombia	1,535	1,787	1,791	1,690	2,010	2,477	2,754	3,550	3,841	4,224	5,227
Costa Rica	503	521	570	617	663	720	822	958	1,117	1,174	1,474
Mexico	8,720	10,230	10,284	10,003	11,400	13,958	16,009	19,056	19,382	17,209	19,745
Peru	932	886	884	937	1,047	1,131	1,389	1,822	2,211	2,275	2,702
Venezuela	2,654	2,873	2,254	1,987	2,232	2,860	4,145	4,902	7,108	8,360	6,755
All others	2,037	2,335	2,168	2,159	2,306	2,707	2,940	3,232	3,332	3,452	4,000
Sub-Saharan Africa	5,450	5,202	4,972	7,032	8,973	10,290	11,830	11,773	11,922	13,030	16,202
Kenya	130	218	281	294	302	369	468	567	617	597	658
Nigeria	16	70	88	113	181	324	1,421	912	985	1,013	1,371
South Africa	4,802	4,311	3,948	6,073	7,869	8,933	9,161	9,374	9,274	10,405	13,105
All others	502	604	655	552	621	664	781	920	1,045	1,016	1,067
Other developed	30,697	30,431	34,235	41,619	47,810	51,504	53,919	61,074	65,164	67,507	76,909
Australia	9,192	8,410	9,311	11,518	13,702	13,960	14,195	17,022	17,703	23,863	28,756
Canada	14,365	14,570	14,975	17,608	20,105	22,735	25,287	28,064	29,729	26,586	29,634
New Zealand	1,283	1,259	1,478	1,911	2,258	2,558	2,409	2,959	3,092	2,736	3,274
Norway	1,996	2,210	2,767	3,287	3,562	3,856	3,891	4,212	4,336	3,469	3,846
Switzerland	3,861	3,982	5,703	7,295	8,183	8,395	8,137	8,817	10,302	10,854	11,400
Other developing	4,552	5,012	5,412	6,184	6,895	7,841	8,309	9,491	10,638	12,466	13,780
Bangladesh	249	297	344	372	418	520	613	775	951	1,182	1,360
Pakistan	3,078	3,432	3,737	4,307	4,717	5,201	5,236	5,796	5,829	7,129	7,716
Sri Lanka	721	735	764	854	975	1,178	1,356	1,638	2,184	2,341	2,751
Vietnam	504	547	568	650	785	941	1,105	1,281	1,674	1,814	1,952

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-11

## Value added of high-technology manufacturing industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	554,422	596,431	607,475	605,727	643,538	719,053	734,641	742,973	720,300	774,821
United States	178,209	190,728	186,061	187,780	195,980	208,517	224,921	241,384	247,542	250,568
EU	158,712	162,745	164,914	144,997	152,657	172,061	176,049	176,139	182,454	190,881
Belgium	3,187	3,188	3,394	3,441	3,742	4,714	4,723	4,397	4,073	4,766
Czech Republic	322	364	403	328	371	608	879	869	897	971
Denmark	1,939	2,008	2,318	1,989	2,495	2,930	2,934	3,013	3,172	3,530
Finland	2,126	1,462	1,588	1,525	2,165	3,156	3,368	3,894	5,224	6,199
France	23,495	23,440	24,924	24,142	23,908	29,257	28,503	29,093	29,271	29,199
Germany	44,142	48,433	49,832	41,733	42,326	45,828	45,589	42,636	42,923	44,786
Ireland	2,042	2,096	2,277	2,187	2,813	4,520	4,553	4,966	5,626	8,596
Italy	24,745	24,307	23,901	18,786	19,088	18,725	21,083	20,051	20,569	20,658
Netherlands	4,847	4,919	5,170	5,203	5,229	5,973	5,589	5,114	5,183	5,528
Poland	1,292	958	832	828	1,118	1,550	1,714	1,775	1,941	2,194
Spain	8,455	8,848	8,776	7,615	7,146	7,857	8,627	7,493	7,404	7,349
Sweden	5,008	5,673	5,835	5,045	5,822	7,389	8,434	8,362	9,396	9,706
United Kingdom	30,516	30,786	29,262	25,854	29,744	31,739	32,332	37,126	39,057	40,037
All others	6,596	6,261	6,403	6,322	6,690	7,814	7,720	7,350	7,717	7,360
Japan	130,332	148,207	147,094	159,967	170,510	193,326	175,638	160,749	141,761	165,218
China	12,407	13,284	14,852	17,995	15,121	18,378	21,010	24,382	23,493	26,967
Asia-8	27,488	34,918	46,041	41,167	52,771	65,240	72,376	71,698	58,389	72,895
India	1,879	1,892	1,941	1,988	2,507	2,779	2,888	3,112	3,362	3,841
Indonesia	542	731	881	896	1,338	1,683	2,452	3,639	968	1,586
Malaysia	2,059	2,851	3,745	4,614	5,779	7,146	8,880	8,809	6,732	8,478
Philippines	743	920	1,073	1,076	1,213	1,673	2,832	3,099	3,350	4,018
Singapore	4,345	5,819	6,857	8,402	10,036	12,566	13,894	13,729	8,673	9,610
South Korea	10,277	10,021	10,856	13,114	18,178	24,967	23,749	20,761	18,038	24,606
Taiwan	6,553	7,080	7,846	8,715	9,564	11,864	13,976	15,391	15,602	19,096
Thailand	1,090	5,603	12,842	2,361	4,157	2,562	3,707	3,159	1,665	1,660
All others	47,274	46,550	48,513	53,822	56,499	61,531	64,647	68,621	66,661	68,293
Central Asia and Europe	2,234	2,575	3,106	6,891	6,622	6,681	6,935	7,349	5,399	4,510
Russia	357	254	695	3,969	4,474	4,296	4,631	5,069	2,771	1,731
Turkey	1,807	2,281	2,158	2,679	1,826	2,094	1,971	1,851	2,258	2,457
Ukraine	69	40	253	242	323	290	333	428	370	321
Middle East and North Africa	2,477	2,509	2,269	2,363	2,521	4,251	4,905	5,649	6,126	6,726
Egypt	366	156	161	207	239	286	373	448	547	609
Iran	198	240	264	246	273	280	265	301	249	272
Israel	1,702	1,891	1,534	1,608	1,655	3,306	3,860	4,471	4,866	5,370
Morocco	55	50	104	86	106	117	124	113	129	127
Saudi Arabia	47	52	56	56	59	64	74	80	76	82
All others	109	121	150	160	188	197	208	237	260	267

## Appendix table 6-11

## Value added of high-technology manufacturing industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	845,961	737,849	761,659	853,336	975,392	1,051,407	1,154,416	1,244,297	1,304,945	1,231,142	1,397,037
United States	275,320	245,412	250,955	258,862	283,336	310,634	342,495	352,802	355,227	367,624	385,941
EU	184,411	176,327	184,213	216,744	242,927	257,905	275,951	312,220	317,606	265,536	272,892
Belgium	4,663	4,629	4,943	5,960	6,566	6,926	7,256	8,302	8,330	7,230	7,326
Czech Republic	990	999	1,158	1,526	1,694	2,019	2,348	2,807	3,390	3,023	3,217
Denmark	3,358	3,622	3,449	4,482	4,783	5,440	5,521	5,954	7,181	6,949	7,210
Finland	6,601	5,767	6,973	8,268	8,592	8,835	9,694	12,248	11,222	5,836	5,564
France	28,833	28,333	29,016	33,879	34,447	36,475	38,543	40,537	42,247	37,033	37,625
Germany	43,836	40,931	43,919	56,262	66,120	70,868	74,914	90,942	91,506	72,356	76,446
Ireland	8,331	7,696	8,890	9,092	9,544	10,567	11,302	13,250	12,996	12,580	12,545
Italy	19,065	20,019	21,141	24,058	27,202	26,818	28,901	32,272	33,184	28,859	29,013
Netherlands	5,803	4,867	4,338	5,246	5,720	6,411	6,331	6,806	7,263	6,095	6,113
Poland	1,966	2,137	2,061	2,201	2,414	3,069	3,431	3,926	5,446	4,155	5,061
Spain	6,727	6,929	6,733	8,352	8,950	9,474	10,443	11,971	13,850	12,240	11,806
Sweden	8,016	6,206	7,623	9,669	13,167	13,624	14,457	14,862	14,956	12,536	13,776
United Kingdom	38,801	36,559	35,577	37,167	41,469	43,658	48,202	53,007	48,098	41,652	41,992
All others	7,421	7,634	8,392	10,582	12,258	13,720	14,608	15,337	17,939	14,992	15,197
Japan	185,141	135,917	123,520	146,050	164,009	158,661	152,943	150,235	153,742	138,689	177,935
China	34,995	38,912	46,424	63,062	82,255	101,794	128,593	155,624	194,519	212,053	263,015
Asia-8	90,600	71,575	85,700	97,087	117,884	127,165	144,875	151,576	144,443	130,928	163,603
India	3,285	3,601	4,095	4,640	5,340	6,517	6,929	8,557	9,427	9,087	11,600
Indonesia	2,447	1,600	2,480	3,043	3,043	2,972	3,540	5,192	6,203	5,870	7,557
Malaysia	8,964	7,487	7,735	8,902	9,945	8,039	8,801	8,715	8,183	5,919	7,325
Philippines	4,366	3,206	3,478	2,449	2,820	2,963	3,523	4,138	4,487	3,661	4,111
Singapore	13,140	9,630	11,273	11,745	15,829	17,377	20,154	18,332	16,912	15,313	21,611
South Korea	31,863	25,259	29,300	33,125	43,029	47,868	53,913	57,482	49,965	48,446	53,908
Taiwan	24,564	18,980	24,039	29,346	33,588	36,706	43,161	43,436	43,532	37,728	51,700
Thailand	1,972	1,814	3,299	3,836	4,291	4,724	4,854	5,725	5,734	4,904	5,791
All others	75,494	69,705	70,847	71,531	84,981	95,248	109,559	121,840	139,408	116,312	133,653
Central Asia and Europe	4,499	4,759	8,956	6,671	12,298	13,801	16,975	16,422	18,437	11,854	14,894
Russia	1,442	1,958	5,849	3,466	8,338	9,787	12,211	10,679	11,606	7,271	9,325
Turkey	2,735	2,382	2,638	2,608	3,254	3,110	3,623	4,150	4,631	3,489	3,896
Ukraine	322	419	470	597	705	903	1,142	1,594	2,200	1,093	1,674
Middle East and North Africa	8,926	7,384	7,013	7,288	7,880	8,540	9,483	11,400	15,231	13,712	14,627
Egypt	605	717	928	779	905	1,107	1,242	1,507	1,930	2,057	2,118
Iran	346	386	596	651	800	784	925	1,119	1,422	1,219	1,374
Israel	7,438	5,713	4,878	5,144	5,387	5,634	6,167	7,329	10,181	8,911	9,532
Morocco	170	167	192	232	241	375	330	464	525	463	443
Saudi Arabia	89	91	95	107	117	136	278	306	331	328	340
All others	278	310	323	376	431	504	541	676	843	733	818



Appendix table 6-11

## Value added of high-technology manufacturing industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	19,458	18,190	19,780	22,208	22,795	22,470	23,871	27,021	27,365	26,753
Argentina	1,418	1,796	2,039	1,865	1,319	1,103	1,116	1,417	1,240	1,119
Brazil	12,943	10,647	10,859	12,625	13,055	13,635	13,597	13,791	12,505	10,411
Chile	155	189	282	295	287	351	332	282	328	269
Colombia	359	387	507	487	647	835	867	967	900	737
Costa Rica	42	44	56	79	87	78	64	65	62	59
Mexico	3,737	4,236	5,062	5,918	6,359	5,517	7,003	9,660	11,474	13,332
Peru	241	260	298	235	237	245	220	246	227	197
Venezuela	355	402	435	416	359	408	343	322	420	399
All others	209	229	242	287	445	299	329	271	209	230
Sub-Saharan Africa	1,455	1,786	1,807	876	893	1,560	1,601	1,710	1,719	1,056
Kenya	32	32	32	19	27	34	33	38	39	50
Nigeria	254	423	333	23	24	596	689	757	772	197
South Africa	1,124	1,287	1,405	811	815	899	857	893	888	790
All others	45	44	37	23	28	31	22	22	20	18
Other developed	21,207	21,014	21,028	20,836	22,966	25,776	26,341	25,995	25,085	28,220
Australia	2,638	2,763	2,891	2,835	3,278	3,496	3,949	3,752	3,183	3,393
Canada	9,849	9,486	9,438	9,167	9,190	10,243	10,539	11,572	10,855	13,737
New Zealand	178	179	170	190	237	262	288	268	206	209
Norway	866	793	899	863	935	1,178	1,393	1,218	1,117	1,375
Switzerland	7,675	7,793	7,631	7,782	9,325	10,598	10,173	9,186	9,724	9,505
Other developing	443	476	522	647	702	793	993	897	968	1,027
Bangladesh	135	119	124	152	176	212	236	180	226	195
Pakistan	283	324	352	425	438	467	612	550	545	531
Sri Lanka	3	5	5	10	14	23	22	37	45	91
Vietnam	22	27	41	60	74	91	123	130	152	210

## Appendix table 6-11

**Value added of high-technology manufacturing industries, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	31,492	30,179	26,328	23,573	26,308	30,415	35,732	40,244	45,231	39,354	46,557
Argentina	1,052	931	326	459	570	679	748	875	1,005	901	1,037
Brazil	12,830	11,564	9,447	8,568	11,311	13,931	17,477	20,427	25,301	22,582	28,162
Chile	300	253	221	223	298	344	363	397	390	360	432
Colombia	676	719	705	641	828	871	989	1,246	1,384	1,199	1,400
Costa Rica	63	71	73	76	84	88	99	113	124	114	134
Mexico	15,570	15,756	14,806	12,900	12,421	13,534	14,917	15,839	15,237	12,596	14,011
Peru	187	173	199	202	172	203	270	327	392	365	370
Venezuela	495	498	341	315	421	513	612	737	1,034	905	632
All others	318	213	211	190	202	252	256	283	363	333	380
Sub-Saharan Africa	1,012	926	992	1,390	1,731	1,946	2,093	2,349	2,355	2,337	2,867
Kenya	43	45	49	60	70	77	81	74	81	76	79
Nigeria	135	151	164	183	226	262	281	321	400	297	373
South Africa	820	717	766	1,130	1,414	1,586	1,711	1,929	1,848	1,939	2,387
All others	15	12	13	17	20	21	21	24	26	25	27
Other developed	28,578	25,538	26,478	31,284	35,134	38,671	43,489	49,394	55,761	46,619	52,012
Australia	2,918	2,557	2,974	3,709	4,312	5,036	5,373	6,387	7,059	6,342	7,669
Canada	15,476	12,248	11,651	13,671	14,986	16,508	18,859	20,674	22,372	17,438	18,776
New Zealand	197	208	235	303	364	402	364	441	423	371	423
Norway	1,248	1,201	1,410	1,607	1,811	2,061	2,499	2,843	3,031	2,872	3,350
Switzerland	8,739	9,324	10,208	11,994	13,661	14,664	16,395	19,049	22,876	19,596	21,793
Other developing	987	919	1,078	1,324	1,630	1,875	1,787	2,031	2,393	2,436	2,696
Bangladesh	210	205	235	267	289	304	325	372	460	515	577
Pakistan	482	442	516	663	827	975	757	839	870	792	851
Sri Lanka	50	35	38	40	48	58	85	93	113	108	125
Vietnam	244	236	288	354	466	537	618	727	950	1,021	1,143

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. High-technology manufacturing industries classified by Organisation for Economic Co-operation and Development and include aerospace, communications and semiconductors, computers and office machinery, pharmaceuticals, and scientific instruments and measuring equipment. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-12

## Value added of all manufacturing industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	4,346,915	4,470,981	4,729,026	4,763,844	5,063,576	5,614,296	5,638,175	5,582,548	5,417,668	5,577,460
United States	1,017,643	1,027,468	1,071,136	1,116,092	1,190,310	1,244,632	1,282,413	1,359,401	1,422,155	1,496,076
EU	1,508,530	1,483,898	1,559,118	1,363,287	1,448,750	1,678,998	1,679,134	1,585,301	1,630,286	1,585,827
Belgium	41,248	39,177	42,308	39,061	42,715	51,914	49,529	45,259	45,587	43,541
Czech Republic	6,621	6,327	7,449	7,721	9,408	12,124	14,697	14,137	14,416	14,420
Denmark	20,364	20,181	22,419	20,433	22,434	26,925	26,142	24,787	24,894	24,437
Finland	27,352	21,576	19,935	17,236	21,951	28,964	27,251	26,302	29,148	28,842
France	203,719	200,733	214,980	195,228	200,922	234,727	227,839	209,014	215,117	209,252
Germany	450,470	451,910	484,734	427,762	447,054	516,507	489,447	438,818	449,215	431,634
Ireland	11,429	11,572	13,395	12,341	13,963	18,075	19,395	22,241	26,226	29,588
Italy	240,479	241,309	248,441	198,722	207,462	225,477	247,570	232,347	236,214	226,208
Netherlands	50,337	49,682	53,697	51,642	54,911	66,000	63,052	56,188	58,312	57,409
Poland	17,862	14,892	14,423	13,596	18,999	25,885	27,406	27,491	29,673	28,097
Spain	104,228	107,584	111,979	89,878	89,589	105,614	109,390	101,797	105,285	105,064
Sweden	43,229	40,942	40,581	32,311	37,912	49,408	51,954	47,944	48,915	49,301
United Kingdom	205,306	198,659	201,646	179,083	197,714	218,294	224,933	246,307	251,656	244,632
All others	85,883	79,355	83,131	78,272	83,716	99,085	100,529	92,670	95,630	93,403
Japan	810,654	922,707	971,257	1,052,193	1,103,579	1,218,059	1,077,349	983,285	868,623	966,906
China	139,819	145,059	172,282	219,863	198,962	255,506	297,178	326,155	333,477	350,400
Asia-8	246,386	267,981	292,002	314,351	360,398	423,916	464,843	447,071	334,441	393,405
India	51,488	42,803	43,306	42,312	50,934	61,446	64,031	65,680	62,854	63,686
Indonesia	28,949	33,512	37,408	43,153	50,570	59,729	71,317	70,779	29,212	44,561
Malaysia	10,484	12,340	15,015	17,048	19,505	23,034	27,602	27,945	20,421	24,069
Philippines	11,003	11,498	12,811	12,891	14,907	17,043	18,896	18,334	14,254	16,475
Singapore	9,523	11,495	12,628	14,688	17,124	20,736	21,789	21,573	18,839	18,797
South Korea	65,639	77,472	80,351	89,226	105,523	130,676	135,429	123,103	86,751	113,886
Taiwan	50,931	56,562	62,774	63,474	65,817	68,909	71,702	74,138	67,576	71,890
Thailand	18,370	22,299	27,710	31,559	36,016	42,344	54,076	45,519	34,534	40,039
All others	623,883	623,867	663,231	698,059	761,577	793,185	837,259	881,335	828,687	784,846
Central Asia and Europe	62,599	60,679	81,735	101,328	106,638	123,319	139,468	145,936	118,738	94,923
Russia	6,095	4,034	15,371	30,626	47,905	50,191	65,517	67,469	45,276	33,410
Turkey	54,850	55,519	57,069	62,242	47,788	63,344	63,602	67,886	64,402	54,280
Ukraine	1,654	1,126	9,294	8,460	10,944	9,784	10,349	10,581	9,060	7,233
Middle East and North Africa	52,757	49,199	53,587	54,100	61,022	67,024	76,015	81,665	78,281	80,701
Egypt	13,097	7,952	7,591	8,518	10,031	11,393	14,909	16,992	16,059	16,183
Iran	5,440	6,488	6,837	6,296	7,535	7,450	8,594	8,631	7,518	7,104
Israel	10,182	10,884	12,241	12,358	13,402	14,596	15,824	16,799	17,028	17,219
Morocco	4,958	5,000	5,381	5,030	5,393	6,315	6,521	6,154	6,342	6,469
Saudi Arabia	10,036	11,236	12,284	12,020	12,625	13,696	15,457	16,627	15,492	16,747
All others	9,044	7,640	9,253	9,878	12,037	13,574	14,709	16,462	15,842	16,979

Appendix table 6-12

## Value added of all manufacturing industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	5,685,998	5,370,104	5,511,154	6,127,550	6,919,982	7,415,703	7,980,178	8,978,407	9,685,086	8,853,799	10,288,724
United States	1,515,885	1,444,003	1,477,307	1,501,991	1,623,521	1,719,239	1,785,381	1,850,143	1,803,033	1,732,562	1,874,092
EU	1,462,754	1,441,875	1,523,165	1,800,490	2,046,159	2,097,133	2,222,224	2,559,706	2,683,758	2,138,561	2,283,267
Belgium	39,876	38,585	41,166	48,641	56,294	57,498	59,256	66,646	69,293	59,088	66,402
Czech Republic	13,773	14,802	17,346	20,466	26,376	29,421	33,869	41,562	47,971	40,251	43,572
Denmark	22,226	21,895	23,552	27,476	30,257	30,934	32,885	37,176	41,363	34,728	35,304
Finland	28,050	28,445	29,760	34,825	39,077	39,737	43,455	52,047	52,820	37,591	39,642
France	190,290	185,639	192,620	228,195	251,756	254,917	255,539	286,356	305,201	241,682	246,398
Germany	392,241	389,589	408,465	493,136	561,932	569,902	614,733	709,530	737,182	568,414	627,086
Ireland	28,211	29,722	35,587	39,912	42,178	41,330	42,871	49,692	50,986	48,754	48,575
Italy	205,390	205,002	218,370	259,244	292,700	294,894	310,098	359,583	373,548	306,741	324,277
Netherlands	53,469	52,630	55,821	68,033	77,783	80,951	83,711	97,952	106,136	89,099	94,391
Poland	28,225	28,478	28,850	33,789	42,911	49,565	56,370	70,396	86,523	66,348	78,454
Spain	97,724	100,262	108,057	133,935	152,868	159,970	170,481	193,378	210,881	172,592	173,019
Sweden	47,758	41,254	45,035	55,283	63,372	64,618	69,090	79,545	75,384	54,583	64,706
United Kingdom	227,121	215,063	219,992	237,129	266,963	269,201	280,132	309,910	293,452	221,429	236,523
All others	88,400	90,508	98,543	120,426	141,691	154,195	169,734	205,932	233,019	197,261	204,919
Japan	1,034,066	856,453	808,166	886,321	974,305	979,298	926,258	926,295	996,154	905,376	1,125,964
China	393,619	426,768	463,317	544,730	630,930	739,511	899,016	1,154,735	1,492,606	1,696,422	2,002,413
Asia-8	442,250	406,948	450,369	505,587	589,190	664,208	759,094	872,040	896,355	841,868	1,111,544
India	68,628	69,336	72,158	84,731	102,178	121,950	143,757	181,305	191,817	192,355	261,856
Indonesia	45,786	46,615	56,190	66,330	72,083	78,349	100,394	116,908	142,357	142,533	186,408
Malaysia	28,947	27,219	29,494	32,982	37,897	40,838	46,000	51,986	58,187	48,999	64,904
Philippines	16,878	16,308	17,735	18,523	20,037	22,958	26,845	31,618	37,374	34,400	44,928
Singapore	23,867	19,604	21,311	22,162	28,392	30,753	35,587	38,766	35,935	32,544	44,070
South Korea	136,209	120,693	135,365	149,356	181,379	210,758	234,105	259,802	235,935	211,264	273,128
Taiwan	80,710	68,554	75,376	81,808	91,644	97,406	99,859	103,756	99,604	89,848	121,668
Thailand	41,226	38,619	42,739	49,695	55,580	61,196	72,547	87,899	95,146	89,926	114,582
All others	837,425	794,057	788,830	888,431	1,055,876	1,216,314	1,388,206	1,615,489	1,813,180	1,539,010	1,891,444
Central Asia and Europe	104,148	90,795	102,696	127,391	173,366	224,782	269,771	333,771	397,326	272,666	358,353
Russia	44,928	46,966	53,938	64,392	93,274	124,486	157,140	196,540	248,355	161,960	218,210
Turkey	53,545	37,206	41,200	53,727	68,059	83,279	90,911	108,735	117,533	92,401	115,622
Ukraine	5,675	6,623	7,559	9,272	12,033	17,017	21,721	28,496	31,438	18,304	24,522
Middle East and North Africa	87,661	85,791	90,224	97,928	114,692	130,476	152,621	176,248	214,756	208,952	245,100
Egypt	15,904	14,684	13,641	11,543	13,671	15,597	17,284	20,276	25,536	29,614	32,580
Iran	9,534	11,413	15,215	15,638	19,263	23,513	28,146	34,814	41,782	40,951	48,319
Israel	19,361	16,940	14,941	15,845	16,890	18,118	20,028	23,301	32,177	28,202	31,935
Morocco	6,029	5,606	6,014	7,732	8,974	8,872	9,379	10,121	11,349	12,243	12,244
Saudi Arabia	18,211	18,455	19,460	23,005	25,554	29,522	33,043	36,402	39,433	39,113	48,329
All others	18,623	18,693	20,954	24,166	30,341	34,855	44,739	51,334	64,479	58,830	71,692

Appendix table 6-12

## Value added of all manufacturing industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	261,360	267,854	281,865	299,401	326,970	302,381	317,774	348,606	340,270	309,038
Argentina	37,787	46,199	49,976	38,948	41,637	44,513	47,740	53,409	53,353	48,114
Brazil	120,860	103,860	99,146	124,672	141,491	124,975	124,136	128,442	117,275	82,411
Chile	5,694	6,705	8,067	8,694	9,937	12,801	13,264	14,427	13,540	12,674
Colombia	9,187	9,632	9,781	10,642	13,304	15,154	15,535	16,324	15,362	13,268
Costa Rica	1,489	1,507	1,832	1,979	2,125	2,355	2,395	2,638	2,997	4,228
Mexico	61,852	73,259	83,297	87,337	89,815	67,486	80,511	96,166	101,471	114,476
Peru	4,857	5,564	6,528	5,637	7,158	8,116	8,346	8,788	8,093	7,204
Venezuela	12,798	13,443	14,504	13,571	12,828	16,961	16,069	18,136	17,380	17,329
All others	6,835	7,684	8,735	7,921	8,675	10,019	9,779	10,277	10,798	9,334
Sub-Saharan Africa	32,233	33,496	34,135	32,418	33,211	39,123	37,993	38,785	35,118	28,799
Kenya	1,442	1,420	1,279	820	1,080	1,267	1,400	1,487	1,515	1,284
Nigeria	1,829	1,953	1,561	1,767	2,859	4,809	6,073	6,584	6,465	1,635
South Africa	24,040	25,136	26,337	25,298	25,937	29,275	26,563	27,045	23,663	22,417
All others	4,922	4,987	4,958	4,533	3,335	3,773	3,958	3,670	3,475	3,465
Other developed	202,191	198,821	196,392	194,434	215,547	240,505	244,038	243,062	231,974	246,902
Australia	42,498	43,174	43,625	43,400	49,277	51,313	55,486	56,357	48,389	50,415
Canada	91,733	87,647	82,725	83,097	89,707	100,480	102,238	108,463	107,027	121,073
New Zealand	7,622	7,409	7,075	7,665	9,265	10,532	11,118	10,881	8,649	8,928
Norway	12,802	12,633	13,583	12,792	13,685	17,018	17,053	16,800	16,863	16,977
Switzerland	47,536	47,958	49,383	47,479	53,613	61,162	58,143	50,562	51,047	49,509
Other developing	12,743	13,818	15,518	16,377	18,189	20,833	21,970	23,281	24,306	24,483
Bangladesh	3,630	3,870	4,124	4,548	4,969	5,575	5,894	6,165	6,666	6,679
Pakistan	7,123	7,608	8,416	8,252	8,987	10,073	10,031	10,050	10,199	9,998
Sri Lanka	1,196	1,338	1,459	1,578	1,805	2,076	2,302	2,641	2,775	2,731
Vietnam	793	1,001	1,519	1,999	2,428	3,109	3,743	4,425	4,666	5,075

Appendix table 6-12

**Value added of all manufacturing industries, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	343,988	328,942	291,971	304,294	356,801	416,758	480,774	559,524	616,150	556,002	686,061
Argentina	46,901	43,264	20,865	28,796	34,026	39,187	43,810	50,972	63,607	60,109	74,865
Brazil	96,131	81,290	73,417	86,110	109,435	136,864	162,786	199,967	217,691	209,163	282,538
Chile	13,250	12,641	12,348	12,148	15,197	17,598	19,823	21,542	21,460	19,664	23,228
Colombia	13,621	13,929	13,696	13,872	17,726	22,617	25,814	33,573	36,455	32,655	40,870
Costa Rica	3,705	3,269	3,305	3,384	3,692	3,954	4,454	5,114	5,611	5,115	6,377
Mexico	132,610	136,615	136,783	128,729	139,619	154,015	175,756	188,635	194,672	151,397	184,055
Peru	7,701	7,910	8,233	8,726	10,365	11,856	13,514	15,608	18,691	18,643	23,523
Venezuela	21,711	20,879	15,228	14,314	18,507	21,941	25,517	33,860	45,765	46,924	35,990
All others	8,358	9,145	8,096	8,215	8,233	8,727	9,300	10,250	12,199	12,332	14,615
Sub-Saharan Africa	28,918	26,754	26,013	36,690	46,648	50,444	51,265	54,820	54,540	51,175	65,353
Kenya	1,292	1,270	1,292	1,447	1,610	1,974	2,313	2,829	2,940	2,792	3,074
Nigeria	1,652	1,790	1,964	2,227	2,629	3,144	3,720	4,140	4,940	4,114	5,199
South Africa	22,942	20,563	19,419	29,600	37,825	40,727	40,564	43,064	41,058	39,014	51,392
All others	3,032	3,131	3,338	3,415	4,585	4,599	4,669	4,787	5,602	5,255	5,688
Other developed	247,586	235,808	249,688	290,217	327,325	350,225	382,955	432,749	462,991	380,228	459,495
Australia	46,089	41,963	48,223	61,890	71,023	75,572	80,961	96,718	107,034	91,700	119,314
Canada	132,945	123,142	123,591	137,438	153,574	164,588	183,909	200,590	205,985	151,631	186,048
New Zealand	8,258	7,962	9,269	11,826	14,445	16,168	15,212	18,475	17,869	16,076	18,263
Norway	15,707	16,069	18,045	21,042	23,575	26,319	29,908	34,974	36,615	32,583	36,988
Switzerland	44,588	46,672	50,560	58,020	64,708	67,577	72,966	81,992	95,488	88,238	98,881
Other developing	25,122	25,968	28,237	31,911	37,045	43,628	50,819	58,378	67,417	69,987	77,082
Bangladesh	6,681	6,851	7,222	7,878	8,658	9,140	9,998	11,786	13,688	15,338	16,973
Pakistan	9,745	9,820	10,764	12,561	15,491	19,098	22,744	25,804	27,694	26,989	28,837
Sri Lanka	2,910	2,831	3,033	3,381	3,657	4,473	5,133	5,690	6,905	7,509	8,598
Vietnam	5,786	6,466	7,218	8,090	9,239	10,916	12,944	15,097	19,129	20,151	22,674

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-13

## Value added of ICT industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	800,349	864,084	934,386	961,442	1,053,095	1,190,976	1,249,820	1,290,286	1,318,114	1,414,784
United States	257,503	269,496	289,990	305,880	337,422	364,784	391,029	423,852	452,684	470,357
EU	234,548	245,094	261,723	242,107	256,877	295,742	306,722	307,901	341,409	358,365
Belgium	5,374	5,478	5,916	5,903	6,450	7,801	7,877	7,707	8,266	8,892
Czech Republic	674	575	586	889	1,023	1,279	1,816	1,954	2,216	2,166
Denmark	3,884	3,789	4,233	3,882	4,369	4,720	5,073	5,178	5,290	5,690
Finland	4,163	3,394	3,361	2,837	3,595	4,890	5,227	5,747	7,692	9,125
France	42,848	43,419	47,791	45,383	47,849	56,299	56,752	53,717	58,879	62,332
Germany	61,300	65,638	70,431	66,855	69,751	79,836	75,044	69,895	74,530	71,299
Ireland	2,182	2,157	2,147	1,970	2,384	3,882	3,777	4,484	4,980	7,261
Italy	32,003	33,939	37,036	31,309	29,430	30,826	36,417	35,425	37,489	39,508
Netherlands	8,550	8,638	9,479	9,260	10,075	11,829	12,391	12,520	14,322	15,546
Poland	1,502	1,601	1,728	1,707	2,153	2,654	3,066	3,478	4,153	4,146
Spain	13,707	15,114	15,825	14,417	14,869	16,819	18,488	17,602	19,034	19,857
Sweden	6,956	7,559	8,120	6,425	7,230	9,174	11,328	11,564	12,608	13,460
United Kingdom	40,125	42,551	42,759	38,789	44,167	49,592	52,581	61,942	73,569	79,503
All others	11,281	11,244	12,312	12,481	13,533	16,141	16,885	16,688	18,383	19,579
Japan	152,446	179,675	186,845	206,686	225,213	261,892	248,712	238,860	225,866	266,211
China	13,172	14,488	16,441	20,281	19,565	25,505	30,005	36,253	36,047	40,238
Asia-8	40,732	49,332	62,643	59,856	74,446	91,157	102,058	102,319	84,074	104,133
India	4,729	4,443	4,742	4,926	6,010	6,726	7,016	7,955	8,425	8,666
Indonesia	3,541	4,235	4,956	5,506	6,469	7,397	8,671	9,218	3,149	4,366
Malaysia	2,794	3,667	4,738	5,815	7,156	8,803	11,016	10,925	8,390	10,244
Philippines	979	1,213	1,276	1,328	1,590	2,086	3,245	3,595	3,927	4,714
Singapore	5,835	7,428	8,502	10,297	12,554	15,676	17,006	16,830	11,183	12,570
South Korea	12,118	12,052	13,066	15,207	20,506	28,407	29,275	26,766	22,866	32,426
Taiwan	8,911	9,882	11,475	12,953	14,392	17,464	19,952	21,936	22,742	27,500
Thailand	1,826	6,411	13,887	3,825	5,769	4,596	5,877	5,093	3,392	3,647
All others	101,948	105,999	116,744	126,632	139,572	151,896	171,294	181,101	178,035	175,480
Central Asia and Europe	10,370	9,971	12,878	19,000	22,111	29,133	34,479	36,942	29,015	24,091
Russia	1,308	731	2,738	7,606	12,965	17,929	21,890	22,969	13,699	8,767
Turkey	8,976	9,195	9,867	11,070	8,635	10,581	11,760	12,733	14,330	14,627
Ukraine	86	45	273	324	511	622	830	1,240	986	698
Middle East and North Africa	13,009	12,732	13,241	13,648	14,698	16,480	18,504	19,534	20,714	21,740
Egypt	2,699	1,735	1,377	1,546	1,862	2,106	2,830	3,173	3,187	3,465
Iran	704	841	970	956	888	830	921	1,041	1,003	892
Israel	3,942	4,304	4,322	4,238	4,589	5,599	6,464	6,730	7,222	7,377
Morocco	835	830	930	912	939	1,081	1,086	1,035	1,292	1,360
Saudi Arabia	2,773	2,985	3,126	3,266	3,387	3,443	3,564	3,716	3,791	3,983
All others	2,056	2,038	2,515	2,730	3,032	3,421	3,640	3,839	4,220	4,663

Appendix table 6-13

## Value added of ICT industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	1,547,561	1,463,267	1,532,098	1,694,206	1,931,555	2,054,536	2,197,051	2,412,509	2,615,866	2,541,602	2,815,964
United States	517,907	501,471	516,848	521,639	575,392	616,673	654,997	680,410	708,939	693,230	729,169
EU	343,945	348,897	385,391	458,551	531,261	542,043	567,931	649,847	689,126	623,581	624,549
Belgium	8,284	8,738	9,407	11,460	13,098	13,440	14,080	16,065	17,760	16,242	16,255
Czech Republic	2,269	2,562	3,382	3,999	4,291	5,163	6,158	7,446	9,619	8,572	8,521
Denmark	5,026	5,363	5,943	7,330	8,093	8,051	8,754	10,175	11,757	11,444	11,759
Finland	9,460	9,236	10,951	12,886	14,267	13,792	14,721	18,294	18,068	12,262	12,268
France	56,693	57,193	63,629	75,467	86,508	86,294	91,055	103,882	116,337	117,009	114,892
Germany	66,548	65,541	71,598	86,621	101,676	97,064	101,842	116,927	125,675	110,970	111,193
Ireland	8,822	7,638	8,193	9,037	10,142	14,331	16,060	16,838	17,935	15,312	14,462
Italy	36,788	40,907	46,625	56,690	63,044	64,346	64,636	72,919	77,069	70,128	69,009
Netherlands	15,657	15,639	16,582	20,782	23,354	24,565	25,584	29,913	32,088	29,131	28,962
Poland	4,133	5,598	6,459	6,958	8,663	9,334	9,687	11,074	13,933	12,115	13,500
Spain	18,401	19,915	22,525	28,282	32,332	33,852	35,805	41,592	46,360	43,212	39,666
Sweden	12,358	11,090	11,948	13,863	19,222	19,388	20,148	22,468	24,446	20,151	22,730
United Kingdom	81,250	79,313	84,340	96,460	113,168	116,031	120,746	138,231	127,963	111,220	115,595
All others	18,255	20,164	23,809	28,717	33,406	36,394	38,654	44,023	50,116	45,813	45,736
Japan	306,438	250,589	238,403	265,654	284,777	277,542	264,664	267,444	290,467	291,097	336,409
China	54,129	61,398	71,269	88,905	111,880	131,896	159,474	186,737	245,867	272,828	340,203
Asia-8	127,063	110,369	125,783	142,156	165,822	179,204	202,062	219,621	217,816	207,782	256,471
India	9,385	10,371	10,513	12,646	15,076	18,236	20,618	26,359	31,523	33,812	43,354
Indonesia	5,428	4,460	6,478	8,277	9,350	10,234	13,550	16,208	18,666	20,747	28,190
Malaysia	11,022	9,829	10,211	11,765	13,052	11,461	12,380	12,855	12,768	10,753	13,478
Philippines	5,127	4,617	5,161	4,550	5,167	5,654	6,486	7,715	8,328	7,977	8,983
Singapore	15,771	12,011	12,228	12,803	15,735	14,625	15,927	17,090	16,551	15,822	20,085
South Korea	41,408	36,116	41,964	46,934	56,818	64,217	71,733	75,673	64,908	60,419	67,549
Taiwan	34,986	29,206	33,919	39,261	44,034	47,637	53,836	54,815	55,921	49,760	64,902
Thailand	3,937	3,759	5,311	5,919	6,591	7,141	7,530	8,905	9,150	8,490	9,932
All others	198,079	190,543	194,404	217,301	262,422	307,178	347,923	408,450	463,652	453,085	529,163
Central Asia and Europe	28,855	28,360	38,394	43,983	61,320	74,315	87,651	106,039	125,909	108,406	127,504
Russia	11,388	13,644	20,570	21,491	32,735	39,157	48,467	57,847	70,476	61,665	73,141
Turkey	16,690	13,635	16,625	21,016	26,729	33,034	36,608	44,710	51,107	43,239	50,338
Ukraine	778	1,081	1,200	1,476	1,855	2,124	2,577	3,481	4,327	3,502	4,024
Middle East and North Africa	24,577	24,148	24,700	25,927	29,204	33,660	38,346	46,254	55,943	58,494	65,118
Egypt	3,327	3,380	3,280	3,015	3,243	4,418	4,524	5,987	7,575	8,369	8,775
Iran	1,361	1,693	2,424	2,591	3,132	3,762	4,728	6,088	7,491	6,903	7,764
Israel	9,324	7,612	6,817	6,983	7,622	8,352	8,710	10,451	12,999	12,363	13,101
Morocco	1,275	1,331	1,471	1,575	1,881	2,088	2,266	2,849	3,169	3,356	3,478
Saudi Arabia	4,157	4,358	4,508	4,646	4,948	5,309	5,622	6,180	7,121	8,006	9,008
All others	5,133	5,774	6,200	7,116	8,378	9,730	12,495	14,700	17,588	19,498	22,992



Appendix table 6-13

## Value added of ICT industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	24,695	26,740	32,567	37,736	43,064	39,687	47,839	55,128	59,834	56,515
Argentina	3,208	4,335	5,382	6,758	7,996	8,178	8,594	9,317	10,105	10,057
Brazil	12,669	11,449	13,384	14,708	15,873	14,005	19,097	20,503	21,391	15,649
Chile	643	776	992	1,129	1,336	1,570	1,900	2,091	2,180	2,064
Colombia	859	912	1,175	1,354	1,886	2,286	2,638	3,101	3,119	2,488
Costa Rica	264	269	320	366	405	448	467	515	531	546
Mexico	5,033	6,644	8,490	10,304	12,071	8,747	10,405	13,600	15,666	18,423
Peru	619	738	808	653	853	1,234	1,391	1,488	1,429	1,359
Venezuela	466	613	868	972	912	1,290	1,225	2,050	2,652	3,192
All others	934	1,004	1,147	1,492	1,732	1,928	2,122	2,465	2,761	2,736
Sub-Saharan Africa	5,080	5,944	7,083	6,140	6,314	7,330	7,132	7,463	7,154	6,878
Kenya	409	391	410	253	337	425	220	237	226	189
Nigeria	96	341	216	83	157	239	291	297	438	136
South Africa	3,909	4,607	5,872	5,177	5,393	6,145	6,000	6,333	5,902	5,948
All others	666	605	584	627	426	522	621	595	589	604
Other developed	46,500	47,980	47,880	46,611	49,481	54,788	58,601	57,006	55,906	60,645
Australia	11,513	12,296	12,108	12,150	13,439	15,065	17,221	17,787	16,177	17,358
Canada	20,363	21,239	20,828	19,922	19,870	21,057	22,195	23,146	23,166	26,359
New Zealand	1,511	1,546	1,441	1,523	1,801	2,268	2,604	2,708	2,241	2,246
Norway	2,949	2,831	3,096	2,805	2,964	3,411	3,745	4,003	4,409	5,026
Switzerland	10,164	10,069	10,407	10,212	11,406	12,986	12,837	9,361	9,913	9,656
Other developing	2,294	2,632	3,096	3,497	3,904	4,478	4,738	5,028	5,413	5,611
Bangladesh	296	305	319	344	396	448	498	558	585	597
Pakistan	1,619	1,872	2,236	2,540	2,767	3,081	3,133	3,206	3,392	3,431
Sri Lanka	272	322	349	355	422	482	556	649	795	870
Vietnam	107	134	192	257	319	468	552	616	641	714

## Appendix table 6-13

## Value added of ICT industries, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	71,436	68,861	56,521	55,919	64,691	80,391	94,321	112,818	127,848	128,954	156,015
Argentina	10,033	9,594	2,906	3,528	4,388	5,479	6,784	8,103	10,043	9,982	11,787
Brazil	27,011	22,816	19,660	20,230	25,604	33,991	40,472	50,018	59,255	62,033	81,099
Chile	1,954	1,748	1,746	2,172	2,616	3,093	3,552	4,062	4,451	4,952	6,167
Colombia	2,382	2,590	2,752	2,594	3,091	3,786	4,217	5,422	5,999	6,359	7,875
Costa Rica	605	638	691	740	795	859	985	1,153	1,344	1,400	1,752
Mexico	21,776	23,187	21,566	19,753	20,598	24,227	27,293	31,152	30,689	26,482	30,171
Peru	1,407	1,394	1,411	1,489	1,643	1,786	2,109	2,644	3,178	3,299	3,935
Venezuela	3,464	3,756	2,882	2,491	2,802	3,495	4,898	5,823	8,464	9,808	7,842
All others	2,802	3,137	2,907	2,922	3,154	3,673	4,013	4,442	4,423	4,638	5,387
Sub-Saharan Africa	6,995	6,625	6,442	9,309	11,871	13,755	15,614	16,099	16,318	17,541	21,759
Kenya	208	300	369	395	412	496	608	714	780	758	832
Nigeria	152	210	240	301	464	762	1,928	1,507	1,717	1,686	2,258
South Africa	6,038	5,413	5,065	7,857	10,214	11,666	12,113	12,751	12,542	13,856	17,366
All others	597	702	769	757	781	830	965	1,127	1,279	1,241	1,302
Other developed	60,505	56,451	61,710	74,588	86,866	95,408	101,899	115,697	124,607	124,600	142,061
Australia	16,539	15,125	17,122	21,392	25,669	27,357	29,050	34,583	37,348	41,782	50,567
Canada	28,601	25,314	25,534	30,403	34,827	39,504	44,244	48,233	50,151	47,560	53,248
New Zealand	1,991	1,998	2,345	3,081	3,698	4,214	4,004	4,874	5,033	4,502	5,425
Norway	4,628	4,796	5,670	6,547	7,651	8,772	8,869	10,750	11,538	10,083	11,120
Switzerland	8,745	9,219	11,039	13,165	15,021	15,562	15,732	17,257	20,536	20,674	21,700
Other developing	5,711	6,097	6,637	7,575	8,470	9,648	10,091	11,542	13,027	15,090	16,706
Bangladesh	605	648	705	757	823	929	1,029	1,228	1,456	1,767	2,016
Pakistan	3,488	3,794	4,157	4,793	5,282	5,894	5,825	6,487	6,583	7,924	8,584
Sri Lanka	857	855	906	1,011	1,146	1,378	1,562	1,874	2,483	2,681	3,155
Vietnam	760	800	869	1,015	1,219	1,447	1,675	1,953	2,505	2,719	2,951

EU = European Union; ICT = information and communications technology

NOTES: ICT industries classified by Organisation for Economic Co-operation and Development and include communications services, computer and related services, communications goods and semiconductors, and computers and office machinery. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

Appendix table 6-14

## Real GDP per employed person, by region/country/economy: 1990-2009

(2009 U.S. PPP dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
United States	72,106	72,515	74,512	75,547	76,857	77,631	79,389	81,065	83,313	85,940	88,240	89,127	90,986	92,500	94,780	96,015	96,762	97,567	98,005	99,113
EU	57,767	58,571	60,209	61,288	63,388	65,158	66,064	67,561	68,721	70,435	72,083	72,923	74,010	74,865	76,356	77,146	78,290	79,014	78,899	77,111
Austria	66,263	67,098	67,978	68,549	70,045	72,149	73,464	74,484	76,390	77,765	79,851	79,692	81,082	81,787	82,717	83,522	85,328	86,941	86,970	84,765
Belgium	74,743	75,857	77,118	76,875	79,688	80,428	81,329	83,811	83,944	85,732	87,136	86,640	87,951	88,621	90,637	90,961	92,372	93,593	92,758	90,307
Bulgaria	17,366	18,286	18,464	18,484	18,704	19,001	16,757	16,324	17,154	18,341	19,801	20,763	21,648	22,079	22,950	23,742	24,428	25,222	25,891	25,329
Cyprus	42,979	42,795	46,568	45,664	47,657	51,729	52,381	53,263	55,067	56,683	58,545	59,614	59,621	58,559	58,806	58,990	60,368	61,469	61,939	61,326
Czech Republic	38,531	35,314	34,660	34,749	35,137	36,954	38,095	37,746	38,047	39,921	41,452	42,277	42,840	44,990	46,846	49,294	51,650	53,394	53,942	52,287
Denmark	58,322	59,440	61,291	62,144	64,520	65,991	67,246	68,466	68,944	70,117	72,223	72,079	72,389	73,458	75,611	76,676	77,651	76,712	74,605	73,339
Estonia	21,734	20,132	18,390	18,278	18,601	20,380	22,055	24,640	26,799	27,956	31,207	33,273	35,454	37,587	40,318	43,266	45,394	48,172	45,654	43,634
Finland	54,436	54,219	56,296	59,394	62,410	63,762	65,124	66,880	68,962	69,915	72,167	72,838	73,469	74,895	77,667	78,853	80,841	83,340	83,050	78,544
France	70,313	70,950	72,340	72,615	74,115	75,018	75,566	76,920	78,422	79,407	80,356	80,417	80,740	81,515	83,440	84,552	85,586	86,250	86,011	84,919
Germany	61,997	63,110	65,468	65,814	67,633	68,756	69,630	70,953	71,538	72,002	72,947	73,528	73,942	74,486	75,087	75,740	77,657	78,272	78,170	74,323
Greece	50,960	53,481	53,090	51,811	51,878	52,495	53,939	56,180	56,405	58,140	60,456	62,914	63,643	66,638	68,228	69,113	70,798	72,973	74,348	73,729
Hungary	28,483	26,773	28,642	30,690	32,642	33,438	33,741	35,229	36,410	36,945	38,376	40,139	41,988	43,748	46,543	48,303	49,911	50,546	51,390	49,763
Ireland	62,158	63,563	65,459	66,225	67,925	71,327	74,430	78,597	78,574	81,661	85,533	87,733	91,963	94,239	95,349	96,488	97,434	99,457	97,503	98,343
Italy	67,541	67,317	68,333	69,595	72,283	74,475	74,863	76,027	76,338	76,625	77,943	77,789	76,829	75,682	76,504	76,565	76,621	76,698	75,461	72,734
Latvia	24,128	21,267	15,585	14,831	16,864	18,926	19,989	20,749	21,808	22,927	25,322	27,033	27,967	29,406	31,575	34,386	36,775	39,043	37,045	35,172
Lithuania	29,300	26,983	21,733	18,994	18,195	21,593	22,509	24,045	26,088	26,399	28,383	31,493	32,479	35,028	37,611	39,566	41,904	44,781	46,320	42,365
Luxembourg	105,641	110,372	109,361	111,950	113,185	111,929	110,800	113,876	116,070	119,848	123,119	119,599	120,609	120,299	122,862	125,874	128,221	130,743	124,898	119,451
Malta	40,328	41,893	44,720	46,083	47,946	49,689	50,896	53,450	54,948	57,292	55,514	53,664	54,776	54,066	54,881	56,261	57,552	57,846	57,813	56,899
Netherlands	68,436	68,785	68,988	69,563	71,130	71,732	72,555	73,385	74,325	75,859	77,113	77,014	76,689	77,325	79,746	80,980	82,328	83,430	83,786	81,438
Poland	23,072	22,789	23,585	24,939	26,422	28,018	29,414	31,056	32,227	35,066	37,146	38,446	40,215	42,262	43,980	44,596	45,888	46,921	47,422	48,085
Portugal	38,027	38,610	39,677	39,680	40,484	42,307	43,132	43,873	44,830	46,027	46,853	46,923	46,982	46,822	47,588	48,107	48,552	49,732	49,528	49,460
Romania	14,928	13,067	12,291	12,966	13,540	15,293	16,082	15,698	15,301	15,822	16,329	17,442	20,401	21,480	23,697	25,062	26,852	28,444	30,607	28,943
Slovakia	28,435	26,381	27,974	28,522	30,834	32,571	34,121	35,984	37,729	38,721	40,033	41,192	43,042	44,615	46,969	49,420	52,420	56,493	58,267	56,825
Slovenia	38,216	36,828	36,443	37,013	38,710	39,892	42,172	45,088	46,781	48,624	50,107	51,296	52,531	54,232	56,379	59,019	61,544	63,853	64,460	60,549
Spain	62,971	63,808	65,312	66,526	68,434	69,018	69,524	69,701	69,701	69,806	69,782	70,110	70,315	70,303	70,120	69,798	69,866	70,236	71,121	73,358
Sweden	55,417	55,641	57,534	59,099	62,059	63,475	65,020	67,650	69,325	71,067	72,447	71,853	73,604	75,761	79,526	81,821	83,909	84,587	83,295	80,515
United Kingdom	56,880	57,759	64,027	66,047	68,331	69,563	70,905	71,961	73,802	75,317	77,366	78,621	79,660	81,124	82,638	83,580	85,218	86,810	86,650	83,596
Japan	57,434	58,161	57,983	57,862	58,296	59,313	60,624	61,146	60,608	61,367	63,516	64,119	65,310	66,450	68,126	69,181	70,284	71,678	71,088	68,398
China	3,523	3,697	4,004	4,339	4,715	5,340	5,396	5,608	5,537	5,824	6,283	6,844	7,574	8,600	9,371	10,238	11,319	12,668	13,760	14,864
Asia-8																				
India	3,785	3,750	3,859	3,984	4,168	4,406	4,689	4,819	5,066	5,314	5,427	5,603	5,675	6,009	6,303	6,735	7,210	7,685	8,002	8,431
Indonesia	5,914	6,394	6,673	7,095	7,366	8,163	8,227	8,481	7,315	7,278	7,549	7,754	8,015	8,292	8,625	9,093	9,443	9,792	9,883	10,141
Malaysia	20,772	22,078	23,345	24,614	26,150	28,563	28,599	30,084	27,770	28,681	29,770	29,642	30,631	31,331	33,089	34,625	35,830	37,200	38,508	37,023
Philippines	8,401	8,096	7,855	7,796	7,927	8,090	8,087	8,772	8,634	8,571	9,040	8,661	8,774	9,034	9,313	9,496	9,875	10,386	10,603	10,419
Singapore	63,396	59,234	60,922	66,161	69,744	79,192	71,562	75,591	72,111	79,120	87,741	78,837	82,815	85,485	90,025	95,467	93,785	96,881	90,819	88,164
South Korea	29,636	31,575	32,758	34,422	36,274	38,414	40,303	41,897	42,043	45,740	47,734	48,664	50,745	52,249	53,653	55,045	57,146	59,330	60,324	60,616
Taiwan	39,993	42,348	44,530	46,914	49,380	51,914	54,649	56,963	58,220	61,066	63,884	63,552	66,395	67,976	70,612	72,773	75,448	78,540	78,285	77,717
Thailand	8,907	9,913	10,167	11,222	12,245	13,094	13,794	13,370	12,528	12,847	13,186	13,131	13,429	14,057	14,566	15,009	15,603	16,117	16,190	15,537
Central Europe/Asia																				
Albania	8,176	6,039	5,690	6,221	6,753	7,806	10,907	9,804	10,904	12,609	13,412	14,545	17,517	18,408	19,354	20,453	21,495	22,786	24,358	25,145

Appendix table 6-14

## Real GDP per employed person, by region/country/economy: 1990-2009

(2009 U.S. PPP dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Armenia	8,082	7,286	4,624	4,383	4,793	5,162	5,620	6,075	6,691	7,117	7,658	8,474	11,146	12,698	14,363	16,114	18,331	20,679	21,797	18,444
Belarus	17,113	17,307	15,767	14,946	13,640	13,022	13,521	15,048	16,146	16,607	17,572	18,501	19,590	21,161	23,704	25,743	27,981	29,686	32,093	31,951
Bosnia & Herzegovina	13,086	12,274	9,531	7,096	7,663	8,012	11,626	15,460	17,396	18,485	19,095	19,276	20,978	22,120	23,791	24,606	26,022	26,026	26,427	24,529
Croatia	46,971	40,232	39,983	32,624	34,778	37,659	36,707	37,988	39,978	40,726	40,362	44,313	44,857	46,805	47,981	49,619	52,280	53,296	53,973	52,141
Georgia	15,824	12,583	8,800	6,883	6,320	6,562	7,111	7,843	8,630	8,872	8,510	8,735	9,407	10,590	11,406	12,778	13,955	16,073	17,495	17,881
Kazakhstan	23,397	17,488	16,862	16,663	15,407	14,209	14,349	14,706	14,653	15,689	16,977	17,836	19,552	20,526	21,879	23,740	25,787	27,231	27,349	25,782
Kyrgyz Republic	9,603	8,819	7,255	6,699	5,471	5,186	5,520	5,931	6,000	6,011	6,324	6,589	6,515	6,527	6,775	6,483	6,618	6,991	7,415	7,602
Macedonia	37,651	34,960	32,638	30,244	29,753	29,393	29,639	30,062	30,055	31,551	32,886	31,931	32,386	33,949	36,117	36,831	37,103	37,758	37,305	35,389
Moldova	16,510	13,670	9,759	9,702	6,763	6,742	6,436	6,656	6,338	6,256	6,302	6,759	7,257	8,586	9,502	10,193	11,203	11,632	12,506	11,658
Russia	31,435	30,461	26,686	24,784	22,384	22,137	21,487	22,207	21,310	22,610	24,668	25,739	26,716	28,478	30,318	32,068	34,333	36,640	38,435	36,180
Serbia & Montenegro	30,072	27,886	20,073	13,785	13,997	14,683	15,541	17,248	17,361	14,541	15,718	16,560	17,483	18,098	19,506	20,424	22,215	23,495	23,332	23,785
Tajikistan	14,566	13,152	9,222	7,946	6,252	5,887	4,884	4,801	5,042	5,405	5,827	6,091	6,650	7,278	7,246	7,645	8,056	8,617	9,222	10,006
Turkey	25,468	24,730	25,984	29,492	25,835	26,931	28,010	30,104	30,235	28,869	31,476	29,760	31,840	33,837	35,936	38,514	40,657	41,924	41,313	39,071
Ukraine	22,687	20,963	19,257	16,906	13,537	11,541	10,603	10,575	10,485	10,720	11,647	12,876	13,322	14,552	16,319	16,452	17,618	18,859	19,230	16,938
Middle East/North Africa																				
Bahrain	48,740	47,951	49,491	54,047	52,157	52,461	52,856	52,779	53,521	54,028	55,017	55,913	57,023	59,384	60,928	64,796	68,145	72,508	75,936	77,110
Egypt	12,497	12,444	12,164	12,216	12,419	12,662	12,961	13,402	14,038	14,499	14,890	15,008	15,069	15,139	15,335	15,658	16,290	17,163	18,011	18,461
Iran	26,978	29,663	30,138	28,802	27,780	27,478	28,305	27,998	27,469	26,735	26,971	26,858	27,749	28,725	29,164	29,493	30,739	32,675	33,327	33,843
Iraq	26,891	9,695	12,159	11,767	10,823	9,562	10,397	9,660	10,738	11,238	12,089	12,800	13,301	10,102	14,984	14,127	14,591	14,408	15,376	15,630
Israel	57,402	55,992	57,258	56,742	58,181	62,052	63,605	63,733	64,323	64,176	67,644	65,944	64,352	63,747	65,241	67,088	68,873	70,041	69,123	66,062
Jordan	18,564	16,013	16,771	15,946	15,496	15,542	15,084	14,988	14,876	15,100	15,309	15,661	16,202	16,387	17,263	18,045	18,803	19,448	19,908	19,432
Kuwait	70,226	70,824	70,011	84,161	82,146	74,835	69,357	66,606	67,092	66,106	71,560	71,301	67,549	73,726	74,334	75,871	77,653	77,602	80,333	76,165
Morocco	9,630	10,077	9,331	8,949	9,713	8,721	9,596	9,060	9,510	9,257	9,338	10,160	10,351	10,570	10,751	10,936	11,579	11,624	12,049	12,444
Oman	57,942	57,706	58,613	58,186	56,967	57,027	56,439	58,316	58,551	56,705	58,299	60,447	60,366	59,273	60,053	61,509	63,676	66,923	73,266	73,840
Qatar	76,812	72,363	76,294	73,973	73,848	75,349	80,316	103,244	110,633	112,277	117,344	114,724	107,695	102,463	106,988	101,953	101,839	100,460	102,573	98,603
Saudi Arabia	73,086	78,294	80,305	77,899	75,874	73,604	73,702	72,913	72,328	68,969	69,871	67,538	64,926	67,523	68,709	70,002	69,881	69,306	70,592	69,017
Syria	14,734	15,496	16,654	16,936	16,960	16,945	16,927	16,252	16,653	15,624	15,529	15,641	16,027	15,172	15,432	15,330	15,486	15,504	15,708	15,738
Tunisia	15,511	15,604	16,290	16,122	16,094	16,007	16,660	17,081	17,492	18,161	18,596	19,103	19,009	19,737	20,531	20,936	21,540	22,448	23,039	23,261
Yemen	10,088	10,077	10,268	9,984	9,999	10,107	10,135	10,291	10,579	10,601	10,854	10,824	10,799	10,726	10,701	10,847	10,726	10,627	10,566	10,528
South and Central America																				
Argentina	23,275	25,373	27,667	29,332	31,153	29,483	30,966	33,746	35,136	33,783	33,093	31,113	31,163	31,935	32,679	33,301	34,675	37,411	39,308	39,311
Bolivia	9,963	10,479	10,494	10,689	11,112	11,330	11,588	11,613	11,780	11,437	11,354	11,389	11,697	11,074	11,238	11,445	11,678	11,855	12,252	12,347
Brazil	16,525	16,568	16,417	17,116	17,884	18,389	19,244	19,775	19,573	19,354	19,090	19,201	18,976	18,872	18,997	19,025	19,309	20,088	20,751	21,130
Chile	21,516	22,448	24,441	25,658	26,642	29,110	30,597	32,067	32,519	31,677	32,587	32,179	32,293	32,593	33,878	34,529	33,264	33,998	34,167	32,684
Colombia	19,561	18,476	19,273	19,258	19,044	21,067	20,711	21,795	21,671	20,210	20,140	19,714	20,262	19,974	20,530	20,883	22,967	24,128	24,220	23,806
Ecuador	19,073	19,396	19,036	18,458	18,462	18,141	18,651	18,685	19,059	18,144	17,968	17,703	17,650	18,074	17,864	18,774	18,827	19,291	20,394	20,161
Mexico	33,352	33,623	34,041	34,180	34,708	33,210	33,568	33,890	34,681	35,589	37,173	37,140	36,587	36,829	37,062	38,059	38,568	39,172	38,890	36,694
Peru	13,127	13,001	12,923	14,165	17,045	18,668	18,779	19,057	18,423	18,095	18,944	19,105	19,898	20,652	21,237	21,789	21,512	21,660	23,310	23,037
Senegal	3,946	3,929	3,863	3,801	3,690	3,780	3,738	3,741	3,845	3,972	3,973	4,031	3,927	4,065	4,176	4,275	4,243	4,314	4,272	4,199
Uruguay	22,252	23,199	24,646	25,091	26,204	25,428	27,560	29,010	32,214	31,922	31,889	30,563	28,184	28,973	31,018	31,987	26,986	27,688	28,756	27,754
Venezuela	28,280	30,065	30,902	30,093	28,351	28,542	27,584	28,703	28,002	25,532	25,678	25,882	23,722	21,715	25,485	28,734	30,666	32,739	33,471	31,906

Appendix table 6-14

**Real GDP per employed person, by region/country/economy: 1990–2009**

(2009 U.S. PPP dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Sub-Saharan Africa																				
Angola	7,089	6,948	6,311	4,607	4,518	5,044	5,887	6,049	5,886	5,907	5,905	5,892	6,543	6,534	7,029	8,227	9,470	11,062	12,149	11,741
Burkina Faso	1,856	1,969	1,916	1,927	1,896	1,950	2,106	2,176	2,267	2,338	2,322	2,390	2,400	2,489	2,507	2,627	2,682	2,689	2,746	2,750
Cameroon	6,572	6,116	5,735	5,371	5,065	5,075	5,160	5,259	5,359	5,421	5,475	5,561	5,616	5,676	5,729	5,689	5,710	5,735	5,740	5,694
Côte d'Ivoire	4,806	4,618	4,423	4,800	4,623	4,701	4,903	5,015	5,071	4,997	4,620	4,509	4,335	4,176	4,155	4,141	4,066	4,028	4,015	4,057
Congo (Democratic Republic)	1,971	1,736	1,490	1,235	1,143	1,116	1,074	989	949	886	801	760	763	781	807	842	861	886	909	905
Ethiopia	1,188	1,097	1,008	1,113	1,140	1,173	1,289	1,304	1,224	1,255	1,255	1,302	1,271	1,182	1,240	1,335	1,430	1,541	1,639	1,742
Kenya	3,906	3,799	3,605	3,451	3,399	3,411	3,421	3,312	3,311	3,283	3,191	3,234	3,137	3,124	3,171	3,263	3,372	3,514	3,473	3,452
Madagascar	2,507	2,272	2,227	2,203	2,132	2,105	2,085	2,101	2,121	2,160	2,189	2,253	1,906	2,032	2,073	2,101	2,138	2,200	2,281	2,098
Malawi	1,481	1,564	1,420	1,538	1,361	1,521	1,633	1,692	1,658	1,668	1,634	1,523	1,507	1,557	1,602	1,610	1,783	1,756	1,869	1,964
Mali	3,081	3,305	3,157	3,224	3,281	3,306	3,492	3,624	3,861	3,898	3,688	4,047	4,099	4,273	4,199	4,338	4,476	4,537	4,642	4,729
Niger	2,613	2,575	2,312	2,251	2,246	2,008	2,017	1,937	2,087	2,016	1,880	1,951	1,989	2,064	1,978	2,082	2,137	2,145	2,277	2,193
Nigeria	4,761	4,610	4,501	4,466	4,372	4,236	4,322	4,310	4,296	4,189	4,282	4,498	5,295	5,698	6,147	6,310	6,529	6,805	7,016	7,210
South Africa	30,415	28,999	27,248	26,470	26,279	26,073	26,224	25,956	25,106	24,723	24,811	24,680	25,045	25,182	25,879	26,692	27,605	28,499	28,347	26,708
Sudan	40	43	41	43	42	42	43	46	47	47	49	51	52	55	56	58	62	67	69	70
Tanzania	1,899	1,870	1,814	1,770	1,736	1,740	1,765	1,778	1,795	1,809	1,850	1,911	1,995	2,075	2,180	2,277	2,366	2,466	2,578	2,646
Uganda	1,508	1,488	1,483	1,562	1,617	1,752	1,860	1,910	1,929	2,032	2,079	2,123	2,235	2,306	2,382	2,451	2,627	2,750	2,890	2,990
Zambia	4,313	4,143	4,086	3,966	3,319	3,127	3,253	3,265	3,108	3,096	3,136	3,224	3,270	3,383	3,508	3,625	3,778	3,927	4,057	4,217
Other developed																				
Australia	65,414	66,747	69,375	70,693	71,044	71,944	74,164	76,332	78,743	80,059	79,991	81,943	82,372	84,462	84,558	84,538	85,316	86,248	87,152	88,183
Canada	66,173	65,941	67,185	68,432	70,277	70,988	71,495	72,992	74,156	76,308	78,381	78,831	79,207	78,835	79,898	81,163	81,858	82,006	81,097	80,210
Iceland	54,360	54,239	52,409	53,214	54,694	53,100	55,626	58,360	59,579	59,834	61,183	62,542	63,548	64,997	70,318	73,187	72,807	73,831	73,949	73,428
New Zealand	65,071	63,528	66,079	69,587	69,659	69,897	69,885	70,981	69,582	71,005	72,848	73,473	74,816	75,924	76,224	75,391	74,370	75,760	73,581	74,026
Norway	80,608	83,967	87,096	88,868	92,099	94,008	96,838	99,172	99,203	100,291	102,929	104,617	105,779	107,960	111,649	113,293	111,835	110,404	108,870	107,693
Switzerland	66,173	64,335	65,368	65,801	67,022	67,233	67,651	69,018	69,870	70,223	71,986	71,652	71,652	71,630	73,241	74,859	75,854	76,370	76,290	74,535
Other developing																				
Bangladesh	3,044	3,072	3,188	3,293	3,386	3,509	3,627	3,776	3,925	4,066	4,256	4,292	4,294	4,330	4,501	4,665	4,866	5,065	5,264	5,448
Cambodia	1,786	1,862	1,931	1,948	2,126	1,811	2,111	2,244	2,125	2,128	2,414	2,196	2,292	2,291	2,343	2,600	2,812	3,021	3,181	3,076
Pakistan	6,599	7,232	7,471	7,429	7,566	7,917	8,242	7,898	7,775	7,922	8,342	8,359	8,520	8,523	8,693	9,296	8,976	9,441	9,512	9,308
Sri Lanka	8,426	8,888	9,378	9,563	9,952	10,353	10,395	10,923	10,607	11,001	11,237	11,216	11,155	10,987	10,983	12,264	13,073	14,088	14,359	14,904
Vietnam	2,547	2,633	2,788	2,946	3,137	3,360	3,594	3,805	3,940	4,042	4,130	4,312	4,500	4,700	4,944	5,214	5,489	5,791	5,991	6,140

EU = European Union; GDP = gross domestic product; PPP = purchasing power parity

NOTE: GDP per capita in 2009 US\$ converted to 2009 price levels with updated 2005 purchasing power parity price indexes.

SOURCE: The Conference Board, Total Economy Database (October 2010), <http://www.conference-board.org/economics>, accessed 23 October 2010.

Appendix table 6-15

## Real GDP per capita, by region/country/economy: 1990–2009

(2009 U.S. PPP dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
United States	34,920	34,366	35,047	35,581	36,594	37,082	38,041	39,262	40,496	41,965	43,217	43,238	43,606	44,304	45,461	46,421	47,208	47,651	47,213	45,576
EU	22,587	22,744	22,879	22,777	23,383	23,995	24,416	25,047	25,757	26,504	27,474	27,952	28,230	28,543	29,199	29,675	30,535	31,318	31,480	30,123
Austria	30,525	31,159	31,360	31,187	31,723	32,448	33,116	33,782	34,959	36,057	37,285	37,395	37,933	38,170	39,083	39,996	41,394	42,901	43,640	42,124
Belgium	28,827	29,252	29,579	29,178	30,008	30,626	30,985	32,079	32,643	33,738	34,884	35,063	35,472	35,686	36,778	37,370	38,350	39,428	39,710	38,475
Bulgaria	8,576	7,964	7,484	7,563	7,781	8,098	7,422	7,091	7,462	7,710	8,204	8,626	9,104	9,652	10,390	11,139	11,947	12,792	13,674	13,090
Cyprus	17,352	16,991	18,113	17,760	18,367	19,753	19,716	19,813	20,482	21,160	21,913	22,479	22,606	22,616	23,033	23,377	23,862	24,659	25,122	24,277
Czech Republic	19,367	17,125	17,020	17,013	17,385	18,428	19,193	19,073	18,946	19,220	19,941	20,446	20,846	21,608	22,588	24,026	25,676	27,268	27,910	26,759
Denmark	30,007	30,318	30,815	30,686	32,275	33,092	33,840	34,780	35,403	36,191	37,347	37,481	37,523	37,531	38,257	39,055	40,246	40,796	40,317	38,186
Estonia	11,506	10,420	9,132	8,564	8,561	8,928	9,560	10,791	11,619	11,677	12,934	14,007	15,228	16,493	17,805	19,612	21,824	23,483	22,436	19,440
Finland	27,079	25,312	24,297	23,989	24,753	25,640	26,478	28,044	29,379	30,460	32,022	32,680	33,193	33,783	35,105	36,067	37,600	39,552	39,988	36,712
France	27,636	27,752	27,967	27,566	28,046	28,511	28,699	29,208	30,091	30,936	31,982	32,393	32,540	32,713	33,327	33,755	34,296	34,848	34,754	33,694
Germany	29,120	30,376	30,816	30,367	31,066	31,561	31,782	32,308	32,959	33,601	34,632	35,022	34,992	34,895	35,306	35,569	36,698	37,613	38,101	36,238
Greece	20,147	20,526	20,521	20,080	20,390	20,763	21,208	21,932	22,631	23,368	24,363	25,331	26,147	27,644	28,863	29,452	30,727	32,047	32,636	31,945
Hungary	14,629	12,856	12,480	12,472	12,881	13,093	13,254	13,866	14,624	15,286	16,074	16,768	17,537	18,323	19,250	19,959	20,775	21,001	21,107	19,886
Ireland	20,826	21,092	21,632	22,086	23,246	25,356	27,238	29,998	32,119	35,100	37,940	39,595	41,512	42,585	43,573	45,073	46,277	47,746	45,276	41,371
Italy	26,912	27,323	27,488	27,155	27,666	28,401	28,665	29,145	29,517	29,922	30,964	31,459	31,557	31,513	31,963	32,147	32,785	33,223	32,783	31,081
Latvia	12,761	11,204	7,711	6,965	7,237	7,380	7,733	8,462	8,951	9,318	10,036	10,926	11,723	12,659	13,856	15,433	17,439	19,306	18,605	15,360
Lithuania	14,692	13,831	10,896	9,156	8,283	8,699	9,163	9,858	10,620	10,514	10,868	11,627	12,468	13,795	14,859	16,069	17,381	19,147	19,733	16,863
Luxembourg	51,887	55,763	55,997	57,538	58,897	58,873	58,924	61,616	64,771	69,244	74,021	74,860	76,895	77,063	79,422	82,685	86,217	90,689	89,638	85,524
Malta	14,672	15,386	16,483	16,944	17,546	18,594	19,171	19,954	20,483	21,142	20,842	20,404	20,852	20,700	20,799	21,543	22,232	22,958	23,453	22,863
Netherlands	30,648	31,156	31,462	31,648	32,358	33,200	34,179	35,466	36,635	38,102	39,340	39,823	39,593	39,480	40,128	40,726	41,894	43,329	43,946	42,047
Poland	9,760	9,043	9,242	9,564	10,049	10,733	11,394	12,194	12,796	13,376	13,950	14,122	14,333	14,896	15,701	16,279	17,302	18,485	19,396	19,760
Portugal	17,753	18,536	18,721	18,265	18,331	19,044	19,674	20,422	21,310	22,052	22,802	23,136	23,196	22,878	23,137	23,220	23,466	23,942	23,876	23,161
Romania	9,123	7,960	7,269	7,388	7,687	8,250	8,596	8,095	7,722	7,641	7,836	8,292	8,733	9,215	10,023	10,463	11,311	12,050	12,962	12,064
Slovakia	14,243	12,120	11,299	11,469	12,131	12,801	13,660	14,231	14,831	14,820	15,011	15,521	16,217	16,973	17,803	18,962	20,544	22,577	23,894	22,722
Slovenia	18,460	16,747	15,834	16,279	17,137	18,287	18,897	19,783	20,496	21,609	22,547	23,182	24,099	24,781	25,845	27,008	28,599	30,582	31,750	29,198
Spain	22,085	22,583	22,741	22,458	22,952	23,552	24,087	24,964	25,990	27,084	28,215	28,918	29,277	29,698	30,184	30,771	31,483	32,046	31,828	30,393
Sweden	29,456	28,906	28,392	27,646	28,552	29,522	29,949	30,742	32,016	33,481	34,918	35,294	36,113	36,890	38,384	39,529	41,160	42,456	42,123	39,835
United Kingdom	26,949	26,498	26,463	26,995	28,077	28,844	29,596	30,497	31,497	32,463	33,603	34,294	34,880	35,726	36,595	37,167	38,002	38,718	38,681	36,520
Japan	29,833	30,723	30,879	30,848	31,028	31,530	32,283	32,707	31,963	31,855	32,706	32,703	32,734	33,152	34,029	34,672	35,385	36,244	35,861	34,003
China	1,989	2,090	2,261	2,446	2,654	3,001	3,034	3,161	3,129	3,299	3,567	3,901	4,337	4,941	5,404	5,925	6,566	7,367	8,011	8,668
Asia-8																				
India	1,403	1,398	1,447	1,502	1,570	1,653	1,753	1,795	1,881	1,967	2,018	2,097	2,140	2,283	2,437	2,598	2,804	3,013	3,165	3,352
Indonesia	2,502	2,681	2,827	2,982	3,154	3,357	3,559	3,667	3,137	3,114	3,220	3,295	3,389	3,502	3,631	3,789	3,948	4,145	4,345	4,490
Malaysia	7,933	8,457	8,971	9,615	10,238	10,966	11,763	12,300	11,099	11,480	12,174	11,935	12,296	12,695	13,240	13,681	14,227	14,888	15,325	14,814
South Korea	12,502	13,568	14,187	14,925	16,085	17,371	18,471	19,391	18,147	19,950	21,541	22,236	23,696	24,248	25,263	26,180	27,468	28,795	29,378	29,357
Philippines	2,867	2,787	2,738	2,738	2,797	2,861	2,958	3,041	2,958	2,993	3,055	3,039	3,105	3,190	3,322	3,417	3,528	3,702	3,763	3,728
Singapore	31,978	30,987	31,858	34,214	36,646	38,046	38,514	41,267	39,408	42,460	45,532	43,383	43,860	44,136	46,277	48,895	52,315	56,003	56,328	55,007
Taiwan	16,422	17,532	18,679	19,746	21,037	22,171	23,216	24,283	24,899	26,178	27,477	26,838	28,106	29,018	30,706	32,039	33,661	35,555	35,718	34,955
Thailand	4,834	5,178	5,522	5,900	6,347	6,845	7,160	6,981	6,179	6,391	6,639	6,725	7,024	7,464	7,875	8,173	8,536	8,890	9,055	8,791
Central Europe/Asia																				
Albania	3,041	2,234	2,146	2,357	2,516	2,808	3,793	3,359	3,676	4,205	4,527	4,934	5,192	5,543	5,906	6,291	6,674	7,109	7,686	7,905

Appendix table 6-15

## Real GDP per capita, by region/country/economy: 1990–2009

(2009 U.S. PPP dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Armenia	4,274	3,708	2,196	2,093	2,281	2,483	2,634	2,725	2,935	3,032	3,216	3,540	4,092	4,685	5,194	5,931	6,728	7,665	8,206	7,049
Belarus	8,641	8,517	7,679	7,083	6,263	5,627	5,802	6,492	7,066	7,330	7,777	8,173	8,620	9,270	10,381	11,415	12,612	13,752	15,222	15,318
Bosnia & Herzegovina	3,554	3,123	2,354	1,752	1,880	2,034	3,224	4,407	4,856	5,129	5,304	5,311	5,498	5,601	5,812	5,924	6,191	6,496	6,810	6,547
Croatia	16,332	12,795	11,415	10,520	11,079	11,870	12,655	13,573	13,938	13,765	14,175	14,624	15,276	15,974	16,656	17,360	18,188	19,189	19,650	18,516
Georgia	7,686	6,068	3,384	2,442	2,243	2,350	2,657	2,967	3,081	3,192	3,277	3,456	3,659	4,079	4,333	4,766	5,231	5,896	6,052	5,833
Kazakhstan	9,246	8,176	7,725	7,053	6,267	5,863	5,961	6,145	6,122	6,355	7,002	7,937	8,700	9,490	10,376	11,351	12,527	13,595	13,980	13,226
Kyrgyz Republic	3,830	3,477	2,963	2,508	2,006	1,878	1,982	2,148	2,163	2,211	2,305	2,403	2,374	2,511	2,654	2,616	2,660	2,848	3,023	3,100
Macedonia	9,506	8,889	8,210	7,485	7,287	7,136	7,158	7,211	7,415	7,700	8,012	7,614	7,654	7,852	8,153	8,465	8,778	9,293	9,728	9,519
Moldova	6,245	5,121	3,622	3,574	2,470	2,441	2,303	2,344	2,193	2,123	2,174	2,314	2,501	2,674	2,876	3,097	3,250	3,352	3,618	3,386
Russia	16,002	15,169	12,960	11,834	10,327	9,900	9,555	9,703	9,200	9,815	10,848	11,457	12,068	13,020	14,029	15,002	16,234	17,628	18,705	17,308
Serbia & Montenegro	11,810	10,474	7,560	5,226	5,349	5,670	5,983	6,430	6,599	5,417	5,743	6,109	6,354	6,522	7,080	7,502	7,925	8,510	9,024	8,808
Tajikistan	5,357	4,794	3,201	2,657	2,070	1,921	1,467	1,466	1,513	1,537	1,632	1,758	1,914	2,089	2,262	2,369	2,479	2,618	2,772	2,814
Turkey	8,572	8,488	8,831	9,370	8,704	9,168	9,643	10,194	10,335	9,825	10,323	9,582	10,015	10,382	11,186	11,949	12,590	12,994	12,902	12,089
Ukraine	11,109	10,122	9,091	7,795	6,036	5,343	4,848	4,744	4,692	4,727	5,055	5,578	5,926	6,548	7,399	7,657	8,280	8,999	9,267	7,909
Middle East/North Africa																				
Bahrain	21,782	21,528	22,345	24,547	23,849	24,172	24,585	24,828	25,503	26,099	26,961	27,711	28,662	30,233	31,438	33,394	35,089	37,387	39,129	39,731
Egypt	3,712	3,725	3,686	3,743	3,848	3,967	4,104	4,253	4,476	4,648	4,794	4,857	4,905	4,954	5,047	5,161	5,399	5,661	5,942	6,094
Iran	7,398	8,000	8,097	7,870	7,798	7,910	8,355	8,517	8,631	8,688	9,024	9,234	9,817	10,443	10,877	11,252	11,763	12,528	12,653	12,724
Iraq	6,400	2,465	3,115	3,023	2,787	2,459	2,686	2,506	2,798	2,948	3,180	3,369	3,504	2,664	3,947	3,726	3,853	3,809	4,064	4,133
Israel	21,671	21,835	22,558	22,587	23,344	24,839	25,469	25,525	25,935	26,110	27,792	27,172	26,491	26,384	27,176	28,032	28,980	29,951	30,613	30,315
Jordan	4,259	3,889	4,177	4,237	4,342	4,510	4,490	4,530	4,562	4,614	4,704	4,843	5,009	5,102	5,415	5,725	5,772	5,888	6,205	6,236
Kuwait	28,022	37,112	37,621	48,099	49,966	48,485	46,702	45,893	45,747	43,296	43,755	42,379	42,214	47,904	51,070	54,604	55,446	54,859	56,315	52,892
Morocco	3,053	3,205	3,023	2,942	3,192	2,933	3,240	3,121	3,312	3,284	3,292	3,495	3,566	3,745	3,877	3,946	4,204	4,268	4,456	4,636
Oman	18,643	19,009	19,842	20,277	20,425	20,795	20,801	21,498	21,521	20,871	21,336	22,025	22,007	21,632	21,935	22,570	23,477	24,822	27,344	27,719
Qatar	46,545	43,883	45,996	44,367	43,876	44,165	46,209	57,754	60,796	61,291	64,757	65,516	64,399	65,317	73,478	77,525	87,298	97,752	111,851	120,713
Saudi Arabia	22,959	24,673	24,672	23,873	23,285	22,644	22,757	22,729	22,786	22,077	22,622	22,240	21,791	22,976	23,710	24,559	24,881	24,942	25,584	25,205
Syria	3,858	4,129	4,543	4,746	4,875	5,002	5,013	4,828	4,964	4,686	4,674	4,727	4,886	4,669	4,867	4,969	5,017	4,934	4,985	5,080
Tunisia	4,587	4,676	4,947	4,964	5,034	5,072	5,355	5,569	5,762	6,041	6,253	6,498	6,540	6,831	7,169	7,388	7,706	8,115	8,408	8,571
Yemen	2,152	2,205	2,299	2,302	2,370	2,425	2,461	2,509	2,577	2,590	2,663	2,678	2,697	2,712	2,734	2,800	2,804	2,813	2,833	2,861
South and Central America																				
Argentina	8,650	9,431	10,196	10,642	11,121	10,673	11,134	11,897	12,215	11,672	11,452	10,843	9,584	10,339	11,155	12,042	12,919	13,890	14,676	14,652
Bolivia	3,469	3,566	3,540	3,606	3,691	3,780	3,861	3,968	4,080	4,013	4,028	4,012	4,027	4,052	4,138	4,236	4,355	4,468	4,656	4,734
Brazil	7,762	7,719	7,557	7,805	8,133	8,345	8,394	8,546	8,421	8,318	8,550	8,539	8,643	8,621	8,990	9,151	9,392	9,798	10,171	10,079
Chile	7,253	7,699	8,504	8,956	9,324	10,166	10,769	11,327	11,542	11,313	11,681	11,936	12,062	12,400	13,013	13,600	14,087	14,608	14,932	14,533
Colombia	6,575	6,595	6,745	6,991	7,212	7,453	7,490	7,640	7,580	7,180	7,324	7,407	7,496	7,735	7,983	8,325	8,784	9,325	9,431	9,344
Ecuador	6,026	6,271	6,291	6,192	6,331	6,297	6,303	6,410	6,405	5,895	5,974	6,202	6,365	6,468	6,832	7,086	7,227	7,293	7,649	7,504
Mexico	11,837	12,113	12,321	12,332	12,653	11,675	12,079	12,696	13,139	13,454	14,153	13,963	13,902	13,927	14,322	14,618	15,147	15,462	15,515	14,298
Peru	4,914	4,947	4,825	4,951	5,472	5,826	5,860	6,150	6,006	5,964	6,046	5,968	6,175	6,331	6,553	6,904	7,338	7,884	8,543	8,505
Uruguay	8,130	8,359	8,959	9,135	9,731	9,525	9,985	10,410	10,810	10,440	10,228	9,823	8,688	8,826	9,814	10,407	11,077	11,856	12,848	12,940
Venezuela	9,025	9,670	10,025	9,836	9,408	9,588	9,389	9,808	9,669	8,943	9,129	9,300	8,354	7,596	8,855	9,628	10,425	11,109	11,468	11,037
Sub-Saharan Africa																				
Angola	3,913	3,859	3,532	2,618	2,593	2,904	3,401	3,513	3,449	3,500	3,549	3,604	4,043	4,065	4,387	5,148	5,958	7,008	7,762	7,568

Appendix table 6-15

**Real GDP per capita, by region/country/economy: 1990–2009**

(2009 U.S. PPP dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Burkina Faso	864	911	883	884	865	883	950	979	1,019	1,049	1,046	1,073	1,071	1,112	1,126	1,187	1,214	1,218	1,242	1,243
Cameroon	2,407	2,251	2,123	2,001	1,900	1,914	1,961	2,011	2,062	2,103	2,139	2,184	2,217	2,251	2,281	2,281	2,302	2,324	2,338	2,332
Congo (Democratic Republic)	678	601	521	437	406	393	381	356	343	318	287	273	273	281	290	304	311	320	329	327
Côte d'Ivoire	1,800	1,725	1,672	1,829	1,766	1,806	1,897	1,954	1,995	1,981	1,841	1,796	1,730	1,665	1,652	1,646	1,623	1,614	1,616	1,641
Ethiopia	523	483	445	493	507	520	569	575	540	553	557	583	573	536	565	612	655	704	749	795
Kenya	1,647	1,616	1,541	1,492	1,493	1,518	1,541	1,508	1,523	1,524	1,498	1,529	1,493	1,493	1,519	1,565	1,619	1,684	1,663	1,652
Madagascar	1,156	1,051	1,031	1,022	991	977	968	974	982	998	1,011	1,040	884	941	961	975	994	1,025	1,065	981
Malawi	609	636	568	612	558	639	685	709	696	701	687	640	634	652	670	674	745	734	781	821
Mali	951	1,014	955	969	979	985	1,037	1,063	1,122	1,123	1,059	1,154	1,171	1,222	1,205	1,247	1,290	1,310	1,339	1,363
Niger	770	765	694	682	686	620	629	611	665	649	609	635	644	664	635	663	676	673	709	677
Nigeria	1,447	1,402	1,373	1,367	1,345	1,309	1,341	1,346	1,351	1,326	1,365	1,443	1,710	1,845	1,997	2,060	2,143	2,246	2,332	2,415
Senegal	1,499	1,495	1,474	1,455	1,418	1,456	1,448	1,457	1,504	1,562	1,575	1,606	1,575	1,636	1,686	1,734	1,730	1,765	1,759	1,740
South Africa	8,227	7,972	7,648	7,582	7,691	7,825	8,054	8,160	8,089	8,175	8,413	8,546	8,763	8,926	9,240	9,636	10,082	10,538	10,832	10,580
Sudan	12	13	12	13	12	12	13	14	14	14	15	16	16	17	17	18	19	21	22	22
Tanzania	923	915	893	873	853	855	875	886	894	901	920	951	996	1,040	1,098	1,154	1,207	1,266	1,332	1,377
Uganda	685	673	667	697	715	775	823	844	851	891	911	930	980	1,010	1,043	1,071	1,145	1,198	1,257	1,304
Zambia	1,615	1,558	1,545	1,502	1,268	1,201	1,251	1,257	1,200	1,194	1,202	1,225	1,234	1,267	1,305	1,342	1,390	1,437	1,476	1,525
Other developed																				
Australia	29,944	29,580	30,273	31,137	32,194	33,176	34,053	35,138	36,543	37,564	37,860	38,819	39,552	40,707	41,384	42,155	43,195	44,244	44,667	44,729
Canada	31,349	30,336	30,143	30,413	31,464	31,956	32,110	33,158	34,239	35,818	37,354	37,685	38,463	38,881	39,788	40,671	41,473	42,149	41,971	40,508
Iceland	29,213	28,908	27,697	27,819	28,302	28,181	29,368	30,562	32,160	33,080	34,048	34,915	34,573	35,037	37,364	39,783	41,244	43,331	43,392	40,174
New Zealand	22,617	22,056	22,058	23,178	24,066	24,702	25,167	25,311	25,266	26,461	26,952	27,640	28,539	29,299	30,008	30,649	30,597	31,173	30,701	30,260
Norway	39,126	40,154	41,330	42,229	44,110	45,720	47,808	50,107	51,138	51,815	53,155	53,940	54,504	54,817	56,696	58,015	59,109	60,499	61,368	60,218
Switzerland	38,720	37,889	37,521	37,118	37,263	37,171	37,280	37,986	38,912	39,286	40,503	40,721	40,621	40,286	41,070	41,938	43,261	44,611	45,237	44,440
Other developing																				
Bangladesh	907	923	955	982	1,006	1,039	1,070	1,109	1,147	1,182	1,231	1,273	1,306	1,351	1,411	1,470	1,542	1,615	1,688	1,757
Cambodia	685	712	729	724	766	797	821	850	876	968	1,033	1,096	1,155	1,235	1,343	1,499	1,636	1,774	1,861	1,792
Pakistan	1,768	1,814	1,901	1,901	1,935	1,981	2,055	2,038	2,059	2,095	2,119	2,101	2,119	2,180	2,300	2,461	2,557	2,683	2,735	2,723
Sri Lanka	2,449	2,539	2,621	2,764	2,880	3,002	3,081	3,247	3,367	3,477	3,648	3,560	3,660	3,834	4,000	4,208	4,484	4,741	4,975	5,103
Vietnam	1,113	1,154	1,230	1,305	1,396	1,504	1,619	1,725	1,799	1,860	1,961	2,069	2,187	2,318	2,467	2,641	2,823	3,025	3,178	3,308

EU = European Union; GDP = gross domestic product; PPP = purchasing power parity

NOTE: GDP per capita in 2009 US\$ converted to 2009 price levels with updated 2005 purchasing power parity price indexes.

SOURCE: The Conference Board, Total Economy Database (October 2010), <http://www.conference-board.org/economics>, accessed 23 October 2010.



Appendix table 6-16

## Value added of pharmaceuticals, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	100,866	110,452	122,481	127,386	136,137	148,492	150,698	147,160	146,549	162,978
United States	24,908	28,854	32,033	33,490	38,012	38,300	41,484	43,007	46,124	51,044
EU	34,590	36,897	40,429	36,668	39,337	45,673	46,622	44,440	45,183	49,208
Belgium	1,179	1,266	1,443	1,409	1,548	2,241	2,250	2,025	1,938	2,474
Czech Republic	58	92	108	86	111	174	182	186	162	161
Denmark	724	805	967	788	1,060	1,286	1,152	1,380	1,462	1,677
Finland	329	343	313	220	288	320	301	280	304	298
France	5,214	5,492	5,991	6,187	6,422	7,924	7,609	7,389	7,545	7,669
Germany	7,438	7,705	8,437	7,869	8,490	10,225	10,396	9,136	8,701	9,332
Ireland	410	422	586	604	1,006	1,273	1,156	1,218	1,686	2,373
Italy	6,907	6,815	7,034	5,601	5,923	5,466	6,789	6,097	6,256	7,217
Netherlands	671	778	915	1,216	1,178	1,620	1,547	1,486	1,374	1,540
Poland	205	183	211	200	335	493	489	501	492	470
Spain	2,919	3,304	3,906	2,874	2,576	3,073	3,257	2,839	2,689	2,724
Sweden	1,272	1,688	1,878	1,790	2,084	2,466	2,508	2,468	2,755	3,263
United Kingdom	5,696	6,265	6,821	6,007	6,387	6,632	6,701	7,256	7,693	8,124
All others	1,569	1,740	1,820	1,819	1,929	2,482	2,285	2,181	2,125	1,888
Japan	20,284	22,454	25,036	29,558	31,167	34,567	30,711	27,458	23,841	30,819
China	2,373	2,723	3,292	3,825	3,248	3,683	4,438	4,875	5,285	6,286
Asia-8	4,013	4,921	5,226	6,055	6,798	7,472	8,585	8,441	7,001	7,585
India	848	943	960	1,083	1,225	1,349	1,608	1,783	1,851	2,264
Indonesia	251	368	202	344	525	408	466	493	191	408
Malaysia	42	47	59	65	77	104	86	95	82	68
Philippines	324	374	524	493	495	602	672	653	547	615
Singapore	446	683	696	748	729	797	1,059	1,071	1,299	1,071
South Korea	1,766	2,105	2,251	2,821	3,148	3,632	3,976	3,641	2,521	2,598
Taiwan	293	334	433	474	497	452	486	518	463	506
Thailand	43	68	102	27	102	128	233	187	49	56
All others	14,699	14,603	16,466	17,790	17,576	18,797	18,858	18,938	19,115	18,035
Central Asia and Europe	929	1,153	1,292	1,514	1,474	1,645	1,651	1,803	1,940	1,770
Russia	90	57	329	257	483	474	531	680	517	314
Turkey	833	1,091	937	1,228	929	1,109	1,001	984	1,280	1,320
Ukraine	6	5	26	29	62	62	119	139	143	136
Middle East and North Africa	649	462	566	634	708	769	833	929	1,035	1,111
Egypt	259	90	102	146	152	199	267	339	426	503
Iran	115	88	100	101	158	172	121	127	112	122
Israel	195	196	200	224	208	199	229	234	244	235
Morocco	14	14	71	60	76	84	88	74	90	83
Saudi Arabia	21	23	25	25	27	29	33	36	34	37
All others	45	51	68	77	86	85	95	120	129	131

Appendix table 6-16

## Value added of pharmaceuticals, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	165,835	176,166	190,619	216,576	232,590	243,382	269,361	292,039	309,854	320,449	345,994
United States	53,327	61,976	68,119	72,766	73,500	69,279	80,604	85,305	79,392	91,013	91,903
EU	46,228	49,642	53,971	66,277	72,468	78,412	85,697	96,408	101,351	91,127	90,418
Belgium	2,331	2,614	2,991	3,641	4,011	4,326	4,573	5,363	5,384	4,760	4,969
Czech Republic	169	178	225	272	332	404	460	523	608	501	558
Denmark	1,649	1,797	1,678	2,347	2,589	3,083	2,947	2,989	3,710	2,957	3,157
Finland	247	296	268	321	368	446	547	608	670	637	637
France	7,565	8,151	8,441	10,621	10,631	11,627	12,592	12,398	12,817	11,518	11,324
Germany	8,509	9,089	9,617	13,107	15,730	18,006	19,275	22,841	24,151	20,490	19,546
Ireland	2,005	2,097	3,047	3,055	2,997	2,661	2,699	4,410	4,039	4,592	5,035
Italy	6,163	6,322	7,002	8,356	8,986	8,093	8,798	9,935	10,000	9,670	9,379
Netherlands	1,428	1,459	1,467	1,639	1,817	2,193	2,303	2,444	2,649	1,993	1,958
Poland	474	537	598	709	845	1,085	1,196	1,321	1,845	1,461	1,627
Spain	2,554	2,935	2,946	3,764	4,245	4,502	5,086	5,690	6,355	6,056	6,152
Sweden	3,042	3,201	4,027	4,940	5,060	5,443	5,863	5,676	5,808	5,171	5,687
United Kingdom	7,989	8,988	9,284	10,363	11,385	12,487	14,992	16,998	17,078	15,882	14,744
All others	2,101	1,978	2,381	3,143	3,473	4,056	4,365	5,211	6,238	5,440	5,645
Japan	31,076	28,648	28,201	31,758	33,342	32,457	28,401	23,101	23,794	28,525	30,015
China	7,736	8,796	10,136	12,422	14,541	18,709	22,715	30,097	40,852	51,006	63,316
Asia-8	8,617	8,245	10,517	11,763	14,858	16,801	19,766	19,770	20,454	19,307	25,044
India	1,853	2,091	2,353	2,631	3,260	3,935	4,177	5,235	5,924	5,889	7,531
Indonesia	489	661	915	1,145	979	1,190	1,147	1,682	1,994	1,859	2,356
Malaysia	100	83	104	117	139	120	141	145	189	153	152
Philippines	663	398	423	253	309	333	436	497	639	559	555
Singapore	1,739	1,561	2,732	3,298	5,343	5,213	6,872	4,578	4,613	4,015	6,510
South Korea	3,185	2,966	3,477	3,710	4,189	5,294	6,030	6,633	6,073	5,802	6,813
Taiwan	528	463	484	576	602	677	779	777	763	787	851
Thailand	59	21	29	33	37	41	184	222	259	242	276
All others	18,852	18,860	19,674	21,590	23,882	27,724	32,177	37,358	44,012	39,471	45,299
Central Asia and Europe	1,997	1,705	1,480	1,903	2,283	2,488	2,998	3,889	4,718	3,803	4,309
Russia	389	492	142	562	662	867	1,105	1,427	1,653	1,466	1,784
Turkey	1,473	1,062	1,176	1,162	1,451	1,387	1,615	2,106	2,582	2,143	2,282
Ukraine	136	151	162	178	170	235	278	357	483	194	242
Middle East and North Africa	1,205	1,406	1,707	1,733	1,956	2,396	2,657	3,226	4,272	3,981	4,211
Egypt	506	627	757	635	738	902	1,012	1,228	1,573	1,677	1,728
Iran	161	188	292	363	389	422	498	602	765	656	740
Israel	251	272	322	353	415	493	620	677	1,064	864	949
Morocco	109	130	152	181	176	295	239	337	404	352	335
Saudi Arabia	40	41	43	48	53	61	60	65	71	70	73
All others	138	148	141	153	185	222	229	316	394	361	385

Appendix table 6-16

**Value added of pharmaceuticals, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	8,465	8,008	9,437	10,767	10,362	10,330	9,961	10,670	10,878	10,053
Argentina	843	1,027	1,156	1,156	532	528	546	771	677	631
Brazil	5,328	4,360	5,034	5,907	5,891	6,212	5,468	5,597	5,520	4,218
Chile	121	153	228	238	233	282	265	197	247	203
Colombia	228	258	368	369	514	645	686	730	702	593
Costa Rica	16	25	29	46	43	35	28	33	37	40
Mexico	1,390	1,595	1,940	2,360	2,385	1,891	2,283	2,698	3,093	3,776
Peru	164	186	231	190	177	223	200	225	208	185
Venezuela	223	239	265	272	196	267	204	183	213	202
All others	151	164	186	229	392	247	280	235	181	205
Sub-Saharan Africa	686	774	796	381	371	981	1,132	1,244	1,248	682
Kenya	10	9	9	5	6	7	5	11	12	13
Nigeria	244	165	175	4	3	577	685	752	767	196
South Africa	400	569	585	357	339	372	425	465	453	458
All others	32	32	27	16	23	24	16	16	16	14
Other developed	3,657	3,869	3,983	4,027	4,170	4,530	4,698	3,807	3,505	3,925
Australia	877	911	905	883	1,001	1,082	1,128	1,128	957	1,001
Canada	1,892	1,967	1,923	1,949	1,756	1,760	1,767	1,499	1,234	1,531
New Zealand	43	43	42	48	64	59	64	62	43	42
Norway	187	168	250	247	237	337	431	259	291	304
Switzerland	658	779	863	898	1,113	1,291	1,308	861	981	1,048
Other developing	314	337	393	467	490	541	583	485	509	495
Bangladesh	115	112	116	144	166	200	225	156	184	166
Pakistan	192	216	262	303	300	309	321	290	286	280
Sri Lanka	1	1	1	1	2	3	4	4	5	5
Vietnam	5	8	14	19	23	29	33	34	34	45

## Appendix table 6-16

**Value added of pharmaceuticals, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	10,483	10,115	10,032	10,127	11,174	13,552	15,689	17,877	20,926	18,435	21,341
Argentina	555	604	211	286	332	385	428	501	598	548	635
Brazil	4,006	3,134	2,998	3,282	3,869	5,524	6,935	8,114	10,535	9,543	11,683
Chile	217	184	180	172	234	282	312	341	335	308	370
Colombia	584	633	615	560	733	771	876	1,104	1,226	1,062	1,240
Costa Rica	45	52	54	58	64	65	73	83	91	84	99
Mexico	4,353	4,906	5,420	5,240	5,381	5,847	6,269	6,799	6,920	5,785	6,303
Peru	180	159	189	196	165	195	259	312	374	350	353
Venezuela	251	253	173	160	214	260	311	374	524	459	323
All others	292	190	192	174	183	223	226	249	321	296	337
Sub-Saharan Africa	643	617	614	837	1,055	1,197	1,267	1,433	1,509	1,455	1,864
Kenya	12	15	15	20	22	22	26	28	31	29	30
Nigeria	134	151	163	182	225	261	279	319	398	296	371
South Africa	485	442	425	621	791	896	944	1,064	1,057	1,109	1,439
All others	12	10	12	14	18	18	18	21	23	23	23
Other developed	3,976	4,496	5,229	6,251	6,505	7,066	8,505	9,736	11,207	10,421	12,057
Australia	892	876	854	1,016	1,170	1,408	1,521	1,725	1,951	2,140	2,597
Canada	1,765	2,202	2,671	3,264	3,165	3,293	4,140	4,549	5,336	3,705	4,215
New Zealand	40	41	49	56	65	73	69	81	74	135	154
Norway	327	325	407	463	545	578	775	787	788	753	1,071
Switzerland	952	1,052	1,248	1,452	1,560	1,714	2,001	2,594	3,058	3,688	4,020
Other developing	548	521	612	740	909	1,024	1,061	1,197	1,381	1,376	1,516
Bangladesh	178	174	205	235	255	265	282	323	403	451	508
Pakistan	295	270	316	407	508	600	553	612	635	578	626
Sri Lanka	4	4	4	5	6	8	52	58	72	68	78
Vietnam	72	73	87	93	141	152	174	203	271	279	303

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

## Appendix table 6-17

## Value added of semiconductors, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	113,130	122,538	125,941	130,549	147,903	174,061	172,223	175,459	161,887	183,236
United States	26,549	27,507	29,578	31,146	37,176	43,641	44,444	50,550	47,592	48,794
EU	25,707	26,254	26,922	23,883	25,630	28,765	29,538	29,925	31,039	33,033
Belgium	747	720	726	752	805	940	919	904	798	848
Czech Republic	53	75	67	49	52	85	134	146	176	190
Denmark	297	293	313	258	314	404	421	410	416	461
Finland	596	353	428	481	735	1,161	1,264	1,551	2,232	2,691
France	3,759	3,617	3,896	3,699	3,726	4,577	4,687	4,389	4,577	4,649
Germany	6,541	7,792	8,071	6,828	7,265	7,261	6,745	6,292	6,501	7,052
Ireland	137	143	132	154	174	246	353	752	756	1,403
Italy	4,392	4,430	4,560	3,597	3,552	3,505	3,911	3,836	3,588	3,274
Netherlands	1,225	1,170	1,191	1,063	1,089	1,188	953	846	830	962
Poland	286	206	155	162	203	285	303	316	357	382
Spain	1,446	1,340	1,266	1,100	1,074	1,127	1,237	1,081	1,073	1,032
Sweden	822	836	818	728	898	1,264	1,693	1,827	1,911	1,887
United Kingdom	3,745	3,662	3,627	3,362	4,021	4,741	4,951	5,829	5,952	6,318
All others	1,659	1,618	1,672	1,651	1,724	1,982	1,967	1,745	1,871	1,883
Japan	40,537	46,271	44,531	48,811	54,161	61,839	55,780	52,117	44,798	52,545
China	3,712	3,966	4,055	4,705	4,379	5,787	6,292	7,884	6,341	7,427
Asia-8	9,451	11,308	13,520	14,352	18,456	25,674	27,439	26,612	23,831	31,755
India	250	186	190	165	226	297	241	274	289	257
Indonesia	74	89	166	142	199	318	496	781	180	425
Malaysia	1,203	1,633	2,226	2,743	3,482	4,266	5,352	5,225	4,126	5,307
Philippines	215	282	280	281	348	494	957	1,042	1,211	1,310
Singapore	992	1,511	1,696	1,835	2,680	3,925	3,755	3,624	2,392	2,971
South Korea	3,364	3,149	3,440	4,186	6,092	8,974	8,321	6,739	6,367	9,288
Taiwan	3,073	3,315	3,551	4,529	4,881	6,667	7,396	8,239	8,755	11,664
Thailand	280	1,141	1,971	471	547	733	920	688	510	533
All others	7,173	7,233	7,334	7,653	8,101	8,354	8,731	8,372	8,287	9,681
Central Asia and Europe	44	36	68	475	486	579	513	510	309	191
Russia	38	31	50	445	455	545	484	473	264	159
Turkey	2	3	3	17	15	19	15	21	31	22
Ukraine	3	2	15	12	16	15	15	16	13	10
Middle East and North Africa	513	564	498	489	512	617	762	800	842	1,007
Egypt	2	1	2	3	5	4	3	3	4	4
Iran	5	11	10	9	5	3	3	4	3	2
Israel	427	473	395	391	403	502	639	668	706	857
Morocco	29	24	22	16	19	21	21	23	24	30
Saudi Arabia	21	24	26	26	27	29	34	37	35	37
All others	28	31	42	44	53	59	61	65	71	76

Appendix table 6-17

## Value added of semiconductors, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	219,213	161,735	166,193	186,954	224,884	237,856	265,493	277,233	285,130	244,527	311,986
United States	58,340	41,531	41,134	42,538	48,284	54,240	59,560	57,099	57,416	52,139	60,142
EU	33,247	27,487	27,774	31,899	38,113	37,477	40,167	46,007	44,887	33,994	36,082
Belgium	863	713	710	832	851	847	892	909	885	764	727
Czech Republic	197	207	269	343	393	475	599	665	777	578	631
Denmark	373	357	440	415	390	396	425	569	626	725	717
Finland	2,975	2,513	3,118	3,686	3,856	3,923	4,303	5,510	5,026	2,330	2,213
France	4,904	4,105	4,265	4,358	4,982	4,603	4,467	4,891	4,853	3,667	3,571
Germany	7,221	5,489	6,147	8,126	10,049	9,554	10,457	13,115	12,234	10,426	10,693
Ireland	1,309	1,252	996	989	1,178	1,097	1,587	1,384	1,406	1,260	1,163
Italy	3,266	3,360	3,360	4,448	5,075	5,128	5,160	5,899	5,956	4,134	5,299
Netherlands	1,247	694	455	528	594	640	510	589	537	492	524
Poland	286	360	309	320	325	394	473	508	717	480	720
Spain	954	945	784	898	957	984	1,117	1,384	1,507	1,119	1,190
Sweden	1,478	799	1,013	840	2,423	2,342	2,546	2,667	2,733	2,198	2,431
United Kingdom	6,199	4,601	3,785	3,517	3,974	3,801	3,977	4,609	3,604	2,723	2,957
All others	1,976	2,093	2,123	2,600	3,066	3,294	3,652	3,308	4,025	3,098	3,248
Japan	62,721	40,801	38,585	48,069	54,259	52,340	53,310	54,573	54,867	43,059	69,045
China	9,864	10,440	9,505	9,961	14,173	18,725	25,685	31,231	42,258	41,784	51,391
Asia-8	43,019	31,975	38,081	45,103	57,269	60,805	69,968	72,487	68,563	60,738	80,908
India	351	378	398	425	420	558	593	717	757	686	851
Indonesia	1,205	508	1,032	1,045	1,178	893	1,193	1,782	2,109	1,994	2,534
Malaysia	4,962	4,279	3,903	4,563	4,426	3,596	4,249	4,349	4,011	2,821	3,612
Philippines	1,455	1,105	1,331	825	968	880	1,026	1,040	1,129	882	1,152
Singapore	5,868	3,494	3,468	4,053	5,353	5,492	6,978	7,458	6,502	5,652	9,463
South Korea	12,086	9,283	11,137	13,053	18,795	20,454	22,992	24,332	21,395	20,740	22,605
Taiwan	16,424	12,304	15,671	19,812	24,645	27,299	32,289	32,022	31,795	27,225	39,665
Thailand	667	625	1,141	1,327	1,484	1,634	648	788	866	738	1,026
All others	12,023	9,501	11,114	9,383	12,786	14,269	16,803	15,836	17,140	12,813	14,417
Central Asia and Europe	366	428	3,363	1,010	3,675	4,274	5,391	3,141	3,428	2,107	2,471
Russia	320	376	3,307	959	3,596	4,192	5,291	3,028	3,282	2,042	2,382
Turkey	24	17	19	19	24	23	26	17	24	12	20
Ukraine	21	35	37	32	56	60	73	95	122	53	69
Middle East and North Africa	2,431	1,617	1,109	1,324	1,212	1,326	1,566	1,706	2,165	2,316	2,375
Egypt	3	3	29	25	29	35	39	48	61	65	67
Iran	3	4	10	16	13	11	13	16	21	18	20
Israel	2,254	1,440	885	1,052	910	992	1,218	1,316	1,701	1,904	1,910
Morocco	52	32	31	42	51	54	51	45	43	40	37
Saudi Arabia	41	42	44	49	54	62	56	61	66	66	66
All others	79	97	110	140	155	171	189	219	273	224	275

Appendix table 6-17

## Value added of semiconductors, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	2,153	2,068	2,293	2,474	2,554	2,136	2,441	2,801	2,955	3,199
Argentina	20	28	34	21	27	23	20	22	16	16
Brazil	1,130	940	980	1,108	1,045	1,010	1,108	1,009	760	560
Chile	4	3	4	4	3	3	3	4	4	3
Colombia	1	1	1	1	2	2	2	2	2	2
Costa Rica	9	10	15	12	14	14	14	17	13	11
Mexico	911	1,002	1,162	1,242	1,410	1,008	1,189	1,669	2,043	2,495
Peru	0	0	0	0	0	0	0	0	0	0
Venezuela	61	69	79	67	42	61	90	69	111	105
All others	16	14	18	17	12	14	15	10	7	6
Sub-Saharan Africa	27	279	180	21	36	30	34	34	35	34
Kenya	11	12	13	8	12	15	16	15	15	19
Nigeria	9	257	156	8	18	8	3	3	3	1
South Africa	6	10	11	5	6	6	15	16	17	14
All others	0	1	0	0	0	0	0	0	0	0
Other developed	4,419	4,272	4,280	4,172	4,487	4,960	4,941	4,178	4,082	5,187
Australia	186	194	196	199	231	245	283	259	212	225
Canada	2,256	2,256	2,257	2,119	2,152	2,450	2,517	2,726	2,657	3,705
New Zealand	38	42	41	47	58	64	74	69	53	56
Norway	136	153	152	142	155	200	219	221	215	269
Switzerland	1,803	1,627	1,634	1,665	1,890	2,001	1,848	902	944	931
Other developing	17	14	16	23	26	31	40	48	64	64
Bangladesh	8	3	4	4	4	5	5	10	19	13
Pakistan	3	5	4	5	6	7	10	9	9	8
Sri Lanka	1	1	2	4	4	5	4	4	7	10
Vietnam	4	5	6	10	13	15	22	26	29	33

Appendix table 6-17

**Value added of semiconductors, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	3,845	3,799	3,216	2,963	3,119	3,373	4,175	4,712	4,906	3,801	4,234
Argentina	18	7	4	6	8	11	12	13	14	12	13
Brazil	658	526	495	380	523	504	936	1,140	1,239	911	1,103
Chile	3	1	2	2	2	2	0	1	1	0	1
Colombia	2	2	2	2	2	2	3	3	4	3	4
Costa Rica	10	11	10	11	13	14	15	18	19	18	20
Mexico	3,018	3,114	2,609	2,476	2,455	2,700	3,041	3,337	3,349	2,611	2,923
Peru	0	0	0	0	1	1	1	1	2	1	2
Venezuela	130	131	90	83	111	135	161	194	272	238	161
All others	6	6	4	4	5	5	5	6	7	6	6
Sub-Saharan Africa	30	26	28	38	47	54	55	54	54	52	54
Kenya	14	14	15	18	22	26	26	20	22	21	22
Nigeria	1	1	1	1	1	1	1	1	2	1	1
South Africa	15	12	12	19	23	26	28	31	29	29	30
All others	0	0	0	0	0	0	1	1	1	1	1
Other developed	5,314	3,591	3,356	3,999	4,672	5,167	5,553	6,151	6,500	4,443	5,179
Australia	191	162	215	251	336	384	409	495	543	529	632
Canada	3,975	2,284	1,953	2,374	2,785	3,179	3,454	3,737	3,774	2,077	2,591
New Zealand	52	55	59	79	96	106	96	92	89	77	85
Norway	263	217	217	234	257	309	341	439	469	445	456
Switzerland	833	872	911	1,060	1,198	1,188	1,253	1,387	1,624	1,315	1,415
Other developing	37	39	43	50	61	74	63	72	87	95	105
Bangladesh	14	14	13	14	15	17	19	21	25	28	30
Pakistan	5	5	6	7	9	11	2	2	2	2	2
Sri Lanka	8	8	9	10	12	15	3	3	4	4	4
Vietnam	10	13	15	19	25	31	39	46	57	61	68

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*



Appendix table 6-18

## Value added of medical, precision, and optical equipment, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	100,050	105,471	107,484	106,059	107,111	115,617	118,455	117,596	116,978	114,925
United States	34,723	36,468	36,266	37,028	36,134	35,966	36,961	37,353	37,320	32,638
EU	40,374	41,303	44,138	39,124	40,001	45,248	47,386	44,947	46,272	46,879
Belgium	387	373	376	390	417	487	490	430	409	360
Czech Republic	38	49	59	122	131	213	292	317	325	332
Denmark	578	604	690	702	794	898	935	848	932	954
Finland	409	371	348	307	404	557	599	606	638	680
France	7,426	7,311	7,711	7,168	7,010	8,470	8,252	7,651	7,654	7,646
Germany	14,275	14,967	17,446	15,142	15,186	16,554	16,910	15,035	15,249	15,314
Ireland	432	483	575	621	613	703	917	895	1,020	1,286
Italy	5,947	5,921	5,310	4,165	4,242	4,590	5,436	5,077	5,264	5,283
Netherlands	1,047	1,058	1,187	1,119	1,072	1,433	1,503	1,303	1,360	1,411
Poland	350	259	222	227	270	391	521	539	627	792
Spain	1,093	1,145	1,295	991	921	1,050	1,136	1,097	1,106	1,211
Sweden	1,119	1,171	1,171	1,149	1,405	1,778	2,026	1,894	2,079	2,017
United Kingdom	5,865	6,460	6,549	5,861	6,301	6,761	6,973	7,954	8,222	8,311
All others	1,409	1,131	1,200	1,162	1,234	1,363	1,395	1,303	1,384	1,282
Japan	14,629	16,834	16,057	16,418	16,248	17,601	15,854	15,016	13,858	15,169
China	1,518	1,577	1,870	2,933	2,199	2,125	2,556	2,624	2,651	2,747
Asia-8	2,090	2,409	2,642	2,711	3,469	4,007	4,534	4,347	3,190	3,851
India	165	165	154	182	205	283	270	206	349	391
Indonesia	10	12	30	19	53	73	109	81	52	130
Malaysia	97	163	162	185	235	286	250	283	250	209
Philippines	11	13	18	39	37	38	188	197	165	341
Singapore	200	248	305	362	400	495	543	566	527	629
South Korea	1,004	1,080	1,163	1,336	1,808	2,128	2,140	2,053	1,257	1,545
Taiwan	544	600	664	557	600	540	563	578	491	494
Thailand	58	126	146	31	132	164	470	383	98	111
All others	6,716	6,880	6,510	7,844	9,061	10,669	11,164	13,309	13,687	13,640
Central Asia and Europe	177	155	213	877	984	706	890	738	517	437
Russia	58	46	76	722	846	567	782	597	363	271
Turkey	87	94	80	107	78	93	57	77	108	128
Ukraine	33	15	57	48	60	46	51	63	46	39
Middle East and North Africa	206	220	123	208	239	1,373	1,519	1,746	1,866	2,121
Egypt	48	23	9	11	24	2	22	25	16	10
Iran	14	22	35	33	35	41	44	43	39	38
Israel	125	156	60	147	161	1,308	1,430	1,651	1,784	2,044
Morocco	9	10	9	8	9	10	12	14	12	13
Saudi Arabia	3	3	3	3	4	4	4	5	5	5
All others	6	6	7	6	6	8	7	9	10	11

Appendix table 6-18

## Value added of medical, precision, and optical equipment, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	121,701	116,671	122,524	143,004	167,838	185,614	207,171	234,055	252,272	241,312	275,465
United States	38,077	34,981	38,656	42,799	52,337	61,431	68,333	72,738	76,007	87,865	95,644
EU	45,581	45,806	48,425	58,361	65,960	69,508	75,084	87,952	90,401	76,447	83,775
Belgium	354	340	368	476	579	622	686	782	829	716	712
Czech Republic	279	291	345	455	541	595	688	855	1,020	936	926
Denmark	1,043	1,195	1,049	1,408	1,535	1,653	1,871	2,094	2,485	2,879	2,960
Finland	661	708	695	865	856	994	1,062	1,213	1,325	1,092	1,089
France	7,452	7,382	7,559	8,720	10,407	9,843	10,320	11,794	11,457	9,964	11,610
Germany	15,580	15,356	15,961	20,434	23,166	24,911	27,672	32,231	33,758	27,003	32,125
Ireland	1,528	1,835	2,375	2,932	2,637	3,267	3,078	3,962	4,025	3,606	3,469
Italy	4,724	5,097	6,113	5,807	6,754	7,300	8,295	9,688	9,665	8,503	8,299
Netherlands	1,366	1,438	1,446	1,904	2,040	2,220	2,251	2,529	2,773	2,476	2,461
Poland	670	711	674	710	781	958	1,064	1,340	1,852	1,427	1,720
Spain	1,151	1,215	1,114	1,415	1,552	1,639	1,834	2,357	2,757	2,260	2,177
Sweden	1,463	787	1,001	2,292	2,463	2,626	2,797	3,055	2,834	2,157	2,479
United Kingdom	8,115	8,107	8,130	8,914	10,260	10,269	10,705	12,427	11,853	9,970	10,367
All others	1,194	1,346	1,596	2,029	2,387	2,610	2,761	3,627	3,768	3,459	3,382
Japan	15,960	13,932	11,884	12,827	15,394	14,975	15,725	15,524	17,866	15,136	20,329
China	3,299	3,556	3,909	6,328	8,180	10,382	14,131	17,915	23,055	24,414	30,922
Asia-8	4,396	4,003	4,378	5,001	5,586	6,615	7,865	9,070	8,686	8,442	10,400
India	357	420	387	504	599	707	753	909	960	870	1,124
Indonesia	138	43	11	18	31	72	234	348	449	442	581
Malaysia	334	365	326	323	377	362	506	602	599	836	847
Philippines	368	156	165	186	217	354	428	519	662	551	648
Singapore	734	744	809	866	795	957	1,085	1,222	1,184	1,134	1,259
South Korea	1,854	1,656	1,892	2,088	2,560	3,166	3,674	4,261	3,649	3,633	4,671
Taiwan	497	512	589	785	750	712	901	844	829	668	849
Thailand	116	109	199	231	258	284	284	365	354	308	421
All others	14,387	14,392	15,271	17,688	20,381	22,703	26,034	30,856	36,256	29,008	34,395
Central Asia and Europe	467	746	791	1,405	2,086	2,388	2,943	4,006	4,475	2,644	3,812
Russia	196	596	622	1,223	1,855	2,154	2,662	3,637	3,982	2,301	3,357
Turkey	236	106	117	116	145	138	161	206	279	247	328
Ukraine	36	44	51	66	86	95	120	163	214	96	127
Middle East and North Africa	2,521	2,423	2,315	2,391	2,445	2,519	3,099	3,703	5,016	4,388	4,977
Egypt	14	16	64	54	63	77	86	104	134	143	152
Iran	42	65	79	97	127	121	143	173	220	188	216
Israel	2,440	2,319	2,142	2,205	2,220	2,269	2,653	3,190	4,406	3,811	4,353
Morocco	7	4	7	9	10	19	35	34	34	31	30
Saudi Arabia	5	5	6	6	7	8	157	172	186	185	193
All others	13	14	17	20	18	25	25	29	36	30	33

Appendix table 6-18

**Value added of medical, precision, and optical equipment, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	1,945	1,831	1,727	2,153	2,159	2,031	2,158	2,372	2,627	2,249
Argentina	112	138	121	202	138	141	114	181	202	171
Brazil	1,343	1,098	1,021	1,175	1,247	1,282	1,356	1,330	1,309	965
Chile	9	12	15	19	25	29	28	33	25	16
Colombia	70	71	67	62	64	79	84	115	112	90
Costa Rica	6	4	5	13	20	20	12	4	3	3
Mexico	321	390	399	595	490	366	483	608	857	896
Peru	19	16	18	16	35	17	14	14	13	8
Venezuela	37	64	57	44	112	74	43	66	89	84
All others	28	38	23	25	29	24	25	21	17	16
Sub-Saharan Africa	165	118	154	110	117	124	118	116	85	90
Kenya	2	1	1	0	0	0	0	1	1	2
Nigeria	1	0	0	0	0	0	0	0	0	0
South Africa	160	115	151	108	115	121	116	113	83	87
All others	2	2	2	2	2	3	2	2	1	1
Other developed	4,210	4,544	4,279	4,479	5,544	6,414	6,456	8,317	8,569	8,720
Australia	685	718	761	755	907	961	1,125	1,021	832	896
Canada	990	870	817	789	847	903	1,003	1,120	1,181	1,295
New Zealand	16	17	17	20	24	27	31	29	22	23
Norway	178	200	232	234	263	336	345	366	408	481
Switzerland	2,341	2,739	2,453	2,682	3,502	4,188	3,953	5,782	6,125	6,025
Other developing	13	13	14	18	19	21	23	21	24	23
Bangladesh	1	1	0	0	1	1	0	1	0	0
Pakistan	11	11	11	14	14	15	15	13	13	13
Sri Lanka	0	0	0	0	0	1	1	1	1	1
Vietnam	1	1	2	3	4	5	7	6	9	10

Appendix table 6-18

**Value added of medical, precision, and optical equipment, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	2,901	2,497	2,471	2,247	2,587	3,098	3,598	4,344	5,079	4,518	5,803
Argentina	161	130	53	83	103	124	133	170	185	161	189
Brazil	1,202	973	908	898	1,182	1,669	2,013	2,612	3,242	2,807	3,936
Chile	18	28	26	29	33	37	35	38	37	34	41
Colombia	29	34	35	35	42	49	56	70	78	67	80
Costa Rica	4	3	3	2	2	2	2	3	3	3	3
Mexico	1,363	1,206	1,360	1,124	1,124	1,094	1,216	1,281	1,297	1,237	1,398
Peru	3	5	2	0	0	0	0	0	0	0	0
Venezuela	105	105	72	66	89	108	129	156	218	191	137
All others	16	14	11	9	12	14	13	15	19	17	19
Sub-Saharan Africa	86	75	107	156	187	209	253	286	249	273	335
Kenya	5	5	6	7	7	7	6	8	9	8	9
Nigeria	0	0	0	0	0	0	0	0	0	0	0
South Africa	80	69	100	149	180	202	246	278	240	264	326
All others	1	1	0	1	1	1	1	1	1	1	1
Other developed	8,358	8,598	9,528	11,412	12,977	14,382	16,006	18,364	21,233	16,960	19,211
Australia	760	646	684	935	1,011	1,224	1,303	1,577	1,729	1,451	1,784
Canada	1,564	1,574	1,636	1,951	2,263	2,545	2,773	2,997	3,024	2,349	2,354
New Zealand	22	23	25	34	42	46	42	64	62	39	44
Norway	381	379	522	599	655	789	920	1,109	1,184	1,122	1,246
Switzerland	5,632	5,977	6,661	7,892	9,006	9,777	10,969	12,616	15,233	11,998	13,783
Other developing	54	53	59	77	100	108	135	152	205	225	257
Bangladesh	0	0	0	1	1	1	1	1	1	1	1
Pakistan	30	28	33	42	52	62	71	79	82	75	82
Sri Lanka	1	0	0	0	0	1	9	10	12	11	13
Vietnam	23	24	25	34	47	45	53	62	111	138	161

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-19

## Value added of medical and measuring equipment, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	64,563	67,466	69,363	68,409	69,599	75,642	78,196	78,968	80,843	79,142
United States	26,487	27,845	28,076	28,382	27,624	27,969	30,509	31,318	31,746	28,136
EU	25,313	25,673	27,885	24,951	26,032	29,309	28,934	27,945	29,619	30,011
Belgium	178	171	173	179	192	224	201	173	235	209
Czech Republic	15	20	24	49	53	85	117	127	130	133
Denmark	491	521	604	610	690	780	813	737	810	829
Finland	400	361	337	297	396	545	588	597	631	672
France	5,316	5,260	5,609	5,190	4,938	5,660	4,426	3,939	4,137	4,007
Germany	7,342	7,837	9,472	8,116	8,676	9,497	9,209	8,455	9,168	9,247
Ireland	304	340	405	437	432	495	645	630	718	905
Italy	3,599	3,363	3,091	2,533	2,696	2,940	3,370	3,352	3,462	3,438
Netherlands	683	730	856	785	751	1,005	1,055	915	955	991
Poland	135	100	86	87	104	150	199	216	256	294
Spain	577	561	669	569	474	474	458	541	547	671
Sweden	1,022	1,066	1,090	1,049	1,286	1,629	1,855	1,735	1,904	1,847
United Kingdom	4,492	4,835	4,988	4,571	4,777	5,190	5,385	5,993	6,052	6,249
All others	759	508	483	480	567	634	612	535	615	521
Japan	6,908	8,121	7,615	7,644	7,877	8,909	8,507	8,136	7,979	8,876
China	488	506	628	1,162	758	730	938	972	1,001	1,067
Asia-8	833	715	846	897	1,161	1,583	1,763	1,828	1,560	2,037
India	37	19	37	52	51	64	50	108	183	279
Indonesia	7	10	16	7	21	16	30	21	14	24
Malaysia	51	70	79	85	95	117	106	95	85	98
Philippines	4	6	9	15	11	10	50	53	44	91
Singapore	131	177	216	273	310	394	437	458	439	528
South Korea	461	269	309	327	495	802	868	878	642	862
Taiwan	131	139	150	133	151	147	161	165	140	141
Thailand	12	26	30	6	27	33	62	51	13	15
All others	4,535	4,606	4,313	5,372	6,147	7,142	7,544	8,769	8,938	9,016
Central Asia and Europe	124	94	178	755	871	594	790	616	476	375
Russia	50	40	66	630	756	478	702	503	337	249
Turkey	49	43	69	90	68	80	49	66	106	100
Ukraine	25	12	43	36	46	36	39	47	34	27
Middle East and North Africa	156	177	100	176	206	1,199	1,318	1,513	1,604	1,880
Egypt	23	11	5	6	21	2	19	22	14	9
Iran	11	17	30	29	31	39	42	41	38	36
Israel	110	136	52	128	141	1,143	1,241	1,431	1,535	1,812
Morocco	5	6	5	5	5	5	7	8	6	9
Saudi Arabia	3	3	3	3	4	4	4	5	5	5
All others	4	4	5	4	4	5	5	6	6	9

Appendix table 6-19

## Value added of medical and measuring equipment, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	85,729	82,506	86,708	100,583	118,715	129,813	145,611	165,276	179,722	172,074	196,521
United States	32,980	30,216	32,895	35,418	42,911	47,677	54,207	57,702	61,009	67,615	75,374
EU	29,584	29,482	31,460	38,825	43,817	46,844	50,367	59,572	61,540	51,731	54,210
Belgium	222	227	269	342	416	492	602	732	780	674	671
Czech Republic	112	117	138	182	217	238	275	346	419	388	388
Denmark	907	1,038	912	1,224	1,334	1,437	1,626	1,825	2,168	2,512	2,587
Finland	655	703	691	859	850	988	1,056	1,206	1,318	1,086	1,084
France	3,790	3,753	3,871	4,474	5,132	5,014	5,458	6,568	6,760	5,238	5,823
Germany	9,923	9,870	10,366	13,633	15,767	17,282	19,010	22,434	23,659	19,292	20,522
Ireland	1,075	1,291	1,671	2,064	1,856	2,299	2,166	2,806	2,851	2,554	2,465
Italy	3,051	3,089	3,937	3,777	4,236	4,444	4,865	5,578	5,583	4,893	4,891
Netherlands	959	1,009	1,015	1,337	1,432	1,558	1,580	1,785	1,960	1,738	1,728
Poland	268	281	271	296	328	399	434	553	779	634	770
Spain	750	829	713	929	1,041	1,101	1,245	1,598	1,870	1,530	1,476
Sweden	1,340	720	916	2,099	2,256	2,405	2,562	2,803	2,607	1,987	2,287
United Kingdom	6,068	6,094	6,037	6,773	7,829	7,911	8,137	9,552	8,917	7,576	7,926
All others	463	460	654	836	1,124	1,275	1,351	1,784	1,870	1,627	1,594
Japan	9,723	9,218	7,994	8,924	11,178	11,270	11,454	11,495	13,237	11,235	15,311
China	1,212	1,366	1,489	2,747	3,620	4,887	7,008	9,581	13,415	15,543	20,057
Asia-8	2,377	2,411	2,553	2,850	3,120	3,650	4,293	5,045	4,807	4,889	6,020
India	232	300	302	411	443	507	540	652	688	624	807
Indonesia	30	35	5	11	27	30	124	185	238	234	307
Malaysia	161	221	189	192	223	213	277	325	325	607	605
Philippines	98	42	44	50	58	95	114	139	177	147	174
Singapore	611	637	699	742	654	799	903	1,059	1,038	994	1,102
South Korea	1,087	1,014	1,120	1,189	1,466	1,765	2,048	2,405	2,066	2,057	2,737
Taiwan	142	146	168	224	215	204	258	241	237	191	246
Thailand	15	14	26	31	34	38	29	39	38	34	42
All others	9,853	9,814	10,316	11,820	14,069	15,485	18,282	21,881	25,713	21,061	25,550
Central Asia and Europe	411	648	701	1,195	1,843	2,085	2,604	3,574	4,080	2,456	3,531
Russia	168	512	548	1,029	1,634	1,873	2,349	3,247	3,639	2,141	3,115
Turkey	215	97	107	106	132	126	147	181	249	229	302
Ukraine	27	39	46	60	77	86	108	147	193	87	114
Middle East and North Africa	2,178	2,146	2,014	2,088	2,208	2,223	2,816	3,358	4,502	3,952	4,507
Egypt	12	14	20	17	19	24	27	32	41	44	47
Iran	40	62	73	90	108	105	123	149	190	163	186
Israel	2,107	2,051	1,895	1,950	2,048	2,048	2,456	2,949	4,023	3,506	4,024
Morocco	4	2	6	8	10	19	34	34	34	31	30
Saudi Arabia	5	5	6	6	7	8	157	172	186	185	193
All others	10	11	14	16	16	20	20	22	28	24	26

Appendix table 6-19

## Value added of medical and measuring equipment, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	1,475	1,403	1,307	1,624	1,617	1,539	1,627	1,814	1,947	1,682
Argentina	89	109	96	160	109	112	90	143	160	136
Brazil	1,000	818	761	876	929	955	1,010	978	972	722
Chile	6	9	11	15	20	22	22	27	18	12
Colombia	61	63	54	51	51	63	66	91	92	72
Costa Rica	0	0	0	1	1	1	1	0	0	0
Mexico	252	307	305	454	358	292	381	502	618	662
Peru	13	13	14	10	19	9	9	9	8	5
Venezuela	34	58	50	42	109	69	32	50	67	64
All others	18	26	16	16	19	15	16	13	10	10
Sub-Saharan Africa	140	100	131	93	100	105	96	94	69	73
Kenya	2	1	1	0	0	0	0	1	1	2
Nigeria	0	0	0	0	0	0	0	0	0	0
South Africa	137	98	129	92	98	103	94	92	68	71
All others	1	1	1	1	1	1	1	1	1	1
Other developed	2,628	2,819	2,584	2,708	3,338	3,687	3,694	4,714	4,823	4,987
Australia	228	259	238	236	284	300	351	319	260	280
Canada	844	747	700	677	727	580	652	658	742	757
New Zealand	10	11	11	12	15	17	19	18	14	15
Norway	121	137	157	171	197	252	260	273	304	359
Switzerland	1,424	1,665	1,478	1,611	2,116	2,538	2,411	3,446	3,503	3,576
Other developing	12	12	13	16	17	18	19	17	19	19
Bangladesh	0	0	0	0	0	0	0	0	0	0
Pakistan	11	11	11	14	14	15	14	13	13	12
Sri Lanka	0	0	0	0	0	0	0	0	0	0
Vietnam	1	1	2	2	3	3	4	4	6	6

Appendix table 6-19

**Value added of medical and measuring equipment, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	2,079	1,816	1,817	1,651	1,961	2,404	2,802	3,402	4,011	3,561	4,682
Argentina	128	103	42	66	81	98	106	134	146	128	150
Brazil	921	725	709	690	955	1,381	1,665	2,149	2,681	2,325	3,332
Chile	13	20	17	20	23	24	25	27	27	25	30
Colombia	23	27	28	30	37	41	46	58	65	56	67
Costa Rica	0	0	0	0	0	0	0	0	0	0	0
Mexico	903	849	957	791	791	770	856	907	917	874	989
Peru	2	3	2	0	0	0	0	0	0	0	0
Venezuela	79	79	54	50	67	82	98	118	165	144	104
All others	10	8	6	5	6	8	7	8	10	9	11
Sub-Saharan Africa	70	61	88	128	153	171	207	234	207	223	276
Kenya	4	4	6	6	6	6	6	7	8	7	8
Nigeria	0	0	0	0	0	0	0	0	0	0	0
South Africa	65	57	82	121	147	165	201	227	199	215	267
All others	0	0	0	0	0	0	0	0	0	0	0
Other developed	5,070	5,099	5,648	6,693	7,820	8,510	9,745	11,191	12,757	10,700	12,363
Australia	237	202	214	292	319	386	411	498	546	902	1,112
Canada	998	968	1,105	1,275	1,517	1,644	2,026	2,160	2,241	1,789	1,740
New Zealand	14	15	16	16	28	30	28	43	41	26	29
Norway	284	283	390	343	495	596	695	840	897	851	945
Switzerland	3,536	3,632	3,924	4,766	5,461	5,853	6,585	7,650	9,032	7,133	8,537
Other developing	45	44	50	65	84	92	108	121	157	168	191
Bangladesh	0	0	0	0	0	0	0	1	1	1	1
Pakistan	30	27	32	41	52	61	71	78	81	74	81
Sri Lanka	0	0	0	0	0	0	0	0	0	0	0
Vietnam	15	16	17	23	32	30	36	42	75	94	109

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.



## Appendix table 6-20

## Value added of communications equipment, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	86,249	93,274	94,936	98,121	109,592	128,578	129,092	133,720	123,279	138,546
United States	17,933	19,114	20,725	21,621	26,911	33,109	34,911	40,659	38,839	39,807
EU	15,394	15,608	15,305	13,895	15,105	16,790	17,054	18,346	18,979	21,061
Belgium	442	426	429	445	476	556	525	580	447	521
Czech Republic	25	35	31	23	25	40	69	83	104	104
Denmark	189	169	179	142	177	230	250	262	248	294
Finland	315	147	200	265	465	782	862	1,150	1,796	2,307
France	1,561	1,532	1,623	1,646	1,598	2,084	2,166	2,019	2,257	2,248
Germany	2,666	3,675	3,539	2,873	3,161	3,016	2,678	2,776	2,625	3,208
Ireland	81	84	66	93	101	149	210	588	563	1,254
Italy	3,359	3,332	3,305	2,751	2,651	2,328	2,336	2,453	2,239	2,014
Netherlands	1,106	1,039	1,059	952	974	1,058	836	747	734	854
Poland	186	134	101	106	132	182	183	207	240	288
Spain	1,282	1,060	794	789	801	744	829	704	642	596
Sweden	593	609	578	521	675	967	1,340	1,508	1,576	1,569
United Kingdom	2,148	2,033	2,066	1,981	2,461	3,046	3,199	3,911	4,070	4,352
All others	1,441	1,335	1,334	1,310	1,410	1,608	1,570	1,356	1,436	1,453
Japan	31,307	35,486	33,549	36,826	39,745	45,327	40,962	38,050	32,818	39,493
China	4,094	4,209	4,616	5,501	4,326	5,289	5,843	6,826	6,463	7,726
Asia-8	7,151	8,578	10,631	9,826	12,718	16,771	17,996	17,694	14,968	18,458
India	504	490	522	459	730	679	605	698	775	617
Indonesia	197	247	468	376	545	860	1,343	2,265	535	612
Malaysia	495	671	912	1,119	1,424	1,745	2,204	2,145	1,700	2,193
Philippines	186	244	243	243	301	430	833	906	1,002	1,123
Singapore	639	976	1,107	1,374	1,413	1,542	1,195	1,101	670	826
South Korea	2,934	2,569	2,764	3,465	5,213	7,734	6,795	5,458	5,437	7,819
Taiwan	1,854	1,993	2,169	2,203	2,506	3,032	4,049	4,440	4,335	4,748
Thailand	341	1,389	2,446	588	585	750	973	681	514	519
All others	10,369	10,279	10,111	10,453	10,787	11,293	12,325	12,146	11,212	12,000
Central Asia and Europe	912	1,106	1,240	1,706	1,223	1,342	1,282	1,026	937	1,043
Russia	29	23	37	333	326	407	327	322	180	113
Turkey	865	1,071	1,110	1,296	798	840	864	607	674	871
Ukraine	18	12	92	77	99	95	91	98	83	59
Middle East and North Africa	907	1,060	924	895	906	990	1,207	1,524	1,705	1,773
Egypt	40	31	38	36	42	57	55	54	52	48
Iran	51	112	113	97	53	53	85	111	83	100
Israel	791	888	745	735	776	842	1,030	1,323	1,527	1,587
Morocco	3	2	2	2	2	2	2	2	2	1
Saudi Arabia	0	0	0	0	0	0	0	0	0	0
All others	24	26	26	26	33	36	34	34	41	38

## Appendix table 6-20

## Value added of communications equipment, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	164,168	117,195	122,085	136,272	162,596	170,833	185,684	192,566	194,189	183,050	199,848
United States	48,937	32,012	30,168	31,094	35,536	40,067	41,684	38,374	38,101	38,725	39,073
EU	22,027	17,024	17,122	19,274	23,144	22,626	23,757	27,934	25,287	18,421	17,594
Belgium	577	405	410	478	469	462	485	486	386	333	306
Czech Republic	113	116	186	221	230	293	379	396	468	320	307
Denmark	173	149	162	173	137	159	127	163	200	232	219
Finland	2,603	2,122	2,756	3,253	3,354	3,303	3,611	4,697	3,986	1,607	1,483
France	2,770	2,091	2,355	2,187	2,454	2,174	2,091	2,192	2,164	1,697	1,242
Germany	3,690	2,319	2,786	4,031	5,213	4,760	4,891	7,660	5,427	3,701	3,849
Ireland	1,086	917	736	579	667	846	1,374	1,139	1,157	1,036	907
Italy	2,118	2,331	2,204	3,066	3,280	3,238	3,025	3,390	3,459	3,215	3,103
Netherlands	1,118	607	375	438	492	534	401	449	387	358	365
Poland	191	252	216	183	170	192	226	211	300	236	328
Spain	544	515	332	340	333	362	360	470	509	386	239
Sweden	1,121	599	765	471	1,951	1,893	2,054	2,091	2,142	1,723	1,833
United Kingdom	4,359	2,911	2,152	1,838	2,109	1,913	1,975	2,440	2,043	1,644	1,485
All others	1,564	1,690	1,686	2,017	2,283	2,497	2,756	2,150	2,660	1,933	1,930
Japan	48,781	30,409	29,217	36,843	40,984	38,344	39,293	40,446	39,641	37,697	42,354
China	9,793	10,912	14,457	16,805	21,047	24,772	30,330	33,440	39,486	42,812	50,908
Asia-8	20,904	16,016	20,188	22,301	28,109	29,673	33,369	34,721	32,375	29,943	32,934
India	502	454	629	616	659	820	873	1,054	1,113	1,009	1,265
Indonesia	556	368	496	786	815	705	812	1,212	1,434	1,356	1,790
Malaysia	2,062	1,283	1,763	1,888	2,344	1,618	1,359	1,108	1,133	866	1,515
Philippines	1,248	959	1,156	671	784	703	880	1,231	1,734	1,487	1,560
Singapore	624	532	434	222	576	1,250	1,058	413	231	138	160
South Korea	10,038	7,630	9,249	10,830	15,920	17,126	19,043	19,822	16,906	16,552	17,619
Taiwan	5,258	4,213	5,407	6,063	5,640	5,943	6,859	7,276	7,577	6,973	7,562
Thailand	616	577	1,053	1,225	1,370	1,508	2,485	2,605	2,247	1,562	1,463
All others	13,727	10,822	10,932	9,955	13,777	15,351	17,252	17,652	19,300	15,452	16,985
Central Asia and Europe	1,003	1,264	2,583	1,627	3,018	3,215	3,923	2,997	2,984	1,782	2,210
Russia	133	156	1,373	398	1,493	1,740	2,197	1,257	1,363	848	1,081
Turkey	825	1,011	1,119	1,106	1,381	1,320	1,537	1,494	1,305	798	955
Ukraine	45	97	90	123	144	155	189	246	316	136	174
Middle East and North Africa	1,981	1,145	1,189	1,105	1,407	1,580	1,684	2,127	2,969	2,294	2,246
Egypt	45	39	73	61	71	87	97	118	151	161	160
Iran	124	112	164	134	204	154	182	220	279	239	262
Israel	1,771	952	905	860	1,074	1,267	1,322	1,694	2,420	1,790	1,718
Morocco	1	1	3	0	0	1	0	1	0	0	0
Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0
All others	39	41	44	50	58	71	83	94	118	102	107

## Appendix table 6-20

## Value added of communications equipment, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	5,109	4,570	4,355	4,617	5,179	4,978	5,533	5,708	4,806	4,361
Argentina	405	556	680	417	541	367	378	410	314	266
Brazil	4,194	3,489	3,068	3,551	3,899	4,072	4,562	4,441	3,412	2,772
Chile	2	2	4	5	4	7	7	8	8	4
Colombia	31	29	32	29	35	44	43	44	37	26
Costa Rica	10	3	5	7	8	7	7	9	7	3
Mexico	369	400	475	540	650	459	516	780	1,011	1,277
Peru	54	52	48	29	22	5	6	6	6	4
Venezuela	32	26	30	26	9	5	6	4	7	7
All others	12	12	13	14	12	12	8	5	3	3
Sub-Saharan Africa	310	463	502	249	254	292	221	225	239	203
Kenya	7	8	8	5	7	10	10	9	9	12
Nigeria	0	1	2	11	3	11	1	2	2	0
South Africa	295	445	487	230	243	269	206	210	226	189
All others	8	9	5	4	2	3	4	3	2	2
Other developed	3,053	2,999	3,021	2,887	3,103	3,544	3,768	3,366	3,211	4,305
Australia	374	393	427	418	511	541	637	576	469	508
Canada	1,610	1,663	1,702	1,561	1,596	1,872	1,910	2,110	2,022	3,030
New Zealand	21	23	22	25	32	35	40	38	29	30
Norway	57	72	66	69	80	110	126	116	105	181
Switzerland	992	848	804	814	883	986	1,056	528	586	556
Other developing	78	81	68	98	122	147	313	298	313	315
Bangladesh	11	4	4	5	5	6	6	13	23	16
Pakistan	56	64	48	70	84	103	251	225	223	217
Sri Lanka	1	3	2	1	4	4	4	5	7	13
Vietnam	9	11	14	22	28	33	51	55	59	68

## Appendix table 6-20

**Value added of communications equipment, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	5,955	5,351	4,015	3,255	4,535	5,103	6,054	6,302	6,699	5,078	5,922
Argentina	284	157	52	78	119	149	165	180	197	170	189
Brazil	4,023	3,517	2,634	1,908	3,210	3,646	4,436	4,550	4,944	3,634	4,358
Chile	5	2	2	2	3	4	1	1	1	1	1
Colombia	25	23	26	23	29	13	15	19	21	19	20
Costa Rica	3	4	4	4	4	5	6	7	7	7	8
Mexico	1,601	1,634	1,285	1,231	1,157	1,269	1,411	1,520	1,496	1,220	1,323
Peru	4	3	3	2	4	4	7	10	11	9	11
Venezuela	8	8	6	5	7	9	10	12	17	15	10
All others	3	3	3	1	2	3	3	3	3	3	3
Sub-Saharan Africa	217	167	179	264	331	363	392	437	414	404	435
Kenya	9	9	9	11	14	17	16	13	14	13	13
Nigeria	0	0	0	0	0	1	1	1	1	1	1
South Africa	207	157	168	251	316	345	374	422	398	389	419
All others	2	1	1	1	2	1	1	1	1	1	2
Other developed	4,307	2,635	2,655	3,309	4,001	4,528	4,849	5,385	5,747	5,375	5,601
Australia	431	366	513	587	803	936	996	1,206	1,322	1,002	1,134
Canada	3,118	1,497	1,302	1,732	1,991	2,275	2,443	2,614	2,564	2,686	2,807
New Zealand	28	30	32	43	52	58	52	50	49	42	45
Norway	203	155	141	151	152	188	201	270	288	273	273
Switzerland	527	587	666	796	1,004	1,072	1,156	1,245	1,525	1,372	1,343
Other developing	263	260	313	393	484	562	349	404	487	519	570
Bangladesh	18	17	16	18	19	22	24	27	31	35	37
Pakistan	137	125	147	189	235	278	46	51	53	48	47
Sri Lanka	8	7	8	9	11	14	1	1	1	1	2
Vietnam	100	110	142	178	219	248	278	325	401	434	484

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

## Appendix table 6-21

## Value added of aircraft and spacecraft, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	81,710	88,246	76,693	73,005	64,719	64,191	72,381	77,087	83,198	90,254
United States	52,821	59,407	48,471	45,895	37,226	35,140	42,302	42,617	47,638	52,776
EU	22,029	21,862	20,337	17,256	17,286	17,225	17,900	21,423	23,380	24,532
Belgium	304	280	295	316	358	328	378	326	360	468
Czech Republic	133	99	114	26	28	56	34	34	46	70
Denmark	11	10	13	1	16	11	11	14	5	8
Finland	114	126	93	112	139	155	158	141	150	154
France	3,547	3,542	3,652	3,878	3,586	4,377	4,149	6,204	5,772	5,741
Germany	4,173	4,866	4,825	3,757	3,343	3,314	4,206	4,378	5,024	5,903
Ireland	155	146	186	125	111	156	206	217	222	227
Italy	2,886	2,582	2,396	1,936	1,987	1,569	1,637	1,685	2,157	1,737
Netherlands	466	528	549	496	321	190	203	305	314	311
Poland	187	120	101	91	126	120	126	135	126	118
Spain	618	500	625	764	678	683	756	777	819	840
Sweden	754	828	960	574	473	621	555	397	728	655
United Kingdom	8,387	7,941	6,264	4,909	5,830	5,389	5,231	6,524	7,392	8,005
All others	294	293	264	271	290	257	251	284	267	297
Japan	1,606	1,838	2,215	2,771	2,849	3,186	2,890	2,711	3,253	3,441
China	246	367	519	582	504	585	619	741	840	562
Asia-8	449	640	666	728	947	1,053	1,187	1,285	1,068	1,293
India	9	12	16	13	14	25	20	27	15	192
Indonesia	7	8	9	10	7	14	24	11	6	3
Malaysia	8	8	8	8	6	7	9	20	4	10
Philippines	4	3	3	5	4	3	2	3	2	1
Singapore	208	261	399	464	516	577	640	774	582	640
South Korea	62	196	72	99	264	275	308	266	292	285
Taiwan	152	149	152	128	135	148	178	182	164	156
Thailand	0	3	6	2	2	2	5	3	3	5
All others	4,559	4,132	4,486	5,773	5,908	7,001	7,483	8,310	7,018	7,650
Central Asia and Europe	98	83	169	1,794	1,713	1,500	1,874	2,150	1,334	823
Russia	75	60	97	1,712	1,642	1,419	1,800	1,919	1,141	670
Turkey	17	20	23	20	5	20	25	140	118	87
Ukraine	6	4	49	62	67	61	50	92	76	66
Middle East and North Africa	157	174	130	105	99	384	447	517	546	586
Egypt	0	0	0	0	0	0	0	0	0	0
Iran	2	2	1	1	4	3	2	0	0	0
Israel	150	165	123	98	88	374	437	509	538	577
Morocco	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	0	0	0	0	0	0	0	0	0	0
All others	5	6	6	6	7	8	8	8	8	8

## Appendix table 6-21

## Value added of aircraft and spacecraft, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	86,233	93,699	89,444	91,575	95,415	109,287	117,986	131,169	142,638	134,048	136,910
United States	49,928	55,197	50,263	49,148	50,201	58,081	61,868	71,115	71,782	70,183	69,401
EU	23,407	24,352	25,035	27,189	27,476	32,646	34,829	35,821	39,895	35,893	34,574
Belgium	452	484	392	448	549	568	513	603	642	480	435
Czech Republic	71	88	76	82	94	106	110	174	235	235	231
Denmark	11	13	13	11	15	20	21	20	35	11	9
Finland	110	106	123	122	133	144	138	181	178	140	113
France	5,457	5,691	5,395	6,610	4,820	7,363	8,363	8,385	10,104	9,827	9,585
Germany	5,033	5,730	6,154	6,404	6,866	8,879	7,963	9,155	10,439	8,941	8,287
Ireland	255	231	244	283	302	332	345	408	392	315	289
Italy	1,757	1,688	1,728	1,593	1,989	1,997	2,439	2,062	2,812	2,527	2,156
Netherlands	229	271	284	413	390	451	477	430	580	490	497
Poland	162	160	161	156	170	210	301	343	493	341	339
Spain	807	630	914	1,225	1,239	1,316	1,597	1,586	2,189	1,973	1,706
Sweden	663	687	646	809	883	1,007	906	1,063	1,138	1,064	1,099
United Kingdom	8,159	8,356	8,597	8,722	9,681	9,818	11,179	10,903	9,970	8,966	9,377
All others	243	217	309	311	344	434	476	508	688	584	451
Japan	2,846	3,250	3,293	3,455	3,823	3,710	4,533	3,922	5,738	4,158	4,722
China	550	891	1,391	2,000	2,257	2,643	2,838	3,722	4,837	5,596	7,454
Asia-8	1,380	1,502	1,563	1,545	1,830	2,032	2,492	2,934	3,174	2,947	3,498
India	14	23	36	49	72	66	74	88	88	101	132
Indonesia	57	17	24	44	34	47	59	59	87	92	125
Malaysia	17	25	40	44	39	80	193	224	293	228	281
Philippines	1	1	1	1	1	2	2	2	2	2	2
Singapore	675	843	923	878	1,106	1,281	1,489	1,653	1,726	1,631	1,848
South Korea	449	454	375	361	409	381	531	719	757	713	899
Taiwan	161	135	153	156	154	161	129	169	201	165	192
Thailand	6	6	11	13	14	15	15	19	19	15	19
All others	8,122	8,507	7,898	8,239	9,828	10,175	11,426	13,655	17,212	15,271	17,262
Central Asia and Europe	320	357	434	559	900	1,071	1,280	1,833	2,352	1,300	1,823
Russia	137	147	173	237	490	567	633	888	976	464	524
Turkey	114	136	151	149	186	178	207	266	373	250	277
Ukraine	70	74	111	174	225	326	440	679	1,003	586	1,023
Middle East and North Africa	659	667	607	655	760	608	349	487	612	560	622
Egypt	0	0	0	0	0	0	0	0	0	0	0
Iran	0	0	25	23	30	34	40	48	61	52	62
Israel	651	659	574	622	719	564	299	385	498	462	512
Morocco	0	0	0	0	0	0	0	43	38	35	36
Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0
All others	7	8	9	10	11	11	10	12	15	11	12

Appendix table 6-21

## Value added of aircraft and spacecraft, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	353	321	416	455	489	806	605	809	932	1,451
Argentina	4	4	5	4	6	10	20	22	21	16
Brazil	214	185	199	241	293	357	316	539	670	1,016
Chile	19	18	30	28	20	28	28	38	43	40
Colombia	28	27	38	24	31	63	50	72	43	25
Costa Rica	1	1	2	1	2	2	2	2	2	2
Mexico	87	86	143	156	137	345	189	136	152	352
Peru	0	0	0	0	0	0	0	0	0	0
Venezuela	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0
Sub-Saharan Africa	261	143	167	83	85	100	87	83	102	43
Kenya	2	2	2	1	1	2	2	2	2	5
Nigeria	0	0	0	0	0	0	0	0	0	0
South Africa	256	140	163	81	83	98	85	81	100	38
All others	2	1	2	1	1	1	0	0	0	0
Other developed	3,683	3,398	3,591	3,320	3,506	4,196	4,461	4,742	4,095	4,737
Australia	410	435	484	462	487	517	602	610	584	623
Canada	2,510	2,262	2,383	2,193	2,270	2,868	3,037	3,444	2,980	3,585
New Zealand	45	37	31	30	34	50	49	41	37	35
Norway	188	147	144	132	144	140	207	172	36	49
Switzerland	530	517	549	503	571	621	566	474	458	444
Other developing	7	14	13	15	15	15	9	9	9	9
Bangladesh	0	0	0	0	0	0	0	0	0	0
Pakistan	7	13	12	14	14	14	8	7	7	7
Sri Lanka	0	0	0	0	0	0	0	0	0	0
Vietnam	0	0	1	1	1	2	2	1	2	2

Appendix table 6-21

**Value added of aircraft and spacecraft, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	1,802	2,204	1,993	1,616	2,136	1,879	2,175	2,518	4,121	4,607	5,588
Argentina	13	18	3	5	6	7	7	8	8	7	7
Brazil	1,399	1,756	1,586	1,288	1,757	1,444	1,705	2,053	3,594	4,200	5,073
Chile	56	38	9	16	25	17	14	15	15	14	17
Colombia	35	24	25	19	19	30	34	43	48	41	50
Costa Rica	2	2	2	1	2	2	2	3	3	3	3
Mexico	298	366	368	286	328	378	412	395	452	341	436
Peru	0	0	0	0	0	0	0	0	0	1	1
Venezuela	0	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	1	1	1
Sub-Saharan Africa	33	38	61	90	104	116	117	130	121	145	169
Kenya	4	3	4	4	6	5	6	5	6	5	6
Nigeria	0	0	0	0	0	0	0	0	0	0	0
South Africa	29	34	57	85	98	111	111	125	115	140	163
All others	0	0	0	0	0	0	0	0	0	0	0
Other developed	5,299	5,230	4,791	5,307	5,914	6,486	7,429	8,602	9,919	8,579	8,974
Australia	526	407	546	741	838	916	975	1,181	1,294	1,032	1,284
Canada	4,294	4,281	3,637	3,833	4,219	4,710	5,439	6,270	7,270	6,396	6,505
New Zealand	33	36	45	58	68	73	63	90	87	52	66
Norway	50	97	110	131	179	169	246	216	280	260	285
Switzerland	396	410	453	545	610	617	706	846	988	840	834
Other developing	10	11	11	12	14	15	75	84	88	81	85
Bangladesh	0	0	0	0	0	0	0	0	0	0	0
Pakistan	8	8	8	9	11	12	71	79	82	74	77
Sri Lanka	0	0	0	0	0	0	0	0	0	0	0
Vietnam	2	3	2	3	4	4	4	5	6	7	8

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*



Appendix table 6-22

## Value added of computers and office machinery, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
World	72,417	76,450	79,939	70,607	78,076	88,115	91,791	91,949	88,409	84,884
United States	21,275	19,378	18,988	18,600	20,521	22,361	24,819	27,198	30,029	25,509
EU	20,619	20,821	17,783	14,171	15,299	18,359	17,549	17,058	17,601	16,167
Belgium	129	124	125	129	139	162	162	132	120	96
Czech Republic	15	15	23	23	25	40	169	105	84	114
Denmark	140	128	156	99	135	102	166	99	109	137
Finland	364	122	207	140	133	182	184	166	105	69
France	1,988	1,947	2,051	1,564	1,566	1,826	1,640	1,441	1,467	1,247
Germany	9,048	9,428	7,514	5,264	4,881	5,459	4,653	5,019	4,824	3,978
Ireland	827	818	732	590	808	1,992	1,711	1,295	1,378	2,053
Italy	1,254	1,228	1,296	736	733	1,268	973	904	1,064	1,134
Netherlands	332	345	268	357	596	485	546	426	571	450
Poland	78	56	43	42	52	80	92	76	99	144
Spain	1,099	1,499	890	1,098	1,097	1,180	1,413	994	1,075	946
Sweden	448	541	430	284	287	293	312	267	346	314
United Kingdom	4,676	4,425	3,934	3,734	4,745	5,169	5,277	5,653	5,727	4,928
All others	223	145	113	109	102	123	252	481	633	558
Japan	21,968	25,323	25,705	25,584	26,340	30,806	29,441	25,397	23,192	23,751
China	463	442	501	448	465	908	1,261	1,432	1,913	2,218
Asia-8	4,335	7,062	13,356	7,495	10,383	10,263	12,635	13,318	8,332	9,953
India	103	96	99	87	106	147	143	125	83	121
Indonesia	4	7	6	6	8	9	13	8	3	8
Malaysia	216	330	378	495	555	739	979	1,041	570	691
Philippines	2	3	5	15	28	106	179	297	423	627
Singapore	1,859	2,140	2,654	3,620	4,299	5,231	6,702	6,593	3,203	3,471
South Korea	1,147	922	1,166	1,207	1,654	2,224	2,210	2,605	2,164	3,070
Taiwan	637	688	877	823	945	1,025	1,304	1,433	1,394	1,528
Thailand	367	2,876	8,171	1,243	2,788	784	1,106	1,217	492	437
All others	3,757	3,423	3,606	4,308	5,067	5,417	6,086	7,545	7,342	7,286
Central Asia and Europe	74	43	125	524	742	909	725	1,121	362	246
Russia	67	37	106	499	722	885	709	1,079	307	205
Turkey	3	3	5	10	1	13	8	22	47	29
Ukraine	4	2	14	14	19	11	8	20	9	12
Middle East and North Africa	45	31	28	32	58	118	138	133	132	129
Egypt	16	10	8	10	17	24	26	26	49	45
Iran	11	5	5	5	18	8	10	16	11	9
Israel	14	13	12	14	19	82	97	85	67	69
Morocco	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	2	2	2	2	2	2	3	3	3	3
All others	1	1	1	1	2	2	2	3	2	2

Appendix table 6-22

## Value added of computers and office machinery, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	88,811	72,382	70,795	78,955	92,068	104,434	108,722	117,235	120,861	107,756	126,832
United States	26,711	19,715	22,615	20,517	23,478	27,536	30,446	28,171	32,529	27,699	29,776
EU	13,920	12,016	11,886	13,744	15,767	17,236	16,419	18,100	15,786	9,654	10,449
Belgium	86	72	70	87	106	102	106	159	204	176	178
Czech Republic	161	120	58	153	103	145	112	194	283	453	565
Denmark	110	111	108	128	117	128	129	119	125	145	148
Finland	5	22	13	20	25	25	34	40	37	29	29
France	686	912	1,001	1,383	1,153	866	709	877	852	359	293
Germany	3,803	2,949	3,255	4,161	5,096	4,759	4,656	5,940	5,497	1,796	1,947
Ireland	2,147	1,364	1,492	1,254	1,762	2,365	2,219	1,946	1,977	1,771	1,683
Italy	1,037	1,222	734	788	1,119	1,062	1,184	1,298	1,291	811	776
Netherlands	414	398	311	323	386	373	389	367	336	286	309
Poland	182	117	104	123	123	230	170	203	239	211	328
Spain	716	689	643	710	624	672	449	483	532	448	342
Sweden	249	134	170	318	387	313	290	310	302	223	248
United Kingdom	3,979	3,596	3,630	3,813	4,061	5,369	5,374	5,629	3,549	2,467	3,063
All others	343	310	296	482	704	828	598	533	562	477	542
Japan	23,758	18,876	12,338	13,099	16,207	16,836	11,681	12,668	11,836	10,114	11,469
China	3,753	4,317	7,026	15,545	22,058	26,563	32,895	39,219	44,032	46,441	59,023
Asia-8	12,286	9,834	10,972	11,374	10,232	11,238	11,415	12,594	11,191	9,551	10,819
India	209	236	292	414	331	432	459	555	586	531	697
Indonesia	2	2	2	7	6	66	94	108	130	128	171
Malaysia	1,488	1,453	1,598	1,968	2,620	2,264	2,353	2,285	1,959	1,016	918
Philippines	631	587	400	513	541	690	751	849	321	181	193
Singapore	3,501	2,457	2,907	2,428	2,656	3,184	2,672	3,009	2,656	2,742	2,371
South Korea	4,251	3,270	3,170	3,083	1,154	1,447	1,643	1,714	1,185	1,006	1,300
Taiwan	1,697	1,353	1,736	1,953	1,796	1,914	2,205	2,348	2,367	1,908	2,582
Thailand	507	475	867	1,008	1,127	1,241	1,238	1,726	1,988	2,039	2,586
All others	8,383	7,623	5,958	4,676	4,326	5,025	5,867	6,483	5,487	4,297	5,295
Central Asia and Europe	346	259	306	166	337	365	441	556	480	218	270
Russia	268	191	232	88	242	267	323	441	351	150	196
Turkey	63	50	55	55	68	65	76	62	69	39	34
Ukraine	15	17	19	24	26	33	42	53	61	28	40
Middle East and North Africa	130	126	87	82	100	111	127	151	197	173	195
Egypt	37	32	5	4	5	6	6	8	10	11	11
Iran	16	18	27	18	37	42	49	60	76	65	76
Israel	72	71	50	53	48	48	56	67	92	80	90
Morocco	0	0	0	0	3	7	5	5	5	4	4
Saudi Arabia	3	3	3	4	4	5	6	7	7	7	8
All others	2	2	2	3	3	4	5	6	7	5	6

Appendix table 6-22

## Value added of computers and office machinery, by region/country/economy: 1990–2010

(Millions of current dollars)

Region/country/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
South and Central America	1,433	1,393	1,551	1,744	2,052	2,189	3,173	4,661	5,166	5,440
Argentina	34	43	43	65	76	34	38	11	10	18
Brazil	734	575	558	642	681	700	787	875	833	881
Chile	1	1	1	1	1	2	1	2	1	1
Colombia	1	1	2	2	2	3	2	2	2	2
Costa Rica	0	0	0	0	0	0	0	0	0	0
Mexico	658	764	942	1,025	1,288	1,449	2,343	3,769	4,317	4,536
Peru	3	5	1	1	3	0	0	0	0	0
Venezuela	3	3	4	7	0	0	0	0	0	0
All others	1	1	1	1	1	2	1	1	1	1
Sub-Saharan Africa	6	8	8	31	29	33	10	9	9	4
Kenya	0	0	0	0	0	0	0	0	0	0
Nigeria	0	0	0	0	0	0	0	0	0	0
South Africa	6	8	8	31	29	33	10	9	9	4
All others	0	0	0	0	0	0	0	0	0	0
Other developed	2,184	1,932	1,874	1,951	2,156	2,132	2,017	1,584	1,623	1,346
Australia	106	112	118	117	141	149	175	159	129	139
Canada	590	468	356	555	570	389	306	674	781	592
New Zealand	16	17	17	20	24	27	31	29	22	23
Norway	120	52	56	40	56	55	64	84	62	91
Switzerland	1,352	1,283	1,328	1,219	1,365	1,512	1,442	639	629	501
Other developing	15	17	19	27	29	37	24	37	49	121
Bangladesh	0	0	0	0	0	0	0	0	0	0
Pakistan	13	15	16	19	20	21	7	6	6	6
Sri Lanka	0	0	0	3	3	10	9	24	24	63
Vietnam	2	2	3	5	5	7	8	7	18	51

Appendix table 6-22

**Value added of computers and office machinery, by region/country/economy: 1990–2010**

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
South and Central America	6,505	6,213	4,601	3,365	2,758	3,409	4,041	4,490	3,502	2,916	3,669
Argentina	20	15	2	3	3	3	3	4	4	3	3
Brazil	1,543	1,658	826	811	771	1,143	1,452	1,957	1,747	1,487	2,010
Chile	1	1	2	2	2	2	2	2	2	2	2
Colombia	2	2	2	2	3	5	5	6	7	6	7
Costa Rica	0	0	0	0	0	0	0	0	0	0	1
Mexico	4,937	4,530	3,764	2,543	1,976	2,246	2,567	2,506	1,723	1,402	1,628
Peru	0	5	4	3	3	3	3	4	4	4	4
Venezuela	1	1	0	0	0	1	1	1	1	1	1
All others	1	1	1	1	1	7	8	9	13	11	14
Sub-Saharan Africa	4	3	4	5	7	7	8	9	8	8	10
Kenya	0	0	0	0	0	0	0	0	0	0	0
Nigeria	0	0	0	0	0	0	0	0	0	0	0
South Africa	4	3	4	5	7	7	8	9	8	8	10
All others	0	0	0	0	0	0	0	0	0	0	0
Other developed	1,324	988	920	1,005	1,064	1,042	1,147	1,155	1,155	842	988
Australia	118	100	162	179	154	168	169	203	221	189	237
Canada	759	411	452	516	564	505	609	506	404	225	305
New Zealand	22	23	25	33	41	45	41	63	61	26	29
Norway	24	29	12	28	22	28	17	22	21	19	20
Switzerland	401	425	268	249	283	296	310	361	448	384	398
Other developing	75	35	41	52	61	91	103	121	145	141	163
Bangladesh	0	0	0	0	0	0	0	0	0	0	0
Pakistan	7	6	7	9	11	13	14	16	16	15	16
Sri Lanka	30	16	17	16	18	20	19	21	24	24	28
Vietnam	38	13	16	27	32	57	69	85	104	103	119

EU = European Union

NOTES: Value added is amount contributed by country, firm, or other entity to value of good or service and excludes purchases of domestic and imported materials and inputs. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-23 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Industry Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-23

**Regions and countries/economies in world industry data**

United States	All others	All others (continued)
EU	Central Asia and Europe	Sub-Saharan Africa
Belgium	Russia	Kenya
Czech Republic	Turkey	Nigeria
Denmark	Ukraine	South Africa
Finland	Middle East and North Africa	All others
France	Egypt	Cameroon
Germany	Iran	Senegal
Ireland	Israel	Zimbabwe
Italy	Morocco	Other developed
Netherlands	Saudi Arabia	Australia
Poland	All others	Canada
Spain	Bahrain	New Zealand
Sweden	Jordan	Norway
United Kingdom	Kuwait	Switzerland
All others	Qatar	Other developing
Austria	Tunisia	Bangladesh
Bulgaria	United Arab Emirates	Pakistan
Greece	South and Central America	Sri Lanka
Hungary	Argentina	Vietnam
Portugal	Brazil	
Romania	Chile	
Slovakia	Colombia	
Japan	Costa Rica	
China	Mexico	
Asia-8	Peru	
India	Venezuela	
Indonesia	All others	
Malaysia	Bolivia	
Philippines	Ecuador	
Singapore	Honduras	
South Korea	Jamaica	
Taiwan	Panama	
Thailand	Uruguay	

EU = European Union

NOTES: Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong.

SOURCE: IHS Global Insight, World Industry Service database, special tabulations (15 November 2010).

*Science and Engineering Indicators 2012*

Appendix table 6-24

## Exports and imports of high-technology goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Exports												
World	903,693	1,055,110	1,207,761	1,308,214	1,554,792	1,898,178	2,145,946	2,469,023	2,542,892	2,684,383	2,429,494	2,798,201
World excluding intra-EU and intra-China	712,928	832,794	937,696	993,407	1,161,721	1,418,757	1,598,199	1,813,878	1,920,640	2,023,150	1,823,277	2,137,419
United States	135,686	177,523	197,261	195,678	176,179	190,828	229,320	265,085	283,308	298,657	271,213	325,146
EU	287,679	334,078	394,102	433,524	523,095	631,132	706,559	815,639	789,435	841,531	755,615	809,581
EU ROW	123,410	143,545	158,918	168,469	205,008	248,199	276,586	300,152	318,852	343,720	310,382	335,185
Intra-EU	164,269	190,533	235,184	265,054	318,087	382,933	429,972	515,487	470,583	497,811	445,232	474,396
France	49,110	55,714	63,102	69,171	74,795	86,202	91,170	109,698	109,167	121,076	113,497	120,046
France ROW	25,114	27,532	28,113	33,117	36,907	43,599	44,514	52,894	55,901	63,876	60,624	64,904
France intra-EU	23,996	28,182	34,990	36,054	37,888	42,604	46,656	56,804	53,266	57,201	52,873	55,142
Germany	68,012	71,145	86,889	98,704	122,525	156,798	171,999	193,438	206,552	217,098	190,855	208,551
Germany ROW	26,047	28,824	33,165	38,737	48,382	61,876	65,762	75,474	81,936	86,517	76,764	83,637
Germany intra-EU	41,966	42,321	53,724	59,967	74,143	94,922	106,237	117,964	124,616	130,580	114,091	124,914
United Kingdom	60,920	73,418	75,716	76,681	72,408	78,079	94,738	129,714	80,508	84,544	77,455	79,366
United Kingdom ROW	28,783	37,132	33,751	27,870	28,847	32,179	42,093	38,694	36,884	39,036	36,300	36,596
United Kingdom intra-EU	32,137	36,286	41,965	48,811	43,561	45,900	52,645	91,020	43,624	45,508	41,155	42,770
Japan	136,991	124,809	124,844	116,275	129,351	151,097	148,334	150,186	142,059	143,737	115,429	139,575
China	69,236	86,386	103,556	142,501	239,922	334,186	413,216	498,455	540,454	592,395	551,265	662,289
China ROW	42,740	54,603	68,676	92,749	164,938	237,698	295,442	358,796	388,785	428,974	390,281	475,902
Intra-China	26,497	31,783	34,880	49,753	74,984	96,488	117,774	139,658	151,669	163,421	160,984	186,387
Asia-8	194,801	233,285	261,359	283,483	345,459	423,474	464,387	528,225	543,855	540,689	479,542	576,325
India	1,142	1,720	1,576	2,629	3,588	4,351	5,106	6,470	9,464	12,208	14,497	18,231
Indonesia	3,092	5,052	6,130	8,362	8,246	9,313	9,650	9,227	9,791	10,258	9,633	11,658
Malaysia	37,829	44,948	50,716	56,109	62,954	71,007	78,627	85,644	83,938	74,797	74,074	83,454
Philippines	7,531	17,872	24,928	26,208	30,304	32,650	33,594	32,983	33,494	30,534	22,739	28,472
Singapore	52,731	58,173	53,402	52,299	59,667	71,586	80,010	94,283	89,069	92,037	70,691	85,846
South Korea	38,739	39,966	50,957	52,642	72,471	95,000	103,330	114,633	122,698	122,750	113,025	135,576
Taiwan	37,476	45,633	53,900	64,061	81,431	105,593	115,381	140,269	147,228	145,482	126,852	157,972
Thailand	16,261	19,920	19,752	21,171	26,798	33,973	38,689	44,716	48,172	52,621	48,030	55,115
All others	67,234	85,235	105,732	128,534	134,415	161,607	178,548	202,381	233,888	258,362	246,969	275,317
Central Asia/Europe	3,416	6,692	4,215	6,182	8,984	11,249	9,148	10,564	12,496	14,109	13,861	15,002
Russia	479	1,126	1,606	2,956	4,341	4,447	1,966	2,591	2,778	3,995	3,287	3,865
Turkey	396	763	1,365	1,678	2,562	3,797	4,207	4,514	4,289	3,984	3,689	3,861
All others	2,540	4,803	1,243	1,548	2,081	3,006	2,975	3,459	5,429	6,131	6,885	7,277
Middle East/North Africa	5,352	7,929	10,714	14,210	13,554	17,360	21,412	20,892	25,807	30,318	27,355	29,731
Israel	3,963	5,971	7,991	10,741	9,232	11,239	11,443	13,439	14,495	16,509	17,815	19,037
All others	1,390	1,958	2,723	3,470	4,322	6,121	9,969	7,453	11,312	13,809	9,540	10,694
South and Central America	16,186	24,322	37,968	49,475	48,847	58,708	63,806	74,004	83,555	87,787	85,655	100,792
Brazil	1,053	2,222	3,761	5,822	4,955	7,276	8,049	8,730	9,464	10,332	9,445	10,907
Mexico	13,527	20,004	29,357	39,657	36,452	42,734	45,576	54,136	60,810	63,125	59,354	70,077
All others	1,606	2,097	4,850	3,995	7,440	8,698	10,181	11,138	13,280	14,330	16,856	19,808

Appendix table 6-24

## Exports and imports of high-technology goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Sub-Saharan Africa	641	940	1,281	1,115	1,458	2,006	2,570	2,954	3,065	3,465	3,465	3,755
Southern Africa	411	595	782	807	980	1,257	1,715	1,792	2,089	2,124	2,215	2,433
All others	230	345	499	308	478	749	854	1,162	976	1,341	1,251	1,322
Other developed	41,429	44,900	51,106	56,832	60,486	71,029	79,835	91,354	105,312	117,513	110,983	119,934
Australia	3,336	3,745	3,742	4,290	4,242	5,069	5,857	6,588	7,576	8,075	7,739	8,488
Canada	15,400	18,415	21,292	24,575	21,468	23,237	27,203	30,271	32,756	32,420	30,586	30,559
All others	22,693	22,740	26,072	27,967	34,776	42,723	46,775	54,495	64,979	77,019	72,659	80,888
Other developing	211	451	448	721	1,085	1,256	1,777	2,612	3,654	5,170	5,648	6,103
Imports												
World	903,693	1,055,110	1,207,761	1,308,214	1,554,792	1,898,178	2,145,946	2,469,023	2,542,892	2,684,383	2,429,494	2,798,201
World excluding intra-EU and intra-China	712,928	832,794	937,696	993,407	1,161,721	1,418,757	1,598,199	1,813,878	1,920,640	2,023,150	1,823,277	2,137,419
United States	171,506	193,649	233,477	245,037	264,242	310,012	331,565	363,379	385,060	390,189	356,372	419,472
EU	305,331	354,185	430,837	456,879	539,363	664,741	742,676	871,498	845,726	898,681	796,450	862,174
EU ROW	141,062	163,651	195,652	191,825	221,277	281,808	312,703	356,011	375,143	400,870	351,217	387,779
Intra-EU	164,269	190,533	235,184	265,054	318,087	382,933	429,972	515,487	470,583	497,811	445,232	474,396
France	44,446	46,955	57,991	60,983	67,810	81,418	89,481	114,256	100,845	110,571	104,615	111,018
France ROW	19,729	20,467	24,889	23,594	26,793	34,442	37,199	41,501	43,710	50,330	47,363	51,432
France intra-EU	24,717	26,488	33,102	37,389	41,017	46,976	52,281	72,754	57,135	60,241	57,251	59,587
Germany	64,593	63,934	78,745	93,512	107,623	130,193	147,857	175,012	169,525	181,613	165,954	183,510
Germany ROW	35,259	34,824	41,728	46,304	53,140	67,936	75,331	90,177	91,205	96,112	85,869	97,416
Germany intra-EU	29,334	29,110	37,017	47,209	54,483	62,257	72,526	84,835	78,320	85,501	80,085	86,094
United Kingdom	54,815	72,721	82,286	73,063	76,497	91,536	98,560	115,758	102,455	102,825	88,627	94,355
United Kingdom ROW	32,504	47,079	49,061	38,294	33,708	40,508	43,940	49,502	47,755	49,990	42,325	45,885
United Kingdom intra-EU	22,311	25,642	33,225	34,769	42,789	51,028	54,621	66,255	54,700	52,835	46,302	48,470
Japan	50,030	56,782	61,895	70,884	77,620	90,443	97,919	104,096	100,750	104,533	92,986	107,984
China	75,516	89,131	96,272	134,424	209,832	270,059	327,993	389,760	432,470	450,177	431,142	505,575
China ROW	49,020	57,347	61,391	84,671	134,847	173,571	210,218	250,102	280,802	286,756	270,158	319,188
Intra-China	26,497	31,783	34,880	49,753	74,984	96,488	117,774	139,658	151,669	163,421	160,984	186,387
Asia-8	142,210	169,999	172,862	185,644	218,933	260,976	285,561	327,391	330,854	327,584	289,281	350,456
India	3,537	4,193	4,694	6,166	9,732	12,988	15,878	23,603	29,632	29,828	31,610	37,568
Indonesia	3,298	5,391	2,495	3,365	3,913	4,746	4,754	5,183	7,553	13,265	12,575	15,235
Malaysia	22,947	26,156	25,475	27,844	33,958	37,904	39,951	46,278	48,011	42,233	37,360	43,973
Philippines	7,378	14,910	15,246	16,468	18,405	20,062	19,633	22,810	22,821	21,523	16,093	19,618
Singapore	44,219	47,649	45,460	47,149	51,767	65,384	73,902	85,824	80,685	81,465	68,639	83,386
South Korea	22,462	26,166	30,330	33,896	42,642	49,891	54,972	61,372	62,240	63,620	55,072	65,548
Taiwan	24,448	30,152	36,192	34,417	40,725	49,182	52,187	55,161	52,079	48,211	42,788	55,228
Thailand	13,921	15,381	12,971	16,339	17,790	20,819	24,284	27,161	27,833	27,439	25,144	29,899
All others	133,076	161,898	181,483	196,592	219,651	272,055	327,401	379,211	405,050	463,492	417,952	502,677
Central Asia/Europe	11,404	16,276	15,211	17,439	26,645	37,978	45,972	56,859	65,565	76,014	58,130	66,749
Russia	5,811	7,326	4,480	7,444	11,779	16,203	20,258	25,235	30,150	36,737	25,376	29,610
Turkey	3,522	5,287	7,224	5,862	8,426	12,478	14,830	17,770	18,662	20,242	17,549	20,643
All others	2,071	3,663	3,506	4,133	6,441	9,297	10,884	13,854	16,753	19,035	15,205	16,496

Appendix table 6-24

## Exports and imports of high-technology goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Middle East/North Africa	22,832	26,305	32,855	35,579	43,655	50,765	68,412	73,370	76,512	83,987	85,113	91,804
Israel	3,719	3,928	6,442	6,000	5,320	7,158	7,959	8,433	8,858	9,210	8,047	8,712
All others	19,112	22,377	26,413	29,579	38,335	43,607	60,454	64,937	67,654	74,777	77,066	83,092
South and Central America	37,059	48,314	52,186	60,513	56,336	72,211	87,396	112,315	118,051	147,007	129,851	166,934
Brazil	8,013	11,929	10,927	12,829	9,374	13,230	17,092	22,662	22,828	36,199	30,185	35,552
Mexico	10,983	16,960	20,955	27,527	28,232	35,080	37,934	47,506	47,646	56,487	50,207	77,723
All others	18,064	19,425	20,303	20,156	18,730	23,901	32,370	42,146	47,577	54,322	49,460	53,659
Sub-Saharan Africa	8,440	9,029	9,983	11,385	13,719	17,480	21,125	25,004	27,026	35,022	29,927	33,270
Southern Africa	4,533	4,683	4,921	5,293	6,335	8,368	9,891	10,686	10,812	11,039	9,556	10,319
All others	3,907	4,346	5,063	6,093	7,384	9,112	11,234	14,319	16,214	23,983	20,371	22,951
Other developed	58,903	67,794	77,695	79,277	87,275	102,202	116,024	125,278	131,852	142,452	130,105	160,276
Australia	10,925	12,350	13,815	13,118	18,292	22,322	24,390	26,400	27,564	31,183	29,577	33,545
Canada	28,680	34,819	39,038	40,671	37,030	42,738	47,986	52,409	54,690	59,501	52,329	74,450
All others	19,299	20,624	24,842	25,487	31,953	37,142	43,647	46,469	49,599	51,769	48,199	52,281
Other developing	2,878	3,209	3,537	3,785	5,740	8,899	9,597	11,390	13,070	14,031	14,752	16,914
Balance												
United States	-35,820	-16,126	-36,216	-49,359	-88,063	-119,184	-102,245	-98,294	-101,752	-91,532	-85,159	-94,326
EU	-17,651	-20,107	-36,735	-23,356	-16,269	-33,609	-36,117	-55,859	-56,292	-57,150	-40,835	-52,594
EU ROW	-17,651	-20,107	-36,735	-23,356	-16,269	-33,609	-36,117	-55,859	-56,292	-57,150	-40,835	-52,594
Intra-EU	0	0	0	0	0	0	0	0	0	0	0	0
France	4,663	8,759	5,111	8,188	6,985	4,784	1,689	-4,558	8,322	10,505	8,882	9,027
France ROW	5,384	7,065	3,224	9,523	10,115	9,157	7,315	11,393	12,191	13,545	13,260	13,473
France intra-EU	-721	1,695	1,888	-1,334	-3,129	-4,372	-5,626	-15,950	-3,869	-3,040	-4,378	-4,445
Germany	3,419	7,211	8,144	5,191	14,902	26,605	24,142	18,426	37,027	35,485	24,901	25,041
Germany ROW	-9,212	-6,000	-8,563	-7,567	-4,758	-6,060	-9,569	-14,703	-9,269	-9,595	-9,105	-13,780
Germany intra-EU	12,631	13,211	16,707	12,758	19,660	32,665	33,711	33,129	46,296	45,080	34,007	38,820
United Kingdom	6,105	697	-6,571	3,618	-4,089	-13,457	-3,822	13,956	-21,947	-18,282	-11,173	-14,989
United Kingdom ROW	-3,722	-9,947	-15,310	-10,424	-4,861	-8,329	-1,847	-10,809	-10,871	-10,954	-6,026	-9,289
United Kingdom intra-EU	9,826	10,644	8,740	14,042	772	-5,128	-1,975	24,765	-11,076	-7,328	-5,147	-5,700
Japan	86,960	68,027	62,949	45,391	51,732	60,654	50,416	46,089	41,309	39,204	22,443	31,591
China	-6,280	-2,744	7,285	8,077	30,090	64,127	85,224	108,694	107,983	142,218	120,123	156,714
China ROW	-6,280	-2,744	7,285	8,077	30,090	64,127	85,224	108,694	107,983	142,218	120,123	156,714
Intra-China	0	0	0	0	0	0	0	0	0	0	0	0
Asia-8	52,591	63,286	88,497	97,839	126,526	162,497	178,826	200,834	213,001	213,105	190,261	225,868
India	-2,394	-2,473	-3,118	-3,536	-6,144	-8,637	-10,772	-17,133	-20,168	-17,620	-17,113	-19,337
Indonesia	-206	-339	3,635	4,997	4,332	4,568	4,896	4,044	2,238	-3,007	-2,942	-3,577
Malaysia	14,882	18,792	25,241	28,266	28,996	33,104	38,676	39,366	35,927	32,564	36,714	39,481
Philippines	153	2,962	9,681	9,740	11,899	12,589	13,961	10,174	10,673	9,011	6,645	8,854
Singapore	8,512	10,524	7,942	5,150	7,899	6,201	6,108	8,458	8,385	10,571	2,052	2,460
South Korea	16,277	13,800	20,627	18,746	29,829	45,109	48,358	53,262	60,459	59,131	57,954	70,028
Taiwan	13,028	15,481	17,708	29,644	40,706	56,411	63,195	85,108	95,148	97,271	84,065	102,743
Thailand	2,339	4,539	6,780	4,832	9,008	13,154	14,405	17,555	20,338	25,182	22,886	25,216



## Appendix table 6-24

## Exports and imports of high-technology goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
All others	-65,842	-76,663	-75,752	-68,057	-85,237	-110,448	-148,854	-176,831	-171,161	-205,130	-170,983	-227,359
Central Asia/Europe	-7,988	-9,584	-10,996	-11,257	-17,662	-26,728	-36,825	-46,294	-53,069	-61,905	-44,269	-51,746
Russia	-5,332	-6,200	-2,874	-4,488	-7,438	-11,756	-18,292	-22,644	-27,371	-32,742	-22,089	-25,746
Turkey	-3,125	-4,523	-5,859	-4,184	-5,864	-8,682	-10,622	-13,256	-14,374	-16,259	-13,860	-16,782
All others	469	1,140	-2,263	-2,585	-4,361	-6,291	-7,910	-10,394	-11,324	-12,904	-8,320	-9,219
Middle East/North Africa	-17,479	-18,376	-22,141	-21,368	-30,101	-33,406	-47,000	-52,478	-50,705	-53,669	-57,758	-62,073
Israel	243	2,043	1,549	4,741	3,913	4,081	3,485	5,006	5,637	7,299	9,768	10,325
All others	-17,723	-20,419	-23,690	-26,109	-34,013	-37,486	-50,485	-57,484	-56,341	-60,969	-67,526	-72,398
South and Central America	-20,873	-23,992	-14,217	-11,038	-7,489	-13,503	-23,590	-38,311	-34,496	-59,221	-44,196	-66,142
Brazil	-6,960	-9,708	-7,166	-7,007	-4,420	-5,955	-9,043	-13,932	-13,364	-25,867	-20,740	-24,645
Mexico	2,544	3,044	8,402	12,130	8,220	7,654	7,641	6,630	13,163	6,638	9,148	-7,646
All others	-16,457	-17,328	-15,453	-16,161	-11,290	-15,202	-22,189	-31,008	-34,296	-39,992	-32,604	-33,851
Sub-Saharan Africa	-7,799	-8,089	-8,702	-10,270	-12,261	-15,474	-18,555	-22,050	-23,961	-31,557	-26,461	-29,515
Southern Africa	-4,122	-4,088	-4,139	-4,485	-5,355	-7,111	-8,175	-8,894	-8,723	-8,915	-7,341	-7,886
All others	-3,677	-4,001	-4,564	-5,785	-6,906	-8,364	-10,380	-13,157	-15,238	-22,642	-19,120	-21,629
Other developed	-17,475	-22,893	-26,589	-22,445	-26,789	-31,173	-36,188	-33,923	-26,541	-24,939	-19,122	-40,342
Australia	-7,589	-8,605	-10,073	-8,829	-14,050	-17,252	-18,533	-19,812	-19,988	-23,107	-21,839	-25,057
Canada	-13,281	-16,404	-17,745	-16,096	-15,562	-19,502	-20,784	-22,138	-21,934	-27,081	-21,743	-43,892
All others	3,395	2,116	1,229	2,480	2,823	5,582	3,128	8,026	15,381	25,250	24,459	28,607
Other developing	-2,667	-2,758	-3,089	-3,064	-4,654	-7,644	-7,820	-8,778	-9,416	-8,861	-9,104	-10,811

EU = European Union; ROW = rest of the world

NOTES: High-technology export goods include aerospace, communications and semiconductors, computers and office machinery, scientific instruments and measuring equipment, and pharmaceuticals. ROW is trade between named region/country/economy and rest of world. Intra-EU is trade between EU member countries. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Intra-China is trade between China and Hong Kong. Detail may not add to total because of rounding. See appendix table 6-32 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Trade Service database.

Appendix table 6-25

## Exports and imports of all manufactured goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Exports												
World	4,372,188	4,791,946	4,984,141	5,416,514	6,616,816	8,032,684	9,085,243	10,629,804	13,111,690	15,037,997	11,914,564	14,165,890
World excluding intra-EU and intra-China	3,074,440	3,429,081	3,528,761	3,895,642	4,653,823	5,690,042	6,568,698	7,740,886	9,809,573	11,504,468	9,188,017	11,072,040
United States	490,110	585,225	590,433	609,994	589,658	663,394	785,496	903,156	1,006,599	1,091,389	888,241	1,140,479
EU	1,856,049	1,952,586	2,039,120	2,156,203	2,750,866	3,283,491	3,572,310	4,054,851	4,936,099	5,462,659	4,185,678	4,723,708
EU ROW	682,903	730,264	716,777	789,641	981,156	1,170,313	1,318,873	1,466,743	1,960,324	2,272,463	1,767,537	1,996,867
Intra-EU	1,173,146	1,222,321	1,322,343	1,366,562	1,769,710	2,113,178	2,253,437	2,588,108	2,975,775	3,190,196	2,418,141	2,726,841
France	243,920	250,453	266,260	272,837	331,158	384,318	400,434	450,019	523,295	573,183	446,182	491,677
France ROW	90,788	93,125	94,039	103,142	117,540	137,471	145,421	164,991	202,851	235,834	191,805	210,918
France intra-EU	153,132	157,327	172,220	169,695	213,618	246,847	255,014	285,028	320,444	337,349	254,378	280,760
Germany	493,470	483,425	517,145	545,055	712,094	867,278	934,664	1,062,801	1,288,275	1,406,893	1,089,502	1,266,595
Germany ROW	188,747	189,855	190,762	211,395	267,745	327,799	357,686	412,978	510,086	575,842	459,365	539,902
Germany intra-EU	304,722	293,570	326,383	333,660	444,348	539,480	576,978	649,823	778,189	831,051	630,137	726,693
United Kingdom	217,721	258,076	254,954	254,747	280,271	319,448	354,136	410,344	420,546	445,976	341,085	369,571
United Kingdom ROW	99,364	124,188	115,725	107,722	118,714	136,437	157,013	162,061	201,212	227,515	175,146	189,443
United Kingdom intra-EU	118,357	133,888	139,229	147,026	161,557	183,011	197,123	248,284	219,334	218,461	165,939	180,128
Japan	450,486	430,631	426,871	416,080	481,447	577,121	609,841	660,394	744,571	823,597	615,015	789,370
China	330,052	389,326	417,041	515,345	735,797	955,594	1,161,792	1,400,123	1,692,742	1,934,323	1,654,279	2,000,585
China ROW	205,450	248,782	284,005	361,036	542,515	726,130	898,684	1,099,313	1,366,400	1,590,990	1,345,874	1,633,576
Intra-China	124,602	140,544	133,036	154,309	193,282	229,464	263,108	300,809	326,342	343,333	308,406	367,009
Asia-8	523,716	590,836	613,375	675,030	829,174	1,026,076	1,160,688	1,382,427	1,628,891	1,854,388	1,540,922	1,960,992
India	27,357	32,607	33,055	42,688	64,099	77,571	95,605	119,947	173,135	214,134	192,604	249,243
Indonesia	32,050	41,323	41,298	46,635	51,623	61,459	66,566	77,156	95,805	113,674	99,584	126,970
Malaysia	70,324	78,944	82,624	89,405	104,300	122,039	139,079	158,056	171,289	193,014	156,686	187,536
Philippines	17,205	27,633	35,320	37,347	43,122	47,584	49,809	51,997	56,445	54,098	40,240	52,405
Singapore	96,261	102,405	94,676	97,552	118,237	146,478	173,879	239,058	279,268	328,357	253,210	334,476
South Korea	120,836	131,909	142,466	155,462	197,683	259,953	289,884	336,137	403,722	468,620	398,231	502,057
Taiwan	116,628	126,177	131,434	146,987	176,719	219,189	239,358	275,665	298,868	306,700	249,490	328,462
Thailand	43,055	49,837	52,502	58,953	73,390	91,803	106,507	124,412	150,358	175,790	150,877	179,843
All others	663,071	769,637	829,874	978,686	1,123,434	1,414,553	1,628,475	1,927,293	2,317,923	2,842,024	2,227,831	2,660,546
Central Asia/Europe	78,819	106,738	102,135	151,608	190,198	261,107	325,600	421,270	516,518	672,790	475,920	578,260
Russia	35,983	52,782	48,437	72,970	87,574	120,827	149,310	178,130	250,747	339,181	237,687	309,006
Turkey	18,868	22,739	24,907	29,772	46,367	61,765	70,842	91,111	110,245	136,937	104,241	112,241
All others	23,969	31,217	28,791	48,866	56,257	78,515	105,448	152,029	155,526	196,673	133,992	157,013
Middle East/North Africa	72,068	80,234	102,457	133,528	175,665	241,201	252,852	314,505	415,882	581,155	468,152	567,920
Israel	17,526	21,935	26,266	31,621	32,811	38,972	44,357	48,372	56,189	63,450	51,973	61,193
All others	54,542	58,299	76,191	101,907	142,854	202,229	208,495	266,133	359,693	517,705	416,180	506,727
South and Central America	154,036	196,898	217,110	260,680	278,125	334,587	394,862	459,768	532,275	626,691	512,077	613,217
Brazil	33,251	36,284	33,587	40,546	50,261	67,656	81,272	91,447	109,603	121,714	88,805	114,533
Mexico	65,274	90,384	116,392	141,754	141,390	159,291	173,991	199,893	227,701	240,589	202,371	250,265
All others	55,511	70,230	67,131	78,380	86,474	107,640	139,599	168,427	194,971	264,388	220,901	248,419

Appendix table 6-25

## Exports and imports of all manufactured goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Sub-Saharan Africa	40,353	44,562	39,113	51,323	56,346	75,404	85,844	100,263	117,518	135,942	106,611	129,947
Southern Africa	24,922	28,263	23,915	32,513	36,121	49,510	56,084	62,176	75,805	89,363	65,152	80,586
All others	15,431	16,299	15,198	18,810	20,224	25,894	29,760	38,087	41,713	46,580	41,460	49,362
Other developed	301,531	320,734	347,291	352,917	385,753	456,507	518,337	569,907	661,221	735,132	577,616	674,341
Australia	33,837	38,870	35,436	39,414	45,769	57,918	69,753	79,872	97,207	121,232	101,780	117,866
Canada	157,338	173,288	200,477	201,806	206,737	236,848	274,447	290,239	312,052	315,039	228,401	277,955
All others	110,356	108,576	111,377	111,697	133,248	161,741	174,137	199,795	251,963	298,860	247,436	278,520
Other developing	16,263	20,471	21,769	28,631	37,347	45,748	50,981	61,580	74,508	90,315	87,455	96,860
Imports												
World	4,372,188	4,791,946	4,984,141	5,416,514	6,616,816	8,032,684	9,085,243	10,629,804	13,111,690	15,037,997	11,914,564	14,165,890
World excluding intra-EU and intra-China	3,074,440	3,429,081	3,528,761	3,895,642	4,653,823	5,690,042	6,568,698	7,740,886	9,809,573	11,504,468	9,188,017	11,072,040
United States	659,691	766,997	923,026	1,001,289	1,082,523	1,246,140	1,386,936	1,519,588	1,597,629	1,622,608	1,270,292	1,544,904
EU	1,705,459	1,799,100	1,962,454	2,047,289	2,588,708	3,119,016	3,439,299	3,997,218	4,794,120	5,255,683	3,984,279	4,522,684
EU ROW	532,313	576,778	640,110	680,727	818,997	1,005,838	1,185,861	1,409,110	1,818,345	2,065,487	1,566,139	1,795,843
Intra-EU	1,173,146	1,222,321	1,322,343	1,366,562	1,769,710	2,113,178	2,253,437	2,588,108	2,975,775	3,190,196	2,418,141	2,726,841
France	232,774	226,967	254,447	257,363	316,454	378,703	412,169	468,691	549,065	604,546	481,702	534,691
France ROW	65,861	68,408	77,336	78,267	90,489	113,051	128,306	143,951	194,729	219,594	180,373	203,139
France intra-EU	166,914	158,559	177,111	179,096	225,965	265,653	283,863	324,740	354,336	384,952	301,328	331,552
Germany	384,447	368,838	398,676	408,408	501,960	594,673	637,728	752,643	898,478	1,000,760	793,196	935,589
Germany ROW	134,805	128,842	139,348	146,173	172,336	209,177	237,026	284,112	354,465	401,363	324,937	390,315
Germany intra-EU	249,641	239,996	259,328	262,235	329,624	385,495	400,702	468,530	544,012	599,397	468,259	545,274
United Kingdom	230,358	272,174	291,690	297,510	347,199	407,336	448,797	534,118	565,581	563,364	441,336	493,364
United Kingdom ROW	100,880	126,342	137,619	137,452	146,112	169,720	203,123	262,993	267,862	275,071	220,749	249,419
United Kingdom intra-EU	129,477	145,833	154,071	160,058	201,088	237,616	245,674	271,124	297,719	288,293	220,588	243,945
Japan	217,454	219,378	205,884	231,479	255,451	305,834	336,995	368,737	412,700	468,965	365,791	445,417
China	334,405	366,898	341,857	418,425	598,144	740,631	853,084	982,521	1,165,317	1,272,818	1,168,209	1,442,755
China ROW	209,804	226,354	208,821	264,116	404,862	511,167	589,976	681,712	838,975	929,485	859,803	1,075,746
Intra-China	124,602	140,544	133,036	154,309	193,282	229,464	263,108	300,809	326,342	343,333	308,406	367,009
Asia-8	508,070	533,082	468,514	499,025	603,238	789,390	870,357	1,016,590	1,236,242	1,481,903	1,199,823	1,522,632
India	32,937	34,294	34,900	36,430	55,128	74,012	96,966	117,126	179,155	230,625	204,940	250,259
Indonesia	35,132	39,701	20,951	27,873	31,964	49,429	51,806	52,931	78,968	127,351	93,773	119,036
Malaysia	61,539	66,361	54,044	59,798	69,582	83,729	97,381	113,071	124,990	137,042	106,932	133,542
Philippines	25,248	35,865	32,397	34,121	37,549	42,125	42,702	47,945	55,133	59,493	48,199	60,928
Singapore	104,328	111,007	97,509	100,115	112,909	141,840	164,908	219,212	254,190	304,797	242,763	303,825
South Korea	103,175	103,323	88,762	101,691	134,284	169,706	187,589	216,918	267,668	312,866	246,149	317,001
Taiwan	83,672	88,761	98,569	90,641	102,919	154,060	142,270	153,802	162,722	177,684	155,650	209,129
Thailand	62,040	53,770	41,383	48,356	58,902	74,488	86,735	95,585	113,416	132,046	101,416	128,912
All others	781,066	944,203	931,006	1,034,312	1,224,393	1,512,383	1,812,079	2,224,068	2,713,156	3,287,053	2,672,576	3,201,236
Central Asia/Europe	72,583	128,161	86,304	111,145	174,491	244,278	296,539	389,613	523,358	662,935	435,387	523,441
Russia	27,300	58,694	26,478	42,061	62,565	85,372	108,152	141,288	200,619	256,507	153,492	186,790
Turkey	27,543	39,326	33,146	34,219	58,745	85,052	100,984	132,389	158,737	188,384	139,294	168,980
All others	17,740	30,141	26,680	34,865	53,181	73,854	87,403	115,935	164,002	218,044	142,601	167,671

Appendix table 6-25

## Exports and imports of all manufactured goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Middle East/North Africa	148,810	160,364	173,550	204,869	273,062	334,192	412,610	532,482	612,192	760,305	726,997	819,864
Israel	22,620	22,861	26,706	28,265	27,849	34,930	41,659	44,546	55,718	61,019	43,697	50,627
All others	126,189	137,503	146,844	176,605	245,214	299,262	370,951	487,936	556,474	699,286	683,300	769,238
South and Central America	217,955	277,089	270,418	304,517	290,603	363,466	442,468	548,215	690,276	852,986	667,564	833,646
Brazil	41,752	52,751	42,676	49,726	40,088	52,679	64,085	80,787	108,263	162,124	122,732	155,464
Mexico	56,920	85,904	105,067	123,503	124,722	150,113	170,608	200,986	235,773	264,707	207,690	285,897
All others	119,283	138,435	122,675	131,288	125,793	160,674	207,776	266,442	346,240	426,155	337,142	392,285
Sub-Saharan Africa	60,731	62,434	58,045	70,578	89,899	113,078	137,063	172,680	220,341	277,402	237,351	278,156
Southern Africa	22,480	25,087	20,076	23,170	29,765	40,568	49,093	61,324	73,425	79,869	60,403	68,880
All others	38,250	37,346	37,969	47,408	60,134	72,509	87,970	111,356	146,916	197,533	176,948	209,276
Other developed	314,690	350,357	373,577	378,345	432,796	504,366	580,743	652,683	753,443	850,216	698,873	851,814
Australia	49,282	53,686	56,340	53,844	74,400	91,633	104,095	116,049	142,092	180,712	150,715	178,737
Canada	151,861	180,522	199,042	201,718	212,612	242,284	282,919	314,684	339,758	357,606	284,909	376,986
All others	113,547	116,149	118,195	122,782	145,784	170,449	193,729	221,951	271,594	311,898	263,249	296,090
Other developing	27,029	28,232	27,157	35,435	53,440	66,080	79,719	101,075	133,886	160,610	143,754	172,471
Balance												
United States	-169,581	-181,772	-332,593	-391,295	-492,865	-582,746	-601,440	-616,432	-591,030	-531,219	-382,051	-404,425
EU	150,589	153,486	76,667	108,914	162,159	164,475	133,012	57,633	141,978	206,976	201,398	201,024
EU ROW	150,589	153,486	76,667	108,914	162,159	164,475	133,012	57,633	141,978	206,976	201,398	201,024
Intra-EU	0	0	0	0	0	0	0	0	0	0	0	0
France	11,145	23,485	11,813	15,474	14,704	5,615	-11,735	-18,672	-25,769	-31,363	-35,519	-43,013
France ROW	24,927	24,717	16,703	24,875	27,051	24,421	17,115	21,040	8,123	16,240	11,431	7,779
France intra-EU	-13,782	-1,232	-4,890	-9,401	-12,347	-18,806	-28,849	-39,712	-33,892	-47,603	-46,951	-50,792
Germany	109,023	114,588	118,468	136,647	210,134	272,606	296,936	310,158	389,798	406,133	296,306	331,007
Germany ROW	53,942	61,013	51,414	65,222	95,409	118,621	120,660	128,866	155,621	174,480	134,428	149,587
Germany intra-EU	55,081	53,575	67,055	71,425	114,724	153,984	176,276	181,292	234,177	231,653	161,878	181,419
United Kingdom	-12,636	-14,098	-36,735	-42,762	-66,929	-87,888	-94,660	-123,773	-145,034	-117,388	-100,251	-123,793
United Kingdom ROW	-1,516	-2,154	-21,893	-29,730	-27,398	-33,283	-46,110	-100,933	-66,650	-47,556	-45,603	-59,976
United Kingdom intra-EU	-11,120	-11,944	-14,842	-13,032	-39,531	-54,605	-48,551	-22,841	-78,384	-69,832	-54,648	-63,817
Japan	233,032	211,253	220,987	184,601	225,996	271,287	272,846	291,657	331,871	354,633	249,224	343,954
China	-4,353	22,428	75,184	96,920	137,654	214,963	308,708	417,601	527,425	661,505	486,071	557,830
China ROW	-4,353	22,428	75,184	96,920	137,654	214,963	308,708	417,601	527,425	661,505	486,071	557,830
Intra-China	0	0	0	0	0	0	0	0	0	0	0	0
Asia-8	15,646	57,754	144,861	176,005	225,936	236,686	290,331	365,837	392,649	372,484	341,099	438,360
India	-5,580	-1,687	-1,845	6,259	8,970	3,559	-1,361	2,821	-6,019	-16,492	-12,336	-1,016
Indonesia	-3,082	1,622	20,347	18,762	19,658	12,030	14,760	24,225	16,837	-13,677	5,811	7,934
Malaysia	8,786	12,583	28,581	29,606	34,718	38,310	41,699	44,985	46,298	55,972	49,754	53,994
Philippines	-8,043	-8,231	2,923	3,226	5,573	5,459	7,107	4,052	1,313	-5,395	-7,959	-8,523
Singapore	-8,067	-8,601	-2,833	-2,563	5,328	4,638	8,971	19,846	25,079	23,561	10,447	30,651
South Korea	17,661	28,586	53,705	53,771	63,400	90,247	102,295	119,219	136,054	155,755	152,082	185,056
Taiwan	32,956	37,416	32,865	56,347	73,800	65,128	97,088	121,863	136,146	129,016	93,840	119,334
Thailand	-18,984	-3,933	11,119	10,597	14,489	17,315	19,772	28,827	36,942	43,744	49,460	50,931

## Appendix table 6-25

## Exports and imports of all manufactured goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
All others	-117,996	-174,566	-101,132	-55,626	-100,959	-97,830	-183,604	-296,775	-395,234	-445,028	-444,745	-540,690
Central Asia/Europe	6,236	-21,423	15,831	40,463	15,707	16,828	29,061	31,658	-6,840	9,855	40,533	54,819
Russia	8,683	-5,912	21,958	30,908	25,009	35,455	41,158	36,842	50,129	82,674	84,195	122,216
Turkey	-8,675	-16,588	-8,239	-4,447	-12,378	-23,288	-30,143	-41,278	-48,492	-51,447	-35,053	-56,739
All others	6,228	1,076	2,111	14,001	3,076	4,661	18,045	36,094	-8,477	-21,371	-8,609	-10,658
Middle East/North Africa	-76,742	-80,130	-71,093	-71,342	-97,398	-92,991	-159,758	-217,977	-196,310	-179,151	-258,845	-251,944
Israel	-5,094	-926	-440	3,356	4,962	4,042	2,698	3,826	471	2,431	8,276	10,567
All others	-71,647	-79,203	-70,652	-74,698	-102,360	-97,033	-162,456	-221,803	-196,781	-181,581	-267,121	-262,511
South and Central America	-63,919	-80,191	-53,308	-43,837	-12,477	-28,880	-47,606	-88,447	-158,001	-226,295	-155,488	-220,429
Brazil	-8,501	-16,467	-9,089	-9,180	10,173	14,977	17,188	10,660	1,340	-40,410	-33,927	-40,930
Mexico	8,354	4,481	11,325	18,251	16,668	9,178	3,383	-1,093	-8,072	-24,118	-5,319	-35,632
All others	-63,772	-68,205	-55,544	-52,908	-39,319	-53,034	-68,177	-98,014	-151,269	-161,767	-116,242	-143,866
Sub-Saharan Africa	-20,377	-17,872	-18,932	-19,255	-33,553	-37,674	-51,219	-72,417	-102,823	-141,460	-130,739	-148,209
Southern Africa	2,442	3,175	3,839	9,343	6,356	8,942	6,991	852	2,380	9,493	4,749	11,705
All others	-22,819	-21,047	-22,771	-28,598	-39,909	-46,615	-58,210	-73,269	-105,203	-150,953	-135,488	-159,914
Other developed	-13,159	-29,623	-26,286	-25,428	-47,043	-47,858	-62,406	-82,777	-92,222	-115,084	-121,257	-177,473
Australia	-15,446	-14,816	-20,903	-14,430	-28,632	-33,715	-34,342	-36,177	-44,885	-59,480	-48,936	-60,871
Canada	5,477	-7,234	1,435	87	-5,875	-5,436	-8,472	-24,444	-27,706	-42,567	-56,508	-99,032
All others	-3,190	-7,573	-6,818	-11,085	-12,536	-8,707	-19,592	-22,156	-19,631	-13,037	-15,813	-17,570
Other developing	-10,766	-7,761	-5,388	-6,804	-16,094	-20,332	-28,738	-39,495	-59,378	-70,296	-56,299	-75,611

EU = European Union; ROW = rest of the world

NOTES: High-technology export goods include aerospace, communications and semiconductors, computers and office machinery, scientific instruments and measuring equipment, and pharmaceuticals. ROW is trade between named region/country/economy and rest of world. Intra-EU is trade between EU member countries. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Intra-China is trade between China and Hong Kong. Detail may not add to total because of rounding. See appendix table 6-32 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Trade Service database.

Appendix table 6-26

## Exports and imports of communications goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Exports												
World	193,705	214,589	242,451	291,732	343,089	442,819	536,160	642,512	610,537	634,189	543,744	655,191
World excluding intra-EU and intra-China	150,453	162,705	174,512	210,602	248,906	326,620	394,885	443,990	464,837	484,143	415,136	506,943
United States	20,147	25,333	25,768	26,094	19,000	22,291	27,957	30,813	34,254	35,897	31,175	46,366
EU	54,626	68,745	85,191	98,000	104,376	127,273	160,970	209,926	146,808	148,519	117,928	133,061
EU ROW	24,243	30,103	30,556	33,736	36,547	46,239	60,888	58,363	54,194	53,307	40,214	46,490
Intra-EU	30,383	38,642	54,635	64,264	67,829	81,034	100,083	151,563	92,614	95,213	77,713	86,572
France	6,478	8,268	10,582	11,176	10,563	12,350	12,935	15,882	9,615	8,822	7,454	8,321
France ROW	2,890	3,588	4,240	5,117	4,942	5,507	5,422	5,458	4,346	4,378	3,811	4,303
France intra-EU	3,588	4,681	6,342	6,059	5,622	6,844	7,513	10,424	5,269	4,443	3,643	4,018
Germany	12,628	13,788	15,947	18,363	22,896	28,687	33,367	35,057	30,936	25,191	19,040	22,092
Germany ROW	5,518	6,268	5,511	6,932	8,860	11,687	13,407	13,902	13,064	10,750	8,002	9,311
Germany intra-EU	7,110	7,520	10,437	11,430	14,036	17,000	19,960	21,155	17,872	14,441	11,039	12,781
United Kingdom	10,129	13,465	14,885	18,547	14,929	13,629	27,045	55,518	9,822	9,549	8,800	9,549
United Kingdom ROW	5,237	6,887	4,946	5,361	3,852	5,151	13,198	8,404	4,204	4,126	4,017	4,424
United Kingdom intra-EU	4,892	6,578	9,939	13,185	11,077	8,478	13,847	47,114	5,618	5,423	4,783	5,126
Japan	29,620	24,101	25,865	25,741	32,091	37,644	37,360	36,885	36,288	36,927	26,965	33,451
China	28,205	31,147	34,466	49,546	82,288	119,183	152,256	188,668	210,186	226,192	209,956	256,709
China ROW	15,337	17,905	21,162	32,681	55,934	84,018	111,065	141,709	157,101	171,359	159,061	195,032
Intra-China	12,869	13,242	13,304	16,865	26,355	35,165	41,192	46,959	53,085	54,834	50,895	61,676
Asia-8	43,834	40,239	41,120	55,126	71,459	93,401	104,992	114,834	116,026	119,898	98,316	120,534
India	157	182	183	239	409	505	627	936	1,381	2,247	4,281	5,580
Indonesia	1,854	2,547	2,720	3,858	3,832	4,175	4,250	4,008	4,436	4,721	4,665	5,721
Malaysia	13,854	11,680	10,803	14,044	14,630	16,868	21,562	23,029	19,275	19,050	14,139	17,332
Philippines	1,249	1,700	1,320	1,737	2,129	2,641	2,603	2,441	2,483	2,471	1,712	2,429
Singapore	9,685	7,619	5,614	5,747	5,501	7,872	8,748	10,833	9,381	8,268	4,463	5,752
South Korea	8,829	7,906	11,049	17,694	28,506	38,864	41,449	43,692	45,892	49,804	41,064	48,060
Taiwan	4,932	4,790	5,459	7,417	10,210	13,431	15,244	18,668	21,918	21,161	17,557	22,955
Thailand	3,274	3,816	3,973	4,391	6,242	9,044	10,509	11,228	11,260	12,175	10,434	12,705
All others	15,845	23,195	28,420	35,754	33,035	42,137	51,667	58,317	64,208	65,493	58,093	63,622
Central Asia/Europe	1,317	3,011	1,233	1,690	2,623	3,978	4,406	4,717	4,508	4,067	4,169	4,540
Russia	42	331	205	192	215	306	272	484	440	574	659	831
Turkey	271	505	829	1,159	2,006	2,968	3,387	3,421	2,801	2,436	2,013	2,104
All others	1,004	2,176	199	339	401	703	748	812	1,267	1,057	1,497	1,605
Middle East/North Africa	1,827	2,630	3,613	4,719	4,388	5,348	8,143	5,757	6,735	7,064	5,555	6,536
Israel	1,569	2,274	2,981	3,633	2,800	3,275	3,143	3,476	2,530	3,470	2,679	3,118
All others	259	356	631	1,086	1,588	2,073	5,000	2,281	4,205	3,594	2,875	3,418
South and Central America	7,348	10,208	14,443	20,538	18,572	23,462	27,871	35,776	41,637	42,800	37,829	41,362
Brazil	148	621	734	1,802	1,653	1,611	3,170	3,560	2,431	2,629	1,823	2,161
Mexico	6,903	9,180	13,456	18,438	16,647	21,375	23,817	31,377	37,951	39,495	35,433	38,644
All others	298	407	253	298	272	476	884	839	1,256	676	572	557

Appendix table 6-26

## Exports and imports of communications goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Sub-Saharan Africa	133	180	248	297	398	547	715	849	771	726	736	852
Southern Africa	106	153	207	251	341	433	371	418	512	474	538	630
All others	26	27	42	46	57	113	343	431	259	252	198	221
Other developed	5,191	7,061	8,786	8,363	6,808	8,476	10,093	10,569	9,392	9,014	7,326	7,653
Australia	509	790	649	765	519	705	700	686	606	626	606	691
Canada	3,177	4,622	6,367	5,736	4,503	5,417	6,753	7,407	6,512	5,740	4,667	4,598
All others	1,506	1,649	1,771	1,862	1,786	2,354	2,640	2,476	2,274	2,648	2,053	2,363
Other developing	28	105	96	146	246	327	439	649	1,164	1,823	2,479	2,680
Imports												
World	193,705	214,589	242,451	291,732	343,089	442,819	536,160	642,512	610,537	634,189	543,744	655,191
World excluding intra-EU and intra-China	150,453	162,705	174,512	210,602	248,906	326,620	394,885	443,990	464,837	484,143	415,136	506,943
United States	35,627	37,962	52,402	64,640	73,443	90,279	107,238	118,835	133,282	136,962	122,547	140,888
EU	56,116	65,755	85,728	101,835	116,788	153,158	187,532	252,657	194,974	193,754	158,640	183,850
EU ROW	25,733	27,113	31,093	37,570	48,959	72,124	87,449	101,093	102,360	98,541	80,926	97,279
Intra-EU	30,383	38,642	54,635	64,264	67,829	81,034	100,083	151,563	92,614	95,213	77,713	86,572
France	7,172	7,891	9,873	11,853	12,792	16,069	20,465	35,934	19,092	19,781	17,404	20,874
France ROW	3,381	3,611	4,535	4,526	6,307	8,545	10,464	11,651	11,441	12,184	10,897	13,578
France intra-EU	3,791	4,280	5,339	7,327	6,485	7,524	10,001	24,283	7,651	7,597	6,507	7,296
Germany	12,234	11,358	13,914	19,916	21,640	28,487	33,361	41,513	33,290	31,380	27,600	32,415
Germany ROW	6,284	5,403	6,736	8,695	11,705	17,459	20,037	25,382	21,731	20,141	17,160	20,756
Germany intra-EU	5,950	5,956	7,177	11,220	9,936	11,029	13,324	16,131	11,559	11,238	10,440	11,659
United Kingdom	9,551	12,370	14,330	15,053	18,000	23,956	28,481	42,093	26,695	25,385	21,140	24,440
United Kingdom ROW	6,813	8,201	6,554	7,092	8,588	11,416	12,252	15,754	13,430	12,653	10,764	12,952
United Kingdom intra-EU	2,738	4,169	7,776	7,961	9,412	12,540	16,230	26,339	13,265	12,732	10,376	11,488
Japan	9,485	9,911	10,369	13,803	13,820	17,212	19,684	19,211	20,107	22,228	21,427	25,833
China	28,711	28,426	25,904	33,871	49,632	62,035	70,578	79,681	89,121	92,887	84,049	101,915
China ROW	15,842	15,184	12,599	17,005	23,278	26,870	29,386	32,723	36,036	38,053	33,154	40,239
Intra-China	12,869	13,242	13,304	16,865	26,355	35,165	41,192	46,959	53,085	54,834	50,895	61,676
Asia-8	22,915	24,017	18,219	23,990	29,240	37,808	40,731	48,870	48,149	52,278	44,902	56,974
India	765	928	931	1,403	3,646	4,990	5,440	7,897	8,934	10,603	10,436	13,532
Indonesia	1,325	2,060	627	1,089	1,364	1,627	1,593	2,036	2,721	5,531	4,697	5,778
Malaysia	3,434	3,034	2,218	3,146	3,199	3,921	4,145	4,583	4,579	4,800	4,065	5,050
Philippines	1,329	1,894	1,129	1,708	1,459	1,776	1,760	2,046	2,019	1,973	1,974	2,767
Singapore	8,467	7,351	5,475	6,105	7,151	10,205	11,468	14,314	13,679	11,554	8,358	10,377
South Korea	2,812	3,162	3,140	4,310	5,753	7,362	7,721	8,902	8,161	9,131	7,696	9,771
Taiwan	1,981	2,955	3,160	3,460	3,832	4,393	4,618	4,614	4,348	4,622	3,957	5,083
Thailand	2,803	2,633	1,538	2,770	2,837	3,535	3,986	4,479	3,708	4,064	3,720	4,616
All others	36,686	44,169	46,479	51,527	58,492	80,171	108,049	120,779	120,552	133,514	110,036	143,233
Central Asia/Europe	4,166	5,693	4,265	4,834	8,021	12,322	15,693	17,764	20,559	22,385	13,529	15,952
Russia	2,710	3,009	1,126	2,321	4,076	6,294	8,248	8,701	10,874	12,499	6,390	7,469
Turkey	830	1,432	2,233	1,334	1,997	3,115	3,679	4,168	4,739	4,428	3,827	4,651
All others	625	1,252	906	1,179	1,948	2,913	3,765	4,895	4,946	5,459	3,313	3,832

Appendix table 6-26

## Exports and imports of communications goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Middle East/North Africa	6,811	6,965	7,790	10,127	13,742	17,428	26,869	24,246	22,723	23,785	21,351	25,299
Israel	1,019	993	1,369	1,320	1,116	1,466	1,630	1,643	1,691	1,827	1,696	1,944
All others	5,792	5,972	6,421	8,806	12,625	15,962	25,240	22,603	21,032	21,959	19,655	23,355
South and Central America	11,248	15,211	14,950	16,157	13,580	19,979	27,288	36,655	35,442	43,822	35,838	49,745
Brazil	2,444	3,861	2,952	2,964	1,831	2,894	3,856	4,982	3,574	7,768	5,330	7,057
Mexico	3,075	4,458	5,399	7,056	6,549	9,135	11,431	16,424	15,744	17,978	16,812	26,586
All others	5,729	6,892	6,599	6,137	5,199	7,951	12,002	15,249	16,125	18,076	13,696	16,102
Sub-Saharan Africa	2,319	2,751	3,130	3,253	4,061	5,585	6,995	8,824	8,464	9,390	7,932	9,566
Southern Africa	1,312	1,593	1,654	1,485	1,643	2,517	3,072	3,652	3,363	3,064	2,628	3,084
All others	1,007	1,158	1,477	1,768	2,418	3,068	3,923	5,171	5,101	6,326	5,304	6,482
Other developed	11,199	12,626	15,425	16,163	17,642	22,431	27,495	28,836	28,726	29,440	26,749	37,247
Australia	2,742	2,852	3,501	3,448	4,587	6,180	6,844	7,856	7,974	8,049	7,966	10,011
Canada	5,050	6,263	7,647	8,633	8,409	10,078	11,227	12,889	13,258	14,070	12,014	19,405
All others	3,407	3,511	4,277	4,082	4,646	6,174	9,424	8,092	7,494	7,321	6,769	7,830
Other developing	944	923	919	993	1,446	2,425	3,708	4,454	4,638	4,692	4,638	5,425
Balance												
United States	-15,480	-12,629	-26,634	-38,546	-54,443	-67,988	-79,281	-88,022	-99,027	-101,066	-91,372	-94,522
EU	-1,489	2,990	-537	-3,834	-12,412	-25,885	-26,561	-42,730	-48,166	-45,234	-40,712	-50,789
EU ROW	-1,489	2,990	-537	-3,834	-12,412	-25,885	-26,561	-42,730	-48,166	-45,234	-40,712	-50,789
Intra-EU	0	0	0	0	0	0	0	0	0	0	0	0
France	-694	377	709	-677	-2,229	-3,719	-7,531	-20,052	-9,477	-10,960	-9,950	-12,553
France ROW	-491	-24	-295	591	-1,366	-3,039	-5,043	-6,193	-7,095	-7,806	-7,086	-9,275
France intra-EU	-203	400	1,003	-1,268	-863	-680	-2,488	-13,859	-2,382	-3,154	-2,864	-3,278
Germany	394	2,430	2,034	-1,553	1,255	200	6	-6,456	-2,355	-6,189	-8,560	-10,322
Germany ROW	-766	865	-1,225	-1,763	-2,845	-5,772	-6,630	-11,480	-8,667	-9,391	-9,158	-11,444
Germany intra-EU	1,160	1,564	3,259	210	4,101	5,972	6,636	5,024	6,313	3,202	599	1,122
United Kingdom	577	1,096	555	3,494	-3,071	-10,327	-1,437	13,424	-16,873	-15,836	-12,341	-14,891
United Kingdom ROW	-1,577	-1,314	-1,607	-1,731	-4,736	-6,265	946	-7,351	-9,226	-8,527	-6,748	-8,529
United Kingdom intra-EU	2,154	2,409	2,163	5,224	1,664	-4,062	-2,383	20,775	-7,647	-7,309	-5,593	-6,362
Japan	20,135	14,190	15,496	11,938	18,271	20,432	17,676	17,674	16,182	14,699	5,538	7,617
China	-506	2,721	8,562	15,676	32,656	57,148	81,678	108,987	121,065	133,306	125,906	154,793
China ROW	-506	2,721	8,562	15,676	32,656	57,148	81,678	108,987	121,065	133,306	125,906	154,793
Intra-China	0	0	0	0	0	0	0	0	0	0	0	0
Asia-8	20,920	16,222	22,902	31,136	42,218	55,593	64,261	65,964	67,877	67,620	53,414	63,560
India	-608	-746	-748	-1,164	-3,238	-4,485	-4,813	-6,961	-7,552	-8,356	-6,155	-7,953
Indonesia	529	487	2,093	2,769	2,468	2,549	2,657	1,972	1,715	-810	-32	-57
Malaysia	10,420	8,646	8,585	10,897	11,431	12,947	17,417	18,445	14,696	14,251	10,074	12,281
Philippines	-80	-195	191	29	670	865	843	396	464	498	-261	-337
Singapore	1,219	268	139	-357	-1,650	-2,332	-2,720	-3,480	-4,298	-3,286	-3,895	-4,625
South Korea	6,017	4,744	7,908	13,384	22,753	31,502	33,727	34,790	37,731	40,673	33,368	38,290
Taiwan	2,951	1,835	2,299	3,957	6,379	9,038	10,627	14,053	17,570	16,538	13,599	17,872
Thailand	471	1,183	2,434	1,620	3,405	5,509	6,523	6,750	7,551	8,111	6,714	8,089



## Appendix table 6-26

## Exports and imports of communications goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
All others	-20,841	-20,974	-18,059	-15,773	-25,457	-38,034	-56,382	-62,462	-56,344	-68,021	-51,943	-79,611
Central Asia/Europe	-2,849	-2,682	-3,032	-3,144	-5,398	-8,344	-11,287	-13,047	-16,051	-18,319	-9,361	-11,412
Russia	-2,668	-2,679	-921	-2,129	-3,861	-5,988	-7,977	-8,217	-10,434	-11,925	-5,731	-6,638
Turkey	-559	-927	-1,405	-175	9	-146	-293	-747	-1,938	-1,992	-1,814	-2,547
All others	378	924	-706	-840	-1,547	-2,210	-3,018	-4,083	-3,679	-4,402	-1,816	-2,228
Middle East/North Africa	-4,983	-4,335	-4,177	-5,408	-9,354	-12,081	-18,726	-18,489	-15,988	-16,721	-15,796	-18,763
Israel	550	1,281	1,612	2,313	1,684	1,808	1,513	1,833	839	1,643	983	1,175
All others	-5,534	-5,616	-5,789	-7,720	-11,037	-13,889	-20,240	-20,322	-16,827	-18,364	-16,780	-19,938
South and Central America	-3,899	-5,003	-506	4,381	4,992	3,482	583	-879	6,195	-1,022	1,991	-8,383
Brazil	-2,297	-3,240	-2,219	-1,162	-179	-1,283	-686	-1,421	-1,143	-5,140	-3,506	-4,896
Mexico	3,828	4,723	8,058	11,382	10,098	12,241	12,386	14,953	22,207	21,517	18,621	12,058
All others	-5,431	-6,486	-6,345	-5,839	-4,927	-7,475	-11,117	-14,410	-14,869	-17,400	-13,124	-15,545
Sub-Saharan Africa	-2,186	-2,571	-2,882	-2,956	-3,663	-5,038	-6,280	-7,975	-7,693	-8,664	-7,196	-8,714
Southern Africa	-1,206	-1,440	-1,447	-1,234	-1,302	-2,084	-2,701	-3,235	-2,851	-2,589	-2,090	-2,454
All others	-980	-1,131	-1,435	-1,722	-2,361	-2,954	-3,579	-4,740	-4,842	-6,074	-5,106	-6,260
Other developed	-6,007	-5,566	-6,639	-7,800	-10,834	-13,955	-17,402	-18,267	-19,333	-20,425	-19,423	-29,594
Australia	-2,234	-2,062	-2,852	-2,683	-4,068	-5,475	-6,144	-7,170	-7,368	-7,422	-7,360	-9,319
Canada	-1,873	-1,641	-1,280	-2,897	-3,906	-4,661	-4,474	-5,482	-6,746	-8,330	-7,347	-14,807
All others	-1,901	-1,862	-2,506	-2,220	-2,860	-3,819	-6,784	-5,615	-5,220	-4,673	-4,716	-5,467
Other developing	-915	-818	-822	-847	-1,200	-2,098	-3,269	-3,805	-3,474	-2,869	-2,158	-2,744

EU = European Union; ROW = rest of the world

NOTES: ROW is trade between named region/country/economy and rest of world. Intra-EU is trade between EU member countries. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Intra-China is trade between China and Hong Kong. Detail may not add to total because of rounding. See appendix table 6-32 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Trade Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-27

## Exports and imports of semiconductor goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Exports												
World	183,378	199,994	231,445	236,361	289,680	355,185	386,644	442,628	476,817	477,257	430,964	510,351
World excluding intra-EU and intra-China	163,463	174,581	207,219	202,657	249,398	302,497	327,872	375,313	398,985	393,018	349,210	421,814
United States	24,859	31,296	39,206	35,882	37,216	36,493	43,224	47,935	46,233	46,527	33,366	47,259
EU	32,895	35,555	38,512	40,695	42,468	52,799	52,136	54,429	57,040	58,401	41,442	42,526
EU ROW	15,071	13,710	19,199	16,550	19,187	23,791	22,935	25,089	26,632	27,047	17,749	18,636
Intra-EU	17,824	21,845	19,313	24,145	23,281	29,008	29,200	29,339	30,408	31,354	23,693	23,891
France	5,530	6,291	6,709	6,249	5,700	6,625	7,155	7,708	7,632	7,340	5,701	5,744
France ROW	2,530	3,335	3,679	3,462	3,608	3,962	4,605	4,806	4,954	4,685	3,398	3,517
France intra-EU	3,001	2,956	3,030	2,787	2,093	2,663	2,550	2,902	2,678	2,655	2,303	2,226
Germany	8,335	8,072	9,248	11,229	13,744	16,322	16,021	16,935	19,638	22,008	14,991	15,820
Germany ROW	3,185	3,363	3,834	5,218	6,773	8,022	7,556	8,110	9,306	9,277	6,514	7,141
Germany intra-EU	5,151	4,709	5,414	6,012	6,971	8,301	8,466	8,824	10,332	12,731	8,477	8,680
United Kingdom	7,852	6,199	6,841	9,377	5,366	6,742	7,169	7,000	5,171	4,959	3,791	3,784
United Kingdom ROW	2,223	2,049	2,155	1,671	1,480	1,991	2,450	2,434	1,902	1,771	1,252	1,275
United Kingdom intra-EU	5,628	4,150	4,686	7,706	3,886	4,752	4,719	4,567	3,269	3,188	2,538	2,508
Japan	43,328	35,852	34,681	31,830	36,374	42,062	41,324	43,242	46,150	46,041	37,641	45,086
China	8,281	10,888	13,488	18,345	30,668	43,905	53,088	68,007	81,945	94,422	93,917	107,647
China ROW	6,190	7,320	8,574	8,786	13,666	20,224	23,516	30,031	34,522	41,537	35,855	43,000
Intra-China	2,091	3,568	4,914	9,559	17,001	23,680	29,571	37,976	47,424	52,885	58,062	64,647
Asia-8	65,271	78,339	92,161	97,314	128,841	163,891	182,423	213,275	229,378	215,140	205,719	247,650
India	73	113	120	157	207	397	350	386	438	794	740	911
Indonesia	258	504	598	777	969	1,130	1,121	1,096	1,221	1,247	1,007	1,222
Malaysia	13,617	16,865	17,919	19,183	23,298	25,404	24,536	24,822	27,237	19,686	30,937	36,374
Philippines	4,086	9,053	13,671	13,929	17,454	19,507	20,262	20,484	21,753	19,302	14,971	18,435
Singapore	13,165	14,651	15,749	17,484	23,519	30,290	34,622	43,602	47,543	47,447	35,599	43,392
South Korea	20,461	19,832	22,622	17,585	21,364	27,958	32,083	34,648	36,324	33,057	32,609	38,881
Taiwan	10,297	13,353	17,086	23,279	34,834	50,647	60,665	77,798	82,874	82,139	78,370	95,622
Thailand	3,314	3,968	4,397	4,920	7,196	8,558	8,784	10,439	11,988	11,469	11,486	12,814
All others	4,434	6,247	6,928	8,342	10,632	13,275	12,152	12,567	12,889	13,883	16,402	17,608
Central Asia/Europe	86	117	210	195	261	382	446	442	483	546	561	585
Russia	64	81	153	98	114	189	143	158	184	208	188	217
Turkey	3	6	12	10	31	27	34	45	46	46	42	42
All others	20	31	45	86	117	165	269	240	253	292	330	326
Middle East/North Africa	640	1,190	1,303	2,201	2,096	2,676	2,298	2,649	3,001	2,888	4,722	3,065
Israel	280	738	663	1,581	1,239	1,544	954	1,132	1,247	1,286	3,624	1,881
All others	360	452	640	619	857	1,131	1,344	1,517	1,754	1,602	1,098	1,184
South and Central America	1,221	1,646	2,281	2,936	5,679	7,055	5,564	5,589	5,678	6,156	7,191	9,978
Brazil	92	94	149	155	184	166	144	142	54	106	108	124
Mexico	1,117	1,521	1,896	1,939	1,758	1,995	1,847	1,778	1,357	1,479	1,758	1,974
All others	12	31	235	842	3,737	4,894	3,572	3,670	4,267	4,571	5,324	7,880

Appendix table 6-27

## Exports and imports of semiconductor goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Sub-Saharan Africa	29	20	123	96	100	144	143	167	189	241	244	259
Southern Africa	21	13	103	46	82	124	125	150	172	217	182	192
All others	8	7	20	50	18	21	18	17	18	23	62	67
Other developed	2,444	3,234	2,978	2,838	2,423	2,928	3,569	3,572	3,397	3,935	3,473	3,503
Australia	59	100	99	109	172	209	232	231	281	299	128	134
Canada	2,013	2,693	2,338	2,085	1,534	1,798	2,278	1,818	1,794	2,007	1,895	1,885
All others	372	442	541	644	717	921	1,059	1,523	1,323	1,629	1,450	1,484
Other developing	14	40	33	76	73	91	131	148	140	117	213	218
Imports												
World	183,378	199,994	231,445	236,361	289,680	355,185	386,644	442,628	476,817	477,257	430,964	510,351
World excluding intra-EU and intra-China	163,463	174,581	207,219	202,657	249,398	302,497	327,872	375,313	398,985	393,018	349,210	421,814
United States	40,596	38,017	38,564	31,405	25,417	28,635	26,545	27,947	26,485	25,605	21,370	29,596
EU	37,484	41,505	43,395	47,884	52,466	63,896	63,098	64,049	67,502	73,352	56,275	60,596
EU ROW	19,660	19,660	24,082	23,739	29,186	34,888	33,898	34,710	37,094	41,998	32,582	36,705
Intra-EU	17,824	21,845	19,313	24,145	23,281	29,008	29,200	29,339	30,408	31,354	23,693	23,891
France	5,241	5,377	6,735	6,253	5,644	6,742	6,954	7,354	6,970	7,074	6,102	6,516
France ROW	2,820	2,884	3,584	3,030	3,286	3,980	3,794	4,018	3,912	4,044	3,418	3,815
France intra-EU	2,421	2,493	3,151	3,223	2,358	2,762	3,159	3,336	3,058	3,030	2,684	2,701
Germany	9,347	8,151	9,801	11,439	12,775	15,954	16,400	18,696	20,225	22,147	19,010	21,466
Germany ROW	5,518	5,048	6,112	6,987	8,622	11,095	11,192	12,800	14,068	16,141	14,118	16,388
Germany intra-EU	3,829	3,103	3,689	4,452	4,152	4,859	5,208	5,896	6,156	6,006	4,892	5,078
United Kingdom	7,294	8,019	7,599	7,610	6,157	7,816	6,692	5,611	5,393	4,868	3,584	3,696
United Kingdom ROW	4,292	5,178	5,190	5,226	3,893	4,869	4,190	3,154	2,934	2,784	1,931	2,063
United Kingdom intra-EU	3,002	2,842	2,409	2,384	2,264	2,947	2,501	2,456	2,458	2,084	1,652	1,633
Japan	8,803	9,322	11,599	13,793	15,174	18,240	18,847	21,669	21,450	21,147	16,476	19,427
China	15,172	20,871	26,493	38,666	71,713	98,091	121,855	152,284	182,326	184,092	186,895	216,283
China ROW	13,081	17,303	21,579	29,107	54,711	74,411	92,284	114,308	134,902	131,207	128,834	151,636
Intra-China	2,091	3,568	4,914	9,559	17,001	23,680	29,571	37,976	47,424	52,885	58,062	64,647
Asia-8	63,402	72,888	85,484	83,645	104,234	120,152	128,386	147,498	155,462	142,662	123,916	148,059
India	533	458	503	637	889	1,288	1,450	1,836	2,306	2,615	3,103	4,214
Indonesia	571	780	756	809	897	1,229	911	767	949	1,799	1,507	1,756
Malaysia	13,665	15,325	17,320	17,164	21,126	21,409	22,447	26,176	27,377	21,351	18,654	21,463
Philippines	3,971	8,028	10,468	10,472	12,037	12,781	12,507	14,925	14,858	13,078	9,008	10,818
Singapore	18,720	17,989	19,525	18,673	22,422	29,092	33,550	41,226	43,165	38,659	33,894	41,405
South Korea	8,388	11,043	15,173	14,524	19,683	22,246	23,155	24,519	27,400	28,746	25,043	28,389
Taiwan	12,851	14,119	16,213	15,057	20,529	23,629	25,742	28,408	28,678	27,028	24,157	29,974
Thailand	4,703	5,146	5,526	6,310	6,651	8,478	8,625	9,641	10,728	9,386	8,550	10,040
All others	14,818	17,281	20,954	20,873	20,245	25,999	27,676	29,000	23,384	30,077	25,761	36,100
Central Asia/Europe	366	860	883	1,100	2,277	3,325	2,789	2,471	2,355	2,566	1,837	2,079
Russia	39	164	145	224	600	875	816	633	654	775	532	644
Turkey	274	590	643	703	1,418	2,047	1,566	1,428	1,144	1,156	724	809
All others	53	106	94	173	259	403	407	409	557	635	581	625

Appendix table 6-27

## Exports and imports of semiconductor goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Middle East/North Africa	1,556	1,406	2,075	2,328	2,577	3,470	3,230	3,782	3,641	3,863	3,249	3,525
Israel	289	245	407	701	525	978	904	891	792	933	846	972
All others	1,267	1,161	1,668	1,627	2,051	2,492	2,327	2,891	2,849	2,930	2,403	2,553
South and Central America	4,776	6,889	8,992	10,719	10,209	12,447	14,153	15,212	9,770	15,314	13,200	20,241
Brazil	906	1,271	1,245	1,676	1,714	2,588	3,640	4,214	1,540	4,902	4,119	5,210
Mexico	3,567	5,159	6,584	8,147	6,873	8,189	8,320	8,149	5,539	7,632	6,687	12,776
All others	303	459	1,163	895	1,623	1,669	2,193	2,848	2,691	2,779	2,393	2,256
Sub-Saharan Africa	258	221	270	303	405	549	563	623	802	842	811	898
Southern Africa	226	181	216	216	251	359	334	373	417	424	378	394
All others	32	40	54	87	154	190	229	250	385	418	433	503
Other developed	7,785	7,661	8,447	6,061	4,480	5,806	6,433	6,235	5,867	6,530	5,661	8,085
Australia	602	652	662	561	740	886	820	784	867	899	950	1,113
Canada	6,352	6,276	6,899	4,424	2,777	3,672	4,267	3,887	3,469	3,825	3,287	5,427
All others	831	732	886	1,075	963	1,248	1,346	1,564	1,531	1,806	1,424	1,546
Other developing	78	243	287	363	297	403	508	677	948	961	1,003	1,272
Balance												
United States	-15,737	-6,722	642	4,477	11,799	7,859	16,679	19,988	19,748	20,921	11,996	17,663
EU	-4,589	-5,950	-4,882	-7,189	-9,999	-11,098	-10,963	-9,620	-10,462	-14,951	-14,833	-18,070
EU ROW	-4,589	-5,950	-4,882	-7,189	-9,999	-11,098	-10,963	-9,620	-10,462	-14,951	-14,833	-18,070
Intra-EU	0	0	0	0	0	0	0	0	0	0	0	0
France	289	914	-26	-4	56	-117	201	355	662	266	-401	-772
France ROW	-291	451	95	431	321	-17	811	788	1,042	641	-20	-297
France intra-EU	579	462	-121	-435	-265	-99	-609	-434	-380	-375	-381	-474
Germany	-1,012	-79	-553	-210	970	368	-378	-1,762	-587	-139	-4,019	-5,646
Germany ROW	-2,333	-1,685	-2,278	-1,769	-1,849	-3,074	-3,636	-4,690	-4,762	-6,864	-7,605	-9,247
Germany intra-EU	1,321	1,606	1,725	1,559	2,819	3,442	3,257	2,928	4,175	6,725	3,586	3,601
United Kingdom	557	-1,820	-758	1,767	-791	-1,074	478	1,390	-222	91	207	88
United Kingdom ROW	-2,069	-3,129	-3,035	-3,555	-2,413	-2,878	-1,740	-721	-1,033	-1,013	-679	-788
United Kingdom intra-EU	2,626	1,309	2,277	5,322	1,622	1,804	2,218	2,110	811	1,104	886	875
Japan	34,526	26,530	23,082	18,037	21,200	23,822	22,478	21,573	24,700	24,895	21,165	25,660
China	-6,891	-9,983	-13,005	-20,321	-41,045	-54,187	-68,767	-84,277	-100,380	-89,670	-92,979	-108,636
China ROW	-6,891	-9,983	-13,005	-20,321	-41,045	-54,187	-68,767	-84,277	-100,380	-89,670	-92,979	-108,636
Intra-China	0	0	0	0	0	0	0	0	0	0	0	0
Asia-8	1,870	5,451	6,676	13,670	24,606	43,739	54,037	65,777	73,917	72,478	81,803	99,591
India	-460	-345	-383	-480	-682	-890	-1,100	-1,450	-1,869	-1,821	-2,363	-3,302
Indonesia	-313	-275	-158	-32	72	-99	209	329	272	-553	-500	-534
Malaysia	-48	1,540	600	2,019	2,172	3,995	2,089	-1,354	-139	-1,664	12,282	14,911
Philippines	115	1,025	3,203	3,457	5,417	6,727	7,756	5,559	6,895	6,224	5,963	7,617
Singapore	-5,555	-3,338	-3,777	-1,189	1,097	1,198	1,073	2,377	4,378	8,788	1,705	1,987
South Korea	12,073	8,788	7,449	3,062	1,681	5,712	8,928	10,129	8,924	4,310	7,566	10,491
Taiwan	-2,554	-766	873	8,223	14,305	27,018	34,922	49,390	54,196	55,111	54,213	65,648
Thailand	-1,389	-1,177	-1,130	-1,390	545	79	159	797	1,259	2,083	2,936	2,774

Appendix table 6-27

## Exports and imports of semiconductor goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
All others	-10,384	-11,034	-14,026	-12,531	-9,613	-12,723	-15,525	-16,433	-10,495	-16,194	-9,358	-18,492
Central Asia/Europe	-280	-743	-673	-905	-2,015	-2,943	-2,343	-2,029	-1,873	-2,020	-1,276	-1,494
Russia	25	-84	8	-126	-486	-685	-672	-476	-471	-567	-344	-427
Turkey	-272	-585	-631	-693	-1,387	-2,019	-1,533	-1,383	-1,099	-1,110	-682	-767
All others	-33	-75	-49	-87	-143	-238	-138	-170	-303	-344	-250	-300
Middle East/North Africa	-916	-216	-772	-127	-480	-794	-932	-1,133	-640	-975	1,472	-460
Israel	-9	492	256	881	714	566	50	241	455	353	2,778	909
All others	-907	-709	-1,028	-1,008	-1,194	-1,360	-982	-1,374	-1,094	-1,328	-1,305	-1,369
South and Central America	-3,555	-5,243	-6,712	-7,782	-4,530	-5,392	-8,589	-9,623	-4,092	-9,158	-6,009	-10,263
Brazil	-814	-1,177	-1,096	-1,521	-1,529	-2,422	-3,495	-4,072	-1,486	-4,796	-4,012	-5,086
Mexico	-2,450	-3,638	-4,688	-6,208	-5,115	-6,194	-6,473	-6,372	-4,182	-6,153	-4,929	-10,802
All others	-291	-429	-928	-53	2,114	3,224	1,379	821	1,576	1,791	2,931	5,624
Sub-Saharan Africa	-229	-201	-146	-207	-305	-404	-420	-456	-612	-602	-567	-638
Southern Africa	-205	-168	-112	-170	-169	-235	-209	-223	-245	-207	-196	-202
All others	-24	-33	-34	-37	-136	-169	-211	-233	-368	-395	-371	-436
Other developed	-5,341	-4,426	-5,468	-3,223	-2,057	-2,878	-2,863	-2,663	-2,470	-2,595	-2,188	-4,583
Australia	-543	-553	-563	-452	-568	-677	-588	-553	-587	-599	-823	-979
Canada	-4,339	-3,583	-4,561	-2,339	-1,243	-1,875	-1,989	-2,069	-1,675	-1,819	-1,391	-3,541
All others	-459	-290	-345	-432	-246	-327	-286	-41	-209	-177	26	-62
Other developing	-64	-203	-254	-287	-225	-312	-377	-529	-808	-844	-790	-1,054

EU = European Union; ROW = rest of the world

NOTES: ROW is trade between named region/country/economy and rest of world. Intra-EU is trade between EU member countries. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Intra-China is trade between China and Hong Kong. Detail may not add to total because of rounding. See appendix table 6-32 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Trade Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-28

## Exports and imports of computer and office machinery goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Exports												
World	241,181	296,104	338,805	346,877	386,982	453,914	509,925	558,893	490,530	493,367	419,477	492,782
World excluding intra-EU and intra-China	185,730	231,693	259,596	264,715	291,814	341,535	380,772	413,990	367,880	373,836	317,995	385,106
United States	35,741	42,953	40,065	38,836	28,532	27,764	36,886	39,034	34,931	33,618	26,500	38,569
EU	67,043	76,790	93,730	92,863	98,759	114,639	127,990	138,437	119,403	112,351	89,780	91,172
EU ROW	16,858	20,353	23,853	24,703	25,545	29,176	33,632	34,563	31,709	31,000	24,784	25,452
Intra-EU	50,185	56,437	69,877	68,161	73,214	85,463	94,358	103,874	87,694	81,351	64,996	65,720
France	8,111	9,145	9,307	7,777	6,617	7,437	7,003	7,865	7,724	7,639	5,105	5,230
France ROW	1,932	2,188	2,174	2,230	2,016	2,375	2,236	2,432	2,550	2,584	2,011	2,120
France intra-EU	6,179	6,958	7,133	5,546	4,601	5,062	4,767	5,433	5,174	5,055	3,094	3,110
Germany	13,338	12,505	14,513	16,072	20,076	26,833	28,497	30,903	26,290	23,738	18,393	19,512
Germany ROW	3,184	2,817	3,516	3,769	4,879	6,727	7,146	7,899	6,709	6,969	4,847	5,351
Germany intra-EU	10,153	9,688	10,996	12,303	15,197	20,106	21,351	23,005	19,580	16,769	13,546	14,161
United Kingdom	17,665	21,074	21,229	18,854	15,479	15,815	17,209	20,380	12,519	10,904	8,339	8,208
United Kingdom ROW	5,195	6,249	5,166	5,253	4,548	4,554	5,268	4,639	3,136	3,177	2,697	2,729
United Kingdom intra-EU	12,471	14,826	16,063	13,601	10,931	11,262	11,940	15,740	9,383	7,726	5,641	5,479
Japan	37,295	37,326	36,376	29,116	26,279	27,646	26,488	27,239	12,838	11,665	8,383	9,389
China	16,043	24,588	34,110	49,687	96,105	134,110	166,131	193,464	182,237	195,954	179,818	216,935
China ROW	10,777	16,614	24,778	35,685	74,150	107,194	131,336	152,436	147,281	157,775	143,331	174,980
Intra-China	5,266	7,974	9,332	14,002	21,954	26,916	34,795	41,028	34,956	38,180	36,487	41,956
Asia-8	72,598	98,996	112,148	113,347	118,925	130,325	129,965	136,668	116,692	114,478	89,661	104,601
India	282	388	146	530	236	308	274	375	418	618	604	727
Indonesia	614	1,365	2,193	3,060	2,689	3,258	3,409	2,955	2,772	2,808	2,433	2,889
Malaysia	8,639	14,508	20,166	20,845	22,722	25,725	29,182	33,687	31,072	29,569	22,257	23,130
Philippines	1,513	6,319	9,112	9,572	9,342	8,962	9,196	8,547	7,375	6,800	4,295	5,374
Singapore	26,895	32,391	28,536	24,818	25,708	27,913	28,765	29,135	17,812	21,430	15,294	18,782
South Korea	7,503	9,294	13,546	14,645	18,941	21,977	19,014	19,165	18,654	13,627	10,708	13,864
Taiwan	19,363	24,601	28,503	29,877	28,351	28,637	23,765	23,228	18,391	15,666	12,418	15,453
Thailand	7,789	10,130	9,946	10,000	10,937	13,546	16,359	19,576	20,199	23,960	21,651	24,382
All others	11,482	14,538	20,565	22,137	18,004	18,934	22,012	23,383	23,746	24,659	24,609	31,346
Central Asia/Europe	77	176	218	319	250	439	496	591	798	883	815	861
Russia	48	64	107	50	67	96	94	133	164	221	196	237
Turkey	13	28	58	52	47	67	84	109	134	153	104	106
All others	15	84	54	217	137	275	318	349	499	509	514	519
Middle East/North Africa	674	964	1,403	1,508	1,494	1,909	2,472	2,101	3,017	3,063	2,399	2,802
Israel	539	686	1,020	978	856	1,036	1,145	1,139	1,297	1,298	1,055	1,194
All others	135	278	383	530	638	874	1,327	962	1,720	1,765	1,344	1,608
South and Central America	3,217	6,437	12,155	14,148	11,374	11,470	13,200	14,131	12,960	13,170	15,391	21,399
Brazil	232	326	429	332	237	296	458	489	285	349	337	396
Mexico	2,850	6,007	9,236	13,231	10,261	10,469	10,237	10,562	9,260	9,097	9,777	15,362
All others	135	103	2,491	586	876	704	2,505	3,080	3,414	3,724	5,277	5,641

Appendix table 6-28

## Exports and imports of computer and office machinery goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Sub-Saharan Africa	95	136	188	144	188	193	215	365	324	300	307	334
Southern Africa	64	101	144	111	141	143	164	259	239	238	231	253
All others	32	35	44	33	47	50	51	106	85	62	76	81
Other developed	7,389	6,709	6,516	5,896	4,321	4,593	5,003	5,091	5,448	5,332	4,135	4,285
Australia	1,099	1,005	757	670	734	772	828	830	851	903	719	778
Canada	5,049	4,351	3,881	3,726	2,390	2,659	2,817	2,966	3,182	3,042	2,178	2,230
All others	1,241	1,352	1,878	1,500	1,197	1,162	1,358	1,295	1,416	1,387	1,238	1,278
Other developing	28	117	84	122	377	330	625	1,104	1,199	1,911	1,563	1,665
Imports												
World	241,181	296,104	338,805	346,877	386,982	453,914	509,925	558,893	490,530	493,367	419,477	492,782
World excluding intra-EU and intra-China	185,730	231,693	259,596	264,715	291,814	341,535	380,772	413,990	367,880	373,836	317,995	385,106
United States	59,392	71,585	82,178	74,794	78,037	90,710	95,332	103,297	81,369	76,521	73,037	94,238
EU	97,645	113,529	135,150	130,341	142,660	169,737	188,061	209,122	183,718	176,419	138,836	148,586
EU ROW	47,460	57,092	65,273	62,180	69,446	84,274	93,703	105,247	96,025	95,068	73,841	82,866
Intra-EU	50,185	56,437	69,877	68,161	73,214	85,463	94,358	103,874	87,694	81,351	64,996	65,720
France	12,360	13,202	13,663	13,241	14,347	17,881	18,939	21,090	18,397	17,669	13,831	14,542
France ROW	7,086	7,354	6,863	6,436	7,329	8,999	9,391	10,628	10,078	10,450	8,192	9,003
France intra-EU	5,273	5,848	6,799	6,804	7,019	8,881	9,548	10,461	8,319	7,219	5,639	5,539
Germany	20,635	19,914	25,177	25,493	28,963	33,199	37,824	41,445	33,504	31,763	25,332	27,884
Germany ROW	13,341	13,370	15,098	15,510	18,038	22,428	25,012	28,141	23,914	22,530	17,264	19,605
Germany intra-EU	7,294	6,543	10,079	9,983	10,925	10,771	12,812	13,304	9,590	9,234	8,068	8,280
United Kingdom	18,877	22,805	27,001	23,706	23,060	26,540	27,371	29,111	26,382	23,715	17,986	18,637
United Kingdom ROW	9,422	12,988	14,934	11,794	9,709	11,060	11,845	13,080	11,254	10,217	7,791	8,583
United Kingdom intra-EU	9,456	9,817	12,067	11,913	13,351	15,480	15,526	16,031	15,128	13,498	10,195	10,054
Japan	15,310	18,199	19,451	22,663	23,509	26,131	27,162	26,191	22,221	22,929	18,641	21,385
China	12,131	18,380	22,590	33,125	50,424	59,511	73,383	83,895	72,376	76,167	68,756	79,733
China ROW	6,865	10,406	13,258	19,123	28,470	32,595	38,588	42,866	37,420	37,987	32,270	37,778
Intra-China	5,266	7,974	9,332	14,002	21,954	26,916	34,795	41,028	34,956	38,180	36,487	41,956
Asia-8	25,045	35,343	37,069	40,850	43,887	48,675	55,634	58,284	50,464	56,205	46,131	55,301
India	607	959	1,193	1,642	1,856	2,595	3,563	4,574	4,501	5,765	4,910	6,315
Indonesia	207	426	385	543	598	731	792	788	1,079	2,725	2,194	2,457
Malaysia	2,529	4,284	3,558	4,441	6,713	8,605	9,528	9,864	10,277	8,865	7,488	8,645
Philippines	829	2,152	2,253	2,707	2,937	2,923	2,898	2,685	2,649	2,888	2,132	2,533
Singapore	11,494	15,097	14,188	14,011	13,718	15,720	18,001	17,418	11,062	15,612	12,082	14,212
South Korea	3,176	3,674	4,869	5,893	6,105	6,540	8,224	8,891	8,709	8,325	7,021	8,482
Taiwan	3,555	5,199	7,287	7,518	7,316	6,829	6,496	7,154	5,556	5,047	4,443	5,880
Thailand	2,649	3,552	3,335	4,095	4,646	4,731	6,131	6,910	6,632	6,979	5,860	6,778
All others	31,114	37,828	40,959	43,750	47,448	57,870	68,942	76,695	78,680	83,457	72,796	92,044
Central Asia/Europe	2,209	2,542	2,750	3,212	4,888	6,475	9,103	10,451	12,251	11,702	8,413	9,828
Russia	1,274	1,184	1,029	1,676	2,590	3,131	4,127	4,804	5,468	5,458	3,510	4,260
Turkey	530	876	1,199	737	1,280	2,027	3,256	3,619	4,014	3,746	3,479	3,984
All others	406	482	522	799	1,017	1,317	1,720	2,027	2,769	2,499	1,423	1,584

Appendix table 6-28

## Exports and imports of computer and office machinery goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Middle East/North Africa	2,403	2,941	4,224	5,156	5,704	6,858	9,024	10,117	10,966	12,024	11,693	13,151
Israel	772	886	1,210	1,286	1,131	1,267	1,549	1,658	1,588	1,379	1,279	1,413
All others	1,631	2,055	3,013	3,870	4,573	5,591	7,475	8,458	9,378	10,645	10,413	11,738
South and Central America	6,517	10,491	10,344	12,180	12,471	15,214	18,402	22,264	23,010	26,059	23,698	32,760
Brazil	1,573	2,502	1,861	2,199	1,345	1,600	2,853	3,833	3,943	4,938	4,547	5,440
Mexico	1,984	3,860	4,439	6,214	7,900	9,540	9,309	10,393	10,411	11,327	10,310	17,581
All others	2,960	4,129	4,044	3,767	3,225	4,074	6,241	8,038	8,656	9,794	8,841	9,739
Sub-Saharan Africa	1,861	1,769	2,088	2,099	2,581	3,201	3,772	4,282	4,350	4,672	4,191	4,571
Southern Africa	1,288	1,156	1,331	1,231	1,528	1,875	2,235	2,486	2,116	2,026	1,788	1,874
All others	573	614	757	867	1,053	1,327	1,537	1,795	2,234	2,646	2,403	2,698
Other developed	17,780	19,657	21,016	20,360	20,832	24,462	27,032	27,825	26,415	26,689	22,562	29,046
Australia	3,824	4,303	4,397	3,854	4,571	5,621	6,323	6,759	7,029	7,224	6,262	7,247
Canada	8,798	10,258	10,522	10,605	9,576	10,820	12,097	12,808	11,959	11,794	9,362	14,433
All others	5,158	5,096	6,098	5,900	6,684	8,020	8,612	8,259	7,426	7,671	6,938	7,366
Other developing	344	428	537	744	972	1,660	1,609	1,757	1,688	2,311	2,239	2,688
Balance												
United States	-23,650	-28,632	-42,113	-35,958	-49,505	-62,946	-58,447	-64,263	-46,438	-42,903	-46,537	-55,669
EU	-30,602	-36,739	-41,420	-37,478	-43,901	-55,098	-60,071	-70,684	-64,316	-64,068	-49,056	-57,414
EU ROW	-30,602	-36,739	-41,420	-37,478	-43,901	-55,098	-60,071	-70,684	-64,316	-64,068	-49,056	-57,414
Intra-EU	0	0	0	0	0	0	0	0	0	0	0	0
France	-4,249	-4,057	-4,355	-5,464	-7,730	-10,443	-11,936	-13,225	-10,673	-10,030	-8,726	-9,313
France ROW	-5,155	-5,166	-4,689	-4,206	-5,313	-6,624	-7,155	-8,197	-7,528	-7,866	-6,181	-6,883
France intra-EU	906	1,109	334	-1,258	-2,417	-3,819	-4,781	-5,029	-3,145	-2,165	-2,545	-2,430
Germany	-7,297	-7,408	-10,664	-9,421	-8,887	-6,366	-9,327	-10,542	-7,214	-8,026	-6,938	-8,373
Germany ROW	-10,157	-10,553	-11,581	-11,741	-13,160	-15,701	-17,865	-20,243	-17,205	-15,561	-12,417	-14,253
Germany intra-EU	2,860	3,145	917	2,320	4,272	9,335	8,538	9,701	9,991	7,536	5,478	5,881
United Kingdom	-1,212	-1,731	-5,772	-4,852	-7,581	-10,725	-10,162	-8,731	-13,863	-12,812	-9,647	-10,429
United Kingdom ROW	-4,227	-6,739	-9,768	-6,541	-5,161	-6,507	-6,576	-8,440	-8,118	-7,040	-5,093	-5,854
United Kingdom intra-EU	3,015	5,008	3,996	1,689	-2,420	-4,218	-3,586	-291	-5,745	-5,772	-4,554	-4,575
Japan	21,985	19,127	16,925	6,453	2,770	1,515	-674	1,049	-9,383	-11,265	-10,259	-11,997
China	3,912	6,208	11,520	16,562	45,681	74,599	92,748	109,569	109,861	119,788	111,061	137,202
China ROW	3,912	6,208	11,520	16,562	45,681	74,599	92,748	109,569	109,861	119,788	111,061	137,202
Intra-China	0	0	0	0	0	0	0	0	0	0	0	0
Asia-8	47,553	63,653	75,080	72,496	75,038	81,650	74,331	78,384	66,228	58,273	43,530	49,300
India	-325	-571	-1,047	-1,112	-1,620	-2,288	-3,289	-4,199	-4,083	-5,147	-4,306	-5,588
Indonesia	407	939	1,809	2,516	2,091	2,527	2,617	2,167	1,693	83	239	432
Malaysia	6,110	10,224	16,608	16,404	16,010	17,120	19,654	23,824	20,795	20,705	14,769	14,485
Philippines	684	4,168	6,859	6,865	6,406	6,039	6,299	5,861	4,726	3,912	2,163	2,841
Singapore	15,401	17,294	14,348	10,807	11,990	12,193	10,764	11,717	6,749	5,818	3,212	4,570
South Korea	4,327	5,621	8,677	8,752	12,836	15,437	10,790	10,274	9,945	5,302	3,687	5,382
Taiwan	15,808	19,401	21,216	22,358	21,035	21,807	17,269	16,074	12,835	10,619	7,975	9,574
Thailand	5,140	6,578	6,611	5,905	6,291	8,815	10,227	12,667	13,567	16,981	15,791	17,604



## Appendix table 6-28

## Exports and imports of computer and office machinery goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
All others	-19,632	-23,291	-20,395	-21,613	-29,443	-38,936	-46,931	-53,312	-54,934	-58,798	-48,186	-60,698
Central Asia/Europe	-2,132	-2,366	-2,532	-2,893	-4,637	-6,036	-8,606	-9,860	-11,454	-10,819	-7,598	-8,966
Russia	-1,225	-1,121	-923	-1,626	-2,524	-3,034	-4,033	-4,671	-5,304	-5,237	-3,314	-4,023
Turkey	-516	-848	-1,141	-686	-1,233	-1,959	-3,172	-3,511	-3,880	-3,593	-3,375	-3,878
All others	-390	-397	-468	-582	-881	-1,042	-1,401	-1,678	-2,269	-1,990	-909	-1,065
Middle East/North Africa	-1,729	-1,978	-2,821	-3,649	-4,210	-4,948	-6,552	-8,015	-7,949	-8,961	-9,293	-10,349
Israel	-233	-200	-190	-308	-275	-231	-404	-519	-291	-81	-224	-219
All others	-1,496	-1,778	-2,630	-3,340	-3,935	-4,717	-6,148	-7,496	-7,658	-8,880	-9,069	-10,129
South and Central America	-3,299	-4,054	1,811	1,968	-1,097	-3,745	-5,203	-8,133	-10,050	-12,889	-8,307	-11,361
Brazil	-1,341	-2,176	-1,432	-1,867	-1,108	-1,303	-2,395	-3,344	-3,658	-4,589	-4,210	-5,044
Mexico	867	2,147	4,796	7,017	2,361	929	928	169	-1,151	-2,229	-533	-2,218
All others	-2,825	-4,026	-1,553	-3,182	-2,349	-3,370	-3,736	-4,957	-5,242	-6,070	-3,564	-4,099
Sub-Saharan Africa	-1,766	-1,633	-1,900	-1,954	-2,392	-3,009	-3,557	-3,917	-4,025	-4,372	-3,884	-4,237
Southern Africa	-1,224	-1,054	-1,187	-1,120	-1,387	-1,732	-2,071	-2,227	-1,877	-1,788	-1,556	-1,621
All others	-542	-579	-713	-835	-1,006	-1,277	-1,486	-1,689	-2,149	-2,584	-2,328	-2,617
Other developed	-10,390	-12,949	-14,500	-14,463	-16,511	-19,869	-22,029	-22,735	-20,967	-21,357	-18,427	-24,761
Australia	-2,725	-3,298	-3,639	-3,184	-3,837	-4,850	-5,495	-5,929	-6,179	-6,320	-5,543	-6,469
Canada	-3,748	-5,907	-6,641	-6,879	-7,187	-8,161	-9,280	-9,842	-8,777	-8,752	-7,184	-12,204
All others	-3,917	-3,744	-4,220	-4,400	-5,487	-6,858	-7,254	-6,964	-6,011	-6,285	-5,700	-6,088
Other developing	-316	-311	-452	-622	-596	-1,330	-984	-653	-489	-400	-677	-1,024

EU = European Union; ROW = rest of the world

NOTES: ROW is trade between named region/country/economy and rest of world. Intra-EU is trade between EU member countries. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Intra-China is trade between China and Hong Kong. Detail may not add to total because of rounding. See appendix table 6-32 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Trade Service database.

*Science and Engineering Indicators 2012*

Appendix table 6-29

## Exports and imports of scientific instruments and measuring equipment goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Exports												
World	136,364	154,640	165,439	183,292	217,419	268,367	297,672	338,451	396,753	432,996	376,988	439,444
World excluding intra-EU and intra-China	106,787	121,533	129,757	143,747	169,076	212,284	235,991	269,730	318,971	348,940	304,933	361,439
United States	23,891	30,306	32,704	36,939	34,592	40,334	46,422	52,381	59,481	61,318	55,529	69,174
EU	45,488	51,932	55,012	60,618	76,490	92,767	100,640	112,990	122,976	134,221	115,411	124,909
EU ROW	21,337	24,953	25,934	29,757	37,187	46,789	50,525	57,254	60,459	66,589	57,822	63,779
Intra-EU	24,151	26,979	29,079	30,861	39,303	45,978	50,115	55,735	62,517	67,632	57,589	61,131
France	5,544	6,012	6,028	6,705	8,302	9,603	9,842	11,427	13,261	14,601	12,120	12,931
France ROW	2,952	2,951	2,853	3,266	3,670	4,390	4,571	5,450	6,271	7,090	5,999	6,500
France intra-EU	2,592	3,061	3,175	3,439	4,632	5,213	5,272	5,977	6,990	7,511	6,121	6,432
Germany	16,000	16,366	18,740	20,545	25,477	31,332	35,074	40,104	45,697	48,636	40,584	45,690
Germany ROW	7,360	7,804	8,846	10,203	12,797	15,937	17,775	20,815	23,789	26,088	22,061	25,421
Germany intra-EU	8,641	8,562	9,894	10,342	12,679	15,395	17,299	19,289	21,908	22,548	18,523	20,269
United Kingdom	7,591	9,814	9,281	9,728	10,443	11,665	12,205	12,553	13,415	13,936	12,332	12,954
United Kingdom ROW	4,080	5,686	5,062	5,377	5,816	6,337	7,004	7,225	7,960	8,222	7,457	7,921
United Kingdom intra-EU	3,511	4,128	4,219	4,352	4,627	5,328	5,202	5,329	5,455	5,714	4,875	5,033
Japan	24,227	23,957	23,476	24,657	29,167	37,770	36,896	36,548	39,547	41,714	34,013	41,927
China	14,083	17,004	18,608	21,792	26,940	32,574	36,681	42,300	58,140	64,950	56,024	67,230
China ROW	8,657	10,876	12,004	13,107	17,901	22,469	25,115	29,314	42,875	48,526	41,558	50,355
Intra-China	5,426	6,128	6,604	8,684	9,039	10,105	11,566	12,986	15,265	16,423	14,467	16,875
Asia-8	10,097	11,563	12,355	13,207	20,295	29,510	37,870	50,532	64,380	72,391	65,587	79,555
India	146	179	209	315	476	610	693	863	1,046	1,153	1,160	1,407
Indonesia	310	538	469	534	529	543	640	789	1,006	1,104	1,049	1,256
Malaysia	1,257	1,322	1,270	1,799	2,057	2,662	2,932	3,611	5,548	5,721	5,779	5,545
Philippines	660	736	783	905	1,199	1,300	1,369	1,363	1,751	1,832	1,620	2,058
Singapore	2,212	2,550	2,438	2,683	3,324	3,842	4,166	4,561	6,863	7,503	7,265	8,724
South Korea	1,494	2,136	3,156	1,927	2,805	5,425	9,934	16,048	20,464	24,671	26,821	32,674
Taiwan	2,785	2,756	2,715	3,327	7,816	12,633	15,395	20,203	23,642	26,067	18,059	23,375
Thailand	1,235	1,346	1,314	1,716	2,089	2,496	2,741	3,094	4,061	4,339	3,834	4,517
All others	17,783	18,997	22,592	25,693	29,454	34,957	38,603	43,018	51,360	57,346	49,419	55,605
Central Asia/Europe	301	551	742	1,018	1,275	1,620	1,440	1,680	2,129	2,706	2,449	2,758
Russia	113	275	441	618	548	660	647	804	900	1,217	988	1,185
Turkey	44	61	81	92	119	171	208	252	326	393	387	415
All others	144	215	220	308	609	789	585	624	902	1,096	1,074	1,157
Middle East/North Africa	1,113	1,588	2,163	2,379	2,097	3,014	3,165	3,542	4,346	4,356	3,912	4,427
Israel	690	1,026	1,516	1,879	1,480	2,178	2,191	2,601	3,075	3,017	2,546	2,935
All others	423	562	648	499	616	836	974	941	1,271	1,338	1,366	1,492
South and Central America	2,930	3,573	4,969	6,418	8,257	8,907	10,300	11,303	13,299	13,944	13,005	14,852
Brazil	231	257	297	321	287	346	413	562	613	723	639	763
Mexico	2,153	2,733	4,002	5,106	6,676	7,235	8,407	9,100	10,710	10,995	10,162	11,766
All others	546	583	670	990	1,295	1,326	1,480	1,640	1,976	2,226	2,204	2,322

Appendix table 6-29

## Exports and imports of scientific instruments and measuring equipment goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Sub-Saharan Africa	197	220	257	240	326	455	390	395	535	667	711	766
Southern Africa	84	117	118	138	202	238	247	269	343	423	507	547
All others	113	102	138	103	123	217	143	125	192	244	204	218
Other developed	13,141	12,946	14,289	15,396	17,231	20,630	22,954	25,623	30,212	34,681	28,311	31,649
Australia	542	653	857	1,052	959	1,101	1,286	1,522	1,814	2,079	1,876	2,081
Canada	1,552	2,045	2,522	2,892	2,685	3,235	3,799	4,273	4,567	4,940	4,149	4,757
All others	11,047	10,248	10,910	11,452	13,586	16,294	17,870	19,828	23,831	27,662	22,286	24,811
Other developing	101	120	172	242	269	331	353	476	839	993	1,031	1,155
Imports												
World	136,364	154,640	165,439	183,292	217,419	268,367	297,672	338,451	396,753	432,996	376,988	439,444
World excluding intra-EU and intra-China	106,787	121,533	129,757	143,747	169,076	212,284	235,991	269,730	318,971	348,940	304,933	361,439
United States	24,013	27,577	31,810	34,483	38,839	44,754	46,945	49,899	69,646	71,079	61,264	70,579
EU	47,500	52,231	57,664	61,227	70,920	83,117	92,840	106,399	120,427	132,404	114,228	124,216
EU ROW	23,349	25,252	28,586	30,367	31,617	37,140	42,725	50,664	57,910	64,772	56,639	63,086
Intra-EU	24,151	26,979	29,079	30,861	39,303	45,978	50,115	55,735	62,517	67,632	57,589	61,131
France	6,842	6,737	7,816	8,094	9,645	11,411	12,256	13,484	14,701	16,021	14,131	15,150
France ROW	3,392	3,484	3,937	4,074	4,369	5,068	5,605	6,418	7,304	7,765	6,861	7,500
France intra-EU	3,450	3,253	3,879	4,020	5,275	6,343	6,651	7,066	7,397	8,256	7,270	7,649
Germany	10,662	10,832	11,936	13,343	14,397	16,691	18,689	21,864	24,668	27,255	23,809	27,172
Germany ROW	6,852	6,885	7,755	8,769	8,787	10,130	11,414	13,454	15,997	17,382	15,001	17,423
Germany intra-EU	3,810	3,947	4,181	4,574	5,610	6,561	7,275	8,411	8,672	9,873	8,807	9,749
United Kingdom	7,085	8,534	8,654	9,242	9,758	11,534	12,284	13,000	13,959	14,613	12,191	12,617
United Kingdom ROW	4,465	5,161	5,121	5,225	5,000	5,820	6,766	7,123	7,325	7,714	6,236	6,460
United Kingdom intra-EU	2,620	3,373	3,533	4,017	4,758	5,713	5,518	5,877	6,634	6,899	5,955	6,157
Japan	8,640	10,856	11,203	12,830	14,186	16,741	19,174	22,142	20,542	21,163	17,115	19,982
China	13,473	14,348	14,740	19,682	29,874	41,648	49,360	56,598	68,040	76,850	69,652	84,831
China ROW	8,047	8,221	8,136	10,998	20,835	31,544	37,793	43,612	52,775	60,427	55,185	67,956
Intra-China	5,426	6,128	6,604	8,684	9,039	10,105	11,566	12,986	15,265	16,423	14,467	16,875
Asia-8	17,215	19,779	19,462	20,671	25,350	36,166	37,661	42,251	41,148	43,095	37,991	48,381
India	881	922	1,020	1,245	1,558	2,024	2,618	3,181	3,931	4,679	4,828	5,707
Indonesia	616	695	364	489	505	626	794	823	1,040	1,589	1,404	1,672
Malaysia	1,685	1,703	1,541	1,967	2,018	2,477	2,424	3,155	3,395	4,246	3,842	4,859
Philippines	636	930	952	1,071	1,255	1,672	1,561	1,664	1,776	1,661	1,358	1,684
Singapore	3,372	4,088	3,622	3,799	4,180	6,073	5,622	6,736	6,991	7,601	6,409	7,934
South Korea	5,005	5,091	4,343	5,128	7,538	9,954	11,525	12,294	11,193	11,087	9,109	11,556
Taiwan	3,345	4,819	6,513	5,611	6,518	11,048	10,470	11,178	9,268	8,001	7,020	9,964
Thailand	1,676	1,532	1,106	1,360	1,778	2,292	2,646	3,221	3,554	4,230	4,021	5,005
All others	24,477	28,764	29,793	33,517	37,310	44,758	50,271	59,754	74,999	86,456	74,955	89,464
Central Asia/Europe	2,164	2,757	2,226	2,867	4,069	5,430	6,429	8,312	11,154	12,939	9,285	10,617
Russia	1,009	1,147	724	1,293	1,730	2,138	2,466	3,556	5,076	6,258	3,978	4,643
Turkey	710	1,060	992	838	1,248	1,797	2,309	2,654	3,277	3,299	2,726	3,102
All others	445	550	510	736	1,091	1,495	1,654	2,101	2,802	3,382	2,580	2,871

Appendix table 6-29

## Exports and imports of scientific instruments and measuring equipment goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Middle East/North Africa	4,121	5,101	5,139	5,932	7,170	8,498	9,065	10,237	12,411	14,624	14,064	15,129
Israel	651	688	1,090	955	992	1,194	1,337	1,561	1,646	1,660	1,403	1,524
All others	3,470	4,413	4,049	4,978	6,178	7,304	7,728	8,677	10,764	12,965	12,661	13,606
South and Central America	5,841	7,437	7,476	8,796	8,403	10,166	12,112	15,830	22,359	27,253	22,661	28,312
Brazil	1,420	1,854	1,562	1,831	1,467	1,898	2,425	3,011	4,468	5,921	4,857	6,053
Mexico	1,692	2,476	3,066	3,927	4,152	4,742	5,056	7,183	10,334	12,741	10,156	13,612
All others	2,729	3,107	2,847	3,038	2,784	3,525	4,632	5,636	7,557	8,591	7,648	8,646
Sub-Saharan Africa	1,330	1,363	1,336	1,471	1,851	2,340	2,682	3,152	3,967	4,307	4,120	4,580
Southern Africa	712	726	710	761	943	1,178	1,340	1,558	1,782	1,912	1,617	1,723
All others	617	637	627	710	907	1,162	1,342	1,594	2,185	2,395	2,502	2,857
Other developed	10,544	11,635	13,153	13,861	14,950	17,279	18,752	20,750	23,327	25,206	22,564	28,307
Australia	1,716	1,933	1,897	1,892	2,333	2,831	3,238	3,557	4,060	4,622	4,344	4,834
Canada	4,750	5,599	6,856	7,461	7,088	7,987	8,457	9,079	9,920	10,233	9,095	13,514
All others	4,078	4,104	4,400	4,508	5,528	6,461	7,057	8,114	9,347	10,351	9,125	9,959
Other developing	478	470	463	591	867	1,045	1,231	1,473	1,781	2,127	2,261	2,519
Balance												
United States	-122	2,730	894	2,455	-4,247	-4,420	-523	2,482	-10,165	-9,762	-5,735	-1,405
EU	-2,012	-300	-2,652	-610	5,570	9,649	7,800	6,591	2,549	1,817	1,183	693
EU ROW	-2,012	-300	-2,652	-610	5,570	9,649	7,800	6,591	2,549	1,817	1,183	693
Intra-EU	0	0	0	0	0	0	0	0	0	0	0	0
France	-1,299	-725	-1,788	-1,388	-1,342	-1,808	-2,413	-2,057	-1,440	-1,420	-2,011	-2,218
France ROW	-440	-533	-1,084	-808	-699	-678	-1,034	-968	-1,033	-675	-861	-1,000
France intra-EU	-859	-192	-704	-581	-643	-1,130	-1,379	-1,089	-408	-745	-1,150	-1,218
Germany	5,338	5,533	6,803	7,203	11,079	14,642	16,385	18,240	21,029	21,381	16,775	18,519
Germany ROW	507	919	1,091	1,434	4,010	5,807	6,360	7,361	7,792	8,707	7,059	7,998
Germany intra-EU	4,831	4,614	5,713	5,769	7,069	8,834	10,025	10,879	13,237	12,675	9,716	10,520
United Kingdom	506	1,280	627	487	685	132	-78	-447	-543	-677	140	337
United Kingdom ROW	-385	525	-59	152	816	517	238	102	635	508	1,221	1,461
United Kingdom intra-EU	891	756	686	335	-132	-385	-316	-548	-1,178	-1,186	-1,080	-1,124
Japan	15,588	13,102	12,273	11,827	14,981	21,029	17,722	14,406	19,005	20,550	16,898	21,945
China	610	2,656	3,868	2,109	-2,934	-9,075	-12,678	-14,298	-9,900	-11,900	-13,628	-17,601
China ROW	610	2,656	3,868	2,109	-2,934	-9,075	-12,678	-14,298	-9,900	-11,900	-13,628	-17,601
Intra-China	0	0	0	0	0	0	0	0	0	0	0	0
Asia-8	-7,117	-8,216	-7,107	-7,464	-5,055	-6,656	209	8,281	23,232	29,296	27,596	31,174
India	-736	-743	-811	-930	-1,082	-1,414	-1,925	-2,318	-2,885	-3,527	-3,668	-4,300
Indonesia	-306	-157	105	45	23	-83	-154	-34	-34	-485	-355	-416
Malaysia	-428	-381	-271	-167	38	185	508	456	2,152	1,476	1,937	686
Philippines	24	-194	-170	-166	-55	-372	-192	-300	-25	172	262	374
Singapore	-1,160	-1,538	-1,184	-1,116	-855	-2,231	-1,457	-2,174	-128	-98	856	790
South Korea	-3,511	-2,955	-1,186	-3,201	-4,733	-4,529	-1,591	3,755	9,271	13,583	17,713	21,118
Taiwan	-560	-2,063	-3,798	-2,284	1,298	1,585	4,925	9,025	14,373	18,066	11,039	13,411
Thailand	-441	-186	208	356	311	204	95	-128	507	108	-187	-489

## Appendix table 6-29

## Exports and imports of scientific instruments and measuring equipment goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
All others	-6,694	-9,766	-7,201	-7,824	-7,855	-9,801	-11,668	-16,736	-23,639	-29,111	-25,536	-33,858
Central Asia/Europe	-1,862	-2,205	-1,484	-1,848	-2,794	-3,810	-4,988	-6,631	-9,026	-10,233	-6,835	-7,859
Russia	-896	-872	-283	-675	-1,182	-1,478	-1,819	-2,752	-4,175	-5,041	-2,990	-3,458
Turkey	-666	-999	-912	-746	-1,130	-1,626	-2,102	-2,402	-2,951	-2,906	-2,339	-2,687
All others	-301	-335	-290	-427	-482	-706	-1,068	-1,477	-1,899	-2,286	-1,506	-1,714
Middle East/North Africa	-3,008	-3,513	-2,976	-3,553	-5,073	-5,484	-5,899	-6,695	-8,065	-10,269	-10,152	-10,702
Israel	39	338	426	925	489	984	854	1,041	1,428	1,358	1,142	1,411
All others	-3,047	-3,851	-3,402	-4,478	-5,562	-6,468	-6,753	-7,736	-9,493	-11,626	-11,295	-12,113
South and Central America	-2,911	-3,864	-2,506	-2,378	-146	-1,259	-1,812	-4,528	-9,060	-13,309	-9,657	-13,460
Brazil	-1,188	-1,598	-1,265	-1,509	-1,180	-1,553	-2,012	-2,450	-3,855	-5,198	-4,218	-5,290
Mexico	461	257	936	1,179	2,524	2,492	3,351	1,917	376	-1,746	6	-1,846
All others	-2,183	-2,524	-2,177	-2,048	-1,490	-2,199	-3,151	-3,995	-5,580	-6,365	-5,444	-6,324
Sub-Saharan Africa	-1,132	-1,144	-1,080	-1,230	-1,525	-1,885	-2,292	-2,757	-3,431	-3,640	-3,409	-3,815
Southern Africa	-628	-609	-592	-623	-741	-940	-1,093	-1,288	-1,439	-1,489	-1,111	-1,175
All others	-504	-535	-488	-608	-784	-945	-1,199	-1,469	-1,992	-2,152	-2,298	-2,639
Other developed	2,597	1,310	1,136	1,535	2,282	3,351	4,202	4,873	6,885	9,474	5,747	3,342
Australia	-1,174	-1,279	-1,040	-840	-1,373	-1,730	-1,953	-2,035	-2,246	-2,543	-2,468	-2,754
Canada	-3,198	-3,554	-4,334	-4,569	-4,403	-4,752	-4,658	-4,806	-5,353	-5,293	-4,947	-8,757
All others	6,968	6,144	6,509	6,943	8,058	9,833	10,812	11,714	14,484	17,310	13,161	14,853
Other developing	-377	-350	-290	-349	-599	-714	-878	-997	-943	-1,134	-1,230	-1,364

EU = European Union; ROW = rest of the world

NOTES: ROW is trade between named region/country/economy and rest of world. Intra-EU is trade between EU member countries. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Intra-China is trade between China and Hong Kong. Detail may not add to total because of rounding. See appendix table 6-32 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Trade Service database.

Appendix table 6-30

## Exports and imports of pharmaceutical goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Exports												
World	71,827	83,403	103,304	131,075	202,735	247,927	277,852	310,619	368,978	418,004	429,212	469,651
World excluding intra-EU and intra-China	44,142	52,988	65,540	81,644	116,771	139,502	156,760	179,210	217,136	247,058	260,895	285,639
United States	6,436	8,041	11,075	15,144	18,756	23,341	25,662	28,669	32,962	37,814	42,840	44,557
EU	47,877	55,424	68,404	88,130	147,036	179,612	199,356	217,728	255,111	285,271	283,932	308,664
EU ROW	21,001	25,829	31,317	39,279	61,634	71,697	78,814	86,922	104,024	115,363	116,614	125,804
Intra-EU	26,876	29,595	37,086	48,852	85,402	107,915	120,542	130,806	151,087	169,908	167,318	182,860
France	6,993	8,008	10,010	12,761	18,994	21,959	24,506	26,533	29,765	34,934	35,442	38,396
France ROW	3,301	3,475	4,003	5,717	8,623	10,647	11,672	12,996	14,513	17,435	17,900	19,289
France intra-EU	3,692	4,533	6,007	7,043	10,371	11,313	12,834	13,537	15,252	17,499	17,542	19,107
Germany	10,366	11,728	14,938	17,092	24,322	35,109	39,793	46,716	58,275	68,081	64,855	72,286
Germany ROW	5,219	6,443	8,400	8,278	10,743	13,293	14,088	17,272	21,286	24,427	23,790	25,134
Germany intra-EU	5,147	5,285	6,537	8,814	13,579	21,816	25,705	29,445	36,989	43,654	41,065	47,152
United Kingdom	7,329	9,055	10,566	13,743	20,058	23,169	22,780	25,721	29,696	32,817	32,301	32,908
United Kingdom ROW	3,274	4,441	5,260	6,800	10,239	10,856	10,113	12,130	14,684	15,525	15,452	14,681
United Kingdom intra-EU	4,054	4,614	5,306	6,944	9,819	12,312	12,667	13,592	15,012	17,292	16,848	18,226
Japan	1,911	2,192	2,749	3,141	4,299	4,570	4,587	4,055	4,429	4,616	5,550	6,645
China	2,355	2,388	2,464	2,611	3,511	3,903	4,478	5,293	6,992	9,607	10,208	12,271
China ROW	1,546	1,568	1,787	2,032	2,949	3,394	3,928	4,689	6,237	8,569	9,209	11,119
Intra-China	809	820	678	579	562	510	550	604	754	1,038	999	1,151
Asia-8	1,550	1,990	2,302	2,942	3,948	4,559	6,988	9,878	13,344	14,093	15,339	18,220
India	469	763	894	1,296	2,191	2,464	3,085	3,782	5,778	6,710	7,007	8,807
Indonesia	48	59	92	98	138	143	124	164	224	274	272	336
Malaysia	77	74	75	82	111	130	145	151	192	187	275	296
Philippines	18	29	23	28	22	32	31	34	42	40	49	64
Singapore	488	517	745	901	829	1,028	2,689	4,656	5,763	5,222	5,905	6,584
South Korea	263	341	284	328	418	464	535	629	824	1,038	1,202	1,360
Taiwan	91	102	87	88	96	140	186	237	243	289	312	407
Thailand	96	105	103	120	144	158	193	224	278	332	317	365
All others	11,038	13,026	15,646	18,597	24,640	31,366	36,012	44,035	54,593	64,258	68,229	75,980
Central Asia/Europe	271	523	586	663	1,010	1,319	1,354	1,402	1,878	2,064	2,845	3,088
Russia	40	111	124	143	228	207	215	260	309	341	426	487
Turkey	56	86	90	124	201	263	346	396	449	607	665	699
All others	176	327	372	397	581	849	794	746	1,120	1,115	1,753	1,901
Middle East/North Africa	295	604	827	1,464	1,733	2,165	3,035	4,060	4,814	6,259	6,401	8,226
Israel	165	435	593	1,175	1,378	1,718	2,459	3,408	3,805	5,333	5,470	7,224
All others	130	169	234	288	355	447	576	652	1,009	926	930	1,002
South and Central America	1,095	1,603	1,854	2,237	2,390	3,193	3,187	3,427	3,846	4,663	5,387	5,743
Brazil	183	238	297	302	355	437	553	704	872	1,140	1,339	1,633
Mexico	357	515	667	870	1,027	1,603	1,216	1,222	1,273	1,488	1,627	1,670
All others	555	849	889	1,064	1,008	1,153	1,418	1,500	1,702	2,036	2,421	2,440

Appendix table 6-30

## Exports and imports of pharmaceutical goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Sub-Saharan Africa	81	148	121	158	187	222	237	261	365	416	495	550
Southern Africa	52	73	80	106	127	155	161	167	239	273	325	367
All others	29	75	41	52	60	66	75	94	125	143	170	183
Other developed	9,265	10,108	12,202	14,002	19,239	24,356	28,032	34,716	43,480	50,630	52,831	58,081
Australia	642	823	1,037	1,337	1,488	1,955	2,430	2,949	3,603	3,646	3,766	4,148
Canada	599	938	1,112	1,389	2,352	2,904	3,409	4,655	6,207	6,306	6,613	6,185
All others	8,024	8,347	10,052	11,276	15,398	19,497	22,193	27,112	33,669	40,679	42,451	47,748
Other developing	30	39	56	73	81	112	167	168	210	225	272	292
Imports												
World	71,827	83,403	103,304	131,075	202,735	247,927	277,852	310,619	368,978	418,004	429,212	469,651
World excluding intra-EU and intra-China	44,142	52,988	65,540	81,644	116,771	139,502	156,760	179,210	217,136	247,058	260,895	285,639
United States	5,544	8,737	13,542	18,624	31,516	35,359	39,032	45,833	52,456	58,519	59,825	65,239
EU	37,071	41,116	51,943	67,607	110,157	140,608	156,762	171,972	202,466	230,540	234,162	253,540
EU ROW	10,195	11,521	14,857	18,755	24,754	32,693	36,220	41,166	51,379	60,631	66,844	70,680
Intra-EU	26,876	29,595	37,086	48,852	85,402	107,915	120,542	130,806	151,087	169,908	167,318	182,860
France	5,242	5,425	7,111	8,492	11,592	13,927	15,303	16,271	18,455	20,688	22,647	24,724
France ROW	1,589	1,513	2,218	2,743	3,245	3,966	4,414	4,112	5,538	6,236	7,182	8,135
France intra-EU	3,653	3,912	4,893	5,749	8,347	9,961	10,888	12,158	12,918	14,452	15,465	16,589
Germany	6,220	6,511	7,707	9,861	18,732	23,508	26,589	30,574	37,642	43,290	43,601	47,525
Germany ROW	2,065	2,231	2,457	2,948	3,529	5,008	5,566	6,832	11,148	13,281	15,248	16,058
Germany intra-EU	4,155	4,280	5,250	6,913	15,203	18,500	21,023	23,742	26,494	30,009	28,352	31,466
United Kingdom	4,264	5,039	6,684	9,043	12,870	14,764	15,905	17,443	20,547	20,680	21,164	22,517
United Kingdom ROW	1,130	1,373	1,821	3,196	2,895	3,793	4,844	5,919	6,535	7,199	7,288	7,651
United Kingdom intra-EU	3,134	3,666	4,862	5,847	9,976	10,971	11,061	11,524	14,012	13,480	13,876	14,865
Japan	4,217	3,791	4,344	4,716	5,599	6,540	7,311	7,917	8,472	9,742	12,968	15,156
China	2,408	2,461	2,082	2,064	2,440	2,603	3,065	3,573	4,939	6,686	7,453	8,372
China ROW	1,599	1,640	1,404	1,485	1,878	2,094	2,515	2,969	4,184	5,648	6,454	7,221
Intra-China	809	820	678	579	562	510	550	604	754	1,038	999	1,151
Asia-8	3,225	3,740	3,679	4,614	6,025	6,963	8,182	9,854	11,592	12,992	13,760	15,902
India	383	417	443	531	796	955	1,107	1,503	1,858	2,264	2,451	2,811
Indonesia	210	244	156	209	321	293	295	371	467	517	596	681
Malaysia	277	334	289	361	500	601	634	743	875	965	1,069	1,223
Philippines	281	338	352	392	494	535	553	614	722	834	864	967
Singapore	380	544	546	686	842	910	1,427	1,517	1,763	1,736	1,723	1,965
South Korea	606	664	629	972	1,342	1,549	1,885	2,472	2,982	3,343	3,417	3,924
Taiwan	629	678	813	911	1,083	1,377	1,371	1,532	1,705	1,854	2,010	2,475
Thailand	460	521	452	553	648	744	910	1,102	1,218	1,477	1,631	1,856
All others	19,056	23,736	28,827	35,322	48,230	57,258	64,776	77,364	91,609	102,494	104,172	116,485
Central Asia/Europe	1,535	3,128	2,523	3,928	5,671	7,382	9,252	12,226	14,456	18,717	17,347	19,426
Russia	558	1,644	844	1,796	2,198	2,779	3,988	5,913	6,401	8,711	7,770	9,196
Turkey	479	705	996	1,192	2,036	2,716	2,873	3,171	3,830	4,891	4,633	4,952
All others	499	779	682	939	1,437	1,888	2,391	3,143	4,225	5,115	4,944	5,278

Appendix table 6-30

## Exports and imports of pharmaceutical goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Middle East/North Africa	3,584	3,779	4,413	5,039	6,613	7,685	8,240	9,189	11,522	13,686	14,733	15,680
Israel	360	445	545	612	754	845	889	1,036	1,170	1,334	1,367	1,516
All others	3,224	3,333	3,868	4,427	5,859	6,841	7,351	8,153	10,353	12,352	13,366	14,164
South and Central America	3,755	4,801	5,852	7,008	7,436	8,829	9,731	11,772	14,919	16,849	17,293	19,601
Brazil	854	1,328	1,611	1,659	1,755	2,047	2,188	2,792	3,534	4,480	4,662	5,430
Mexico	526	737	1,067	1,449	1,892	2,212	2,486	3,093	3,434	3,954	3,868	4,519
All others	2,375	2,736	3,174	3,900	3,789	4,571	5,057	5,886	7,951	8,415	8,764	9,652
Sub-Saharan Africa	1,673	1,717	1,889	2,186	2,772	3,281	3,841	4,806	6,116	6,360	6,506	7,073
Southern Africa	481	569	646	720	819	1,012	1,304	1,738	2,209	2,139	1,818	1,929
All others	1,193	1,149	1,243	1,466	1,953	2,269	2,537	3,068	3,906	4,221	4,688	5,144
Other developed	6,682	8,075	10,982	12,940	19,866	23,464	26,195	30,400	34,909	35,946	36,624	40,629
Australia	1,132	1,472	1,903	2,127	3,300	4,155	4,820	4,906	5,534	5,866	6,482	6,971
Canada	1,826	2,236	3,169	4,221	5,872	6,618	7,518	8,971	9,686	10,937	11,669	14,077
All others	3,725	4,367	5,910	6,592	10,693	12,691	13,858	16,523	19,689	19,143	18,473	19,582
Other developing	744	796	733	878	1,105	1,234	1,460	1,576	1,913	2,193	2,614	2,864
Balance												
United States	892	-696	-2,467	-3,480	-12,760	-12,018	-13,370	-17,164	-19,495	-20,706	-16,985	-20,682
EU	10,806	14,308	16,460	20,523	36,879	39,004	42,594	45,756	52,645	54,732	49,770	55,124
EU ROW	10,806	14,308	16,460	20,523	36,879	39,004	42,594	45,756	52,645	54,732	49,770	55,124
Intra-EU	0	0	0	0	0	0	0	0	0	0	0	0
France	1,752	2,582	2,898	4,269	7,402	8,032	9,203	10,262	11,310	14,247	12,795	13,672
France ROW	1,712	1,962	1,784	2,974	5,377	6,681	7,258	8,884	8,975	11,199	10,718	11,154
France intra-EU	40	621	1,114	1,295	2,024	1,351	1,946	1,379	2,335	3,048	2,077	2,519
Germany	4,146	5,217	7,231	7,231	5,590	11,601	13,204	16,143	20,633	24,791	21,254	24,762
Germany ROW	3,154	4,212	5,943	5,330	7,213	8,285	8,522	10,440	10,138	11,146	8,542	9,076
Germany intra-EU	992	1,005	1,288	1,901	-1,623	3,316	4,682	5,703	10,495	13,645	12,713	15,686
United Kingdom	3,065	4,016	3,882	4,700	7,188	8,404	6,875	8,278	9,149	12,138	11,137	10,391
United Kingdom ROW	2,145	3,068	3,439	3,604	7,344	7,063	5,270	6,211	8,149	8,326	8,165	7,030
United Kingdom intra-EU	920	948	444	1,097	-156	1,341	1,605	2,068	1,000	3,812	2,973	3,361
Japan	-2,306	-1,599	-1,595	-1,575	-1,300	-1,970	-2,724	-3,862	-4,043	-5,125	-7,418	-8,512
China	-53	-73	382	547	1,071	1,300	1,413	1,719	2,053	2,921	2,755	3,899
China ROW	-53	-73	382	547	1,071	1,300	1,413	1,719	2,053	2,921	2,755	3,899
Intra-China	0	0	0	0	0	0	0	0	0	0	0	0
Asia-8	-1,675	-1,750	-1,377	-1,672	-2,076	-2,404	-1,194	24	1,752	1,101	1,579	2,318
India	86	346	451	765	1,395	1,509	1,978	2,279	3,920	4,446	4,555	5,996
Indonesia	-162	-185	-64	-111	-183	-150	-170	-206	-244	-243	-324	-345
Malaysia	-200	-260	-214	-279	-389	-471	-489	-592	-683	-778	-793	-927
Philippines	-263	-309	-329	-363	-472	-502	-522	-580	-680	-794	-816	-902
Singapore	109	-27	199	216	-13	118	1,261	3,139	3,999	3,486	4,182	4,619
South Korea	-342	-323	-345	-644	-924	-1,085	-1,350	-1,843	-2,158	-2,305	-2,215	-2,564
Taiwan	-538	-576	-726	-823	-986	-1,237	-1,186	-1,296	-1,463	-1,566	-1,697	-2,067
Thailand	-364	-416	-350	-433	-504	-585	-717	-878	-940	-1,145	-1,313	-1,491



## Appendix table 6-30

## Exports and imports of pharmaceutical goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
All others	-8,018	-10,710	-13,181	-16,725	-23,590	-25,892	-28,765	-33,330	-37,016	-38,236	-35,943	-40,506
Central Asia/Europe	-1,264	-2,605	-1,937	-3,264	-4,661	-6,063	-7,897	-10,824	-12,578	-16,653	-14,502	-16,338
Russia	-518	-1,533	-720	-1,653	-1,969	-2,571	-3,773	-5,653	-6,092	-8,369	-7,343	-8,708
Turkey	-423	-620	-906	-1,069	-1,835	-2,453	-2,528	-2,775	-3,381	-4,284	-3,968	-4,252
All others	-323	-452	-310	-542	-856	-1,039	-1,597	-2,396	-3,105	-3,999	-3,191	-3,377
Middle East/North Africa	-3,289	-3,174	-3,586	-3,575	-4,880	-5,520	-5,205	-5,128	-6,708	-7,427	-8,332	-7,453
Israel	-195	-10	48	563	624	874	1,569	2,373	2,636	3,999	4,104	5,708
All others	-3,094	-3,164	-3,635	-4,138	-5,504	-6,394	-6,775	-7,501	-9,344	-11,426	-12,436	-13,162
South and Central America	-2,660	-3,198	-3,998	-4,771	-5,046	-5,636	-6,544	-8,345	-11,073	-12,185	-11,907	-13,858
Brazil	-671	-1,090	-1,314	-1,357	-1,400	-1,610	-1,635	-2,088	-2,662	-3,340	-3,323	-3,797
Mexico	-168	-222	-400	-579	-865	-608	-1,271	-1,871	-2,161	-2,466	-2,241	-2,849
All others	-1,820	-1,887	-2,284	-2,836	-2,781	-3,417	-3,639	-4,386	-6,250	-6,379	-6,343	-7,212
Sub-Saharan Africa	-1,592	-1,569	-1,767	-2,028	-2,585	-3,059	-3,604	-4,545	-5,751	-5,943	-6,011	-6,523
Southern Africa	-429	-496	-565	-614	-693	-856	-1,143	-1,571	-1,970	-1,865	-1,493	-1,562
All others	-1,164	-1,073	-1,202	-1,414	-1,893	-2,203	-2,462	-2,974	-3,781	-4,078	-4,518	-4,961
Other developed	2,583	2,033	1,220	1,062	-627	892	1,837	4,316	8,571	14,684	16,207	17,451
Australia	-490	-649	-866	-791	-1,812	-2,199	-2,390	-1,957	-1,930	-2,220	-2,716	-2,823
Canada	-1,227	-1,297	-2,057	-2,832	-3,520	-3,714	-4,108	-4,316	-3,479	-4,631	-5,055	-7,892
All others	4,300	3,980	4,143	4,685	4,705	6,805	8,335	10,589	13,980	21,535	23,978	28,165
Other developing	-715	-757	-677	-806	-1,024	-1,122	-1,294	-1,408	-1,703	-1,968	-2,342	-2,573

EU = European Union; ROW = rest of the world

NOTES: ROW is trade between named region/country/economy and rest of world. Intra-EU is trade between EU member countries. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Intra-China is trade between China and Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-32 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Trade Service database.

Appendix table 6-31

## Exports and imports of aerospace goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Exports												
World	77,238	106,381	126,316	118,876	114,886	129,967	137,693	175,919	199,278	228,570	229,109	230,783
World excluding intra-EU and intra-China	62,353	89,294	101,073	90,042	85,755	96,319	101,919	131,645	152,830	176,155	175,110	176,478
United States	24,612	39,594	48,443	42,783	38,083	40,604	49,169	66,252	75,446	83,484	81,804	79,222
EU	39,749	45,632	53,253	53,217	53,966	64,043	65,466	82,129	88,097	102,768	107,122	109,248
EU ROW	24,900	28,597	28,059	24,445	24,908	30,508	29,792	37,960	41,833	50,415	53,198	55,025
Intra-EU	14,849	17,035	25,194	28,772	29,058	33,535	35,674	44,169	46,263	52,353	53,923	54,222
France	16,453	17,990	20,466	24,503	24,618	28,227	29,729	40,284	41,171	47,741	47,675	49,424
France ROW	11,509	11,996	11,165	13,324	14,049	16,718	16,009	21,752	23,268	27,703	27,504	29,175
France intra-EU	4,944	5,995	9,302	11,179	10,569	11,509	13,720	18,532	17,903	20,038	20,171	20,249
Germany	7,344	8,686	13,504	15,402	16,010	18,514	19,247	23,723	25,717	29,443	32,992	33,149
Germany ROW	1,580	2,128	3,058	4,337	4,330	6,210	5,791	7,477	7,782	9,006	11,551	11,278
Germany intra-EU	5,764	6,558	10,446	11,065	11,679	12,304	13,457	16,246	17,935	20,438	21,441	21,871
United Kingdom	10,354	13,810	12,913	6,431	6,133	7,059	8,331	8,541	9,885	12,379	11,893	11,963
United Kingdom ROW	8,773	11,820	11,162	3,408	2,912	3,291	4,060	3,863	4,998	6,214	5,424	5,566
United Kingdom intra-EU	1,581	1,990	1,751	3,023	3,221	3,768	4,271	4,678	4,887	6,165	6,469	6,397
Japan	609	1,380	1,698	1,790	1,142	1,404	1,680	2,216	2,806	2,774	2,878	3,078
China	270	372	421	520	410	511	581	723	954	1,270	1,343	1,497
China ROW	233	320	372	457	337	398	481	618	769	1,208	1,268	1,415
Intra-China	36	52	49	63	73	113	100	105	185	62	75	82
Asia-8	1,449	2,158	1,273	1,547	1,991	1,788	2,150	3,037	4,034	4,689	4,921	5,764
India	16	95	25	94	70	68	76	128	403	686	705	799
Indonesia	8	39	59	35	89	65	106	214	132	104	207	235
Malaysia	385	500	483	157	137	218	270	344	615	583	687	776
Philippines	5	36	18	37	158	208	132	114	89	88	92	112
Singapore	285	445	320	666	786	640	1,020	1,495	1,707	2,166	2,165	2,612
South Korea	188	457	300	463	438	313	316	452	541	554	621	738
Taiwan	9	31	50	73	123	106	126	135	160	161	137	160
Thailand	553	555	20	24	190	171	104	155	386	346	307	332
All others	6,652	9,231	11,582	18,011	18,649	20,938	18,103	21,061	27,093	32,723	30,215	31,156
Central Asia/Europe	1,363	2,314	1,226	2,295	3,564	3,512	1,004	1,732	2,701	3,844	3,023	3,170
Russia	172	265	576	1,854	3,170	2,988	594	753	782	1,433	829	907
Turkey	10	78	296	242	158	300	150	291	533	349	478	494
All others	1,182	1,970	354	200	236	225	260	688	1,386	2,062	1,716	1,769
Middle East/North Africa	802	953	1,405	1,941	1,746	2,248	2,299	2,783	3,893	6,689	4,367	4,675
Israel	720	812	1,218	1,494	1,479	1,487	1,552	1,683	2,541	2,105	2,440	2,685
All others	83	141	188	447	268	760	747	1,100	1,352	4,584	1,926	1,990
South and Central America	374	857	2,266	3,197	2,575	4,622	3,684	3,779	6,134	7,054	6,854	7,458
Brazil	167	686	1,855	2,910	2,239	4,420	3,311	3,273	5,210	5,386	5,199	5,829
Mexico	146	47	100	72	83	56	52	98	259	571	597	661
All others	61	124	311	215	252	145	321	408	665	1,098	1,058	968

Appendix table 6-31

## Exports and imports of aerospace goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Sub-Saharan Africa	106	236	343	179	260	445	871	917	881	1,115	973	994
Southern Africa	84	138	129	155	88	163	647	528	584	498	431	443
All others	22	98	214	24	172	281	224	389	297	617	542	551
Other developed	3,998	4,843	6,335	10,337	10,465	10,047	10,184	11,784	13,381	13,921	14,908	14,765
Australia	485	374	342	357	370	328	382	369	421	521	644	656
Canada	3,009	3,766	5,072	8,747	8,004	7,224	8,146	9,153	10,494	10,385	11,083	10,904
All others	504	703	920	1,233	2,091	2,495	1,655	2,262	2,467	3,015	3,181	3,204
Other developing	10	30	6	62	40	65	62	66	102	100	91	93
Imports												
World	77,238	106,381	126,316	118,876	114,886	129,967	137,693	175,919	199,278	228,570	229,109	230,783
World excluding intra-EU and intra-China	62,353	89,294	101,073	90,042	85,755	96,319	101,919	131,645	152,830	176,155	175,110	176,478
United States	6,336	9,770	14,982	21,091	16,990	20,275	16,472	17,568	21,821	21,502	18,330	18,933
EU	29,514	40,049	56,956	47,985	46,373	54,224	54,383	67,299	76,638	92,213	94,309	91,386
EU ROW	14,666	23,014	31,762	19,214	17,315	20,689	18,709	23,131	30,375	39,859	40,386	37,164
Intra-EU	14,849	17,035	25,194	28,772	29,058	33,535	35,674	44,169	46,263	52,353	53,923	54,222
France	7,589	8,321	12,792	13,050	13,789	15,388	15,564	20,124	23,230	29,338	30,500	29,213
France ROW	1,460	1,621	3,752	2,784	2,256	3,884	3,530	4,673	5,438	9,652	10,814	9,401
France intra-EU	6,129	6,701	9,041	10,267	11,533	11,504	12,034	15,450	17,793	19,687	19,686	19,813
Germany	5,494	7,168	10,211	13,461	11,115	12,353	14,994	20,919	20,196	25,778	26,603	27,049
Germany ROW	1,198	1,887	3,570	3,395	2,458	1,815	2,111	3,568	4,347	6,637	7,078	7,187
Germany intra-EU	4,296	5,281	6,640	10,067	8,657	10,538	12,883	17,351	15,849	19,141	19,525	19,862
United Kingdom	7,744	15,954	18,019	8,409	6,651	6,926	7,828	8,500	9,480	13,565	12,562	12,447
United Kingdom ROW	6,382	14,178	15,442	5,761	3,624	3,549	4,044	4,472	6,277	9,423	8,315	8,175
United Kingdom intra-EU	1,361	1,775	2,577	2,648	3,027	3,377	3,784	4,028	3,202	4,142	4,248	4,273
Japan	3,576	4,703	4,929	3,079	5,331	5,577	5,741	6,967	7,959	7,325	6,358	6,200
China	3,622	4,645	4,463	7,017	5,749	6,171	9,752	13,729	15,669	13,496	14,336	14,440
China ROW	3,586	4,593	4,415	6,954	5,676	6,058	9,652	13,624	15,485	13,435	14,260	14,358
Intra-China	36	52	49	63	73	113	100	105	185	62	75	82
Asia-8	10,408	14,233	8,949	11,874	10,196	11,213	14,967	20,634	24,039	20,352	22,581	25,839
India	369	509	604	708	987	1,137	1,701	4,613	8,102	3,901	5,881	4,989
Indonesia	369	1,187	207	226	228	240	369	398	1,298	1,103	2,177	2,892
Malaysia	1,357	1,477	549	765	402	890	773	1,756	1,509	2,008	2,241	2,732
Philippines	332	1,568	92	119	224	376	354	876	796	1,090	758	851
Singapore	1,787	2,580	2,103	3,875	3,455	3,384	3,832	4,615	4,023	6,303	6,173	7,493
South Korea	2,476	2,532	2,176	3,069	2,223	2,241	2,462	4,294	3,795	2,988	2,787	3,427
Taiwan	2,088	2,382	2,206	1,860	1,448	1,906	3,490	2,274	2,524	1,658	1,201	1,854
Thailand	1,630	1,998	1,013	1,250	1,229	1,039	1,986	1,808	1,992	1,302	1,363	1,603
All others	16,447	20,588	26,890	26,331	26,414	28,864	34,868	48,017	50,626	71,260	69,213	69,833
Central Asia/Europe	965	1,296	2,563	1,498	1,720	3,044	2,707	5,636	4,789	7,705	7,719	8,847
Russia	222	178	611	133	585	986	614	1,628	1,676	3,037	3,196	3,399
Turkey	699	623	1,160	1,058	446	777	1,146	2,729	1,658	2,723	2,159	3,144
All others	44	496	793	307	688	1,280	948	1,279	1,455	1,945	2,364	2,304

Appendix table 6-31

## Exports and imports of aerospace goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
Middle East/North Africa	4,357	6,112	9,214	6,997	7,850	6,827	11,984	15,799	15,248	16,005	20,023	19,021
Israel	629	669	1,821	1,126	802	1,408	1,650	1,644	1,970	2,078	1,456	1,345
All others	3,728	5,442	7,393	5,871	7,049	5,419	10,333	14,155	13,278	13,927	18,567	17,676
South and Central America	4,923	3,485	4,572	5,652	4,236	5,575	5,709	10,583	12,550	17,712	17,162	16,276
Brazil	815	1,114	1,695	2,500	1,262	2,203	2,131	3,830	5,770	8,189	6,670	6,362
Mexico	140	271	399	733	866	1,262	1,332	2,264	2,184	2,856	2,373	2,649
All others	3,968	2,101	2,477	2,419	2,109	2,111	2,246	4,489	4,597	6,667	8,118	7,264
Sub-Saharan Africa	999	1,207	1,270	2,074	2,050	2,525	3,272	3,317	3,329	9,450	6,367	6,582
Southern Africa	514	458	364	880	1,151	1,428	1,605	878	926	1,474	1,327	1,315
All others	485	749	906	1,194	899	1,097	1,667	2,439	2,403	7,976	5,041	5,267
Other developed	4,913	8,139	8,671	9,893	9,506	8,761	10,117	11,231	12,608	18,641	15,945	16,962
Australia	909	1,138	1,455	1,236	2,760	2,649	2,345	2,538	2,099	4,524	3,573	3,370
Canada	1,905	4,187	3,945	5,327	3,307	3,563	4,421	4,775	6,398	8,642	6,901	7,594
All others	2,100	2,814	3,271	3,330	3,438	2,548	3,351	3,918	4,111	5,476	5,470	5,998
Other developing	290	349	599	217	1,051	2,132	1,080	1,452	2,101	1,747	1,997	2,146
Balance												
United States	18,277	29,823	33,461	21,692	21,093	20,329	32,697	48,684	53,625	61,982	63,474	60,289
EU	10,235	5,583	-3,703	5,232	7,593	9,819	11,083	14,830	11,458	10,555	12,813	17,862
EU ROW	10,235	5,583	-3,703	5,232	7,593	9,819	11,083	14,830	11,458	10,555	12,813	17,862
Intra-EU	0	0	0	0	0	0	0	0	0	0	0	0
France	8,864	9,669	7,674	11,453	10,829	12,840	14,165	20,160	17,940	18,403	17,175	20,210
France ROW	10,049	10,375	7,413	10,540	11,793	12,834	12,479	17,079	17,830	18,052	16,690	19,774
France intra-EU	-1,185	-706	261	913	-965	5	1,686	3,081	110	351	485	436
Germany	1,850	1,519	3,293	1,941	4,895	6,161	4,253	2,804	5,521	3,666	6,389	6,101
Germany ROW	382	241	-512	942	1,873	4,395	3,680	3,909	3,435	2,369	4,473	4,091
Germany intra-EU	1,468	1,277	3,805	999	3,022	1,766	574	-1,105	2,086	1,297	1,915	2,010
United Kingdom	2,611	-2,144	-5,106	-1,978	-518	132	503	41	405	-1,186	-669	-485
United Kingdom ROW	2,391	-2,358	-4,280	-2,354	-712	-259	17	-609	-1,279	-3,209	-2,891	-2,609
United Kingdom intra-EU	220	214	-826	376	194	391	486	650	1,684	2,023	2,221	2,124
Japan	-2,967	-3,323	-3,231	-1,290	-4,189	-4,173	-4,062	-4,751	-5,153	-4,551	-3,480	-3,123
China	-3,353	-4,273	-4,043	-6,497	-5,339	-5,660	-9,171	-13,007	-14,716	-12,227	-12,993	-12,943
China ROW	-3,353	-4,273	-4,043	-6,497	-5,339	-5,660	-9,171	-13,007	-14,716	-12,227	-12,993	-12,943
Intra-China	0	0	0	0	0	0	0	0	0	0	0	0
Asia-8	-8,959	-12,075	-7,676	-10,327	-8,205	-9,424	-12,817	-17,597	-20,005	-15,663	-17,661	-20,075
India	-352	-414	-579	-615	-917	-1,069	-1,625	-4,485	-7,699	-3,215	-5,176	-4,190
Indonesia	-362	-1,148	-148	-191	-139	-175	-263	-184	-1,165	-998	-1,970	-2,657
Malaysia	-972	-977	-65	-609	-265	-672	-503	-1,412	-895	-1,425	-1,554	-1,955
Philippines	-327	-1,532	-74	-83	-67	-168	-222	-762	-707	-1,001	-667	-739
Singapore	-1,502	-2,135	-1,784	-3,210	-2,669	-2,744	-2,812	-3,119	-2,316	-4,137	-4,008	-4,881
South Korea	-2,288	-2,075	-1,877	-2,607	-1,784	-1,928	-2,147	-3,842	-3,254	-2,433	-2,165	-2,689
Taiwan	-2,079	-2,351	-2,156	-1,787	-1,325	-1,801	-3,363	-2,140	-2,364	-1,498	-1,065	-1,694
Thailand	-1,077	-1,443	-993	-1,227	-1,039	-868	-1,882	-1,653	-1,606	-956	-1,055	-1,271

Appendix table 6-31

## Exports and imports of aerospace goods, by region/country/economy: Selected years, 1995–2010

(Millions of current dollars)

Region/country/economy	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010
All others	-9,794	-11,357	-15,308	-8,319	-7,764	-7,926	-16,765	-26,957	-23,533	-38,537	-38,998	-38,677
Central Asia/Europe	399	1,017	-1,338	797	1,844	468	-1,703	-3,903	-2,088	-3,861	-4,696	-5,677
Russia	-50	88	-35	1,720	2,585	2,001	-19	-875	-895	-1,604	-2,367	-2,492
Turkey	-690	-545	-864	-816	-288	-478	-996	-2,438	-1,125	-2,374	-1,681	-2,650
All others	1,138	1,475	-439	-107	-452	-1,056	-688	-591	-69	117	-648	-535
Middle East/North Africa	-3,555	-5,159	-7,809	-5,056	-6,104	-4,579	-9,685	-13,016	-11,355	-9,316	-15,656	-14,346
Israel	91	143	-603	368	677	79	-99	39	571	27	985	1,341
All others	-3,645	-5,301	-7,206	-5,424	-6,781	-4,658	-9,587	-13,055	-11,926	-9,344	-16,641	-15,687
South and Central America	-4,549	-2,628	-2,306	-2,455	-1,662	-954	-2,026	-6,804	-6,416	-10,657	-10,308	-8,817
Brazil	-648	-428	160	410	978	2,217	1,180	-557	-560	-2,804	-1,471	-533
Mexico	7	-224	-300	-661	-783	-1,205	-1,280	-2,166	-1,925	-2,285	-1,776	-1,989
All others	-3,908	-1,977	-2,166	-2,204	-1,857	-1,966	-1,926	-4,081	-3,931	-5,569	-7,061	-6,296
Sub-Saharan Africa	-893	-971	-927	-1,895	-1,790	-2,080	-2,402	-2,400	-2,448	-8,335	-5,394	-5,588
Southern Africa	-430	-321	-235	-725	-1,063	-1,264	-958	-350	-342	-976	-895	-871
All others	-463	-651	-692	-1,170	-727	-816	-1,444	-2,050	-2,106	-7,359	-4,499	-4,716
Other developed	-916	-3,297	-2,336	444	959	1,286	67	553	773	-4,720	-1,037	-2,197
Australia	-424	-764	-1,112	-879	-2,390	-2,322	-1,963	-2,169	-1,678	-4,003	-2,929	-2,713
Canada	1,104	-421	1,127	3,420	4,696	3,661	3,726	4,378	4,096	1,743	4,181	3,310
All others	-1,596	-2,111	-2,351	-2,097	-1,347	-53	-1,696	-1,656	-1,644	-2,461	-2,289	-2,793
Other developing	-280	-319	-593	-155	-1,012	-2,068	-1,017	-1,386	-1,999	-1,647	-1,906	-2,053

EU = European Union; ROW = rest of the world

NOTES: ROW is trade between named region/country/economy and rest of world. Intra-EU is trade between EU member countries. Data are not available for EU members Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, and Slovenia. China includes Hong Kong. Intra-China is trade between China and Hong Kong. Detail may not add to total because of rounding. See appendix table 6-32 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Trade Service database.

Appendix table 6-32

**Regions and countries/economies in world trade data**

United States	Central Asia and Europe
EU	All others (continued)
Austria	Croatia
Belgium	Other Europe
Bulgaria	Middle East and North Africa
Czech Republic	Israel
Denmark	All others
Estonia	Algeria
Finland	Egypt
France	Libya
Germany	Morocco
Greece	Tunisia
Hungary	Saudi Arabia
Ireland	United Arab Emirates
Italy	Other Arabian Gulf
Latvia	South and Central America
Lithuania	Brazil
Netherlands	Mexico
Poland	All others
Portugal	Argentina
Romania	Venezuela
Slovakia	Other East Coast of South America
Slovenia	Bolivia
Spain	Chile
Sweden	Colombia
United Kingdom	Ecuador
Japan	Peru
China	Caribbean Basin
China	Central America
Hong Kong	Sub-Saharan Africa
Asia-8	South Africa
India	All others
Indonesia	Kenya
Malaysia	Other East Africa
Philippines	Other Southern Africa
Singapore	Western Africa
South Korea	Other developed
Taiwan	Australia
Thailand	Canada
All others	All others
Central Asia and Europe	New Zealand
Russia	Norway
Turkey	Switzerland
All others	Other developing
Belarus	Pakistan
Moldova	Other Indian Subcontinent
Ukraine	Vietnam
Other CIS Southeast	

CIS = Commonwealth of Independent States; EU = European Union

NOTE: Data are not available for EU members Cyprus, Luxembourg, and Malta.

SOURCE: IHS Global Insight, World Trade Service database, special tabulations (15 January 2011).

*Science and Engineering Indicators 2012*

Appendix table 6-33

## Trade in communications and computer and office machinery goods, by selected region/country/economy of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
United States	World	55,888	75,551	64,843	84,935	United States	World	95,018	162,544	202,570	235,126
	EU	18,017	22,928	19,062	14,538		EU	7,340	12,312	12,291	9,401
	Japan	6,460	7,551	4,741	3,208		Japan	25,107	27,101	18,075	7,844
	China	3,034	4,143	5,701	7,517		China	7,709	21,138	75,709	115,122
	Asia-8	7,533	9,440	8,772	8,051		Asia-8	39,041	59,321	61,065	48,773
	India	265	481	932	1,026		India	93	58	185	606
	Indonesia	268	84	105	124		Indonesia	889	1,743	1,636	1,237
	Malaysia	742	887	1,245	1,068		Malaysia	7,758	13,410	23,086	11,163
	Philippines	366	354	257	475		Philippines	885	3,092	1,514	1,035
	Singapore	2,192	2,249	2,446	2,139		Singapore	12,271	10,883	7,225	3,504
	South Korea	1,982	3,315	1,617	1,647		South Korea	5,724	12,525	11,382	13,006
	Taiwan	1,002	1,551	1,138	785		Taiwan	8,539	13,552	8,975	10,968
	Thailand	715	519	1,031	786		Thailand	2,881	4,058	7,063	7,253
	Brazil	1,914	2,975	2,129	3,602		Brazil	118	695	826	97
	Mexico	2,887	7,707	4,961	17,893		Mexico	8,486	25,303	26,169	44,356
Russia	236	149	242	217	Russia	2	5	6	6		
EU	World	121,670	198,707	288,961	224,234	EU	World	153,761	241,380	375,593	332,436
	Intra-EU	80,568	133,749	194,441	152,292		Intra-EU	80,568	133,749	194,441	152,292
	EU ROW	41,102	64,958	94,520	71,942		EU ROW	73,193	107,632	181,152	180,144
	United States	7,340	12,312	12,291	9,401		United States	18,017	22,928	19,062	14,538
	Japan	3,004	4,039	2,387	2,009		Japan	17,998	18,927	18,750	12,295
	China	3,716	6,306	6,401	6,603		China	6,635	16,507	71,480	91,915
	Asia-8	4,496	7,121	7,742	7,533		Asia-8	23,774	39,656	54,726	46,715
	India	344	547	1,226	2,258		India	114	74	219	1,240
	Indonesia	424	282	661	531		Indonesia	410	1,297	1,885	2,158
	Malaysia	785	933	750	816		Malaysia	3,606	5,952	7,554	6,252
	Philippines	204	667	301	274		Philippines	416	2,755	2,970	1,370
	Singapore	1,226	1,604	2,192	1,448		Singapore	7,821	7,762	8,339	3,747
	South Korea	416	938	1,251	1,122		South Korea	3,200	7,331	17,864	15,392
	Taiwan	407	1,582	881	578		Taiwan	6,407	11,492	11,662	10,443
	Thailand	691	568	481	506		Thailand	1,800	2,994	4,232	6,113
Brazil	558	1,056	918	894	Brazil	63	91	499	173		
Mexico	302	1,516	1,118	757	Mexico	249	1,139	1,602	1,944		
Russia	1,807	2,013	9,246	6,411	Russia	21	74	87	133		

Appendix table 6-33

## Trade in communications and computer and office machinery goods, by selected region/country/economy of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Japan	World	66,916	69,316	63,847	42,839	Japan	World	24,795	40,135	46,846	47,219
	United States	25,107	27,101	18,075	7,844		United States	6,460	7,551	4,741	3,208
	EU	17,998	18,927	18,750	12,295		EU	3,004	4,039	2,387	2,009
	China	6,550	5,988	11,386	11,443		China	2,426	6,114	23,416	27,901
	Asia-8	10,424	11,451	8,451	5,978		Asia-8	12,487	21,663	15,329	12,796
	India	107	64	126	296		India	4	25	48	56
	Indonesia	334	438	275	204		Indonesia	140	647	606	702
	Malaysia	1,356	953	672	495		Malaysia	2,401	4,520	2,726	2,938
	Philippines	633	1,260	1,064	543		Philippines	722	2,273	1,819	1,181
	Singapore	3,720	2,875	2,176	985		Singapore	3,279	2,459	1,714	1,096
	South Korea	1,494	1,906	1,898	1,668		South Korea	1,461	3,562	3,181	2,965
	Taiwan	1,854	3,115	1,294	720		Taiwan	2,766	6,113	2,474	1,817
	Thailand	928	839	946	1,067		Thailand	1,714	2,064	2,761	2,041
	Brazil	274	256	139	145		Brazil	8	62	7	2
	Mexico	430	695	1,526	1,201		Mexico	88	284	412	331
Russia	324	71	264	198	Russia	0	0	2	1		
China	World	44,248	91,761	318,388	473,644	China	World	40,842	63,690	143,961	181,649
	Intra-China	18,135	29,721	75,987	103,632		Intra-China	18,135	29,721	75,987	103,632
	China ROW	26,113	62,040	242,401	370,012		China ROW	22,707	33,969	67,974	78,017
	United States	7,709	21,138	75,709	115,122		United States	3,034	4,143	5,701	7,517
	EU	6,635	16,507	71,480	91,915		EU	3,716	6,306	6,401	6,603
	Japan	2,426	6,114	23,416	27,901		Japan	6,550	5,988	11,386	11,443
	Asia-8	5,338	11,244	36,106	55,381		Asia-8	8,438	16,417	42,797	49,426
	India	124	332	2,252	9,966		India	6	32	56	326
	Indonesia	109	243	635	4,421		Indonesia	49	227	364	718
	Malaysia	653	1,276	5,744	7,158		Malaysia	1,119	2,790	4,316	5,512
	Philippines	339	432	1,456	1,919		Philippines	145	788	3,089	2,322
	Singapore	2,365	4,325	10,478	10,948		Singapore	3,642	3,869	7,207	3,800
	South Korea	641	2,413	8,280	10,679		South Korea	1,093	3,434	13,798	16,103
	Taiwan	744	1,375	4,377	6,310		Taiwan	2,119	4,116	8,150	7,570
	Thailand	363	847	2,883	3,979		Thailand	266	1,162	5,818	13,075
	Brazil	227	331	1,846	4,849		Brazil	2	2	29	97
	Mexico	279	875	7,539	17,606		Mexico	6	284	331	526
Russia	117	115	1,293	2,602	Russia	5	33	12	14		



Appendix table 6-33

## Trade in communications and computer and office machinery goods, by selected region/country/economy of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Asia-8	World	116,432	187,720	234,956	225,136	Asia-8	World	47,959	73,755	96,365	112,275
	United States	39,041	59,321	61,065	48,773		United States	7,533	9,440	8,772	8,051
	EU	23,774	39,656	54,726	46,715		EU	4,496	7,121	7,742	7,533
	Japan	12,487	21,663	15,329	12,796		Japan	10,424	11,451	8,451	5,978
	China	8,438	16,417	42,797	49,426		China	5,338	11,244	36,106	55,381
	Asia-8	18,901	32,829	32,771	31,060		Asia-8	18,901	32,829	32,771	31,060
	India	472	1,482	3,877	4,795		India	171	364	105	1,446
	Indonesia	366	455	666	2,824		Indonesia	767	2,443	2,312	2,395
	Malaysia	2,324	3,393	5,051	3,735		Malaysia	5,332	8,547	8,172	7,685
	Philippines	532	1,563	1,505	1,899		Philippines	491	2,778	1,683	1,100
	Singapore	10,069	12,105	11,545	8,340		Singapore	4,902	6,864	7,228	7,534
	South Korea	1,190	4,205	2,506	2,571		South Korea	1,371	4,637	5,643	4,496
	Taiwan	1,408	6,498	3,138	2,248		Taiwan	2,000	2,900	3,226	2,473
	Thailand	2,541	3,127	4,482	4,648		Thailand	3,868	4,296	4,400	3,931
	Brazil	695	719	1,401	2,467		Brazil	10	7	54	34
	Mexico	947	1,757	5,180	6,158		Mexico	51	228	432	500
	Russia	1,426	223	923	1,819		Russia	2	24	133	546
India	World	439	636	901	6,307	India	World	1,372	3,077	9,003	19,848
	United States	93	58	185	606		United States	265	481	932	1,026
	EU	114	74	219	1,240		EU	344	547	1,226	2,258
	Japan	4	25	48	56		Japan	107	64	126	296
	China	6	32	56	326		China	124	332	2,252	9,966
	Asia-8	171	364	105	1,446		Asia-8	472	1,482	3,877	4,795
	Indonesia	1	1	1	543		Indonesia	3	23	47	103
	Malaysia	33	155	11	178		Malaysia	12	366	406	757
	Philippines	1	7	4	59		Philippines	0	2	6	21
	Singapore	133	195	70	396		Singapore	369	750	1,693	1,953
	South Korea	0	1	11	12		South Korea	39	133	1,331	1,298
	Taiwan	1	2	5	12		Taiwan	42	106	212	314
	Thailand	2	2	3	245		Thailand	8	100	183	349
	Brazil	0	3	12	35		Brazil	0	1	2	20
	Mexico	0	2	15	43		Mexico	0	4	26	125
	Russia	6	4	15	81		Russia	0	23	127	498

Appendix table 6-33

## Trade in communications and computer and office machinery goods, by selected region/country/economy of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Indonesia	World	2,468	6,942	7,659	8,609	Indonesia	World	1,532	1,578	2,385	8,235
	United States	889	1,743	1,636	1,237		United States	268	84	105	124
	EU	410	1,297	1,885	2,158		EU	424	282	661	531
	Japan	140	647	606	702		Japan	334	438	275	204
	China	49	227	364	718		China	109	243	635	4,421
	Asia-8	767	2,443	2,312	2,395		Asia-8	366	455	666	2,824
	India	3	23	47	103		India	1	1	1	543
	Malaysia	82	345	285	196		Malaysia	16	23	85	215
	Philippines	2	19	41	254		Philippines	4	0	12	53
	Singapore	611	1,856	1,655	1,383		Singapore	108	51	135	1,202
	South Korea	28	74	170	276		South Korea	179	344	395	656
	Taiwan	6	77	46	24		Taiwan	51	24	15	58
	Thailand	35	49	70	159		Thailand	6	10	23	97
	Brazil	3	25	49	49		Brazil	2	0	0	1
	Mexico	6	53	91	137		Mexico	1	1	2	53
Russia	5	5	32	84	Russia	0	0	2	7		
Malaysia	World	22,493	38,892	50,744	40,462	Malaysia	World	5,963	7,596	13,673	13,695
	United States	7,758	13,410	23,086	11,163		United States	742	887	1,245	1,068
	EU	3,606	5,952	7,554	6,252		EU	785	933	750	816
	Japan	2,401	4,520	2,726	2,938		Japan	1,356	953	672	495
	China	1,119	2,790	4,316	5,512		China	653	1,276	5,744	7,158
	Asia-8	5,332	8,547	8,172	7,685		Asia-8	2,324	3,393	5,051	3,735
	India	12	366	406	757		India	33	155	11	178
	Indonesia	16	23	85	215		Indonesia	82	345	285	196
	Philippines	27	181	168	103		Philippines	133	145	258	101
	Singapore	4,374	5,241	4,939	3,561		Singapore	1,244	1,251	1,399	1,239
	South Korea	155	1,115	678	583		South Korea	109	415	1,072	651
	Taiwan	186	741	356	515		Taiwan	312	488	899	432
	Thailand	562	880	1,542	1,952		Thailand	411	594	1,128	938
	Brazil	117	144	150	256		Brazil	1	5	2	3
	Mexico	253	427	376	626		Mexico	2	11	21	25
Russia	72	26	100	194	Russia	0	0	0	15		

Appendix table 6-33

## Trade in communications and computer and office machinery goods, by selected region/country/economy of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Philippines	World	2,762	12,242	11,799	7,803	Philippines	World	2,158	4,428	4,657	5,300
	United States	885	3,092	1,514	1,035		United States	366	354	257	475
	EU	416	2,755	2,970	1,370		EU	204	667	301	274
	Japan	722	2,273	1,819	1,181		Japan	633	1,260	1,064	543
	China	145	788	3,089	2,322		China	339	432	1,456	1,919
	Asia-8	491	2,778	1,683	1,100		Asia-8	532	1,563	1,505	1,899
	India	0	2	6	21		India	1	7	4	59
	Indonesia	4	0	12	53		Indonesia	2	19	41	254
	Malaysia	133	145	258	101		Malaysia	27	181	168	103
	Singapore	210	613	620	237		Singapore	258	600	668	813
	South Korea	39	538	204	248		South Korea	141	288	393	211
	Taiwan	90	876	394	181		Taiwan	85	246	94	142
	Thailand	15	603	189	260		Thailand	18	222	138	318
	Brazil	0	38	26	146		Brazil	2	0	1	1
	Mexico	12	76	189	207		Mexico	0	7	11	12
Russia	0	1	9	40	Russia	0	0	0	0		
Singapore	World	36,581	35,615	37,513	24,534	Singapore	World	19,960	23,545	29,470	24,589
	United States	12,271	10,883	7,225	3,504		United States	2,192	2,249	2,446	2,139
	EU	7,821	7,762	8,339	3,747		EU	1,226	1,604	2,192	1,448
	Japan	3,279	2,459	1,714	1,096		Japan	3,720	2,875	2,176	985
	China	3,642	3,869	7,207	3,800		China	2,365	4,325	10,478	10,948
	Asia-8	4,902	6,864	7,228	7,534		Asia-8	10,069	12,105	11,545	8,340
	India	369	750	1,693	1,953		India	133	195	70	396
	Indonesia	108	51	135	1,202		Indonesia	611	1,856	1,655	1,383
	Malaysia	1,244	1,251	1,399	1,239		Malaysia	4,374	5,241	4,939	3,561
	Philippines	258	600	668	813		Philippines	210	613	620	237
	South Korea	594	1,199	464	456		South Korea	566	817	1,166	737
	Taiwan	897	1,782	1,181	620		Taiwan	908	937	975	633
	Thailand	1,433	1,229	1,688	1,251		Thailand	3,267	2,446	2,120	1,393
	Brazil	220	117	309	97		Brazil	2	0	26	5
	Mexico	161	200	1,131	618		Mexico	25	89	153	56
Russia	761	51	208	76	Russia	1	0	0	1		

Appendix table 6-33

## Trade in communications and computer and office machinery goods, by selected region/country/economy of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
South Korea	World	16,332	35,734	60,463	61,924	South Korea	World	5,987	13,136	15,945	18,252
	United States	5,724	12,525	11,382	13,006		United States	1,982	3,315	1,617	1,647
	EU	3,200	7,331	17,864	15,392		EU	416	938	1,251	1,122
	Japan	1,461	3,562	3,181	2,965		Japan	1,494	1,906	1,898	1,668
	China	1,093	3,434	13,798	16,103		China	641	2,413	8,280	10,679
	Asia-8	1,371	4,637	5,643	4,496		Asia-8	1,190	4,205	2,506	2,571
	India	39	133	1,331	1,298		India	0	1	11	12
	Indonesia	179	344	395	656		Indonesia	28	74	170	276
	Malaysia	109	415	1,072	651		Malaysia	155	1,115	678	583
	Philippines	141	288	393	211		Philippines	39	538	204	248
	Singapore	566	817	1,166	737		Singapore	594	1,199	464	456
	Taiwan	137	2,399	780	588		Taiwan	308	975	546	467
	Thailand	198	241	506	355		Thailand	66	302	433	528
	Brazil	225	216	543	1,201		Brazil	1	1	20	4
	Mexico	335	573	1,769	2,023		Mexico	9	65	88	184
Russia	581	100	313	828	Russia	0	1	3	21		
Taiwan	World	24,294	41,955	39,009	38,408	Taiwan	World	5,536	14,324	11,114	10,962
	United States	8,539	13,552	8,975	10,968		United States	1,002	1,551	1,138	785
	EU	6,407	11,492	11,662	10,443		EU	407	1,582	881	578
	Japan	2,766	6,113	2,474	1,817		Japan	1,854	3,115	1,294	720
	China	2,119	4,116	8,150	7,570		China	744	1,375	4,377	6,310
	Asia-8	2,000	2,900	3,226	2,473		Asia-8	1,408	6,498	3,138	2,248
	India	42	106	212	314		India	1	2	5	12
	Indonesia	51	24	15	58		Indonesia	6	77	46	24
	Malaysia	312	488	899	432		Malaysia	186	741	356	515
	Philippines	85	246	94	142		Philippines	90	876	394	181
	Singapore	908	937	975	633		Singapore	897	1,782	1,181	620
	South Korea	308	975	546	467		South Korea	137	2,399	780	588
	Thailand	295	123	484	427		Thailand	92	622	376	308
	Brazil	75	124	237	390		Brazil	1	0	2	1
	Mexico	153	293	877	1,554		Mexico	1	9	79	20
Russia	0	22	160	309	Russia	0	0	0	4		

Appendix table 6-33

## Trade in communications and computer and office machinery goods, by selected region/country/economy of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Thailand	World	11,063	15,702	26,867	37,088	Thailand	World	5,452	6,072	10,118	11,394
	United States	2,881	4,058	7,063	7,253		United States	715	519	1,031	786
	EU	1,800	2,994	4,232	6,113		EU	691	568	481	506
	Japan	1,714	2,064	2,761	2,041		Japan	928	839	946	1,067
	China	266	1,162	5,818	13,075		China	363	847	2,883	3,979
	Asia-8	3,868	4,296	4,400	3,931		Asia-8	2,541	3,127	4,482	4,648
	India	8	100	183	349		India	2	2	3	245
	Indonesia	6	10	23	97		Indonesia	35	49	70	159
	Malaysia	411	594	1,128	938		Malaysia	562	880	1,542	1,952
	Philippines	18	222	138	318		Philippines	15	603	189	260
	Singapore	3,267	2,446	2,120	1,393		Singapore	1,433	1,229	1,688	1,251
	South Korea	66	302	433	528		South Korea	198	241	506	355
	Taiwan	92	622	376	308		Taiwan	295	123	484	427
	Brazil	55	53	75	293		Brazil	1	0	1	0
	Mexico	25	133	733	950		Mexico	12	42	53	25
Russia	0	16	87	207	Russia	0	0	0	0		
Brazil	World	379	2,037	3,628	2,557	Brazil	World	4,017	5,622	6,709	12,497
	United States	118	695	826	97		United States	1,914	2,975	2,129	3,602
	EU	63	91	499	173		EU	558	1,056	918	894
	Japan	8	62	7	2		Japan	274	256	139	145
	China	2	2	29	97		China	227	331	1,846	4,849
	Asia-8	10	7	54	34		Asia-8	695	719	1,401	2,467
	India	0	1	2	20		India	0	3	12	35
	Indonesia	2	0	0	1		Indonesia	3	25	49	49
	Malaysia	1	5	2	3		Malaysia	117	144	150	256
	Philippines	2	0	1	1		Philippines	0	38	26	146
	Singapore	2	0	26	5		Singapore	220	117	309	97
	South Korea	1	1	20	4		South Korea	225	216	543	1,201
	Taiwan	1	0	2	1		Taiwan	75	124	237	390
	Thailand	1	0	1	0		Thailand	55	53	75	293
	Mexico	8	25	69	124		Mexico	109	89	130	282
Russia	0	0	1	0	Russia	0	0	0	4		

Appendix table 6-33

## Trade in communications and computer and office machinery goods, by selected region/country/economy of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Mexico	World	9,754	30,037	34,054	54,006	Mexico	World	5,058	12,870	20,740	44,167
	United States	8,486	25,303	26,169	44,356		United States	2,887	7,707	4,961	17,893
	EU	249	1,139	1,602	1,944		EU	302	1,516	1,118	757
	Japan	88	284	412	331		Japan	430	695	1,526	1,201
	China	6	284	331	526		China	279	875	7,539	17,606
	Asia-8	51	228	432	500		Asia-8	947	1,757	5,180	6,158
	India	0	4	26	125		India	0	2	15	43
	Indonesia	1	1	2	53		Indonesia	6	53	91	137
	Malaysia	2	11	21	25		Malaysia	253	427	376	626
	Philippines	0	7	11	12		Philippines	12	76	189	207
	Singapore	25	89	153	56		Singapore	161	200	1,131	618
	South Korea	9	65	88	184		South Korea	335	573	1,769	2,023
	Taiwan	1	9	79	20		Taiwan	153	293	877	1,554
	Thailand	12	42	53	25		Thailand	25	133	733	950
	Brazil	109	89	130	282		Brazil	8	25	69	124
Russia	0	1	8	26	Russia	0	0	2	1		
Russia	World	90	258	366	1,068	Russia	World	3,984	2,796	12,375	11,729
	United States	2	5	6	6		United States	236	149	242	217
	EU	21	74	87	133		EU	1,807	2,013	9,246	6,411
	Japan	0	0	2	1		Japan	324	71	264	198
	China	5	33	12	14		China	117	115	1,293	2,602
	Asia-8	2	24	133	546		Asia-8	1,426	223	923	1,819
	India	0	23	127	498		India	6	4	15	81
	Indonesia	0	0	2	7		Indonesia	5	5	32	84
	Malaysia	0	0	0	15		Malaysia	72	26	100	194
	Philippines	0	0	0	0		Philippines	0	1	9	40
	Singapore	1	0	0	1		Singapore	761	51	208	76
	South Korea	0	1	3	21		South Korea	581	100	313	828
	Taiwan	0	0	0	4		Taiwan	0	22	160	309
	Thailand	0	0	0	0		Thailand	0	16	87	207
	Brazil	0	0	0	4		Brazil	0	0	1	0
Mexico	0	0	2	1	Mexico	0	1	8	26		

EU = European Union; ROW = rest of the world

NOTES: ROW is trade between named region/country/economy and rest of world. Intra-EU is trade between EU member countries. Data are not available for EU members Cyprus, Luxembourg, and Malta. China includes Hong Kong. Intra-China is trade between China and Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-32 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Trade Service database.

Appendix table 6-34

## Trade in semiconductors, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
United States	World	24,859	47,761	43,224	47,259	United States	World	40,596	49,210	26,545	29,596
	EU	3,316	5,224	4,589	4,019		EU	3,698	3,326	2,514	2,011
	Japan	2,133	3,376	1,913	1,356		Japan	11,418	8,797	3,070	3,563
	China	1,420	2,655	7,000	9,456		China	1,328	1,958	2,031	3,898
	Asia-8	12,291	24,362	22,003	19,300		Asia-8	21,172	29,712	15,020	15,173
	India	75	61	113	194		India	18	26	39	67
	Indonesia	71	79	35	64		Indonesia	131	281	184	167
	Malaysia	3,807	5,053	5,066	5,849		Malaysia	5,146	6,336	3,449	3,968
	Philippines	1,610	4,700	3,915	2,527		Philippines	2,008	5,531	2,391	1,706
	Singapore	2,383	3,000	2,831	3,101		Singapore	2,780	3,338	1,494	1,583
	South Korea	1,710	5,478	4,682	2,704		South Korea	7,108	7,608	3,072	3,007
	Taiwan	1,722	3,884	3,814	3,324		Taiwan	3,085	5,176	3,720	3,736
	Thailand	913	2,107	1,547	1,536		Thailand	897	1,416	671	938
	Brazil	259	710	739	1,329		Brazil	13	29	4	4
	Mexico	2,461	6,684	2,871	7,070		Mexico	957	1,829	1,166	1,099
Russia	7	12	27	62	Russia	5	13	9	17		
EU	World	32,895	50,719	52,136	42,526	EU	World	37,484	59,430	63,098	60,596
	Intra-EU	17,824	25,728	29,200	23,891		Intra-EU	17,824	25,728	29,200	23,891
	EU ROW	15,071	24,991	22,935	18,636		EU ROW	19,660	33,702	33,898	36,705
	United States	3,698	3,326	2,514	2,011		United States	3,316	5,224	4,589	4,019
	Japan	371	896	565	438		Japan	4,952	5,611	4,848	3,956
	China	629	1,796	3,826	3,824		China	593	1,511	2,745	10,034
	Asia-8	4,755	9,112	10,222	7,905		Asia-8	7,035	13,858	17,934	15,778
	India	65	74	131	409		India	13	34	142	561
	Indonesia	22	55	62	82		Indonesia	6	100	73	105
	Malaysia	1,420	2,189	3,581	2,983		Malaysia	1,964	3,083	4,485	3,916
	Philippines	439	1,198	1,203	788		Philippines	521	1,410	2,882	2,056
	Singapore	1,141	2,329	2,555	1,492		Singapore	1,413	3,082	3,723	2,230
	South Korea	609	1,395	780	581		South Korea	1,637	3,070	2,793	2,533
	Taiwan	862	1,580	1,483	1,137		Taiwan	1,148	2,363	3,040	3,575
	Thailand	198	291	427	434		Thailand	332	715	796	802
Brazil	64	173	378	201	Brazil	39	74	27	11		
Mexico	58	135	175	106	Mexico	55	116	190	143		
Russia	21	109	517	348	Russia	6	21	37	37		

Appendix table 6-34

## Trade in semiconductors, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Japan	World	43,328	45,206	41,324	45,086	Japan	World	8,803	17,488	18,847	19,427
	United States	11,418	8,797	3,070	3,563		United States	2,133	3,376	1,913	1,356
	EU	4,952	5,611	4,848	3,956		EU	371	896	565	438
	China	3,951	7,416	13,006	16,154		China	406	882	1,851	2,507
	Asia-8	20,916	21,398	19,239	19,998		Asia-8	5,849	11,888	14,185	14,432
	India	70	43	60	298		India	1	4	2	8
	Indonesia	188	785	478	359		Indonesia	16	226	217	182
	Malaysia	3,842	3,582	2,332	2,348		Malaysia	438	2,052	1,573	1,099
	Philippines	1,284	2,423	1,789	1,199		Philippines	212	1,667	1,594	636
	Singapore	5,671	4,839	3,466	2,869		Singapore	762	1,332	1,078	1,723
	South Korea	3,305	4,270	4,406	3,057		South Korea	3,280	2,876	3,576	3,257
	Taiwan	5,023	3,501	4,426	7,381		Taiwan	934	3,313	5,364	6,870
	Thailand	1,533	1,955	2,283	2,488		Thailand	206	420	780	657
	Brazil	211	169	79	47		Brazil	1	1	1	1
	Mexico	654	546	406	295		Mexico	12	223	33	24
Russia	0	0	2	3	Russia	1	0	1	2		
China	World	8,281	19,054	53,088	107,647	China	World	15,172	39,059	121,855	216,283
	Intra-China	2,091	8,134	29,571	64,647		Intra-China	2,091	8,134	29,571	64,647
	China ROW	6,190	10,920	23,516	43,000		China ROW	13,081	30,925	92,284	151,636
	United States	1,328	1,958	2,031	3,898		United States	1,420	2,655	7,000	9,456
	EU	593	1,511	2,745	10,034		EU	629	1,796	3,826	3,824
	Japan	406	882	1,851	2,507		Japan	3,951	7,416	13,006	16,154
	Asia-8	3,397	5,776	14,548	22,507		Asia-8	6,883	18,752	66,260	116,762
	India	83	106	194	788		India	10	8	41	100
	Indonesia	26	29	100	205		Indonesia	9	41	77	192
	Malaysia	127	436	1,873	2,786		Malaysia	834	1,229	4,524	15,680
	Philippines	119	216	918	1,202		Philippines	281	997	4,182	4,639
	Singapore	903	1,131	3,516	4,743		Singapore	1,791	3,711	12,971	15,813
	South Korea	894	1,861	3,401	6,314		South Korea	1,624	3,901	11,526	17,660
	Taiwan	1,142	1,756	4,082	5,934		Taiwan	2,166	7,832	29,819	56,768
	Thailand	104	241	463	535		Thailand	169	1,033	3,119	5,911
	Brazil	22	127	345	1,082		Brazil	4	8	14	25
	Mexico	18	139	991	1,190		Mexico	21	6	3	365
Russia	3	6	97	58	Russia	43	33	49	42		



Appendix table 6-34

## Trade in semiconductors, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Asia-8	World	65,271	126,085	182,423	247,650	Asia-8	World	63,402	109,985	128,386	148,059
	United States	21,172	29,712	15,020	15,173		United States	12,291	24,362	22,003	19,300
	EU	7,035	13,858	17,934	15,778		EU	4,755	9,112	10,222	7,905
	Japan	5,849	11,888	14,185	14,432		Japan	20,916	21,398	19,239	19,998
	China	6,883	18,752	66,260	116,762		China	3,397	5,776	14,548	22,507
	Asia-8	21,398	45,683	60,188	75,392		Asia-8	21,398	45,683	60,188	75,392
	India	202	341	884	2,397		India	23	50	42	77
	Indonesia	257	182	224	1,038		Indonesia	92	364	491	471
	Malaysia	4,449	8,908	9,310	6,870		Malaysia	4,705	9,857	9,319	10,169
	Philippines	510	3,792	4,513	4,978		Philippines	891	6,587	7,726	8,280
	Singapore	8,377	14,254	20,129	28,172		Singapore	5,877	10,256	13,594	20,095
	South Korea	1,686	5,641	9,541	15,051		South Korea	5,665	8,679	9,607	10,473
	Taiwan	3,997	9,446	11,789	11,940		Taiwan	2,536	7,510	16,564	21,967
	Thailand	1,919	3,118	3,799	4,946		Thailand	1,609	2,380	2,845	3,861
	Brazil	338	800	1,857	2,151		Brazil	2	30	11	10
	Mexico	344	973	2,970	2,614		Mexico	26	204	152	183
	Russia	5	9	146	123		Russia	6	8	22	29
India	World	73	141	350	911	India	World	533	644	1,450	4,214
	United States	18	26	39	67		United States	75	61	113	194
	EU	13	34	142	561		EU	65	74	131	409
	Japan	1	4	2	8		Japan	70	43	60	298
	China	10	8	41	100		China	83	106	194	788
	Asia-8	23	50	42	77		Asia-8	202	341	884	2,397
	Indonesia	7	0	1	4		Indonesia	0	2	4	70
	Malaysia	3	34	5	8		Malaysia	9	41	356	203
	Philippines	0	1	3	1		Philippines	1	11	7	31
	Singapore	7	4	21	39		Singapore	129	219	344	1,489
	South Korea	2	8	3	11		South Korea	33	30	107	113
	Taiwan	2	0	3	10		Taiwan	19	34	42	296
	Thailand	0	2	4	4		Thailand	10	5	24	196
	Brazil	0	1	2	1		Brazil	0	0	3	1
	Mexico	0	0	4	6		Mexico	0	0	3	7
	Russia	0	1	11	2		Russia	0	1	1	9

Appendix table 6-34

## Trade in semiconductors, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Indonesia	World	258	1,050	1,121	1,222	Indonesia	World	571	1,152	911	1,756
	United States	131	281	184	167		United States	71	79	35	64
	EU	6	100	73	105		EU	22	55	62	82
	Japan	16	226	217	182		Japan	188	785	478	359
	China	9	41	77	192		China	26	29	100	205
	Asia-8	92	364	491	471		Asia-8	257	182	224	1,038
	India	0	2	4	70		India	7	0	1	4
	Malaysia	3	61	89	20		Malaysia	77	19	24	102
	Philippines	2	39	14	8		Philippines	0	9	21	145
	Singapore	76	131	311	315		Singapore	76	15	16	557
	South Korea	2	46	30	24		South Korea	51	133	140	105
	Taiwan	4	37	16	9		Taiwan	29	2	5	102
	Thailand	5	48	26	24		Thailand	17	4	16	24
	Brazil	0	3	4	18		Brazil	0	0	0	0
	Mexico	1	6	3	20		Mexico	0	0	0	0
Russia	0	1	4	0	Russia	0	0	0	0		
Malaysia	World	13,617	23,806	24,536	36,374	Malaysia	World	13,665	22,012	22,447	21,463
	United States	5,146	6,336	3,449	3,968		United States	3,807	5,053	5,066	5,849
	EU	1,964	3,083	4,485	3,916		EU	1,420	2,189	3,581	2,983
	Japan	438	2,052	1,573	1,099		Japan	3,842	3,582	2,332	2,348
	China	834	1,229	4,524	15,680		China	127	436	1,873	2,786
	Asia-8	4,705	9,857	9,319	10,169		Asia-8	4,449	8,908	9,310	6,870
	India	9	41	356	203		India	3	34	5	8
	Indonesia	77	19	24	102		Indonesia	3	61	89	20
	Philippines	110	641	477	360		Philippines	171	1,564	2,431	626
	Singapore	3,085	5,770	5,404	5,878		Singapore	2,291	3,604	3,113	3,088
	South Korea	414	1,438	1,196	1,451		South Korea	1,177	1,619	867	609
	Taiwan	728	1,261	1,130	1,489		Taiwan	547	1,416	2,330	2,036
	Thailand	282	686	733	687		Thailand	257	611	476	484
	Brazil	58	198	243	528		Brazil	0	5	2	0
	Mexico	29	60	62	27		Mexico	2	45	24	12
Russia	1	2	45	46	Russia	0	0	0	1		

Appendix table 6-34

## Trade in semiconductors, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Philippines	World	4,086	16,973	20,262	18,435	Philippines	World	3,971	12,838	12,507	10,818
	United States	2,008	5,531	2,391	1,706		United States	1,610	4,700	3,915	2,527
	EU	521	1,410	2,882	2,056		EU	439	1,198	1,203	788
	Japan	212	1,667	1,594	636		Japan	1,284	2,423	1,789	1,199
	China	281	997	4,182	4,639		China	119	216	918	1,202
	Asia-8	891	6,587	7,726	8,280		Asia-8	510	3,792	4,513	4,978
	India	1	11	7	31		India	0	1	3	1
	Indonesia	0	9	21	145		Indonesia	2	39	14	8
	Malaysia	171	1,564	2,431	626		Malaysia	110	641	477	360
	Singapore	533	2,284	3,084	5,237		Singapore	194	650	793	1,284
	South Korea	121	821	1,046	1,252		South Korea	179	1,434	1,128	1,322
	Taiwan	63	1,663	992	890		Taiwan	23	891	1,850	1,605
	Thailand	2	234	145	101		Thailand	3	136	247	398
	Brazil	0	62	214	164		Brazil	0	0	0	0
Mexico	13	118	884	684	Mexico	0	3	1	4		
Russia	0	0	3	5	Russia	0	0	1	2		
Singapore	World	13,165	22,964	34,622	43,392	Singapore	World	18,720	26,290	33,550	41,405
	United States	2,780	3,338	1,494	1,583		United States	2,383	3,000	2,831	3,101
	EU	1,413	3,082	3,723	2,230		EU	1,141	2,329	2,555	1,492
	Japan	762	1,332	1,078	1,723		Japan	5,671	4,839	3,466	2,869
	China	1,791	3,711	12,971	15,813		China	903	1,131	3,516	4,743
	Asia-8	5,877	10,256	13,594	20,095		Asia-8	8,377	14,254	20,129	28,172
	India	129	219	344	1,489		India	7	4	21	39
	Indonesia	76	15	16	557		Indonesia	76	131	311	315
	Malaysia	2,291	3,604	3,113	3,088		Malaysia	3,085	5,770	5,404	5,878
	Philippines	194	650	793	1,284		Philippines	533	2,284	3,084	5,237
	South Korea	486	972	3,058	5,831		South Korea	2,660	2,695	2,636	4,457
	Taiwan	1,648	3,604	4,601	5,449		Taiwan	1,003	2,724	7,735	10,452
	Thailand	1,054	1,193	1,669	2,397		Thailand	1,013	645	937	1,794
	Brazil	44	49	222	194		Brazil	1	21	3	1
Mexico	35	94	608	441	Mexico	12	80	79	124		
Russia	3	2	7	35	Russia	4	1	2	4		

Appendix table 6-34

## Trade in semiconductors, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
South Korea	World	20,461	27,642	32,083	38,881	South Korea	World	8,388	18,927	23,155	28,389
	United States	7,108	7,608	3,072	3,007		United States	1,710	5,478	4,682	2,704
	EU	1,637	3,070	2,793	2,533		EU	609	1,395	780	581
	Japan	3,280	2,876	3,576	3,257		Japan	3,305	4,270	4,406	3,057
	China	1,624	3,901	11,526	17,660		China	894	1,861	3,401	6,314
	Asia-8	5,665	8,679	9,607	10,473		Asia-8	1,686	5,641	9,541	15,051
	India	33	30	107	113		India	2	8	3	11
	Indonesia	51	133	140	105		Indonesia	2	46	30	24
	Malaysia	1,177	1,619	867	609		Malaysia	414	1,438	1,196	1,451
	Philippines	179	1,434	1,128	1,322		Philippines	121	821	1,046	1,252
	Singapore	2,660	2,695	2,636	4,457		Singapore	486	972	3,058	5,831
	Taiwan	1,316	2,262	4,387	3,679		Taiwan	587	1,995	3,722	5,931
	Thailand	249	506	342	189		Thailand	73	361	486	551
	Brazil	143	299	703	548		Brazil	0	3	2	5
	Mexico	204	401	185	117		Mexico	9	38	30	31
Russia	1	2	30	3	Russia	1	1	6	4		
Taiwan	World	10,297	27,307	60,665	95,622	Taiwan	World	12,851	20,305	25,742	29,974
	United States	3,085	5,176	3,720	3,736		United States	1,722	3,884	3,814	3,324
	EU	1,148	2,363	3,040	3,575		EU	862	1,580	1,483	1,137
	Japan	934	3,313	5,364	6,870		Japan	5,023	3,501	4,426	7,381
	China	2,166	7,832	29,819	56,768		China	1,142	1,756	4,082	5,934
	Asia-8	2,536	7,510	16,564	21,967		Asia-8	3,997	9,446	11,789	11,940
	India	19	34	42	296		India	2	0	3	10
	Indonesia	29	2	5	102		Indonesia	4	37	16	9
	Malaysia	547	1,416	2,330	2,036		Malaysia	728	1,261	1,130	1,489
	Philippines	23	891	1,850	1,605		Philippines	63	1,663	992	890
	Singapore	1,003	2,724	7,735	10,452		Singapore	1,648	3,604	4,601	5,449
	South Korea	587	1,995	3,722	5,931		South Korea	1,316	2,262	4,387	3,679
	Thailand	328	449	879	1,545		Thailand	235	619	659	415
	Brazil	89	155	414	632		Brazil	1	0	0	0
	Mexico	54	251	965	1,033		Mexico	0	2	0	0
Russia	0	1	24	22	Russia	0	5	12	9		

Appendix table 6-34

## Trade in semiconductors, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Thailand	World	3,314	6,202	8,784	12,814	Thailand	World	4,703	7,817	8,625	10,040
	United States	897	1,416	671	938		United States	913	2,107	1,547	1,536
	EU	332	715	796	802		EU	198	291	427	434
	Japan	206	420	780	657		Japan	1,533	1,955	2,283	2,488
	China	169	1,033	3,119	5,911		China	104	241	463	535
	Asia-8	1,609	2,380	2,845	3,861		Asia-8	1,919	3,118	3,799	4,946
	India	10	5	24	196		India	0	2	4	4
	Indonesia	17	4	16	24		Indonesia	5	48	26	24
	Malaysia	257	611	476	484		Malaysia	282	686	733	687
	Philippines	3	136	247	398		Philippines	2	234	145	101
	Singapore	1,013	645	937	1,794		Singapore	1,054	1,193	1,669	2,397
	South Korea	73	361	486	551		South Korea	249	506	342	189
	Taiwan	235	619	659	415		Taiwan	328	449	879	1,545
	Brazil	4	33	53	65		Brazil	0	0	0	0
	Mexico	8	42	260	285		Mexico	2	36	14	5
Russia	0	0	22	10	Russia	0	0	0	0		
Brazil	World	92	220	144	124	Brazil	World	906	2,030	3,640	5,210
	United States	13	29	4	4		United States	259	710	739	1,329
	EU	39	74	27	11		EU	64	173	378	201
	Japan	1	1	1	1		Japan	211	169	79	47
	China	4	8	14	25		China	22	127	345	1,082
	Asia-8	2	30	11	10		Asia-8	338	800	1,857	2,151
	India	0	0	3	1		India	0	1	2	1
	Indonesia	0	0	0	0		Indonesia	0	3	4	18
	Malaysia	0	5	2	0		Malaysia	58	198	243	528
	Philippines	0	0	0	0		Philippines	0	62	214	164
	Singapore	1	21	3	1		Singapore	44	49	222	194
	South Korea	0	3	2	5		South Korea	143	299	703	548
	Taiwan	1	0	0	0		Taiwan	89	155	414	632
	Thailand	0	0	0	0		Thailand	4	33	53	65
	Mexico	10	39	26	6		Mexico	5	16	120	25
Russia	0	0	0	0	Russia	0	0	0	0		

Appendix table 6-34

## Trade in semiconductors, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Mexico	World	1,117	2,465	1,847	1,974	Mexico	World	3,567	8,624	8,320	12,776
	United States	957	1,829	1,166	1,099		United States	2,461	6,684	2,871	7,070
	EU	55	116	190	143		EU	58	135	175	106
	Japan	12	223	33	24		Japan	654	546	406	295
	China	21	6	3	365		China	18	139	991	1,190
	Asia-8	26	204	152	183		Asia-8	344	973	2,970	2,614
	India	0	0	3	7		India	0	0	4	6
	Indonesia	0	0	0	0		Indonesia	1	6	3	20
	Malaysia	2	45	24	12		Malaysia	29	60	62	27
	Philippines	0	3	1	4		Philippines	13	118	884	684
	Singapore	12	80	79	124		Singapore	35	94	608	441
	South Korea	9	38	30	31		South Korea	204	401	185	117
	Taiwan	0	2	0	0		Taiwan	54	251	965	1,033
	Thailand	2	36	14	5		Thailand	8	42	260	285
	Brazil	5	16	120	25		Brazil	10	39	26	6
Russia	0	0	0	1	Russia	0	0	1	1		
Russia	World	64	100	143	217	Russia	World	39	157	816	644
	United States	5	13	9	17		United States	7	12	27	62
	EU	6	21	37	37		EU	21	109	517	348
	Japan	1	0	1	2		Japan	0	0	2	3
	China	43	33	49	42		China	3	6	97	58
	Asia-8	6	8	22	29		Asia-8	5	9	146	123
	India	0	1	1	9		India	0	1	11	2
	Indonesia	0	0	0	0		Indonesia	0	1	4	0
	Malaysia	0	0	0	1		Malaysia	1	2	45	46
	Philippines	0	0	1	2		Philippines	0	0	3	5
	Singapore	4	1	2	4		Singapore	3	2	7	35
	South Korea	1	1	6	4		South Korea	1	2	30	3
	Taiwan	0	5	12	9		Taiwan	0	1	24	22
	Thailand	0	0	0	0		Thailand	0	0	22	10
	Brazil	0	0	0	0		Brazil	0	0	0	0
Mexico	0	0	1	1	Mexico	0	0	0	1		

EU = European Union; ROW = rest of the world

NOTES: ROW is trade between named region/country/economy and rest of world. Intra-EU is trade between EU member countries. Data are not available for EU members Cyprus, Luxembourg, and Malta. China includes Hong Kong. Intra-China is trade between China and Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-32 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Trade Service database.

Appendix table 6-35

## Trade in aerospace goods, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
United States	World	24,612	39,916	49,169	79,222	United States	World	6,336	18,160	16,472	18,933
	EU	8,055	15,982	14,077	25,762		EU	3,635	9,668	6,214	9,302
	Japan	2,847	3,360	5,244	5,108		Japan	479	1,187	1,064	2,092
	China	1,591	1,945	4,647	7,169		China	24	36	87	278
	Asia-8	6,170	5,408	8,412	12,024		Asia-8	83	238	364	586
	India	162	307	665	1,277		India	0	1	7	28
	Indonesia	85	39	221	1,727		Indonesia	0	1	2	6
	Malaysia	230	262	255	902		Malaysia	0	1	21	41
	Philippines	167	123	43	306		Philippines	1	16	16	7
	Singapore	1,255	830	2,655	3,804		Singapore	41	59	81	104
	South Korea	2,187	1,907	1,902	2,429		South Korea	40	134	186	338
	Taiwan	1,711	1,408	2,337	1,298		Taiwan	0	25	52	61
	Thailand	373	532	333	281		Thailand	1	1	1	2
	Brazil	414	677	1,037	4,412		Brazil	88	1,474	1,806	697
	Mexico	93	271	801	1,473		Mexico	18	63	38	288
Russia	185	202	144	276	Russia	4	37	14	95		
EU	World	39,749	49,122	65,466	109,248	EU	World	29,514	47,101	54,383	91,386
	Intra-EU	14,849	26,420	35,674	54,222		Intra-EU	14,849	26,420	35,674	54,222
	EU ROW	24,900	22,702	29,792	55,025		EU ROW	14,666	20,681	18,709	37,164
	United States	3,635	9,668	6,214	9,302		United States	8,055	15,982	14,077	25,762
	Japan	659	535	272	452		Japan	41	65	156	342
	China	1,781	1,075	4,285	5,589		China	74	47	78	493
	Asia-8	3,324	1,439	4,730	10,199		Asia-8	326	296	460	1,391
	India	125	132	451	2,963		India	7	17	32	347
	Indonesia	228	90	103	907		Indonesia	5	4	28	72
	Malaysia	1,057	29	328	1,385		Malaysia	216	104	91	147
	Philippines	144	30	246	266		Philippines	1	3	85	54
	Singapore	338	183	900	2,775		Singapore	34	72	95	473
	South Korea	235	800	453	872		South Korea	55	79	80	129
	Taiwan	296	34	1,046	158		Taiwan	1	4	19	39
	Thailand	902	140	1,201	874		Thailand	7	14	30	129
Brazil	378	923	937	1,504	Brazil	45	987	560	1,781		
Mexico	46	95	522	835	Mexico	105	1	9	209		
Russia	32	86	359	2,748	Russia	8	84	47	188		

Appendix table 6-35

## Trade in aerospace goods, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Japan	World	609	1,526	1,680	3,078	Japan	World	3,576	4,313	5,741	6,200
	United States	479	1,187	1,064	2,092		United States	2,847	3,360	5,244	5,108
	EU	41	65	156	342		EU	659	535	272	452
	China	10	15	4	8		China	1	1	10	10
	Asia-8	14	13	23	49		Asia-8	7	200	11	104
	India	3	1	0	2		India	0	0	0	47
	Indonesia	0	0	0	0		Indonesia	0	0	0	0
	Malaysia	1	1	1	1		Malaysia	0	0	0	3
	Philippines	1	0	0	0		Philippines	0	0	0	1
	Singapore	2	8	9	32		Singapore	3	9	7	10
	South Korea	6	1	7	8		South Korea	2	189	2	31
	Taiwan	1	1	4	2		Taiwan	1	1	1	9
	Thailand	0	1	2	3		Thailand	0	0	0	4
	Brazil	0	0	61	80		Brazil	0	161	0	216
	Mexico	0	1	0	0		Mexico	0	0	0	0
Russia	0	0	0	0	Russia	0	0	0	0		
China	World	270	404	581	1,497	China	World	3,622	3,429	9,752	14,440
	Intra-China	36	56	100	82		Intra-China	36	56	100	82
	China ROW	233	348	481	1,415		China ROW	3,586	3,373	9,652	14,358
	United States	24	36	87	278		United States	1,591	1,945	4,647	7,169
	EU	74	47	78	493		EU	1,781	1,075	4,285	5,589
	Japan	1	1	10	10		Japan	10	15	4	8
	Asia-8	23	169	110	298		Asia-8	45	79	272	713
	India	0	0	1	24		India	0	0	0	9
	Indonesia	1	0	1	19		Indonesia	0	0	1	1
	Malaysia	1	6	9	23		Malaysia	11	5	6	5
	Philippines	1	67	7	65		Philippines	0	0	10	2
	Singapore	14	16	56	102		Singapore	26	64	220	581
	South Korea	2	7	18	22		South Korea	5	7	20	86
	Taiwan	4	6	12	33		Taiwan	1	2	4	1
	Thailand	0	67	5	11		Thailand	2	1	10	27
	Brazil	0	0	2	0		Brazil	0	37	92	497
	Mexico	0	0	0	0		Mexico	0	0	1	0
Russia	0	1	3	2	Russia	41	61	142	97		



Appendix table 6-35

## Trade in aerospace goods, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Asia-8	World	1,449	1,258	2,150	5,764	Asia-8	World	10,408	8,135	14,967	25,839
	United States	83	238	364	586		United States	6,170	5,408	8,412	12,024
	EU	326	296	460	1,391		EU	3,324	1,439	4,730	10,199
	Japan	7	200	11	104		Japan	14	13	23	49
	China	45	79	272	713		China	23	169	110	298
	Asia-8	284	279	538	1,780		Asia-8	284	279	538	1,780
	India	70	27	88	230		India	6	11	11	124
	Indonesia	51	12	26	125		Indonesia	1	4	37	98
	Malaysia	9	53	113	219		Malaysia	109	74	123	480
	Philippines	10	16	50	154		Philippines	1	2	13	21
	Singapore	98	71	124	503		Singapore	91	162	314	899
	South Korea	6	5	7	5		South Korea	68	4	16	67
	Taiwan	16	46	61	288		Taiwan	5	8	17	11
	Thailand	25	50	70	256		Thailand	3	13	7	81
	Brazil	0	7	3	32		Brazil	0	1	185	148
	Mexico	0	0	0	18		Mexico	0	0	2	8
	Russia	0	4	11	82		Russia	32	158	80	87
India	World	16	35	76	799	India	World	369	637	1,701	4,989
	United States	0	1	7	28		United States	162	307	665	1,277
	EU	7	17	32	347		EU	125	132	451	2,963
	Japan	0	0	0	47		Japan	3	1	0	2
	China	0	0	0	9		China	0	0	1	24
	Asia-8	6	11	11	124		Asia-8	70	27	88	230
	Indonesia	0	0	0	28		Indonesia	0	0	0	0
	Malaysia	0	2	7	55		Malaysia	61	1	3	54
	Philippines	0	0	0	2		Philippines	0	0	3	0
	Singapore	6	5	4	38		Singapore	9	26	81	174
	South Korea	0	0	0	0		South Korea	0	0	0	0
	Taiwan	0	0	0	0		Taiwan	0	0	0	0
	Thailand	0	4	0	1		Thailand	0	0	1	1
	Brazil	NA	NA	NA	NA		Brazil	0	0	157	26
	Mexico	NA	NA	NA	NA		Mexico	0	0	0	0
	Russia	0	3	10	54		Russia	0	140	13	26

Appendix table 6-35

## Trade in aerospace goods, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Indonesia	World	8	15	106	235	Indonesia	World	369	147	369	2,892
	United States	0	1	2	6		United States	85	39	221	1,727
	EU	5	4	28	72		EU	228	90	103	907
	Japan	0	0	0	0		Japan	0	0	0	0
	China	0	0	1	1		China	1	0	1	19
	Asia-8	1	4	37	98		Asia-8	51	12	26	125
	India	0	0	0	0		India	0	0	0	28
	Malaysia	0	1	13	32		Malaysia	30	0	9	5
	Philippines	0	1	0	0		Philippines	0	0	1	14
	Singapore	1	2	12	53		Singapore	20	12	10	69
	South Korea	0	0	0	1		South Korea	0	0	6	6
	Taiwan	0	0	0	3		Taiwan	0	0	0	0
	Thailand	0	0	11	10		Thailand	0	0	0	2
	Brazil	NA	NA	NA	NA		Brazil	0	0	0	55
	Mexico	0	0	0	0		Mexico	0	0	0	0
Russia	0	0	1	0	Russia	0	0	1	4		
Malaysia	World	385	219	270	776	Malaysia	World	1,357	374	773	2,732
	United States	0	1	21	41		United States	230	262	255	902
	EU	216	104	91	147		EU	1,057	29	328	1,385
	Japan	0	0	0	3		Japan	1	1	1	1
	China	11	5	6	5		China	1	6	9	23
	Asia-8	109	74	123	480		Asia-8	9	53	113	219
	India	61	1	3	54		India	0	2	7	55
	Indonesia	30	0	9	5		Indonesia	0	1	13	32
	Philippines	0	3	1	2		Philippines	0	1	1	1
	Singapore	17	56	81	378		Singapore	9	33	83	101
	South Korea	0	2	0	0		South Korea	0	1	7	4
	Taiwan	0	9	14	15		Taiwan	0	5	1	1
	Thailand	0	4	14	26		Thailand	0	11	2	25
	Brazil	0	6	0	0		Brazil	0	0	0	0
	Mexico	0	0	0	0		Mexico	0	0	0	0
Russia	0	1	0	0	Russia	10	2	10	2		

Appendix table 6-35

## Trade in aerospace goods, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Philippines	World	5	24	132	112	Philippines	World	332	236	354	851
	United States	1	16	16	7		United States	167	123	43	306
	EU	1	3	85	54		EU	144	30	246	266
	Japan	0	0	0	1		Japan	1	0	0	0
	China	0	0	10	2		China	1	67	7	65
	Asia-8	1	2	13	21		Asia-8	10	16	50	154
	India	0	0	3	0		India	0	0	0	2
	Indonesia	0	0	1	14		Indonesia	0	1	0	0
	Malaysia	0	1	1	1		Malaysia	0	3	1	2
	Singapore	1	1	6	3		Singapore	10	11	47	105
	South Korea	0	0	1	0		South Korea	0	0	1	3
	Taiwan	0	0	1	2		Taiwan	0	0	0	0
	Thailand	0	0	1	0		Thailand	0	0	0	43
	Brazil	0	0	1	0		Brazil	0	0	0	0
	Mexico	0	0	0	0		Mexico	0	0	0	0
Russia	0	0	0	21	Russia	0	0	0	0		
Singapore	World	285	413	1,020	2,612	Singapore	World	1,787	1,139	3,832	7,493
	United States	41	59	81	104		United States	1,255	830	2,655	3,804
	EU	34	72	95	473		EU	338	183	900	2,775
	Japan	3	9	7	10		Japan	2	8	9	32
	China	26	64	220	581		China	14	16	56	102
	Asia-8	91	162	314	899		Asia-8	98	71	124	503
	India	9	26	81	174		India	6	5	4	38
	Indonesia	20	12	10	69		Indonesia	1	2	12	53
	Malaysia	9	33	83	101		Malaysia	17	56	81	378
	Philippines	10	11	47	105		Philippines	1	1	6	3
	South Korea	5	2	6	4		South Korea	66	3	1	14
	Taiwan	15	37	44	228		Taiwan	4	2	16	9
	Thailand	24	42	43	218		Thailand	3	1	3	8
	Brazil	0	1	2	15		Brazil	0	1	27	1
	Mexico	0	0	0	14		Mexico	0	0	1	8
Russia	0	0	0	0	Russia	0	0	0	1		

Appendix table 6-35

## Trade in aerospace goods, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
South Korea	World	188	477	316	738	South Korea	World	2,476	2,867	2,462	3,427
	United States	40	134	186	338		United States	2,187	1,907	1,902	2,429
	EU	55	79	80	129		EU	235	800	453	872
	Japan	2	189	2	31		Japan	6	1	7	8
	China	5	7	20	86		China	2	7	18	22
	Asia-8	68	4	16	67		Asia-8	6	5	7	5
	India	0	0	0	0		India	0	0	0	0
	Indonesia	0	0	6	6		Indonesia	0	0	0	1
	Malaysia	0	1	7	4		Malaysia	0	2	0	0
	Philippines	0	0	1	3		Philippines	0	0	1	0
	Singapore	66	3	1	14		Singapore	5	2	6	4
	Taiwan	1	0	1	40		Taiwan	1	1	0	0
	Thailand	0	0	0	0		Thailand	0	0	0	0
	Brazil	0	0	0	17		Brazil	0	0	0	0
	Mexico	0	0	0	2		Mexico	0	0	0	0
Russia	0	0	0	7	Russia	22	16	55	54		
Taiwan	World	9	43	126	160	Taiwan	World	2,088	1,498	3,490	1,854
	United States	0	25	52	61		United States	1,711	1,408	2,337	1,298
	EU	1	4	19	39		EU	296	34	1,046	158
	Japan	1	1	1	9		Japan	1	1	4	2
	China	1	2	4	1		China	4	6	12	33
	Asia-8	5	8	17	11		Asia-8	16	46	61	288
	India	0	0	0	0		India	0	0	0	0
	Indonesia	0	0	0	0		Indonesia	0	0	0	3
	Malaysia	0	5	1	1		Malaysia	0	9	14	15
	Philippines	0	0	0	0		Philippines	0	0	1	2
	Singapore	4	2	16	9		Singapore	15	37	44	228
	South Korea	1	1	0	0		South Korea	1	0	1	40
	Thailand	0	0	0	0		Thailand	0	0	1	1
	Brazil	0	0	0	0		Brazil	0	0	0	36
	Mexico	NA	NA	NA	NA		Mexico	0	0	0	0
Russia	NA	NA	NA	NA	Russia	0	0	0	0		

Appendix table 6-35

## Trade in aerospace goods, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Thailand	World	553	33	104	332	Thailand	World	1,630	1,237	1,986	1,603
	United States	1	1	1	2		United States	373	532	333	281
	EU	7	14	30	129		EU	902	140	1,201	874
	Japan	0	0	0	4		Japan	0	1	2	3
	China	2	1	10	27		China	0	67	5	11
	Asia-8	3	13	7	81		Asia-8	25	50	70	256
	India	0	0	1	1		India	0	4	0	1
	Indonesia	0	0	0	2		Indonesia	0	0	11	10
	Malaysia	0	11	2	25		Malaysia	0	4	14	26
	Philippines	0	0	0	43		Philippines	0	0	1	0
	Singapore	3	1	3	8		Singapore	24	42	43	218
	South Korea	0	0	0	0		South Korea	0	0	0	0
	Taiwan	0	0	1	1		Taiwan	0	0	0	0
	Brazil	0	0	0	0		Brazil	0	0	0	30
	Mexico	0	0	0	3		Mexico	NA	NA	NA	NA
	Russia	0	0	0	0		Russia	0	0	0	0
Brazil	World	167	2,931	3,311	5,829	Brazil	World	815	1,672	2,131	6,362
	United States	88	1,474	1,806	697		United States	414	677	1,037	4,412
	EU	45	987	560	1,781		EU	378	923	937	1,504
	Japan	0	161	0	216		Japan	0	0	61	80
	China	0	37	92	497		China	0	0	2	0
	Asia-8	0	1	185	148		Asia-8	0	7	3	32
	India	0	0	157	26		India	NA	NA	NA	NA
	Indonesia	0	0	0	55		Indonesia	NA	NA	NA	NA
	Malaysia	0	0	0	0		Malaysia	0	6	0	0
	Philippines	0	0	0	0		Philippines	0	0	1	0
	Singapore	0	1	27	1		Singapore	0	1	2	15
	South Korea	0	0	0	0		South Korea	0	0	0	17
	Taiwan	0	0	0	36		Taiwan	0	0	0	0
	Thailand	0	0	0	30		Thailand	0	0	0	0
	Mexico	0	3	0	87		Mexico	0	3	0	0
	Russia	0	0	0	24		Russia	0	0	3	20

Appendix table 6-35

## Trade in aerospace goods, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Mexico	World	146	69	52	661	Mexico	World	140	409	1,332	2,649
	United States	18	63	38	288		United States	93	271	801	1,473
	EU	105	1	9	209		EU	46	95	522	835
	Japan	0	0	0	0		Japan	0	1	0	0
	China	0	0	1	0		China	0	0	0	0
	Asia-8	0	0	2	8		Asia-8	0	0	0	18
	India	0	0	0	0		India	NA	NA	NA	NA
	Indonesia	0	0	0	0		Indonesia	0	0	0	0
	Malaysia	0	0	0	0		Malaysia	0	0	0	0
	Philippines	0	0	0	0		Philippines	0	0	0	0
	Singapore	0	0	1	8		Singapore	0	0	0	14
	South Korea	0	0	0	0		South Korea	0	0	0	2
	Taiwan	0	0	0	0		Taiwan	NA	NA	NA	NA
	Thailand	NA	NA	NA	NA		Thailand	0	0	0	3
	Brazil	0	3	0	0		Brazil	0	3	0	87
Russia	0	0	0	0	Russia	0	14	3	20		
Russia	World	172	605	594	907	Russia	World	222	415	614	3,399
	United States	4	37	14	95		United States	185	202	144	276
	EU	8	84	47	188		EU	32	86	359	2,748
	Japan	0	0	0	0		Japan	0	0	0	0
	China	41	61	142	97		China	0	1	3	2
	Asia-8	32	158	80	87		Asia-8	0	4	11	82
	India	0	140	13	26		India	0	3	10	54
	Indonesia	0	0	1	4		Indonesia	0	0	1	0
	Malaysia	10	2	10	2		Malaysia	0	1	0	0
	Philippines	0	0	0	0		Philippines	0	0	0	21
	Singapore	0	0	0	1		Singapore	0	0	0	0
	South Korea	22	16	55	54		South Korea	0	0	0	7
	Taiwan	0	0	0	0		Taiwan	NA	NA	NA	NA
	Thailand	0	0	0	0		Thailand	0	0	0	0
	Brazil	0	0	3	20		Brazil	0	0	0	24
Mexico	0	14	3	20	Mexico	0	0	0	0		

NA = not available

EU = European Union; ROW = rest of the world

NOTES: ROW is trade between named region/country/economy and rest of world. Intra-EU is trade between EU member countries. Data are not available for EU members Cyprus, Luxembourg, and Malta. China includes Hong Kong. Intra-China is trade between China and Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-32 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Trade Service database.

Appendix table 6-36

## Trade in pharmaceuticals, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
United States	World	6,436	12,881	25,662	44,557	United States	World	5,544	14,694	39,032	65,239
	EU	2,859	6,510	15,428	25,278		EU	3,505	10,176	28,102	40,259
	Japan	933	1,051	1,500	3,187		Japan	520	1,522	2,031	2,117
	China	102	142	290	919		China	183	400	662	1,760
	Asia-8	320	484	941	1,735		Asia-8	66	125	1,637	4,663
	India	28	39	80	196		India	11	57	367	2,523
	Indonesia	17	14	21	52		Indonesia	1	2	3	2
	Malaysia	12	22	35	53		Malaysia	0	1	2	44
	Philippines	21	34	42	62		Philippines	1	1	3	2
	Singapore	29	69	318	204		Singapore	35	37	1,198	1,987
	South Korea	94	120	224	694		South Korea	17	22	38	47
	Taiwan	85	140	148	362		Taiwan	1	3	17	40
	Thailand	35	46	74	113		Thailand	1	2	9	16
	Brazil	157	301	444	1,234		Brazil	7	17	78	166
	Mexico	154	412	674	1,431		Mexico	33	77	356	295
Russia	15	14	37	101	Russia	0	0	0	0		
EU	World	47,877	71,337	199,356	308,664	EU	World	37,071	53,647	156,762	253,540
	Intra-EU	26,876	38,433	120,542	182,860		Intra-EU	26,876	38,433	120,542	182,860
	EU ROW	21,001	32,904	78,814	125,804		EU ROW	10,195	15,213	36,220	70,680
	United States	3,505	10,176	28,102	40,259		United States	2,859	6,510	15,428	25,278
	Japan	838	682	1,218	3,997		Japan	429	519	1,087	3,338
	China	2,561	2,627	4,417	7,914		China	719	913	1,577	2,587
	Asia-8	1,238	1,619	3,484	6,108		Asia-8	213	360	1,308	4,673
	India	157	231	333	654		India	114	99	496	1,372
	Indonesia	94	82	123	235		Indonesia	8	18	14	21
	Malaysia	96	117	253	458		Malaysia	10	7	13	28
	Philippines	112	135	248	366		Philippines	1	1	1	1
	Singapore	141	239	695	1,089		Singapore	8	187	693	2,998
	South Korea	245	310	895	1,527		South Korea	63	38	69	149
	Taiwan	211	326	604	1,054		Taiwan	4	5	7	49
	Thailand	183	180	333	724		Thailand	5	5	15	53
Brazil	431	759	1,011	2,540	Brazil	55	39	98	487		
Mexico	274	518	1,253	2,014	Mexico	63	70	128	276		
Russia	481	912	3,091	7,007	Russia	20	18	9	37		

Appendix table 6-36

## Trade in pharmaceuticals, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Japan	World	1,911	3,041	4,587	6,645	Japan	World	4,217	4,394	7,311	15,156
	United States	520	1,522	2,031	2,117		United States	933	1,051	1,500	3,187
	EU	719	913	1,577	2,587		EU	2,561	2,627	4,417	7,914
	China	172	116	199	461		China	134	148	281	782
	Asia-8	274	268	352	672		Asia-8	103	135	203	576
	India	7	12	20	25		India	6	9	16	32
	Indonesia	10	8	10	31		Indonesia	5	11	10	34
	Malaysia	5	7	8	14		Malaysia	10	6	5	2
	Philippines	8	16	10	15		Philippines	1	2	1	2
	Singapore	29	23	20	22		Singapore	12	53	53	229
	South Korea	110	99	168	336		South Korea	50	31	80	206
	Taiwan	83	80	90	158		Taiwan	17	19	28	50
	Thailand	21	23	26	70		Thailand	2	3	10	22
	Brazil	16	7	5	37		Brazil	14	12	8	4
Mexico	11	7	7	22	Mexico	16	14	9	10		
Russia	2	1	2	17	Russia	0	0	0	0		
China	World	2,355	2,468	4,478	12,271	China	World	2,408	1,979	3,065	8,372
	Intra-China	809	583	550	1,151		Intra-China	809	583	550	1,151
	China ROW	1,546	1,885	3,928	11,119		China ROW	1,599	1,396	2,515	7,221
	United States	183	400	662	1,760		United States	102	142	290	919
	EU	429	519	1,087	3,338		EU	838	682	1,218	3,997
	Japan	134	148	281	782		Japan	172	116	199	461
	Asia-8	469	401	877	2,438		Asia-8	227	200	302	440
	India	114	100	391	1,273		India	60	50	94	108
	Indonesia	42	35	56	149		Indonesia	5	7	8	15
	Malaysia	47	37	67	176		Malaysia	6	8	11	18
	Philippines	29	46	38	72		Philippines	3	2	2	5
	Singapore	60	47	75	136		Singapore	82	73	92	54
	South Korea	68	57	137	354		South Korea	41	26	39	101
	Taiwan	58	45	60	109		Taiwan	21	25	36	109
	Thailand	51	35	53	169		Thailand	8	9	21	31
	Brazil	9	24	104	244		Brazil	1	4	3	11
	Mexico	10	30	70	197		Mexico	5	2	1	7
Russia	2	12	24	86	Russia	0	7	7	11		



Appendix table 6-36

## Trade in pharmaceuticals, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Asia-8	World	1,550	2,540	6,988	18,220	Asia-8	World	3,225	4,013	8,182	15,902
	United States	66	125	1,637	4,663		United States	320	484	941	1,735
	EU	213	360	1,308	4,673		EU	1,238	1,619	3,484	6,108
	Japan	103	135	203	576		Japan	274	268	352	672
	China	227	200	302	440		China	469	401	877	2,438
	Asia-8	429	523	704	1,482		Asia-8	429	523	704	1,482
	India	39	44	59	158		India	46	95	175	407
	Indonesia	28	25	42	108		Indonesia	12	24	55	148
	Malaysia	63	58	93	200		Malaysia	30	29	53	107
	Philippines	58	66	75	226		Philippines	7	5	9	18
	Singapore	50	56	105	154		Singapore	227	272	259	502
	South Korea	23	56	91	165		South Korea	43	49	87	158
	Taiwan	73	97	86	154		Taiwan	33	20	27	70
	Thailand	96	119	151	316		Thailand	33	30	39	73
	Brazil	3	59	140	256		Brazil	2	6	9	50
	Mexico	6	55	140	228		Mexico	3	25	39	23
	Russia	3	131	301	624		Russia	4	3	2	3
India	World	469	1,027	3,085	8,807	India	World	383	499	1,107	2,811
	United States	11	57	367	2,523		United States	28	39	80	196
	EU	114	99	496	1,372		EU	157	231	333	654
	Japan	6	9	16	32		Japan	7	12	20	25
	China	60	50	94	108		China	114	100	391	1,273
	Asia-8	46	95	175	407		Asia-8	39	44	59	158
	Indonesia	2	3	7	35		Indonesia	1	1	3	32
	Malaysia	8	10	23	76		Malaysia	0	2	6	9
	Philippines	3	9	15	46		Philippines	0	0	1	3
	Singapore	12	21	46	43		Singapore	7	26	32	55
	South Korea	9	22	39	67		South Korea	15	11	12	44
	Taiwan	6	9	10	19		Taiwan	15	2	2	11
	Thailand	7	22	35	122		Thailand	2	4	3	2
	Brazil	2	29	101	177		Brazil	0	1	1	4
	Mexico	4	21	55	105		Mexico	1	11	8	9
	Russia	0	127	298	616		Russia	0	2	1	1

Appendix table 6-36

## Trade in pharmaceuticals, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Indonesia	World	48	96	124	336	Indonesia	World	210	187	295	681
	United States	1	2	3	2		United States	17	14	21	52
	EU	8	18	14	21		EU	94	82	123	235
	Japan	5	11	10	34		Japan	10	8	10	31
	China	5	7	8	15		China	42	35	56	149
	Asia-8	12	24	55	148		Asia-8	28	25	42	108
	India	1	1	3	32		India	2	3	7	35
	Malaysia	3	6	5	8		Malaysia	1	1	6	14
	Philippines	3	4	7	44		Philippines	0	0	1	1
	Singapore	2	4	5	7		Singapore	6	9	11	27
	South Korea	0	3	19	33		South Korea	9	8	13	18
	Taiwan	1	1	0	1		Taiwan	2	1	2	6
	Thailand	2	5	15	22		Thailand	7	3	2	8
	Brazil	0	0	0	2		Brazil	0	0	0	6
	Mexico	0	0	1	1		Mexico	0	6	2	2
Russia	1	1	0	0	Russia	0	0	0	0		
Malaysia	World	77	79	145	296	Malaysia	World	277	314	634	1,223
	United States	0	1	2	44		United States	12	22	35	53
	EU	10	7	13	28		EU	96	117	253	458
	Japan	10	6	5	2		Japan	5	7	8	14
	China	6	8	11	18		China	47	37	67	176
	Asia-8	30	29	53	107		Asia-8	63	58	93	200
	India	0	2	6	9		India	8	10	23	76
	Indonesia	1	1	6	14		Indonesia	3	6	5	8
	Philippines	2	3	2	4		Philippines	3	2	2	4
	Singapore	21	18	24	60		Singapore	32	24	31	67
	South Korea	1	1	2	6		South Korea	3	6	13	10
	Taiwan	4	2	6	7		Taiwan	4	3	4	11
	Thailand	2	2	7	8		Thailand	9	8	15	26
	Brazil	0	0	0	1		Brazil	0	1	3	6
	Mexico	0	1	1	3		Mexico	0	0	1	2
Russia	0	0	0	0	Russia	0	0	0	0		

Appendix table 6-36

## Trade in pharmaceuticals, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Philippines	World	18	21	31	64	Philippines	World	281	365	553	967
	United States	1	1	3	2		United States	21	34	42	62
	EU	1	1	1	1		EU	112	135	248	366
	Japan	1	2	1	2		Japan	8	16	10	15
	China	3	2	2	5		China	29	46	38	72
	Asia-8	7	5	9	18		Asia-8	58	66	75	226
	India	0	0	1	3		India	3	9	15	46
	Indonesia	0	0	1	1		Indonesia	3	4	7	44
	Malaysia	3	2	2	4		Malaysia	2	3	2	4
	Singapore	1	2	2	4		Singapore	39	35	33	81
	South Korea	0	0	0	1		South Korea	3	5	8	21
	Taiwan	1	1	1	1		Taiwan	2	3	3	8
	Thailand	1	1	2	3		Thailand	8	7	8	21
	Brazil	NA	NA	NA	NA		Brazil	0	1	1	2
	Mexico	0	0	0	0		Mexico	0	1	1	2
Russia	NA	NA	NA	NA	Russia	NA	NA	NA	NA		
Singapore	World	488	805	2,689	6,584	Singapore	World	380	572	1,427	1,965
	United States	35	37	1,198	1,987		United States	29	69	318	204
	EU	8	187	693	2,998		EU	141	239	695	1,089
	Japan	12	53	53	229		Japan	29	23	20	22
	China	82	73	92	54		China	60	47	75	136
	Asia-8	227	272	259	502		Asia-8	50	56	105	154
	India	7	26	32	55		India	12	21	46	43
	Indonesia	6	9	11	27		Indonesia	2	4	5	7
	Malaysia	32	24	31	67		Malaysia	21	18	24	60
	Philippines	39	35	33	81		Philippines	1	2	2	4
	South Korea	9	24	26	43		South Korea	4	3	9	18
	Taiwan	54	76	50	106		Taiwan	3	3	9	14
	Thailand	81	78	77	122		Thailand	6	6	9	10
	Brazil	0	10	10	21		Brazil	0	0	0	3
	Mexico	1	16	68	93		Mexico	0	0	5	1
Russia	0	0	0	3	Russia	0	0	0	1		

Appendix table 6-36

## Trade in pharmaceuticals, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
South Korea	World	263	309	535	1,360	South Korea	World	606	733	1,885	3,924
	United States	17	22	38	47		United States	94	120	224	694
	EU	63	38	69	149		EU	245	310	895	1,527
	Japan	50	31	80	206		Japan	110	99	168	336
	China	41	26	39	101		China	68	57	137	354
	Asia-8	43	49	87	158		Asia-8	23	56	91	165
	India	15	11	12	44		India	9	22	39	67
	Indonesia	9	8	13	18		Indonesia	0	3	19	33
	Malaysia	3	6	13	10		Malaysia	1	1	2	6
	Philippines	3	5	8	21		Philippines	0	0	0	1
	Singapore	4	3	9	18		Singapore	9	24	26	43
	Taiwan	6	7	19	19		Taiwan	4	5	5	11
	Thailand	3	9	12	29		Thailand	0	1	1	4
	Brazil	1	19	28	54		Brazil	0	1	1	3
Mexico	1	16	11	25	Mexico	1	6	20	4		
Russia	1	3	3	5	Russia	3	1	0	0		
Taiwan	World	91	90	186	407	Taiwan	World	629	843	1,371	2,475
	United States	1	3	17	40		United States	85	140	148	362
	EU	4	5	7	49		EU	211	326	604	1,054
	Japan	17	19	28	50		Japan	83	80	90	158
	China	21	25	36	109		China	58	45	60	109
	Asia-8	33	20	27	70		Asia-8	73	97	86	154
	India	15	2	2	11		India	6	9	10	19
	Indonesia	2	1	2	6		Indonesia	1	1	0	1
	Malaysia	4	3	4	11		Malaysia	4	2	6	7
	Philippines	2	3	3	8		Philippines	1	1	1	1
	Singapore	3	3	9	14		Singapore	54	76	50	106
	South Korea	4	5	5	11		South Korea	6	7	19	19
	Thailand	2	2	2	10		Thailand	1	1	1	2
	Brazil	0	0	0	1		Brazil	0	2	0	2
Mexico	0	1	2	1	Mexico	0	0	2	2		
Russia	0	0	0	0	Russia	0	0	1	1		

Appendix table 6-36

## Trade in pharmaceuticals, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Thailand	World	96	112	193	365	Thailand	World	460	499	910	1,856
	United States	1	2	9	16		United States	35	46	74	113
	EU	5	5	15	53		EU	183	180	333	724
	Japan	2	3	10	22		Japan	21	23	26	70
	China	8	9	21	31		China	51	35	53	169
	Asia-8	33	30	39	73		Asia-8	96	119	151	316
	India	2	4	3	2		India	7	22	35	122
	Indonesia	7	3	2	8		Indonesia	2	5	15	22
	Malaysia	9	8	15	26		Malaysia	2	2	7	8
	Philippines	8	7	8	21		Philippines	1	1	2	3
	Singapore	6	6	9	10		Singapore	81	78	77	122
	South Korea	0	1	1	4		South Korea	3	9	12	29
	Taiwan	1	1	1	2		Taiwan	2	2	2	10
	Brazil	0	0	1	0		Brazil	1	1	2	23
	Mexico	0	0	1	1		Mexico	0	0	1	1
Russia	1	0	0	0	Russia	0	0	0	0		
Brazil	World	183	288	553	1,633	Brazil	World	854	1,578	2,188	5,430
	United States	7	17	78	166		United States	157	301	444	1,234
	EU	55	39	98	487		EU	431	759	1,011	2,540
	Japan	14	12	8	4		Japan	16	7	5	37
	China	1	4	3	11		China	9	24	104	244
	Asia-8	2	6	9	50		Asia-8	3	59	140	256
	India	0	1	1	4		India	2	29	101	177
	Indonesia	0	0	0	6		Indonesia	0	0	0	2
	Malaysia	0	1	3	6		Malaysia	0	0	0	1
	Philippines	0	1	1	2		Philippines	NA	NA	NA	NA
	Singapore	0	0	0	3		Singapore	0	10	10	21
	South Korea	0	1	1	3		South Korea	1	19	28	54
	Taiwan	0	2	0	2		Taiwan	0	0	0	1
	Thailand	1	1	2	23		Thailand	0	0	1	0
	Mexico	4	28	49	115		Mexico	33	55	50	63
Russia	0	0	1	2	Russia	0	0	0	0		

Appendix table 6-36

## Trade in pharmaceuticals, by selected region/country of destination and origin: Selected years, 1995–2010

(Millions of current dollars)

Export region/ country/economy	Destination	1995	2000	2005	2010	Import region/ country/economy	Origin	1995	2000	2005	2010
Mexico	World	357	677	1,216	1,670	Mexico	World	526	1,265	2,486	4,519
	United States	33	77	356	295		United States	154	412	674	1,431
	EU	63	70	128	276		EU	274	518	1,253	2,014
	Japan	16	14	9	10		Japan	11	7	7	22
	China	5	2	1	7		China	10	30	70	197
	Asia-8	3	25	39	23		Asia-8	6	55	140	228
	India	1	11	8	9		India	4	21	55	105
	Indonesia	0	6	2	2		Indonesia	0	0	1	1
	Malaysia	0	0	1	2		Malaysia	0	1	1	3
	Philippines	0	1	1	2		Philippines	0	0	0	0
	Singapore	0	0	5	1		Singapore	1	16	68	93
	South Korea	1	6	20	4		South Korea	1	16	11	25
	Taiwan	0	0	2	2		Taiwan	0	1	2	1
	Thailand	0	0	1	1		Thailand	0	0	1	1
	Brazil	33	55	50	63		Brazil	4	28	49	115
Russia	0	1	0	6	Russia	3	2	0	0		
Russia	World	40	159	215	487	Russia	World	558	1,255	3,988	9,196
	United States	0	0	0	0		United States	15	14	37	101
	EU	20	18	9	37		EU	481	912	3,091	7,007
	Japan	0	0	0	0		Japan	2	1	2	17
	China	0	7	7	11		China	2	12	24	86
	Asia-8	4	3	2	3		Asia-8	3	131	301	624
	India	0	2	1	1		India	0	127	298	616
	Indonesia	0	0	0	0		Indonesia	1	1	0	0
	Malaysia	0	0	0	0		Malaysia	0	0	0	0
	Philippines	NA	NA	NA	NA		Philippines	NA	NA	NA	NA
	Singapore	0	0	0	1		Singapore	0	0	0	3
	South Korea	3	1	0	0		South Korea	1	3	3	5
	Taiwan	0	0	1	1		Taiwan	0	0	0	0
	Thailand	0	0	0	0		Thailand	1	0	0	0
	Brazil	0	0	0	0		Brazil	0	0	1	2
Mexico	3	2	0	0	Mexico	0	1	0	6		

NA = not available

EU = European Union; ROW = rest of the world

NOTES: ROW is trade between named region/country/economy and rest of world. Intra-EU is trade between EU member countries. Data are not available for EU members Cyprus, Luxembourg, and Malta. China includes Hong Kong. Intra-China is trade between China and Hong Kong. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-32 for full list of countries in each region.

SOURCE: IHS Global Insight, special tabulations (2011) of World Trade Service database.

Appendix table 6-37

## U.S. trade in advanced-technology products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Exports</b>											
World	227,395	199,628	178,566	180,208	201,561	216,824	247,071	264,875	270,131	244,708	272,694
EU	60,472	54,352	49,732	50,611	56,090	58,255	63,676	73,495	75,240	70,023	66,180
Belgium	2,022	1,851	1,656	1,568	1,879	2,331	2,509	2,988	3,505	3,077	3,215
Czech Republic	327	276	334	268	345	450	483	535	493	342	507
France	8,644	8,153	8,512	6,654	9,096	9,287	9,543	11,285	10,864	11,514	10,621
Germany	11,625	11,380	9,347	9,293	9,518	10,914	13,056	16,535	17,212	16,867	16,602
Hungary	105	147	235	456	646	383	400	418	484	475	462
Ireland	3,593	3,237	2,823	3,278	3,143	3,709	3,326	3,208	3,162	3,477	2,798
Italy	2,798	2,448	3,120	3,090	2,969	2,628	2,814	2,666	2,939	2,567	2,718
Netherlands	8,453	6,798	7,253	8,397	9,136	9,702	10,131	10,748	11,907	9,379	9,413
Poland	247	201	179	189	228	335	828	1,552	1,261	782	876
Portugal	340	571	229	195	480	551	846	1,472	1,611	384	340
Spain	2,206	1,425	1,143	1,427	1,553	1,674	1,612	2,011	2,266	1,582	1,759
Sweden	2,105	1,300	1,212	1,205	1,035	1,129	1,474	1,520	1,561	1,887	1,506
United Kingdom	15,121	13,440	10,572	10,766	12,177	12,157	13,013	13,674	14,155	12,993	12,094
All others	2,887	3,126	3,115	3,824	3,883	3,005	3,642	4,882	3,818	4,699	3,268
Japan	19,745	16,394	16,853	16,923	17,465	16,988	18,420	18,540	17,475	14,208	15,566
China	9,529	11,006	13,068	13,421	15,669	18,315	23,062	25,966	24,850	25,374	29,649
Asia-8	48,887	39,499	42,285	43,622	46,967	47,857	55,791	56,356	51,345	39,722	52,530
India	981	1,070	1,255	1,311	1,688	2,090	2,958	5,468	3,660	4,023	3,166
Indonesia	205	197	198	208	250	395	306	620	780	1,209	1,990
Malaysia	6,757	5,474	7,235	7,803	7,556	7,082	8,432	7,094	7,992	6,203	8,459
Philippines	5,365	4,761	4,965	5,851	4,854	4,422	4,915	4,545	4,461	2,698	3,552
Singapore	7,810	8,231	8,138	8,398	10,104	9,872	11,557	11,398	11,567	8,176	10,893
South Korea	13,120	9,199	9,600	9,540	10,173	11,252	13,943	12,193	10,157	8,100	11,035
Taiwan	11,323	7,868	9,176	8,203	9,801	9,626	10,035	11,680	9,864	7,023	10,485
Thailand	3,327	2,698	1,717	2,309	2,541	3,119	3,644	3,358	2,864	2,290	2,949
All others	58,473	51,154	56,618	55,619	65,304	75,378	86,084	90,484	101,162	95,381	108,770
Central Asia and Europe	2,260	1,652	2,206	1,365	1,542	1,728	2,869	2,990	3,903	3,216	4,504
Kazakhstan	26	26	360	37	53	104	93	75	187	69	55
Russia	426	353	430	367	472	502	868	1,337	1,184	835	949
Turkey	1,570	984	1,247	602	565	872	1,592	1,197	1,931	1,663	3,049
Ukraine	21	30	29	33	38	66	85	105	150	219	175
All others	217	259	140	326	414	184	231	276	450	431	276
Middle East and North Africa	7,281	6,814	6,042	4,911	5,628	8,966	11,382	10,854	11,881	13,250	12,488
Algeria	372	491	245	36	217	399	246	138	146	103	281
Egypt	1,063	1,122	800	318	627	474	839	813	622	878	1,359
Iran	1	2	2	12	13	23	28	28	36	42	38
Iraq	0	6	1	17	174	259	329	503	471	468	325
Israel	2,476	2,408	2,025	1,846	2,825	2,715	3,006	3,277	3,371	2,408	2,229
Morocco	181	35	313	154	154	157	265	181	240	417	378
Saudi Arabia	2,106	1,698	590	680	509	693	767	779	1,374	1,807	1,612
Tunisia	135	63	19	16	21	40	24	32	39	49	30
United Arab Emirates	526	536	1,296	1,060	633	3,564	4,662	3,534	3,792	4,524	3,329
All others	421	453	751	772	455	642	1,216	1,569	1,790	2,554	2,907
South and Central America	22,189	19,628	22,422	22,776	28,379	30,652	36,217	38,070	44,175	43,814	52,193
Argentina	1,193	825	223	439	698	947	1,012	1,338	1,466	1,443	1,622
Brazil	4,985	4,935	3,942	3,205	4,626	5,221	6,799	8,823	10,846	9,671	10,948
Chile	801	681	599	578	637	991	1,590	1,524	1,613	2,318	1,713
Colombia	475	508	742	661	756	911	1,122	1,489	1,793	1,652	1,889
Costa Rica	415	458	1,064	1,287	1,144	1,240	1,535	1,458	1,855	1,421	1,272
Mexico	11,108	9,514	12,579	13,550	16,502	16,669	18,626	17,202	19,585	20,601	27,149
Peru	278	206	290	301	329	376	528	575	809	849	1,058
Venezuela	698	613	580	344	872	1,081	1,467	1,529	1,744	1,636	1,489
All others	2,235	1,888	2,404	2,410	2,816	3,216	3,537	4,132	4,464	4,222	5,051
Sub-Saharan Africa	1,119	1,656	1,005	1,249	1,367	1,956	2,017	1,860	2,253	1,944	2,109

Appendix table 6-37

## U.S. trade in advanced-technology products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	20	17	32	58	37	63	573	219	440	126	117
Congo (Kinshasa)	20	8	3	5	4	8	10	11	14	9	11
Ethiopia	18	6	8	214	152	237	20	32	86	85	502
Kenya	24	442	134	75	187	405	156	260	151	230	111
Nigeria	45	69	124	107	145	250	207	251	194	310	234
South Africa	875	858	570	642	621	676	778	818	1,011	780	754
Tanzania	5	6	7	6	60	17	18	18	13	23	31
Uganda	6	8	6	7	7	9	9	20	34	75	45
All others	142	255	130	349	305	527	265	247	379	305	304
Other developed	25,274	20,826	24,461	24,155	26,837	30,879	31,991	35,241	37,137	31,513	35,569
Australia	3,284	2,636	4,708	4,032	3,094	3,295	4,073	4,057	4,404	4,329	4,163
Canada	18,790	15,242	17,450	18,108	21,310	24,592	24,546	27,720	28,830	23,992	27,538
New Zealand	779	947	589	541	618	915	1,206	882	598	461	845
Norway	566	526	456	407	387	524	623	853	951	951	1,145
Switzerland	1,754	1,381	1,142	1,027	1,311	1,380	1,487	1,548	2,217	1,694	1,787
All others	102	95	117	40	116	172	55	182	137	85	92
Other developing	350	578	482	1,163	1,551	1,197	1,608	1,469	1,813	1,644	1,907
Afghanistan	0	0	64	15	36	60	172	166	138	297	617
Bangladesh	18	25	24	16	27	52	37	43	46	35	49
Burma	3	1	1	1	3	1	2	2	2	9	11
Cambodia	1	2	1	1	1	3	3	6	4	6	8
Laos	0	1	1	2	3	6	3	1	5	4	2
Nepal	8	4	6	5	10	10	5	11	11	13	12
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	77	62	109	153	799	252	804	750	695	325	500
Sri Lanka	34	32	55	37	33	29	37	39	83	72	23
Vietnam	34	42	58	786	417	454	204	180	350	349	379
All others	175	409	163	147	222	330	341	271	479	534	306
<b>Imports</b>											
World	222,082	195,177	195,150	207,031	238,276	259,742	290,760	326,809	331,152	300,892	354,465
EU	44,143	47,019	47,812	49,420	51,122	53,680	58,699	65,695	68,762	60,457	65,804
Belgium	978	1,368	1,298	989	1,517	1,096	1,981	2,208	2,891	4,255	3,792
Czech Republic	105	164	220	288	340	404	423	410	448	318	334
France	9,624	10,434	9,645	9,182	8,659	8,468	9,778	12,262	12,073	10,376	10,638
Germany	9,130	9,537	8,089	8,010	9,580	11,034	11,428	11,861	11,584	10,414	10,116
Hungary	1,261	886	1,085	1,288	1,247	1,393	1,178	1,254	1,427	1,019	911
Ireland	6,805	8,924	12,624	14,497	13,431	14,058	14,216	16,146	17,605	14,443	17,505
Italy	1,938	1,674	1,843	1,734	1,974	2,200	2,165	2,410	2,862	2,635	2,949
Netherlands	1,680	1,515	1,767	2,028	2,120	2,235	2,832	3,572	3,143	2,505	3,102
Poland	49	38	42	46	74	94	312	301	291	293	533
Portugal	223	252	312	429	536	668	798	422	193	66	86
Spain	233	256	368	752	701	552	594	780	1,053	903	1,001
Sweden	1,244	1,127	1,510	1,343	1,466	1,891	1,267	1,383	1,539	1,194	2,033
United Kingdom	9,416	9,256	7,146	6,842	7,414	7,262	9,428	9,994	10,758	9,282	9,518
All others	1,460	1,587	1,864	1,994	2,056	2,323	2,295	2,692	2,897	2,753	3,286
Japan	37,352	27,880	23,688	22,388	23,877	24,576	25,853	28,093	26,713	19,879	23,273
China	14,203	14,424	21,292	30,404	46,823	60,289	73,521	88,802	92,170	90,289	116,452
Asia-8	79,444	62,110	62,720	62,706	69,729	69,773	75,094	74,499	71,819	60,532	69,453
India	146	200	199	253	319	456	693	709	1,062	1,000	1,440
Indonesia	1,318	1,399	1,259	1,076	1,123	1,104	917	1,125	1,343	1,360	1,448
Malaysia	16,252	14,052	15,151	16,382	18,231	22,618	25,098	22,311	20,099	14,900	15,248
Philippines	8,055	5,907	5,843	4,920	3,806	3,694	3,745	3,634	3,305	2,629	2,913
Singapore	13,658	10,081	10,062	10,385	10,878	9,253	9,804	9,654	8,194	6,565	7,700
South Korea	18,706	13,756	13,822	14,378	17,977	13,980	13,647	14,852	16,392	15,236	17,436
Taiwan	17,642	13,816	13,331	12,031	12,808	12,264	14,063	14,762	13,784	12,120	15,441
Thailand	3,666	2,899	3,062	3,291	4,599	6,412	7,209	7,735	8,054	6,723	7,828
All others	47,004	43,832	39,639	42,112	46,723	51,423	57,589	69,714	71,706	69,734	79,483



Appendix table 6-37

## U.S. trade in advanced-technology products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Central Asia and Europe	1,257	1,227	1,014	1,241	1,092	1,132	1,250	1,471	1,350	1,385	1,667
Kazakhstan	29	45	75	0	0	0	0	1	0	54	53
Russia	1,045	1,012	831	1,054	920	945	999	1,055	998	1,003	1,249
Turkey	99	109	83	83	107	136	160	205	232	277	306
Ukraine	76	53	12	37	45	7	68	74	45	9	12
All others	6	10	13	16	19	22	23	34	35	43	46
Middle East and North Africa	5,321	4,562	2,184	2,112	2,410	2,421	2,968	3,392	3,289	4,674	2,852
Algeria	0	0	0	0	0	0	0	0	0	0	0
Egypt	0	0	1	3	3	1	2	1	1	1	1
Iran	0	0	0	0	0	4	1	0	0	0	0
Iraq	2,585	2,230	0	0	2	1	1	0	0	0	1
Israel	2,584	2,229	2,077	2,009	2,284	2,297	2,818	3,272	3,167	4,603	2,732
Morocco	141	83	98	89	103	92	100	96	94	54	95
Saudi Arabia	6	5	3	1	4	6	2	1	6	1	2
Tunisia	0	0	0	1	1	2	4	4	8	6	8
United Arab Emirates	2	10	4	6	10	14	37	15	9	7	10
All others	3	5	1	3	3	4	3	3	4	2	3
South and Central America	18,383	20,488	20,465	22,365	26,559	28,375	34,332	42,463	44,790	44,542	56,163
Argentina	11	14	18	10	17	14	16	11	13	15	12
Brazil	1,935	2,927	2,948	2,704	2,792	2,599	1,730	2,034	2,570	920	795
Chile	2	3	4	4	6	4	8	11	13	4	12
Colombia	5	9	4	2	3	6	11	19	10	11	10
Costa Rica	1,224	726	919	1,207	1,104	1,129	1,175	1,257	1,389	3,431	6,045
Mexico	14,815	16,423	16,196	17,961	22,142	23,991	30,881	38,631	40,326	39,748	48,746
Peru	1	2	2	1	2	1	1	1	2	3	3
Venezuela	5	2	3	2	3	4	10	2	2	2	1
All others	385	383	371	474	491	629	500	497	465	409	539
Sub-Saharan Africa	48	36	42	41	42	38	39	46	64	48	52
Angola	0	0	0	0	0	0	0	0	0	0	0
Congo (Kinshasa)	0	0	0	0	0	0	1	0	0	0	0
Ethiopia	0	0	0	0	0	0	0	0	0	0	0
Kenya	7	5	4	6	3	2	4	2	6	4	3
Nigeria	0	0	0	0	0	1	0	0	3	1	0
South Africa	28	23	25	25	30	30	26	31	38	37	41
Tanzania	0	0	0	0	0	0	0	0	0	0	0
Uganda	0	0	0	0	0	0	0	0	0	0	0
All others	12	7	13	9	9	5	8	12	17	6	8
Other developed	24,536	19,714	15,868	16,277	16,550	19,352	18,784	21,712	21,312	18,541	18,085
Australia	398	428	384	380	418	532	609	859	817	805	870
Canada	22,405	17,302	13,704	13,700	13,827	15,652	14,873	17,767	16,625	14,232	12,846
New Zealand	53	69	72	92	116	129	143	160	164	152	180
Norway	259	333	313	280	372	349	444	507	653	518	615
Switzerland	1,409	1,566	1,376	1,799	1,784	2,652	2,663	2,375	3,007	2,794	3,528
All others	11	16	19	25	34	38	52	45	45	39	47
Other developing	39	34	58	66	59	74	132	346	487	544	663
Afghanistan	0	0	0	1	0	1	0	0	0	0	0
Bangladesh	0	0	0	0	0	0	0	0	0	1	1
Burma	1	0	0	0	0	0	0	0	0	0	1
Cambodia	0	0	0	0	0	1	1	0	0	0	0
Laos	0	0	0	0	0	0	0	0	0	0	0
Nepal	0	0	0	0	0	0	0	0	0	0	0
North Korea	0	0	0	0	1	0	NA	NA	NA	NA	NA
Pakistan	25	23	28	26	31	32	33	43	56	54	51
Sri Lanka	6	4	11	8	6	5	7	7	5	3	2
Vietnam	0	0	8	10	12	30	83	283	414	479	600
All others	7	7	11	21	9	5	8	13	12	6	7

Appendix table 6-37

## U.S. trade in advanced-technology products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Balance											
World	5,313	4,451	-16,584	-26,823	-36,715	-42,918	-43,689	-61,934	-61,021	-56,184	-81,771
EU	16,329	7,333	1,919	1,191	4,967	4,575	4,977	7,800	6,478	9,566	376
Belgium	1,044	483	358	579	362	1,235	528	780	614	-1,178	-577
Czech Republic	222	113	113	-20	6	45	60	125	46	24	173
France	-980	-2,281	-1,133	-2,528	438	818	-236	-977	-1,209	1,138	-17
Germany	2,495	1,843	1,259	1,283	-61	-120	1,628	4,674	5,629	6,453	6,486
Hungary	-1,155	-740	-849	-832	-601	-1,010	-779	-836	-943	-544	-449
Ireland	-3,211	-5,687	-9,800	-11,220	-10,289	-10,349	-10,890	-12,938	-14,442	-10,966	-14,707
Italy	860	774	1,277	1,356	995	428	650	255	77	-68	-231
Netherlands	6,773	5,284	5,485	6,369	7,016	7,467	7,299	7,177	8,764	6,874	6,311
Poland	198	163	138	143	154	241	516	1,251	971	489	343
Portugal	117	319	-83	-234	-55	-117	48	1,050	1,418	318	254
Spain	1,974	1,169	775	675	852	1,122	1,018	1,231	1,213	679	758
Sweden	861	173	-298	-138	-430	-762	207	137	22	693	-527
United Kingdom	5,705	4,183	3,426	3,924	4,763	4,895	3,585	3,680	3,397	3,711	2,576
All others	1,427	1,539	1,252	1,831	1,826	682	1,347	2,189	921	1,946	-18
Japan	-17,607	-11,486	-6,835	-5,465	-6,412	-7,588	-7,433	-9,553	-9,238	-5,671	-7,707
China	-4,673	-3,419	-8,224	-16,983	-31,154	-41,974	-50,459	-62,836	-67,320	-64,915	-86,803
Asia-8	-30,557	-22,611	-20,435	-19,084	-22,762	-21,916	-19,303	-18,142	-20,474	-20,810	-16,923
India	835	871	1,056	1,058	1,370	1,633	2,264	4,759	2,599	3,023	1,726
Indonesia	-1,113	-1,202	-1,061	-868	-873	-708	-611	-505	-563	-151	542
Malaysia	-9,496	-8,578	-7,917	-8,580	-10,675	-15,537	-16,666	-15,217	-12,107	-8,697	-6,789
Philippines	-2,690	-1,146	-877	932	1,048	727	1,170	912	1,156	69	639
Singapore	-5,848	-1,850	-1,923	-1,987	-775	619	1,754	1,743	3,373	1,611	3,193
South Korea	-5,586	-4,557	-4,222	-4,839	-7,805	-2,728	296	-2,659	-6,235	-7,136	-6,401
Taiwan	-6,319	-5,948	-4,155	-3,829	-3,007	-2,638	-4,027	-3,081	-3,920	-5,097	-4,956
Thailand	-339	-201	-1,345	-982	-2,058	-3,293	-3,565	-4,377	-5,190	-4,433	-4,879
All others	11,500	7,349	16,858	14,287	18,985	24,397	28,684	20,883	29,792	25,647	29,287
Central Asia and Europe	1,003	425	1,192	124	450	596	1,620	1,519	2,553	1,831	2,837
Kazakhstan	-4	-19	285	37	53	104	93	74	187	15	2
Russia	-620	-659	-401	-687	-448	-443	-130	281	186	-168	-300
Turkey	1,471	874	1,164	519	458	736	1,432	993	1,699	1,386	2,743
Ukraine	-55	-23	17	-3	-7	59	17	31	105	210	163
All others	210	249	127	309	395	162	207	243	416	388	230
Middle East and North Africa	4,535	4,465	3,680	2,792	3,208	6,534	8,402	7,392	8,580	8,576	9,636
Algeria	372	491	245	36	217	399	246	138	146	103	281
Egypt	1,063	1,121	799	315	625	473	837	812	622	877	1,358
Iran	1	2	2	12	12	19	27	28	36	42	38
Iraq	-2,585	-2,224	1	17	173	258	328	503	471	468	324
Israel	-107	179	-52	-163	540	418	188	5	205	-2,195	-503
Morocco	40	-48	215	65	51	65	164	84	146	363	283
Saudi Arabia	2,100	1,693	587	678	504	687	764	778	1,368	1,806	1,610
Tunisia	135	63	18	16	20	38	20	27	30	43	22
United Arab Emirates	524	526	1,292	1,054	623	3,550	4,625	3,518	3,784	4,517	3,319
All others	419	448	750	769	452	638	1,215	1,566	1,787	2,552	2,904
South and Central America	3,807	-860	1,958	411	1,820	2,277	1,885	-4,392	-614	-728	-3,970
Argentina	1,182	811	205	429	681	932	996	1,326	1,454	1,428	1,610
Brazil	3,051	2,007	994	501	1,835	2,623	5,069	6,790	8,275	8,751	10,153
Chile	799	678	595	574	631	987	1,581	1,513	1,601	2,314	1,701
Colombia	470	500	738	659	753	905	1,111	1,471	1,783	1,641	1,879
Costa Rica	-808	-268	145	80	40	111	360	201	466	-2,010	-4,773
Mexico	-3,707	-6,909	-3,618	-4,412	-5,640	-7,322	-12,255	-21,429	-20,741	-19,147	-21,597
Peru	278	204	287	300	327	375	527	574	807	846	1,055
Venezuela	693	611	577	342	869	1,077	1,458	1,527	1,742	1,634	1,488
All others	1,849	1,505	2,033	1,936	2,325	2,588	3,037	3,635	3,999	3,813	4,512
Sub-Saharan Africa	1,071	1,620	963	1,209	1,325	1,918	1,977	1,815	2,189	1,896	2,057

Appendix table 6-37

## U.S. trade in advanced-technology products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	20	16	31	58	37	63	573	219	440	126	117
Congo (Kinshasa)	19	8	2	5	4	8	8	10	14	9	11
Ethiopia	18	6	8	214	152	237	20	31	86	85	502
Kenya	17	436	131	69	184	404	153	258	145	226	108
Nigeria	45	69	123	107	145	250	207	251	191	309	234
South Africa	847	836	545	617	591	645	751	788	973	743	713
Tanzania	5	6	7	5	60	17	18	18	13	23	31
Uganda	6	8	6	7	7	9	9	20	34	75	45
All others	130	247	117	340	296	522	257	235	362	299	296
Other developed	738	1,112	8,593	7,878	10,286	11,527	13,206	13,528	15,825	12,972	17,484
Australia	2,885	2,208	4,324	3,652	2,677	2,763	3,464	3,198	3,587	3,524	3,293
Canada	-3,615	-2,060	3,745	4,408	7,483	8,941	9,673	9,953	12,205	9,760	14,692
New Zealand	726	878	517	449	502	786	1,064	722	434	309	665
Norway	307	193	143	127	15	175	178	346	298	433	530
Switzerland	345	-184	-235	-773	-473	-1,271	-1,176	-827	-790	-1,100	-1,741
All others	90	78	99	15	82	134	3	136	91	46	45
Other developing	346	587	472	1,874	1,894	1,544	1,594	1,022	1,258	1,100	1,244
Afghanistan	0	0	64	14	36	60	172	166	137	297	617
Burma	2	1	1	1	3	1	2	2	2	9	10
Bangladesh	18	25	24	16	26	52	37	43	46	34	48
Cambodia	1	2	0	1	1	3	1	6	4	6	8
Laos	0	1	1	2	3	5	3	1	5	4	2
Nepal	8	4	6	5	10	10	5	11	11	13	12
North Korea	0	0	0	0	-1	0	NA	NA	NA	NA	NA
Pakistan	53	38	81	127	768	220	771	707	639	271	449
Sri Lanka	28	29	44	29	27	24	30	32	77	69	21
Vietnam	34	42	50	776	405	423	121	-103	-63	-130	-221
All others	168	402	152	126	212	324	331	259	466	528	299

NA = not available; not provided by Census Bureau

EU = European Union

NOTES: Technologies classified by U.S. Census. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies.

SOURCE: Census Bureau, Foreign Trade Statistics, Country and Product Trade Data, Advanced Technology Products, special tabulations (15 January 2011).

*Science and Engineering Indicators 2012*

Appendix table 6-38

## U.S. trade in information and communications products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Exports</b>											
World	64,196	53,437	53,289	53,115	59,010	63,769	68,928	74,582	77,331	66,663	77,686
EU	20,513	17,296	14,967	14,693	15,181	15,901	16,291	17,285	16,488	12,164	12,728
Belgium	568	566	345	304	362	501	473	716	780	498	562
Czech Republic	89	94	128	114	102	181	249	172	178	116	150
France	1,694	1,404	1,372	1,275	1,241	1,213	1,238	1,358	1,392	967	1,039
Germany	3,465	3,207	2,531	2,534	2,455	2,583	2,824	3,204	2,616	2,016	1,925
Hungary	63	54	83	78	99	132	224	224	235	218	263
Ireland	1,937	1,619	1,326	1,262	1,114	1,184	1,183	1,139	1,104	821	514
Italy	730	696	459	510	576	531	530	569	546	436	503
Netherlands	4,887	3,815	3,721	3,451	3,710	4,372	4,133	4,637	4,783	3,506	3,918
Poland	164	114	110	102	101	156	140	155	171	127	202
Portugal	64	65	37	30	36	45	53	52	46	37	47
Spain	395	299	314	575	473	320	292	318	354	255	281
Sweden	295	242	233	271	204	230	281	318	326	243	240
United Kingdom	5,301	4,208	3,541	3,503	3,971	3,597	3,693	3,329	3,125	2,336	2,454
All others	859	913	770	686	739	857	977	1,093	834	588	630
Japan	6,488	5,248	4,371	4,002	4,149	3,787	4,107	3,945	3,306	2,611	2,514
China	3,625	3,894	3,583	3,493	3,795	4,646	5,531	5,838	6,269	6,169	7,074
Asia-8	8,707	6,346	6,968	6,687	7,055	8,083	8,030	8,282	8,433	6,846	7,450
India	483	426	628	650	824	911	994	1,119	1,034	953	931
Indonesia	40	64	64	93	84	142	86	114	118	184	98
Malaysia	771	710	960	780	819	1,132	1,062	1,005	1,031	884	1,077
Philippines	280	218	175	168	172	203	257	264	396	363	437
Singapore	2,100	1,607	1,711	1,972	1,946	2,178	2,039	2,057	2,266	1,896	2,082
South Korea	3,063	1,643	1,732	1,344	1,227	1,412	1,462	1,478	1,517	1,134	1,230
Taiwan	1,485	1,215	1,179	1,057	1,231	1,039	1,089	1,235	1,028	718	833
Thailand	484	464	519	623	754	1,066	1,042	1,010	1,043	715	762
All others	24,878	20,669	23,422	24,269	28,858	31,401	35,020	39,326	43,049	38,873	47,920
Central Asia and Europe	384	334	510	402	444	435	520	657	647	422	537
Kazakhstan	13	17	201	13	14	24	56	34	50	18	25
Russia	130	155	159	190	231	217	241	321	224	150	187
Turkey	173	96	88	78	103	121	154	196	228	154	234
Ukraine	16	20	14	11	15	13	19	30	26	15	17
All others	52	46	49	111	82	60	51	77	120	84	75
Middle East and North Africa	1,398	1,321	952	1,011	1,341	1,530	1,823	2,020	2,150	2,152	2,382
Algeria	0	220	15	8	164	180	184	99	89	26	21
Egypt	130	136	91	97	107	101	263	154	126	112	120
Iran	0	0	0	0	0	0	0	0	0	0	1
Iraq	0	0	1	9	97	105	77	122	163	240	75
Israel	770	602	464	441	495	532	493	540	551	472	557
Morocco	20	12	9	11	16	17	26	24	31	31	42
Saudi Arabia	148	122	132	118	129	156	221	205	255	308	257
Tunisia	8	7	5	5	7	5	9	8	11	17	5
United Arab Emirates	151	129	151	171	196	263	392	682	682	699	1,026
All others	79	98	89	152	137	173	162	191	246	247	279
South and Central America	11,154	9,656	10,894	11,314	14,377	15,228	17,932	19,585	22,579	22,006	28,029
Argentina	884	548	140	295	402	559	664	902	991	794	992
Brazil	2,206	1,739	1,390	1,115	1,290	1,800	2,246	2,798	3,304	3,009	3,580
Chile	517	389	431	376	427	534	643	809	897	871	1,106
Colombia	337	377	436	454	558	611	696	955	1,169	935	1,190
Costa Rica	120	161	148	191	195	200	282	296	314	384	352
Mexico	5,035	4,414	6,051	6,831	8,554	8,241	9,385	9,411	11,009	11,550	15,730
Peru	203	164	228	254	260	278	413	436	632	591	713
Venezuela	480	422	385	218	661	766	1,150	1,057	1,210	1,086	1,000
All others	1,372	1,442	1,686	1,580	2,030	2,239	2,451	2,922	3,053	2,786	3,367
Sub-Saharan Africa	304	299	288	351	401	443	535	572	618	454	454

Appendix table 6-38

## U.S. trade in information and communications products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	7	8	10	16	21	7	21	16	23	13	19
Congo (Kinshasa)	2	1	2	4	2	7	3	7	7	4	4
Ethiopia	3	2	2	11	3	6	6	7	11	8	7
Kenya	8	7	12	9	13	13	21	39	29	21	21
Nigeria	24	39	62	79	67	88	108	90	96	62	59
South Africa	189	142	126	158	204	219	270	290	311	189	215
Tanzania	3	5	4	4	6	7	7	1	1	15	15
Uganda	6	0	4	5	4	4	5	12	15	18	17
All others	65	91	69	76	83	96	100	103	127	123	99
Other developed	11,481	8,895	10,495	10,955	12,000	13,404	13,799	15,933	16,229	13,343	15,893
Australia	1,501	1,036	982	965	1,069	1,243	1,489	1,731	1,414	1,241	1,254
Canada	9,187	7,248	9,084	9,580	10,502	11,632	11,726	13,654	14,209	11,716	14,217
New Zealand	263	131	136	129	127	152	134	154	155	122	95
Norway	100	85	81	84	95	120	150	153	199	98	119
Switzerland	414	383	203	181	193	238	289	224	206	153	199
All others	15	14	9	15	14	19	12	18	47	13	9
Other developing	157	163	283	236	296	362	411	558	825	496	624
Afghanistan	0	0	63	7	20	18	27	47	43	100	194
Bangladesh	7	15	9	5	12	28	17	14	13	8	9
Burma	0	0	0	0	0	0	0	2	0	0	1
Cambodia	1	1	0	1	1	2	1	1	3	4	3
Laos	0	0	1	2	2	4	3	0	2	1	1
Nepal	1	1	4	2	7	7	1	3	3	2	3
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	21	19	41	33	58	64	73	121	143	50	79
Sri Lanka	27	19	40	30	12	18	22	18	18	7	9
Vietnam	16	20	27	31	35	51	54	99	218	150	154
All others	67	65	71	92	113	120	158	154	164	174	171
Imports											
World	111,180	95,159	100,660	110,089	132,544	147,178	160,784	179,575	181,775	169,807	205,080
EU	9,184	7,760	8,265	7,788	7,491	8,193	7,270	7,067	7,724	6,216	6,955
Belgium	176	146	124	97	116	102	141	207	225	206	256
Czech Republic	38	74	125	154	168	208	169	100	61	49	60
France	900	618	793	587	385	429	322	371	330	330	371
Germany	876	863	968	1,163	1,093	1,077	1,230	1,430	1,544	1,169	1,284
Hungary	1,208	825	587	611	843	1,109	864	1,013	1,272	901	651
Ireland	1,644	1,499	1,938	1,270	1,055	1,268	1,474	1,194	1,147	1,140	573
Italy	468	458	481	406	405	311	266	285	317	300	407
Netherlands	198	141	131	146	140	137	147	208	222	150	175
Poland	21	8	9	9	8	12	16	19	35	57	104
Portugal	19	4	89	103	4	2	2	4	46	34	54
Spain	71	70	62	357	246	92	48	62	63	49	41
Sweden	760	666	1,092	900	895	1,310	675	525	779	504	1,247
United Kingdom	2,605	1,930	1,288	1,385	1,532	1,276	1,125	1,068	1,164	856	837
All others	200	414	578	600	369	481	358	501	520	471	895
Japan	18,891	13,791	12,932	12,073	12,076	11,816	11,691	13,022	12,559	9,170	9,374
China	9,960	10,707	17,166	26,881	42,168	54,230	64,971	78,479	80,991	79,551	102,967
Asia-8	46,502	40,920	43,196	43,661	48,641	50,293	52,975	53,120	51,887	44,579	48,103
India	41	35	32	43	43	127	239	192	365	358	557
Indonesia	891	1,060	979	865	79	53	28	33	31	1,179	1,208
Malaysia	9,593	9,188	10,564	12,510	14,260	207	21,403	18,957	16,605	12,337	10,467
Philippines	2,501	2,337	2,576	2,024	1,366	1,277	106	1,437	1,289	981	1,167
Singapore	9,604	7,636	7,537	7,332	7,527	6,737	6,599	6,464	5,366	4,142	4,507
South Korea	10,351	9,176	9,553	10,147	12,742	9,557	8,958	10,629	12,553	12,026	13,085
Taiwan	5,652	9,585	9,620	8,173	8,075	7,578	8,338	8,548	8,179	8,175	10,884
Thailand	71	1,904	2,336	2,573	3,759	5,380	5,469	409	455	5,382	6,230
All others	26,642	21,980	19,106	19,679	22,173	22,667	23,948	28,053	28,920	30,290	37,682

Appendix table 6-38

## U.S. trade in information and communications products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Central Asia and Europe	10	10	11	9	16	15	8	20	19	22	29
Kazakhstan	0	0	0	0	0	0	0	0	0	0	0
Russia	4	5	5	2	3	4	3	3	7	5	4
Turkey	5	0	4	5	9	8	3	7	8	13	19
Ukraine	0	1	1	2	1	1	0	8	3	2	5
All others	0	1	1	1	3	2	1	0	1	2	1
Middle East and North Africa	1,046	843	572	510	550	638	807	1,178	1,012	934	1,000
Algeria	0	0	0	0	0	0	0	0	0	0	0
Egypt	0	0	1	2	2	0	0	0	0	0	0
Iran	0	0	0	0	0	0	1	0	0	0	0
Iraq	0	0	0	0	0	0	0	0	0	0	1
Israel	1,042	836	567	501	540	623	769	1,161	999	927	987
Morocco	0	0	1	0	0	0	1	0	0	0	0
Saudi Arabia	1	0	1	0	0	0	0	0	0	1	1
Tunisia	0	0	0	0	0	0	1	0	4	2	3
United Arab Emirates	2	3	3	4	6	12	34	10	5	3	6
All others	1	2	0	2	1	1	1	2	2	0	2
South and Central America	12,601	14,266	13,732	14,986	16,899	16,518	17,431	20,573	21,364	24,445	31,978
Argentina	2	2	8	3	2	4	3	3	4	5	2
Brazil	405	944	1,080	1,002	384	760	546	285	211	182	103
Chile	0	1	4	3	4	3	6	5	5	2	9
Colombia	4	1	2	1	1	3	5	14	7	6	6
Costa Rica	843	111	114	112	135	282	354	432	444	2,612	2,839
Mexico	11,332	13,190	12,513	13,834	16,277	15,222	16,380	19,690	20,600	21,591	28,992
Peru	0	1	1	0	0	1	1	0	0	2	1
Venezuela	4	1	1	1	0	1	1	1	0	1	1
All others	11	14	10	29	93	242	134	143	92	45	26
Sub-Saharan Africa	9	15	9	19	17	9	15	20	27	13	12
Angola	0	0	0	0	0	0	0	0	0	0	0
Congo (Kinshasa)	0	0	0	0	0	0	0	0	0	0	0
Ethiopia	0	0	0	0	0	0	0	0	0	0	0
Kenya	1	4	1	5	2	1	3	1	4	3	2
Nigeria	0	0	0	0	0	0	0	0	0	0	0
South Africa	4	5	3	7	8	5	7	8	10	5	6
Tanzania	0	0	0	0	0	0	0	0	0	0	0
Uganda	0	0	0	0	0	0	0	0	0	0	0
All others	3	5	4	6	7	3	5	11	13	4	4
Other developed	12,967	6,842	4,762	4,136	4,667	5,428	5,525	5,907	5,867	4,506	4,222
Australia	68	60	67	67	96	65	69	108	91	86	96
Canada	12,564	6,472	4,492	3,863	4,322	5,093	5,136	5,430	5,249	4,029	3,628
New Zealand	10	18	18	28	29	22	30	36	34	25	31
Norway	125	140	118	121	149	158	205	244	361	254	350
Switzerland	199	150	66	57	71	89	83	87	129	111	115
All others	1	2	1	0	0	1	3	2	3	2	2
Other developing	10	5	20	19	24	59	162	355	631	371	440
Afghanistan	0	0	0	0	0	1	0	0	0	0	0
Bangladesh	0	0	0	0	0	0	0	0	0	0	0
Burma	1	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	1	0	0	0	0
Laos	0	0	0	0	0	0	0	0	0	0	0
Nepal	0	0	0	0	0	0	0	0	0	0	0
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	1	0	0	0	0	0	1	0	1	0	0
Sri Lanka	5	4	6	8	6	5	6	6	5	3	2
Vietnam	0	0	6	1	7	25	75	171	309	363	433
All others	2	1	2	3	4	3	4	7	6	4	5

Appendix table 6-38

## U.S. trade in information and communications products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Balance											
World	-46,984	-41,721	-47,370	-56,974	-73,534	-83,409	-91,857	-104,993	-104,444	-103,144	-127,394
EU	11,328	9,535	6,703	6,905	7,690	7,708	9,020	10,219	8,765	5,948	5,773
Belgium	391	420	220	207	246	398	333	509	555	292	306
Czech Republic	51	20	2	-40	-66	-27	81	72	117	67	90
France	795	787	579	687	856	784	915	988	1,063	637	668
Germany	2,589	2,344	1,563	1,371	1,362	1,506	1,594	1,774	1,072	847	641
Hungary	-1,144	-771	-504	-533	-744	-977	-640	-790	-1,037	-683	-388
Ireland	294	121	-612	-8	58	-84	-290	-55	-43	-319	-59
Italy	261	238	-22	105	171	219	264	285	229	136	96
Netherlands	4,690	3,674	3,590	3,305	3,570	4,235	3,986	4,429	4,560	3,356	3,743
Poland	143	106	100	93	93	144	124	136	136	70	98
Portugal	45	61	-52	-73	32	43	51	47	0	3	-7
Spain	324	229	253	217	227	227	244	256	291	206	240
Sweden	-465	-424	-859	-630	-691	-1,079	-395	-206	-453	-261	-1,007
United Kingdom	2,697	2,278	2,253	2,117	2,439	2,321	2,569	2,261	1,961	1,480	1,617
All others	658	498	192	86	370	376	618	592	313	117	-265
Japan	-12,403	-8,543	-8,561	-8,071	-7,926	-8,029	-7,584	-9,077	-9,253	-6,559	-6,860
China	-6,336	-6,814	-13,583	-23,389	-38,373	-49,584	-59,441	-72,641	-74,723	-73,382	-95,893
Asia-8	-37,795	-34,574	-36,228	-36,974	-41,586	-42,210	-44,945	-44,839	-43,454	-37,733	-40,653
India	442	391	596	607	781	784	754	926	669	595	374
Indonesia	-851	-996	-915	-772	5	89	58	81	87	-995	-1,110
Malaysia	-8,822	-8,478	-9,604	-11,730	-13,441	925	-20,340	-17,952	-15,574	-11,453	-9,390
Philippines	-2,221	-2,119	-2,401	-1,856	-1,194	-1,075	151	-1,172	-893	-618	-730
Singapore	-7,504	-6,029	-5,826	-5,361	-5,581	-4,559	-4,560	-4,407	-3,099	-2,246	-2,425
South Korea	-7,288	-7,533	-7,821	-8,803	-11,515	-8,144	-7,497	-9,152	-11,036	-10,892	-11,855
Taiwan	-4,166	-8,370	-8,441	-7,116	-6,845	-6,539	-7,249	-7,313	-7,150	-7,457	-10,051
Thailand	413	-1,440	-1,817	-1,950	-3,006	-4,314	-4,427	601	588	-4,667	-5,468
All others	-1,764	-1,311	4,317	4,591	6,686	8,734	11,072	11,273	14,129	8,583	10,238
Central Asia and Europe	374	325	500	393	429	420	511	637	629	400	508
Kazakhstan	13	17	201	13	14	24	56	34	50	18	25
Russia	127	150	154	188	228	213	237	318	218	145	183
Turkey	168	96	84	72	95	113	150	189	220	141	215
Ukraine	16	19	13	9	13	12	18	22	23	13	12
All others	51	45	48	110	79	59	50	76	118	82	74
Middle East and North Africa	352	477	380	502	791	892	1,017	843	1,138	1,218	1,382
Algeria	0	220	15	8	164	180	184	99	89	26	21
Egypt	130	136	90	96	105	101	263	154	126	112	120
Iran	0	0	0	0	0	0	-1	0	0	0	1
Iraq	0	0	1	9	97	105	77	122	163	240	74
Israel	-272	-235	-103	-60	-45	-92	-277	-621	-447	-455	-430
Morocco	20	12	8	11	16	17	25	24	31	31	42
Saudi Arabia	146	122	131	118	129	156	220	205	255	307	256
Tunisia	8	7	5	5	7	5	8	8	7	15	2
United Arab Emirates	149	126	148	167	190	252	358	671	677	696	1,020
All others	78	96	88	149	136	171	161	189	244	247	277
South and Central America	-1,447	-4,609	-2,838	-3,672	-2,522	-1,290	501	-988	1,215	-2,439	-3,949
Argentina	882	547	132	292	400	555	661	899	987	789	990
Brazil	1,801	794	310	113	906	1,039	1,701	2,513	3,093	2,827	3,477
Chile	517	388	427	373	423	532	637	804	892	869	1,097
Colombia	333	377	434	453	556	608	691	941	1,162	929	1,184
Costa Rica	-722	50	35	79	60	-82	-72	-136	-129	-2,228	-2,487
Mexico	-6,297	-8,776	-6,463	-7,003	-7,723	-6,982	-6,995	-10,279	-9,591	-10,041	-13,262
Peru	203	163	227	254	260	277	413	436	632	589	712
Venezuela	476	421	384	216	661	765	1,149	1,056	1,209	1,085	999
All others	1,362	1,428	1,676	1,551	1,937	1,997	2,316	2,780	2,961	2,741	3,341
Sub-Saharan Africa	295	284	279	332	384	433	520	551	591	441	442

Appendix table 6-38

## U.S. trade in information and communications products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	7	8	10	16	21	7	21	16	23	13	19
Congo (Kinshasa)	1	1	2	4	2	7	3	7	7	4	4
Ethiopia	3	2	2	11	3	6	6	7	11	8	7
Kenya	6	2	10	3	12	12	18	37	26	18	19
Nigeria	24	39	62	78	67	88	108	90	96	62	59
South Africa	185	138	123	151	196	214	263	282	301	184	209
Tanzania	3	4	3	4	6	7	7	0	1	15	15
Uganda	6	0	4	5	4	4	5	12	15	18	17
All others	62	86	65	70	76	93	94	92	114	119	95
Other developed	-1,486	2,054	5,733	6,818	7,332	7,976	8,275	10,026	10,362	8,837	11,671
Australia	1,433	976	915	898	973	1,178	1,420	1,623	1,323	1,155	1,158
Canada	-3,376	776	4,592	5,718	6,180	6,538	6,591	8,224	8,960	7,687	10,589
New Zealand	253	112	118	101	98	130	104	118	120	97	64
Norway	-25	-54	-37	-37	-54	-38	-55	-91	-162	-156	-231
Switzerland	215	232	137	124	122	150	206	137	76	42	84
All others	14	12	8	14	14	18	9	16	44	11	7
Other developing	148	158	263	217	272	303	249	202	194	125	184
Afghanistan	0	0	63	7	20	17	27	47	43	100	194
Bangladesh	7	15	9	5	12	28	17	14	13	8	9
Burma	-1	0	0	0	0	0	0	2	0	0	1
Cambodia	1	1	0	1	1	2	0	1	3	4	3
Laos	0	0	1	2	2	4	3	0	2	1	1
Nepal	1	2	4	2	7	7	1	3	3	2	3
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	20	19	41	32	58	64	72	121	143	50	79
Sri Lanka	21	15	35	23	6	13	16	12	13	4	7
Vietnam	16	20	21	31	28	26	-20	-72	-92	-213	-279
All others	65	64	69	89	109	116	154	147	159	170	166

NA = not available; not provided by Census Bureau

EU = European Union

NOTES: Technologies classified by U.S. Census. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies.

SOURCE: Census Bureau, Foreign Trade Statistics, Country and Product Trade Data, Advanced Technology Products, special tabulations (15 January 2011).

*Science and Engineering Indicators 2012*



Appendix table 6-39

## U.S. trade in aerospace products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Exports</b>											
World	51,030	54,295	53,228	49,831	54,737	64,141	75,964	84,108	84,633	83,951	80,703
EU	22,614	21,286	19,833	20,214	23,132	22,944	24,731	29,859	30,444	29,823	26,163
Belgium	607	567	378	231	266	363	490	518	803	663	757
Czech Republic	188	110	113	54	107	140	87	187	176	106	187
France	4,287	4,870	5,448	3,737	6,158	6,389	6,416	7,694	7,284	8,646	7,221
Germany	4,413	4,207	2,909	2,680	2,942	3,711	4,359	5,246	5,680	5,513	5,408
Hungary	11	54	29	298	459	124	34	42	55	67	34
Ireland	717	762	849	1,020	1,087	1,561	1,201	1,433	1,389	1,896	1,714
Italy	795	707	1,678	1,616	1,369	1,032	1,116	993	1,145	1,037	779
Netherlands	1,757	1,251	1,429	2,475	2,134	1,330	1,909	1,746	1,943	1,818	1,518
Poland	19	33	27	21	40	72	537	1,083	863	343	459
Portugal	104	99	139	106	391	444	557	505	735	210	190
Spain	1,340	641	448	439	669	842	700	911	969	572	615
Sweden	1,326	577	481	441	319	371	337	310	381	316	236
United Kingdom	6,092	6,143	4,424	4,748	4,932	5,345	5,482	6,627	7,176	6,096	5,975
All others	958	1,266	1,481	2,348	2,260	1,222	1,506	2,564	1,844	2,538	1,070
Japan	4,054	3,579	4,870	5,719	5,228	5,573	5,954	6,464	6,658	5,513	5,288
China	2,034	2,933	3,732	2,593	2,076	4,214	5,450	6,528	5,177	7,619	7,245
Asia-8	6,327	10,082	8,441	7,372	8,071	9,578	12,508	13,829	10,775	9,964	12,260
India	296	352	333	327	426	660	1,347	3,604	1,792	2,236	1,261
Indonesia	49	50	72	51	98	187	144	395	540	909	1,727
Malaysia	337	685	954	257	673	413	760	543	376	613	901
Philippines	112	52	67	66	128	66	63	76	156	262	304
Singapore	1,257	3,993	3,297	3,100	3,275	3,728	4,299	3,706	3,900	2,970	3,871
South Korea	2,105	2,784	2,449	1,684	1,826	2,114	3,561	3,356	2,583	1,937	2,567
Taiwan	1,603	1,593	1,095	1,265	1,447	2,175	1,450	1,516	1,177	808	1,343
Thailand	567	572	173	622	198	236	884	633	252	229	284
All others	16,001	16,411	16,186	14,648	16,563	22,177	27,395	27,386	31,606	31,033	29,747
Central Asia and Europe	1,587	972	1,280	601	720	862	1,764	1,631	2,384	2,086	2,984
Kazakhstan	0	0	154	3	2	55	6	16	111	14	13
Russia	203	13	37	13	93	161	426	704	547	415	274
Turkey	1,244	765	1,020	390	309	527	1,174	729	1,407	1,226	2,451
Ukraine	1	3	3	8	7	32	45	47	82	168	132
All others	139	190	67	187	309	88	114	135	237	263	115
Middle East and North Africa	4,618	4,313	3,848	2,781	2,677	5,911	7,676	6,620	7,151	8,654	7,572
Algeria	0	264	225	19	40	190	37	14	29	56	231
Egypt	852	897	634	163	316	228	412	454	274	582	1,116
Iran	0	0	0	0	0	1	0	0	0	0	0
Iraq	0	0	0	5	39	106	173	316	251	153	173
Israel	846	1,144	944	804	1,424	1,429	1,562	1,632	1,552	996	874
Morocco	150	17	294	134	127	131	220	133	183	346	284
Saudi Arabia	1,839	1,410	320	388	227	344	329	344	781	1,067	899
Tunisia	122	53	10	9	10	29	8	15	17	10	10
United Arab Emirates	271	292	1,029	753	290	3,145	4,086	2,627	2,781	3,399	1,798
All others	264	244	564	508	206	313	852	1,143	1,289	2,045	2,186
South and Central America	2,910	3,493	2,977	2,792	4,320	4,684	6,903	7,505	9,030	9,447	8,131
Argentina	116	111	41	57	173	206	133	180	159	307	243
Brazil	1,470	2,207	1,473	1,138	2,305	2,233	3,244	4,525	5,563	4,674	4,422
Chile	176	199	53	80	82	277	735	499	513	1,242	359
Colombia	61	43	203	93	83	109	194	237	257	382	269
Costa Rica	18	12	24	11	31	44	67	37	81	22	83
Mexico	381	668	610	757	1,058	1,124	1,817	1,209	1,518	1,642	1,588
Peru	37	13	33	14	29	46	55	42	50	79	116
Venezuela	56	62	100	72	99	132	114	186	111	245	140
All others	595	178	439	569	460	512	542	590	779	854	911
Sub-Saharan Africa	665	1,191	531	672	763	1,211	1,166	943	1,231	1,055	1,184

Appendix table 6-39

## U.S. trade in aerospace products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	7	5	18	38	12	44	541	177	393	82	73
Congo (Kinshasa)	0	0	0	0	1	0	6	1	5	2	5
Ethiopia	14	0	6	201	148	231	13	23	73	74	492
Kenya	10	431	117	59	159	374	128	210	104	199	74
Nigeria	18	21	52	18	68	147	74	128	56	217	134
South Africa	579	588	302	327	290	291	319	324	451	330	288
Tanzania	1	1	3	1	54	7	10	0	0	6	7
Uganda	0	1	0	1	1	4	3	5	11	50	16
All others	50	145	37	228	180	343	86	81	192	95	96
Other developed	6,073	6,093	7,403	6,230	6,597	8,454	8,811	9,932	10,978	9,016	9,201
Australia	1,215	981	3,126	2,377	1,246	1,158	1,534	1,214	1,722	1,793	1,628
Canada	3,203	3,460	3,050	3,013	4,068	5,531	5,316	6,858	7,277	5,729	5,376
New Zealand	450	750	391	336	409	669	988	630	326	218	611
Norway	345	320	256	150	163	278	263	411	484	615	828
Switzerland	778	505	483	341	618	680	677	673	1,091	603	699
All others	81	76	97	13	93	137	32	147	77	58	59
Other developing	149	349	147	1,572	1,486	1,056	1,075	754	832	774	674
Afghanistan	0	0	0	2	11	24	132	96	72	127	311
Bangladesh	4	5	5	5	5	8	7	19	19	11	12
Burma	0	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	0	0	0	0
Laos	0	0	0	0	0	2	0	0	2	2	0
Nepal	5	1	1	1	1	2	3	6	5	9	5
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	42	30	53	101	708	142	629	518	360	153	220
Sri Lanka	3	3	7	2	13	4	4	4	47	52	3
Vietnam	2	4	4	718	336	349	78	16	33	100	49
All others	89	302	72	26	75	177	145	79	262	320	73
Imports											
World	25,733	30,511	25,005	22,766	23,610	25,360	27,594	33,823	34,999	29,895	29,275
EU	15,141	17,152	13,103	10,741	11,197	12,349	14,937	17,484	18,137	16,268	15,711
Belgium	110	128	92	79	80	115	127	147	240	261	263
Czech Republic	10	27	39	70	94	103	158	206	250	152	135
France	7,021	7,730	6,234	5,069	5,094	4,943	6,791	8,964	8,793	7,480	7,355
Germany	3,266	3,663	2,338	1,699	1,833	2,835	2,542	2,382	2,798	3,059	2,150
Hungary	2	1	1	1	1	0	2	23	35	18	36
Ireland	48	52	55	44	61	82	90	99	110	50	26
Italy	421	494	432	386	461	625	680	865	918	816	1,072
Netherlands	161	169	154	149	171	191	206	214	237	248	272
Poland	15	21	20	26	53	54	252	202	158	169	358
Portugal	5	0	2	1	0	13	0	5	0	6	9
Spain	49	56	83	47	123	69	131	170	136	166	186
Sweden	143	150	127	114	140	106	111	246	253	160	220
United Kingdom	3,806	4,572	3,446	2,967	2,915	3,035	3,609	3,716	3,955	3,482	3,409
All others	85	88	79	88	165	177	232	245	247	201	220
Japan	1,530	1,818	1,380	1,290	1,405	1,685	2,236	2,794	2,562	2,842	2,989
China	77	103	115	133	183	176	261	354	408	413	508
Asia-8	381	550	424	443	544	674	812	975	967	907	1,041
India	5	5	5	9	11	9	13	15	42	31	31
Indonesia	1	2	1	2	5	5	8	6	6	9	12
Malaysia	1	2	9	16	19	31	28	40	31	42	63
Philippines	17	27	12	12	14	16	0	8	8	8	11
Singapore	93	124	128	121	142	172	179	237	318	245	260
South Korea	194	302	212	198	233	354	445	497	367	388	480
Taiwan	39	76	52	80	111	92	114	153	175	168	180
Thailand	9	13	5	6	12	9	13	8	6	16	3
All others	8,604	10,887	9,983	10,159	10,282	10,475	9,348	12,217	12,926	9,465	9,025

Appendix table 6-39

## U.S. trade in aerospace products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Central Asia and Europe	222	200	104	201	170	161	283	364	336	345	405
Kazakhstan	0	0	0	0	0	0	0	0	0	0	0
Russia	63	59	25	96	38	40	72	109	83	83	129
Turkey	85	2	72	73	91	120	147	189	214	253	271
Ukraine	74	50	7	32	40	1	1	62	36	4	3
All others	0	0	0	0	0	0	1	2	3	5	1
Middle East and North Africa	479	574	557	549	627	722	926	1,219	1,320	752	749
Algeria	0	0	0	0	0	0	0	0	0	0	0
Egypt	0	0	0	0	0	1	0	1	0	0	0
Iran	0	0	0	0	0	0	0	0	0	0	0
Iraq	0	0	0	0	0	0	0	0	0	0	0
Israel	473	567	554	548	622	713	920	1,212	1,309	746	742
Morocco	0	0	0	0	2	1	0	0	0	1	0
Saudi Arabia	5	1	2	0	2	5	0	0	5	1	1
Tunisia	0	0	0	0	1	2	3	3	4	3	5
United Arab Emirates	0	6	0	0	1	0	1	2	1	1	1
All others	0	1	0	0	0	0	0	0	0	0	0
South and Central America	1,579	2,078	2,165	1,887	2,578	1,998	1,345	2,060	2,834	1,131	1,317
Argentina	1	1	1	0	0	1	1	0	0	1	1
Brazil	1,466	1,936	1,848	1,682	2,384	1,807	1,151	1,703	2,290	673	633
Chile	1	1	0	0	0	1	1	5	6	1	2
Colombia	0	0	1	0	1	0	3	3	0	2	2
Costa Rica	0	0	0	0	0	0	0	1	1	0	1
Mexico	108	136	312	202	191	186	188	342	526	450	677
Peru	0	0	0	0	0	0	0	0	0	0	1
Venezuela	0	0	0	0	0	1	0	1	0	0	0
All others	3	3	3	2	1	2	1	6	11	3	2
Sub-Saharan Africa	3	1	3	5	6	3	4	3	9	5	6
Angola	0	0	0	0	0	0	0	0	0	0	0
Congo (Kinshasa)	0	0	0	0	0	0	1	0	0	0	0
Ethiopia	0	0	0	0	0	0	0	0	0	0	0
Kenya	0	0	0	0	0	0	0	0	2	0	0
Nigeria	0	0	0	0	0	0	0	0	2	0	0
South Africa	1	1	2	4	6	2	2	3	4	4	6
Tanzania	0	0	0	0	0	0	0	0	0	0	0
Uganda	0	0	0	0	0	0	0	0	0	0	0
All others	2	0	0	1	0	1	1	0	0	0	0
Other developed	6,320	8,033	7,149	7,516	6,900	7,590	6,788	8,566	8,420	7,231	6,545
Australia	111	146	128	126	107	124	136	174	171	160	159
Canada	6,082	7,706	6,805	7,232	6,591	7,166	6,317	8,065	7,779	6,685	6,041
New Zealand	2	2	3	8	10	10	13	10	4	2	7
Norway	73	132	126	91	136	73	80	88	116	116	105
Switzerland	53	47	87	60	55	217	241	229	350	267	233
All others	0	0	0	0	0	0	0	0	0	0	0
Other developing	1	1	6	1	1	1	2	5	7	2	2
Afghanistan	0	0	0	0	0	0	0	0	0	0	0
Bangladesh	0	0	0	0	0	0	0	0	0	0	0
Burma	0	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	0	0	0	0
Laos	0	0	0	0	0	0	0	0	0	0	0
Nepal	0	0	0	0	0	0	0	0	0	0	0
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	0	0	1	0	0	1	1	1	1	1	1
Sri Lanka	0	0	5	0	0	0	0	0	0	0	0
Vietnam	0	0	0	0	0	0	0	0	0	0	0
All others	1	1	0	0	1	0	0	3	3	0	0

Appendix table 6-39

## U.S. trade in aerospace products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Balance											
World	25,297	23,784	28,223	27,065	31,127	38,781	48,369	50,286	49,634	54,056	51,428
EU	7,472	4,133	6,730	9,473	11,935	10,595	9,794	12,376	12,308	13,555	10,452
Belgium	497	440	285	152	185	248	363	371	563	402	494
Czech Republic	178	83	74	-16	13	36	-71	-19	-74	-46	52
France	-2,734	-2,860	-786	-1,332	1,064	1,445	-375	-1,270	-1,509	1,166	-134
Germany	1,146	544	571	980	1,109	876	1,816	2,864	2,882	2,454	3,258
Hungary	9	53	28	297	459	124	32	19	21	49	-2
Ireland	669	709	794	976	1,026	1,479	1,111	1,333	1,279	1,846	1,688
Italy	374	213	1,245	1,230	908	406	436	128	227	221	-293
Netherlands	1,595	1,082	1,276	2,326	1,963	1,139	1,704	1,532	1,706	1,570	1,246
Poland	4	12	8	-5	-13	18	285	881	704	174	101
Portugal	99	99	137	105	391	431	557	500	735	204	181
Spain	1,291	584	365	392	546	773	569	741	833	406	429
Sweden	1,183	426	354	328	179	265	226	65	128	156	16
United Kingdom	2,287	1,570	978	1,780	2,016	2,310	1,873	2,911	3,221	2,614	2,566
All others	873	1,178	1,402	2,261	2,095	1,045	1,274	2,319	1,597	2,337	850
Japan	2,525	1,761	3,490	4,429	3,823	3,887	3,718	3,670	4,096	2,671	2,299
China	1,958	2,830	3,617	2,460	1,893	4,039	5,189	6,175	4,769	7,206	6,737
Asia-8	5,947	9,532	8,017	6,929	7,527	8,904	11,696	12,854	9,808	9,057	11,219
India	291	347	328	318	416	651	1,333	3,588	1,750	2,205	1,230
Indonesia	48	49	70	49	92	183	136	389	534	900	1,715
Malaysia	336	683	946	241	654	382	732	503	345	571	838
Philippines	95	25	54	54	114	50	63	68	148	254	293
Singapore	1,164	3,869	3,169	2,979	3,134	3,556	4,121	3,469	3,582	2,725	3,611
South Korea	1,911	2,482	2,237	1,486	1,593	1,760	3,116	2,859	2,216	1,549	2,087
Taiwan	1,564	1,518	1,044	1,185	1,336	2,083	1,336	1,363	1,002	640	1,163
Thailand	558	558	168	616	185	227	871	625	246	213	281
All others	7,397	5,523	6,202	4,489	6,282	11,702	18,047	15,169	18,680	21,568	20,722
Central Asia and Europe	1,364	772	1,176	400	551	701	1,481	1,268	2,048	1,741	2,579
Kazakhstan	0	0	154	3	2	55	6	16	111	14	13
Russia	139	-46	12	-83	55	121	353	595	463	332	145
Turkey	1,159	763	948	317	218	407	1,026	540	1,193	973	2,180
Ukraine	-73	-47	-5	-24	-33	31	44	-15	47	164	129
All others	139	190	67	187	309	87	112	133	234	258	114
Middle East and North Africa	4,140	3,738	3,291	2,232	2,050	5,190	6,749	5,402	5,831	7,902	6,823
Algeria	0	264	225	19	40	190	37	14	29	56	231
Egypt	852	897	634	163	315	228	412	453	274	582	1,116
Iran	0	0	0	0	0	1	0	0	0	0	0
Iraq	0	0	0	5	39	106	173	316	251	153	173
Israel	374	578	389	256	803	716	642	420	243	250	132
Morocco	150	17	294	133	125	130	220	133	183	345	284
Saudi Arabia	1,833	1,409	318	388	225	338	329	344	776	1,066	898
Tunisia	122	53	10	9	9	27	5	12	13	7	5
United Arab Emirates	271	286	1,029	753	289	3,144	4,085	2,625	2,780	3,398	1,797
All others	264	243	564	508	206	313	852	1,143	1,289	2,045	2,186
South and Central America	1,331	1,415	812	905	1,742	2,686	5,558	5,446	6,196	8,316	6,814
Argentina	115	110	40	57	173	205	132	180	159	306	242
Brazil	4	271	-374	-544	-79	425	2,093	2,822	3,273	4,001	3,789
Chile	175	198	53	80	81	276	734	495	507	1,241	357
Colombia	61	43	202	92	82	109	191	234	257	380	267
Costa Rica	18	12	24	10	31	44	67	36	81	22	82
Mexico	273	532	298	555	868	938	1,630	867	992	1,192	911
Peru	37	13	33	14	29	46	55	42	50	79	115
Venezuela	56	61	99	72	98	131	114	186	110	245	140
All others	592	175	436	568	459	510	541	584	768	851	909
Sub-Saharan Africa	662	1,190	528	667	757	1,208	1,162	940	1,222	1,050	1,178

Appendix table 6-39

## U.S. trade in aerospace products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	7	5	18	38	12	44	541	177	393	82	73
Congo (Kinshasa)	0	0	0	0	1	0	5	1	5	2	5
Ethiopia	14	0	6	201	148	231	13	23	73	74	492
Kenya	10	431	117	59	159	374	128	210	103	199	74
Nigeria	18	21	52	18	68	147	74	128	53	217	134
South Africa	578	587	301	323	284	289	317	322	447	326	282
Tanzania	1	1	3	1	54	7	10	0	0	6	7
Uganda	0	1	0	1	1	4	3	5	11	50	16
All others	48	145	36	227	179	343	86	81	192	95	96
Other developed	-247	-1,940	254	-1,286	-303	864	2,023	1,366	2,558	1,785	2,656
Australia	1,104	835	2,998	2,252	1,139	1,034	1,398	1,040	1,551	1,633	1,469
Canada	-2,878	-4,247	-3,755	-4,219	-2,523	-1,635	-1,002	-1,207	-502	-956	-665
New Zealand	448	748	387	329	399	659	975	620	322	216	604
Norway	273	189	131	59	26	206	183	323	368	499	723
Switzerland	725	459	397	281	563	463	437	443	742	336	466
All others	81	76	97	13	93	137	32	147	77	58	59
Other developing	147	348	141	1,571	1,485	1,055	1,074	748	825	772	672
Afghanistan	0	0	0	2	11	24	132	96	72	127	311
Bangladesh	4	5	5	5	5	8	7	19	19	11	12
Burma	0	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	0	0	0	0
Laos	0	0	0	0	0	2	0	0	2	2	0
Nepal	5	1	1	1	1	2	3	6	5	9	5
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	42	29	52	101	708	141	628	517	359	152	219
Sri Lanka	3	3	3	2	13	4	4	4	47	52	3
Vietnam	2	4	4	717	336	349	78	16	32	100	49
All others	88	301	72	26	74	176	145	75	259	320	73

NA = not available; not provided by Census Bureau

EU = European Union

NOTES: Technologies classified by U.S. Census. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies.

SOURCE: Census Bureau, Foreign Trade Statistics, Country and Product Trade Data, Advanced Technology Products, special tabulations (15 January 2011).

*Science and Engineering Indicators 2012*

Appendix table 6-40

## U.S. trade in electronics products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Exports</b>											
World	45,928	34,035	42,747	46,576	48,323	47,559	53,464	50,809	50,910	37,298	45,946
EU	5,517	4,787	5,298	4,975	4,795	4,401	5,472	5,426	4,875	2,903	2,993
Belgium	76	53	56	52	73	80	76	106	162	62	61
Czech Republic	15	16	57	41	39	49	45	23	17	15	14
France	953	661	592	531	368	307	335	316	358	306	378
Germany	985	1,086	1,489	1,503	1,277	1,338	1,967	1,820	1,507	744	871
Hungary	13	18	95	49	58	98	108	97	136	132	95
Ireland	437	349	317	556	491	366	415	230	223	196	205
Italy	444	261	308	268	305	265	392	303	295	178	243
Netherlands	354	348	557	419	331	389	338	301	243	241	208
Poland	10	7	11	18	33	29	31	29	18	17	25
Portugal	131	357	21	23	12	13	179	852	765	73	3
Spain	63	48	77	65	71	73	98	91	61	48	62
Sweden	153	114	146	112	108	107	237	257	162	282	206
United Kingdom	1,475	1,109	1,207	1,050	1,353	1,044	969	693	621	471	460
All others	408	362	364	288	276	243	282	309	306	137	160
Japan	3,299	2,545	2,780	2,392	2,230	1,714	2,032	1,736	1,584	1,166	1,274
China	2,637	2,278	3,977	5,302	6,953	6,977	8,995	9,723	9,515	7,866	9,285
Asia-8	24,610	17,576	21,225	24,274	23,026	22,293	25,005	23,379	23,712	15,396	19,124
India	48	52	70	82	90	118	139	134	172	170	173
Indonesia	79	53	37	29	42	36	34	62	52	49	74
Malaysia	5,063	3,633	4,926	6,434	5,573	5,085	5,906	5,039	6,107	4,363	5,909
Philippines	4,680	4,316	4,581	5,446	4,245	3,915	4,306	3,974	3,659	1,845	2,483
Singapore	3,075	1,828	2,216	2,389	3,137	2,847	3,629	4,243	3,925	2,119	2,948
South Korea	5,541	3,110	3,929	4,787	4,702	4,845	5,237	3,870	3,294	2,685	2,677
Taiwan	4,006	3,048	4,563	4,205	3,872	3,902	4,315	4,657	5,257	3,103	3,323
Thailand	2,118	1,537	902	902	1,365	1,546	1,438	1,400	1,247	1,063	1,538
All others	9,870	6,851	9,476	9,642	11,338	12,189	11,985	10,557	11,255	9,967	13,270
Central Asia and Europe	38	34	57	79	69	57	73	82	93	69	87
Kazakhstan	0	0	1	0	1	1	2	1	3	1	1
Russia	13	13	32	53	39	29	38	38	49	38	47
Turkey	22	17	18	20	24	23	26	34	29	22	26
Ukraine	1	2	2	3	2	2	2	4	4	1	2
All others	2	2	3	3	3	3	5	5	9	7	12
Middle East and North Africa	447	325	298	290	516	426	451	377	430	322	329
Algeria	0	1	0	0	0	14	11	3	4	1	1
Egypt	5	11	7	3	3	9	10	6	6	5	6
Iran	0	0	0	0	0	0	0	0	0	2	0
Iraq	0	1	0	0	3	7	5	5	7	5	2
Israel	386	272	256	241	453	349	351	267	297	175	218
Morocco	6	1	1	2	1	1	11	12	9	5	13
Saudi Arabia	5	9	5	9	10	11	13	17	23	25	23
Tunisia	1	0	0	1	0	1	1	1	1	4	2
United Arab Emirates	27	15	22	25	39	22	38	50	68	76	41
All others	17	16	7	9	7	11	12	16	17	24	23
South and Central America	5,502	4,257	6,413	6,549	7,176	7,517	7,744	6,868	7,439	6,905	9,693
Argentina	32	17	9	17	34	35	55	69	76	92	97
Brazil	670	516	650	635	672	693	692	653	896	917	1,367
Chile	27	19	30	33	34	53	55	50	33	30	31
Colombia	7	8	6	6	8	22	18	35	43	34	36
Costa Rica	219	244	838	1,016	848	869	1,047	1,029	1,353	894	676
Mexico	4,478	3,397	4,801	4,758	5,467	5,629	5,659	4,808	4,787	4,725	7,202
Peru	9	3	3	5	7	6	6	9	18	43	45
Venezuela	13	16	8	8	17	32	21	34	80	44	23
All others	47	37	68	71	89	177	192	182	153	127	216
Sub-Saharan Africa	23	22	23	29	26	69	60	49	30	29	28

Appendix table 6-40

## U.S. trade in electronics products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	0	0	0	0	0	1	1	0	2	1	1
Congo (Kinshasa)	0	0	0	0	1	0	0	0	0	0	1
Ethiopia	0	0	0	1	0	0	0	0	1	1	0
Kenya	3	2	1	1	1	11	1	2	3	1	1
Nigeria	0	1	1	1	2	1	1	6	3	2	2
South Africa	17	17	17	18	14	14	16	21	14	20	19
Tanzania	0	0	0	0	0	0	0	16	9	0	0
Uganda	0	0	0	0	0	0	0	0	0	0	0
All others	3	2	4	8	8	42	41	20	6	3	4
Other developed	3,843	2,198	2,662	2,668	3,494	4,078	3,593	3,141	3,183	2,603	3,032
Australia	80	77	98	122	125	115	116	123	141	96	121
Canada	3,593	2,005	2,473	2,455	3,264	3,856	3,385	2,867	2,798	2,306	2,680
New Zealand	9	8	11	13	12	10	11	10	10	8	12
Norway	43	40	18	24	24	19	20	21	28	15	15
Switzerland	116	66	60	52	68	71	59	118	205	176	203
All others	1	1	2	2	1	6	2	1	1	2	2
Other developing	16	16	24	27	57	43	64	41	80	41	100
Afghanistan	0	0	0	1	2	4	1	3	3	5	11
Bangladesh	0	0	1	0	0	0	0	0	0	1	0
Burma	2	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	0	0	0	0
Laos	0	0	0	0	0	0	0	0	0	0	0
Nepal	0	0	0	0	0	0	0	0	0	0	0
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	1	1	1	1	2	2	2	2	3	3	2
Sri Lanka	0	6	2	1	1	0	4	4	5	4	4
Vietnam	5	2	9	10	20	15	26	12	31	21	74
All others	5	4	3	4	10	6	4	6	6	6	9
Imports											
World	48,822	30,883	26,592	25,136	27,454	26,582	27,995	27,038	25,621	20,901	27,771
EU	3,833	3,204	3,076	3,179	3,049	3,034	3,120	3,333	3,209	1,891	2,304
Belgium	47	52	53	34	50	34	39	48	51	39	32
Czech Republic	25	11	14	12	9	5	3	5	6	13	16
France	570	530	478	557	527	513	406	360	220	155	192
Germany	1,004	1,035	1,026	950	777	797	875	861	793	502	676
Hungary	22	20	28	34	34	32	38	47	42	42	67
Ireland	261	167	103	127	111	134	178	501	513	73	74
Italy	420	196	375	328	358	338	334	279	505	370	408
Netherlands	87	82	44	57	53	35	25	28	29	27	22
Poland	5	3	6	4	4	16	27	51	67	21	17
Portugal	195	49	217	319	236	381	436	85	123	13	2
Spain	15	11	11	18	15	13	11	7	10	10	15
Sweden	113	72	63	48	55	44	45	52	43	34	44
United Kingdom	601	456	377	354	406	539	535	449	436	318	311
All others	469	371	281	337	356	269	254	332	371	274	429
Japan	7,773	4,240	2,649	2,332	2,800	2,586	2,948	3,021	2,937	2,054	2,861
China	2,109	1,392	1,291	1,173	1,703	2,130	2,488	2,494	2,132	1,741	2,820
Asia-8	30,074	18,088	16,238	14,970	16,219	15,088	16,127	15,251	14,585	10,843	14,865
India	19	29	20	15	35	45	73	64	96	60	76
Indonesia	266	196	163	144	871	871	714	877	1,109	123	173
Malaysia	6,163	4,448	4,146	3,479	3,557	18,770	3,027	2,725	2,854	2,077	3,796
Philippines	5,492	3,469	3,186	2,808	2,338	2,303	1,258	2,025	1,744	1,362	1,576
Singapore	3,368	1,769	1,300	1,302	1,495	1,539	1,981	1,846	1,473	1,039	1,685
South Korea	7,713	3,637	3,574	3,462	4,082	3,166	3,096	2,579	2,696	2,256	3,035
Taiwan	195	3,730	3,266	3,187	3,934	3,854	4,539	4,597	4,463	3,151	3,590
Thailand	2,146	811	584	575	616	648	911	6,019	6,426	775	934
All others	5,032	3,959	3,339	3,487	3,686	3,746	3,314	2,943	2,763	4,372	4,921

Appendix table 6-40

## U.S. trade in electronics products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Central Asia and Europe	12	6	3	3	4	4	6	4	15	6	10
Kazakhstan	0	0	0	0	0	0	0	1	0	0	0
Russia	10	5	3	2	3	3	4	3	13	5	9
Turkey	0	1	0	0	0	0	0	0	0	0	0
Ukraine	0	0	0	0	0	0	1	0	1	1	1
All others	1	1	0	0	1	0	1	1	1	0	0
Middle East and North Africa	645	314	395	410	458	370	510	246	173	2,158	277
Algeria	0	0	0	0	0	0	0	0	0	0	0
Egypt	0	0	0	0	0	0	0	0	0	0	0
Iran	0	0	0	0	0	0	0	0	0	0	0
Iraq	0	0	0	0	0	0	0	0	0	0	0
Israel	503	231	299	322	356	278	410	153	82	2,105	184
Morocco	141	1	96	88	101	91	99	3	2	53	92
Saudi Arabia	0	0	0	1	0	1	0	1	0	0	0
Tunisia	0	0	0	0	0	0	0	0	0	0	0
United Arab Emirates	0	1	0	0	0	1	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0
South and Central America	1,886	1,531	1,573	1,723	1,608	1,332	1,392	1,387	1,251	984	3,515
Argentina	0	0	0	0	0	0	0	0	1	0	0
Brazil	18	9	3	3	3	5	7	8	13	5	16
Chile	0	0	0	0	0	0	0	1	0	0	0
Colombia	1	7	0	0	0	2	0	0	0	1	0
Costa Rica	203	328	452	629	493	331	247	202	209	117	2,487
Mexico	1,662	1,185	1,117	1,088	1,110	992	1,132	1,170	1,023	858	1,007
Peru	0	0	0	0	0	0	0	0	1	0	0
Venezuela	0	0	0	0	0	0	0	0	0	0	0
All others	2	1	1	2	2	2	6	5	4	3	4
Sub-Saharan Africa	8	2	10	3	2	2	2	3	3	2	4
Angola	0	0	0	0	0	0	0	0	0	0	0
Congo (Kinshasa)	0	0	0	0	0	0	0	0	0	0	0
Ethiopia	0	0	0	0	0	0	0	0	0	0	0
Kenya	5	1	2	0	0	0	0	0	0	0	0
Nigeria	0	0	0	0	0	0	0	0	0	0	0
South Africa	2	1	1	1	1	1	1	1	2	1	1
Tanzania	0	0	0	0	0	0	0	0	0	0	0
Uganda	0	0	0	0	0	0	0	0	0	0	0
All others	1	1	7	1	1	1	1	1	0	0	2
Other developed	2,481	2,105	1,353	1,339	1,606	2,030	1,397	1,294	1,310	1,218	1,111
Australia	12	15	9	11	13	14	10	13	17	16	16
Canada	2,369	1,972	1,252	1,223	1,411	1,835	1,262	1,173	1,105	1,093	994
New Zealand	2	3	4	5	6	5	3	3	2	1	3
Norway	6	5	5	2	5	14	6	8	8	9	18
Switzerland	92	109	83	97	170	162	115	98	177	96	76
All others	0	1	0	0	1	0	0	0	0	3	4
Other developing	2	1	4	9	8	7	7	9	10	5	3
Afghanistan	0	0	0	0	0	0	0	0	0	0	0
Bangladesh	0	0	0	0	0	0	0	0	0	0	0
Burma	0	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	0	0	0	0
Laos	0	0	0	0	0	0	0	0	0	0	0
Nepal	0	0	0	0	0	0	0	0	0	0	0
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	0	0	0	0	0	0	0	0	0	0	0
Sri Lanka	0	0	0	0	0	0	0	0	0	0	0
Vietnam	0	0	1	7	3	3	3	4	4	4	3
All others	1	1	1	0	2	0	1	1	1	1	0



Appendix table 6-40

## U.S. trade in electronics products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Balance											
World	-2,894	3,153	16,155	21,440	20,869	20,977	25,469	23,770	25,289	16,397	18,175
EU	1,684	1,583	2,221	1,796	1,747	1,367	2,352	2,093	1,666	1,012	689
Belgium	30	1	2	18	23	46	37	58	111	23	29
Czech Republic	-10	5	44	29	30	45	42	18	10	2	-2
France	383	131	113	-27	-159	-206	-72	-44	137	151	186
Germany	-20	51	464	553	500	541	1,092	959	714	242	195
Hungary	-10	-3	67	15	23	66	70	50	94	90	28
Ireland	176	182	214	428	381	232	238	-271	-290	123	131
Italy	24	66	-68	-60	-53	-72	59	24	-210	-192	-165
Netherlands	266	266	514	363	278	354	312	273	215	214	186
Poland	6	4	5	14	29	13	4	-22	-48	-4	8
Portugal	-64	308	-197	-296	-225	-368	-257	767	642	60	1
Spain	48	37	66	47	56	60	87	84	51	38	47
Sweden	39	42	83	64	53	63	192	205	119	248	162
United Kingdom	875	653	830	697	948	505	435	244	185	153	149
All others	-60	-9	84	-49	-80	-25	27	-23	-65	-137	-269
Japan	-4,474	-1,694	131	61	-570	-872	-915	-1,285	-1,353	-888	-1,587
China	528	887	2,687	4,129	5,251	4,846	6,507	7,229	7,383	6,125	6,465
Asia-8	-5,465	-512	4,986	9,304	6,807	7,206	8,878	8,128	9,128	4,553	4,259
India	29	23	50	67	55	72	66	69	76	110	97
Indonesia	-187	-142	-125	-115	-829	-835	-680	-816	-1,058	-74	-99
Malaysia	-1,100	-815	780	2,955	2,016	-13,685	2,880	2,314	3,253	2,286	2,113
Philippines	-812	847	1,396	2,639	1,908	1,612	3,048	1,949	1,915	483	907
Singapore	-293	59	916	1,088	1,642	1,308	1,648	2,398	2,452	1,080	1,263
South Korea	-2,173	-527	355	1,324	619	1,678	2,142	1,291	598	429	-358
Taiwan	3,811	-682	1,297	1,018	-62	48	-224	60	794	-48	-267
Thailand	-28	726	318	327	748	898	527	-4,619	-5,179	288	604
All others	4,837	2,892	6,137	6,155	7,652	8,443	8,671	7,615	8,492	5,595	8,349
Central Asia and Europe	27	27	53	76	65	53	67	78	78	63	77
Kazakhstan	0	0	1	0	0	1	2	1	3	1	1
Russia	3	8	29	51	36	25	34	35	36	33	38
Turkey	22	16	18	20	24	22	26	34	28	22	26
Ukraine	1	2	2	3	2	2	1	3	3	0	1
All others	1	1	3	3	2	3	4	4	8	7	12
Middle East and North Africa	-198	11	-97	-120	59	55	-59	131	257	-1,836	52
Algeria	0	1	0	0	0	14	11	3	4	1	1
Egypt	5	11	7	3	3	9	10	6	6	5	6
Iran	0	0	0	0	0	0	0	0	0	2	0
Iraq	0	1	0	0	3	7	5	5	7	5	2
Israel	-117	41	-43	-81	97	71	-59	114	215	-1,930	34
Morocco	-135	0	-95	-86	-100	-90	-89	9	7	-48	-79
Saudi Arabia	5	9	5	8	10	11	13	17	23	25	23
Tunisia	1	0	0	1	0	1	1	0	1	4	2
United Arab Emirates	27	14	22	25	39	22	38	50	67	76	41
All others	17	16	7	9	7	11	12	16	16	24	23
South and Central America	3,617	2,726	4,840	4,826	5,568	6,185	6,352	5,481	6,188	5,921	6,178
Argentina	32	17	9	17	34	35	54	69	76	92	97
Brazil	653	507	647	632	669	689	685	645	883	912	1,351
Chile	27	19	30	33	34	52	55	49	33	30	31
Colombia	6	1	6	6	8	21	17	35	43	33	36
Costa Rica	16	-83	386	387	356	538	800	827	1,144	777	-1,811
Mexico	2,816	2,211	3,684	3,669	4,358	4,637	4,527	3,638	3,763	3,867	6,195
Peru	9	3	3	5	7	6	6	9	16	43	45
Venezuela	13	16	8	8	17	32	21	34	80	44	23
All others	45	36	66	69	87	176	186	176	149	124	212
Sub-Saharan Africa	16	20	13	26	23	66	58	47	27	27	24

Appendix table 6-40

## U.S. trade in electronics products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	0	0	0	0	0	1	1	0	2	1	1
Congo (Kinshasa)	0	0	0	0	1	0	0	0	0	0	1
Ethiopia	0	0	0	1	0	0	0	0	1	1	0
Kenya	-2	1	-1	1	1	10	1	1	3	1	1
Nigeria	0	1	1	1	1	0	1	6	3	2	2
South Africa	15	16	17	17	13	13	16	20	12	19	18
Tanzania	0	0	0	0	0	0	0	16	9	0	0
Uganda	0	0	0	0	0	0	0	0	0	0	0
All others	2	1	-3	6	7	41	40	19	6	3	2
Other developed	1,362	93	1,309	1,330	1,888	2,048	2,195	1,847	1,873	1,385	1,921
Australia	68	62	90	111	113	101	106	111	124	80	105
Canada	1,225	32	1,221	1,232	1,854	2,021	2,123	1,695	1,693	1,213	1,686
New Zealand	7	5	7	8	5	5	8	7	8	7	9
Norway	38	35	13	22	19	6	13	13	19	6	-3
Switzerland	24	-42	-23	-46	-103	-91	-57	20	28	80	127
All others	1	0	2	2	0	6	2	1	1	-1	-2
Other developing	14	15	20	17	49	35	57	32	70	36	97
Afghanistan	0	0	0	1	2	4	1	3	3	5	11
Bangladesh	0	0	1	0	0	0	0	0	0	1	0
Burma	2	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	0	0	0	0
Laos	0	0	0	0	0	0	0	0	0	0	0
Nepal	0	0	0	0	0	0	0	0	0	0	0
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	1	1	1	1	2	2	2	2	3	3	2
Sri Lanka	0	6	2	1	1	0	4	3	5	4	4
Vietnam	5	2	7	3	18	11	23	8	27	17	71
All others	4	3	2	4	8	6	3	6	5	5	9

NA = not available; not provided by Census Bureau

EU = European Union

NOTES: Technologies classified by U.S. Census. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies.

SOURCE: Census Bureau, Foreign Trade Statistics, Country and Product Trade Data, Advanced Technology Products, special tabulations (15 January 2011).

*Science and Engineering Indicators 2012*

Appendix table 6-41

## U.S. trade in life-sciences products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Exports</b>											
World	11,413	12,123	11,828	12,994	14,537	16,506	18,759	21,580	25,172	25,260	27,834
EU	4,988	5,489	5,238	5,731	6,306	7,040	8,129	9,278	10,830	10,785	11,016
Belgium	307	268	268	319	363	450	564	846	1,005	1,156	1,228
Czech Republic	13	17	18	23	33	40	43	57	62	62	62
France	603	633	658	684	741	746	855	947	977	887	1,041
Germany	1,188	1,310	1,374	1,638	1,641	1,768	2,043	2,296	2,479	2,497	2,607
Hungary	11	11	15	19	20	19	19	30	29	36	41
Ireland	209	318	180	157	209	221	293	225	268	376	223
Italy	342	365	388	354	423	516	510	510	556	547	728
Netherlands	837	859	851	876	996	1,184	1,430	1,692	2,600	2,441	2,159
Poland	28	24	18	25	31	48	49	71	88	83	111
Portugal	32	43	22	22	32	35	37	39	40	33	38
Spain	239	320	181	247	235	252	311	361	381	359	449
Sweden	197	231	238	278	301	345	442	509	537	673	636
United Kingdom	740	829	786	814	953	1,060	1,126	1,134	1,302	1,076	1,083
All others	241	262	241	275	328	356	408	560	507	560	610
Japan	1,917	1,918	1,710	1,793	2,072	2,195	2,358	2,480	2,819	2,676	3,392
China	532	653	714	952	1,023	1,170	1,240	1,441	1,781	2,021	2,435
Asia-8	991	931	957	1,076	1,242	1,512	1,659	1,991	2,128	2,183	2,603
India	98	134	144	164	250	262	298	381	437	448	511
Indonesia	17	17	12	11	9	17	23	28	44	41	58
Malaysia	45	63	61	51	70	72	82	99	105	112	143
Philippines	31	27	23	22	28	50	56	55	61	74	86
Singapore	155	129	152	178	192	230	304	373	465	515	606
South Korea	326	308	313	381	388	515	537	617	602	598	730
Taiwan	262	203	207	206	216	237	247	295	260	248	319
Thailand	57	50	44	62	88	128	114	143	154	147	150
All others	2,992	3,144	3,220	3,460	3,906	4,613	5,401	6,417	7,653	7,595	8,389
Central Asia and Europe	127	123	114	138	159	218	283	367	477	388	468
Kazakhstan	6	7	3	1	2	6	15	17	15	12	12
Russia	36	52	51	66	52	50	75	137	228	131	191
Turkey	68	49	42	54	86	136	141	161	174	183	204
Ukraine	2	3	8	5	10	6	12	15	22	22	17
All others	15	11	11	11	9	20	41	38	38	40	45
Middle East and North Africa	284	339	306	378	402	454	497	620	742	901	899
Algeria	1	3	4	6	10	10	5	18	16	14	21
Egypt	40	53	32	21	29	32	31	41	70	58	54
Iran	0	0	1	3	6	12	9	13	19	20	19
Iraq	0	5	0	1	18	23	24	38	27	54	51
Israel	94	87	95	110	120	99	119	124	134	135	153
Morocco	2	3	2	4	6	4	6	8	12	18	15
Saudi Arabia	68	104	95	119	103	122	131	137	185	264	224
Tunisia	4	2	2	2	2	5	5	6	5	14	11
United Arab Emirates	39	35	42	60	45	61	83	110	144	175	150
All others	37	48	36	54	65	89	90	131	131	148	202
South and Central America	994	978	946	900	1,104	1,418	1,674	2,026	2,492	2,424	2,840
Argentina	81	66	20	38	54	83	98	116	147	154	184
Brazil	297	280	252	194	234	328	406	537	686	671	819
Chile	46	47	48	46	62	79	92	89	105	107	121
Colombia	42	47	54	48	69	96	117	139	165	163	227
Costa Rica	13	14	21	54	49	60	65	55	49	74	104
Mexico	364	329	372	379	436	501	575	666	814	791	799
Peru	14	14	12	14	19	23	31	56	66	56	65
Venezuela	49	68	61	29	60	100	120	152	223	168	240
All others	88	112	104	97	120	148	169	215	237	241	281
Sub-Saharan Africa	62	62	77	88	102	149	159	194	201	214	228

Appendix table 6-41

## U.S. trade in life-sciences products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	1	1	1	2	2	5	6	16	12	16	12
Congo (Kinshasa)	0	0	0	0	0	0	0	0	1	0	1
Ethiopia	0	1	0	1	0	0	1	0	1	2	2
Kenya	2	1	3	2	6	5	4	6	5	5	5
Nigeria	1	4	6	3	3	6	10	12	18	15	19
South Africa	49	47	59	64	79	110	119	133	137	152	139
Tanzania	0	0	0	0	1	2	0	0	0	1	5
Uganda	0	0	0	1	2	1	1	2	1	1	1
All others	9	8	8	16	10	20	19	24	25	21	44
Other developed	1,485	1,594	1,728	1,888	2,067	2,255	2,648	3,068	3,571	3,511	3,747
Australia	308	345	334	342	393	429	558	616	783	800	863
Canada	873	908	1,060	1,172	1,319	1,433	1,619	1,855	2,027	1,930	2,122
New Zealand	39	39	30	39	48	59	53	67	77	85	91
Norway	45	47	50	62	53	66	104	151	139	145	133
Switzerland	217	253	246	266	249	261	309	367	536	540	517
All others	4	2	7	6	6	7	6	13	9	11	20
Other developing	40	47	48	68	72	119	140	141	170	157	207
Afghanistan	0	0	0	0	1	10	10	12	9	40	56
Bangladesh	4	2	3	3	7	13	10	7	11	13	17
Burma	1	0	0	1	0	0	1	0	1	1	2
Cambodia	0	1	0	0	0	0	1	1	1	1	1
Laos	0	0	0	0	0	0	0	0	0	1	0
Nepal	1	2	0	1	0	1	1	1	2	1	2
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	10	8	8	13	16	28	26	31	34	28	32
Sri Lanka	3	3	4	3	6	4	5	8	7	7	5
Vietnam	8	12	13	19	15	26	34	32	41	50	57
All others	6	7	6	10	12	10	18	16	21	16	35
Imports											
World	16,211	20,113	25,416	30,801	32,775	30,420	33,616	36,232	39,944	38,117	41,849
EU	10,807	13,940	18,022	21,278	22,788	20,683	22,359	23,675	26,828	25,047	27,162
Belgium	405	745	725	411	1,000	485	1,168	1,191	1,738	3,068	2,439
Czech Republic	8	15	15	20	33	39	42	50	73	60	49
France	491	931	1,418	1,901	1,865	1,561	1,400	1,432	1,695	1,563	1,818
Germany	2,432	2,565	2,644	2,995	4,236	3,379	3,569	3,727	3,411	3,218	3,508
Hungary	10	9	13	22	31	26	31	27	21	25	111
Ireland	4,744	7,061	10,229	12,691	11,697	11,981	11,905	12,749	14,672	12,611	14,555
Italy	470	363	386	399	498	402	398	392	434	478	413
Netherlands	372	451	518	556	740	726	789	786	786	743	804
Poland	1	2	2	1	3	6	11	20	22	30	30
Portugal	1	0	0	0	0	1	2	2	11	7	15
Spain	47	73	149	269	234	147	144	261	530	422	473
Sweden	98	96	121	122	156	159	211	214	203	184	188
United Kingdom	1,304	1,201	1,165	1,135	1,396	1,185	2,131	2,235	2,590	1,977	2,045
All others	425	429	637	755	898	584	556	577	643	661	714
Japan	1,690	1,770	1,801	1,903	2,007	2,159	2,135	2,332	2,103	1,919	2,227
China	358	368	450	498	594	405	625	794	1,085	1,270	1,518
Asia-8	520	593	1,217	1,818	1,875	1,013	1,335	1,360	1,461	1,714	1,886
India	43	83	112	159	189	233	321	381	509	501	709
Indonesia	0	0	0	1	1	2	2	2	1	4	10
Malaysia	17	14	15	18	26	0	58	61	56	62	102
Philippines	4	7	5	10	14	14	0	28	33	36	24
Singapore	311	352	925	1,433	1,411	528	680	679	613	807	638
South Korea	83	67	72	74	110	102	144	170	170	153	197
Taiwan	168	66	82	115	113	74	93	105	125	130	145
Thailand	0	4	5	9	12	20	25	1	1	20	62
All others	2,836	3,443	3,926	5,303	5,512	6,162	7,158	7,986	8,420	8,167	9,057

Appendix table 6-41

## U.S. trade in life-sciences products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Central Asia and Europe	16	18	22	29	32	42	48	55	68	55	71
Kazakhstan	0	0	0	0	0	0	0	0	0	0	0
Russia	14	14	19	26	29	35	36	36	45	42	47
Turkey	0	0	1	1	1	0	1	1	2	2	2
Ukraine	0	0	0	0	0	0	0	0	0	0	0
All others	2	3	2	3	2	6	11	1	20	10	21
Middle East and North Africa	318	350	440	505	564	490	479	506	529	457	503
Algeria	0	0	0	0	0	0	0	0	0	0	0
Egypt	0	0	0	0	0	0	0	0	0	0	0
Iran	0	0	0	0	0	0	0	0	0	0	0
Iraq	0	0	0	0	0	0	0	0	0	0	0
Israel	317	349	440	504	562	483	475	502	527	454	498
Morocco	0	0	0	0	0	0	0	0	0	0	2
Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0
Tunisia	0	0	0	0	0	0	0	0	0	0	0
United Arab Emirates	0	0	0	1	1	1	2	3	1	2	2
All others	0	0	0	0	1	2	1	0	1	1	1
South and Central America	1,334	1,543	1,821	2,382	2,563	2,730	3,166	3,545	3,876	3,894	4,431
Argentina	5	3	2	2	3	2	3	3	3	4	4
Brazil	3	3	4	3	3	8	7	12	14	17	18
Chile	0	0	0	0	0	0	1	0	1	0	0
Colombia	0	1	1	1	0	0	3	0	0	0	1
Costa Rica	176	285	352	464	474	512	561	616	728	694	699
Mexico	793	895	1,113	1,480	1,695	1,831	2,234	2,586	2,786	2,828	3,215
Peru	0	0	0	0	0	0	0	0	0	1	0
Venezuela	0	0	1	0	0	2	8	0	1	1	0
All others	356	356	349	433	388	375	349	328	342	348	495
Sub-Saharan Africa	11	4	7	7	9	13	12	13	15	21	24
Angola	0	0	0	0	0	0	0	0	0	0	0
Congo (Kinshasa)	0	0	0	0	0	0	0	0	0	0	0
Ethiopia	0	0	0	0	0	0	0	0	0	0	0
Kenya	0	0	0	0	0	0	0	0	0	0	0
Nigeria	0	0	0	0	0	0	0	0	0	0	0
South Africa	11	3	7	7	9	13	11	13	14	19	22
Tanzania	0	0	0	0	0	0	0	0	0	0	0
Uganda	0	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	1	2	1
Other developed	1,133	1,506	1,608	2,352	2,307	2,853	3,419	3,803	3,827	3,649	3,940
Australia	88	85	107	127	165	259	333	412	446	411	494
Canada	386	521	578	824	781	779	1,187	1,727	1,380	1,165	883
New Zealand	26	32	40	40	58	67	78	90	105	107	110
Norway	35	29	46	34	41	64	87	87	79	70	80
Switzerland	588	829	824	1,304	1,234	1,651	1,688	1,445	1,776	1,863	2,334
All others	10	11	14	23	28	33	44	42	42	33	40
Other developing	24	23	28	27	37	34	35	64	105	91	88
Afghanistan	0	0	0	0	0	0	0	0	0	0	0
Bangladesh	0	0	0	0	0	0	0	0	0	1	1
Burma	0	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	0	0	0	0
Laos	0	0	0	0	0	0	0	0	0	0	0
Nepal	0	0	0	0	0	0	0	0	0	0	0
North Korea	0	0	0	0	1	0	NA	NA	NA	NA	NA
Pakistan	24	23	27	26	30	31	32	42	54	52	49
Sri Lanka	0	0	0	0	0	0	1	0	0	0	0
Vietnam	0	0	0	0	1	0	1	10	25	37	37
All others	0	0	0	0	2	1	1	1	1	1	1

Appendix table 6-41

## U.S. trade in life-sciences products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Balance											
World	-4,797	-7,990	-13,589	-17,806	-18,238	-13,915	-14,857	-14,652	-14,772	-12,857	-14,015
EU	-5,819	-8,450	-12,785	-15,547	-16,481	-13,642	-14,230	-14,397	-15,997	-14,262	-16,146
Belgium	-98	-477	-457	-91	-637	-36	-604	-345	-733	-1,912	-1,211
Czech Republic	5	2	3	3	0	1	1	7	-10	2	13
France	112	-298	-760	-1,217	-1,124	-815	-546	-485	-718	-676	-777
Germany	-1,244	-1,255	-1,271	-1,357	-2,595	-1,611	-1,526	-1,431	-932	-721	-901
Hungary	1	2	2	-4	-12	-6	-12	3	8	11	-70
Ireland	-4,535	-6,743	-10,049	-12,534	-11,487	-11,760	-11,612	-12,524	-14,405	-12,235	-14,332
Italy	-128	2	2	-45	-75	114	112	118	122	69	315
Netherlands	465	408	333	320	256	459	641	906	1,815	1,698	1,355
Poland	27	22	16	24	28	42	38	50	66	53	81
Portugal	31	43	22	22	32	33	35	37	29	26	23
Spain	192	246	32	-22	0	105	166	100	-149	-63	-24
Sweden	99	135	118	157	145	186	231	294	334	489	448
United Kingdom	-563	-372	-380	-321	-443	-125	-1,005	-1,100	-1,289	-901	-962
All others	-183	-166	-396	-480	-570	-228	-148	-17	-136	-101	-104
Japan	227	148	-91	-109	65	35	223	148	717	757	1,165
China	173	285	265	454	429	765	615	648	696	751	917
Asia-8	472	338	-260	-742	-633	499	324	631	667	469	717
India	55	51	32	5	61	29	-24	0	-72	-53	-198
Indonesia	17	17	12	10	9	15	21	26	43	37	48
Malaysia	29	49	46	33	44	72	24	38	49	50	41
Philippines	27	20	18	12	15	36	56	28	28	38	62
Singapore	-156	-223	-773	-1,255	-1,219	-298	-376	-305	-148	-292	-32
South Korea	244	241	240	307	278	413	393	447	432	445	533
Taiwan	94	137	125	92	104	163	153	190	135	118	174
Thailand	57	46	39	53	76	108	89	142	153	127	88
All others	156	-299	-706	-1,843	-1,606	-1,549	-1,757	-1,569	-766	-572	-688
Central Asia and Europe	111	105	93	108	127	176	235	312	409	333	397
Kazakhstan	6	7	3	1	2	6	15	17	15	12	12
Russia	22	38	31	41	23	15	39	101	182	89	144
Turkey	68	49	41	54	86	135	140	160	172	181	202
Ukraine	2	3	8	5	9	6	12	14	22	22	17
All others	13	8	9	8	7	14	30	37	18	30	24
Middle East and North Africa	-34	-10	-134	-127	-162	-36	18	115	213	444	396
Algeria	1	3	4	6	10	10	5	18	16	14	21
Egypt	40	53	32	21	29	32	31	41	70	58	54
Iran	0	0	1	3	6	12	9	13	19	20	19
Iraq	0	5	0	1	18	23	24	38	27	54	51
Israel	-224	-263	-345	-394	-442	-384	-356	-379	-392	-319	-345
Morocco	2	3	2	4	6	4	6	8	12	18	13
Saudi Arabia	68	104	95	119	103	122	131	137	185	264	224
Tunisia	4	2	2	2	2	5	5	6	5	14	11
United Arab Emirates	39	35	42	59	43	60	82	108	143	173	148
All others	37	48	35	53	64	87	89	131	130	147	201
South and Central America	-340	-564	-874	-1,483	-1,460	-1,312	-1,492	-1,519	-1,383	-1,470	-1,591
Argentina	76	63	18	36	51	81	95	114	144	150	180
Brazil	294	277	249	191	230	320	399	525	672	654	801
Chile	46	47	48	46	62	78	91	89	105	107	121
Colombia	42	47	54	48	69	96	114	139	165	163	226
Costa Rica	-164	-271	-330	-410	-424	-452	-496	-560	-679	-620	-595
Mexico	-429	-567	-741	-1,101	-1,260	-1,330	-1,659	-1,920	-1,972	-2,037	-2,416
Peru	14	14	12	14	19	23	31	56	66	55	65
Venezuela	49	67	61	29	60	98	112	152	222	167	240
All others	-268	-243	-245	-335	-267	-227	-179	-112	-105	-107	-214
Sub-Saharan Africa	52	58	70	81	93	136	147	181	187	193	204

Appendix table 6-41

## U.S. trade in life-sciences products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	1	1	1	2	2	5	6	16	12	16	12
Congo (Kinshasa)	0	0	0	0	0	0	0	0	1	0	1
Ethiopia	0	1	0	1	0	0	1	0	1	2	2
Kenya	2	1	3	2	6	5	4	6	5	5	5
Nigeria	1	4	6	3	3	6	10	11	18	15	19
South Africa	38	44	52	57	70	97	108	121	123	133	117
Tanzania	0	0	0	0	1	2	0	0	0	1	5
Uganda	0	0	0	1	2	1	1	2	1	1	1
All others	8	8	8	16	10	20	19	24	25	19	43
Other developed	352	88	119	-463	-240	-599	-771	-734	-256	-138	-193
Australia	220	260	227	215	228	169	225	204	337	389	369
Canada	486	387	483	348	537	654	431	128	648	765	1,239
New Zealand	13	8	-11	0	-10	-8	-25	-23	-27	-22	-19
Norway	10	17	4	28	12	2	17	64	60	75	53
Switzerland	-371	-575	-577	-1,038	-985	-1,390	-1,380	-1,078	-1,240	-1,323	-1,817
All others	-6	-9	-7	-17	-22	-27	-38	-29	-33	-22	-20
Other developing	15	24	20	42	36	86	104	77	65	66	119
Afghanistan	0	0	0	0	1	10	10	12	9	40	56
Bangladesh	4	2	3	3	7	13	10	7	11	12	16
Burma	1	0	0	1	0	0	1	0	1	1	2
Cambodia	0	1	0	0	0	0	1	1	1	1	1
Laos	0	0	0	0	0	0	0	0	0	1	0
Nepal	1	2	0	1	0	1	1	1	2	1	2
North Korea	0	0	0	0	-1	0	NA	NA	NA	NA	NA
Pakistan	-14	-15	-19	-13	-14	-3	-6	-10	-19	-24	-17
Sri Lanka	3	3	4	3	6	4	4	7	7	7	5
Vietnam	8	12	12	19	13	26	34	22	17	13	20
All others	5	7	6	9	10	9	16	16	20	15	34

NA = not available; not provided by Census Bureau

EU = European Union

NOTES: Technologies classified by U.S. Census. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies.

SOURCE: Census Bureau, Foreign Trade Statistics, Country and Product Trade Data, Advanced Technology Products, special tabulations (15 January 2011).

*Science and Engineering Indicators 2012*

Appendix table 6-42

## U.S. trade in optoelectronics products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Exports</b>											
World	3,815	3,091	2,430	2,467	3,525	4,583	5,033	5,379	5,000	4,484	6,178
EU	1,415	1,227	737	728	959	1,460	1,545	1,654	1,746	1,432	1,951
Belgium	9	14	16	41	55	69	59	66	83	79	82
Czech Republic	2	1	3	3	3	4	6	19	8	8	39
France	114	80	58	62	92	102	118	88	116	115	157
Germany	398	485	294	238	338	506	534	714	732	761	1,008
Hungary	1	2	3	2	1	2	5	3	5	4	5
Ireland	30	27	19	52	47	120	52	24	27	7	10
Italy	134	132	48	65	46	84	73	71	104	120	156
Netherlands	130	109	120	126	195	321	377	357	255	117	222
Poland	2	3	4	3	6	6	8	10	10	7	12
Portugal	2	1	1	2	4	8	10	6	17	15	8
Spain	16	31	24	18	17	27	54	72	159	26	58
Sweden	25	47	10	5	8	13	22	23	28	26	17
United Kingdom	516	243	102	83	112	144	164	143	154	110	116
All others	34	53	33	27	35	56	61	56	48	36	59
Japan	557	483	348	346	545	845	778	774	576	307	452
China	135	181	185	219	266	317	363	446	369	291	561
Asia-8	921	623	542	454	992	946	1,252	1,281	844	756	1,399
India	12	44	10	16	11	24	28	49	28	44	61
Indonesia	3	0	1	1	1	0	1	1	2	1	3
Malaysia	100	34	31	31	41	55	99	60	84	35	51
Philippines	69	30	12	5	16	11	10	11	7	5	17
Singapore	140	102	97	112	184	130	187	186	206	109	263
South Korea	133	148	86	93	190	221	400	325	275	184	331
Taiwan	453	255	295	180	515	468	492	608	212	355	645
Thailand	12	9	10	16	33	35	35	41	30	22	28
All others	787	577	620	721	763	1,015	1,097	1,225	1,467	1,698	1,815
Central Asia and Europe	10	5	9	10	14	21	22	34	35	27	37
Kazakhstan	0	0	0	0	0	0	1	0	2	0	1
Russia	0	1	2	5	9	8	11	11	7	7	24
Turkey	9	3	6	4	4	12	8	19	18	12	10
Ukraine	0	0	0	0	0	0	1	1	3	4	1
All others	1	1	1	1	1	1	2	2	5	4	2
Middle East and North Africa	66	74	34	50	61	80	90	131	133	136	165
Algeria	93	0	0	0	0	0	1	0	0	0	0
Egypt	4	2	1	4	1	3	4	9	1	1	6
Iran	0	0	0	0	0	0	0	0	0	0	0
Iraq	0	0	0	0	1	4	2	5	6	8	15
Israel	51	65	26	37	45	49	55	88	76	60	58
Morocco	2	0	1	0	0	0	0	0	1	5	4
Saudi Arabia	1	1	2	2	1	5	7	7	18	25	20
Tunisia	0	0	0	0	0	0	0	0	3	1	0
United Arab Emirates	2	4	3	4	9	12	13	12	18	27	41
All others	6	2	2	4	3	6	8	10	10	8	20
South and Central America	334	187	218	365	329	473	498	603	774	991	808
Argentina	5	5	1	3	4	22	10	12	10	13	12
Brazil	101	22	23	19	19	45	62	83	80	53	95
Chile	3	3	8	12	8	17	20	16	17	14	21
Colombia	3	5	5	4	6	12	17	22	35	32	17
Costa Rica	2	3	2	2	2	4	5	4	6	7	13
Mexico	167	130	158	312	273	320	325	372	508	788	547
Peru	1	1	4	2	3	5	11	10	13	28	35
Venezuela	5	4	2	1	3	9	11	26	26	13	11
All others	46	14	14	12	11	39	36	58	79	44	55
Sub-Saharan Africa	16	11	12	15	17	26	18	19	36	26	26



Appendix table 6-42

## U.S. trade in optoelectronics products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	0	0	0	0	0	0	0	2	4	1	1
Congo (Kinshasa)	0	0	0	0	0	0	0	0	0	0	0
Ethiopia	0	0	0	0	0	0	0	0	0	0	0
Kenya	0	0	1	3	3	1	1	1	1	1	2
Nigeria	0	0	1	0	0	5	3	1	9	7	5
South Africa	15	10	9	9	12	12	12	10	12	10	8
Tanzania	0	0	0	0	0	0	0	1	2	1	2
Uganda	0	6	0	1	0	0	0	0	1	1	0
All others	1	0	1	2	1	8	1	4	8	5	7
Other developed	358	299	341	277	331	404	457	416	469	483	726
Australia	38	25	28	26	43	39	47	44	63	51	39
Canada	291	248	289	224	253	315	340	312	358	397	644
New Zealand	2	3	3	3	3	7	7	4	5	6	6
Norway	5	6	4	4	4	17	25	15	9	4	10
Switzerland	22	18	17	21	28	25	37	40	34	25	27
All others	0	0	0	0	0	1	1	1	0	0	0
Other developing	2	2	5	3	10	10	11	22	20	35	53
Afghanistan	0	0	0	0	0	0	1	3	3	11	28
Bangladesh	0	0	1	1	0	0	0	1	0	0	0
Burma	0	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	1	0	0	0
Laos	0	1	0	0	0	0	0	0	0	0	0
Nepal	0	0	0	0	0	0	0	0	0	0	0
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	0	0	1	1	7	1	2	7	9	10	4
Sri Lanka	0	0	0	0	0	0	0	1	1	0	0
Vietnam	0	0	1	0	1	1	1	2	2	6	17
All others	1	1	2	1	1	6	6	6	3	8	3
Imports											
World	5,823	5,607	5,447	5,256	7,802	12,149	19,584	24,964	25,566	23,290	25,936
EU	351	407	455	664	677	822	770	957	988	695	918
Belgium	14	11	24	57	44	54	19	12	11	8	11
Czech Republic	1	1	4	4	6	3	4	6	6	5	11
France	53	44	48	38	29	38	33	42	48	47	79
Germany	90	108	117	118	137	298	356	507	589	372	462
Hungary	4	19	49	60	52	55	55	43	30	8	6
Ireland	2	5	11	8	12	12	9	6	4	5	4
Italy	16	16	17	24	31	38	41	36	31	25	36
Netherlands	32	61	80	235	223	159	72	67	45	25	44
Poland	0	0	0	0	0	1	1	3	1	2	2
Portugal	3	0	4	4	1	2	4	12	7	4	4
Spain	7	10	6	3	6	4	2	15	14	4	6
Sweden	11	15	24	27	34	27	24	20	34	36	41
United Kingdom	106	97	48	58	66	91	102	137	124	113	153
All others	14	15	23	28	33	41	48	60	45	41	57
Japan	2,042	1,654	1,392	1,354	1,627	1,625	1,332	1,266	1,225	796	1,094
China	1,492	1,663	1,936	1,288	1,664	2,770	4,448	5,852	6,665	6,563	7,573
Asia-8	1,084	1,023	974	1,094	1,373	1,553	2,347	1,972	1,238	1,346	1,806
India	7	8	12	5	6	6	19	29	15	14	37
Indonesia	148	138	115	61	1	1	0	1	3	31	38
Malaysia	365	286	298	215	135	41	254	101	80	101	335
Philippines	38	54	51	60	67	77	17	123	213	224	113
Singapore	200	134	99	102	124	132	153	170	194	195	313
South Korea	88	150	206	283	502	418	511	383	121	67	93
Taiwan	11,376	109	81	258	294	355	596	894	438	216	332
Thailand	7	145	119	109	173	330	753	33	25	499	546
All others	854	860	684	856	2,455	5,355	10,616	14,844	15,214	13,890	14,545



Appendix table 6-42

## U.S. trade in optoelectronics products, by region/country/economy: 2000-10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Balance											
World	-2,008	-2,516	-3,017	-2,789	-4,277	-7,566	-14,551	-19,586	-20,566	-18,806	-19,758
EU	1,064	820	282	64	283	638	775	697	758	737	1,033
Belgium	-5	3	-8	-15	12	15	41	54	72	71	71
Czech Republic	1	0	-1	-1	-3	2	2	13	2	3	28
France	61	36	11	24	63	64	84	45	68	68	78
Germany	308	377	176	120	201	208	178	208	143	389	546
Hungary	-3	-17	-46	-58	-51	-53	-50	-39	-25	-4	-1
Ireland	29	22	7	44	35	108	43	18	23	2	6
Italy	118	116	31	41	15	46	32	35	72	95	120
Netherlands	98	48	40	-109	-28	162	305	290	210	92	178
Poland	2	3	4	3	6	5	7	8	8	5	10
Portugal	-1	1	-2	-2	4	5	7	-6	10	11	4
Spain	9	21	19	15	11	22	51	57	145	22	52
Sweden	14	31	-15	-21	-26	-14	-2	3	-6	-10	-24
United Kingdom	411	146	55	25	45	53	62	6	30	-3	-37
All others	20	37	11	-1	3	15	13	-3	4	-5	2
Japan	-1,484	-1,171	-1,044	-1,008	-1,082	-780	-555	-492	-649	-489	-642
China	-1,357	-1,482	-1,751	-1,069	-1,398	-2,452	-4,084	-5,406	-6,296	-6,272	-7,012
Asia-8	-163	-400	-432	-640	-381	-607	-1,095	-690	-394	-590	-407
India	5	36	-2	11	6	18	9	20	13	30	24
Indonesia	-144	-137	-114	-61	0	0	1	0	-1	-30	-35
Malaysia	-265	-252	-267	-185	-94	14	-155	-42	3	-66	-284
Philippines	30	-23	-39	-55	-51	-66	-7	-112	-205	-219	-96
Singapore	-59	-31	-2	10	60	-1	34	16	12	-86	-50
South Korea	45	-2	-120	-190	-312	-197	-111	-58	153	117	238
Taiwan	-10,923	146	215	-78	221	113	-105	-286	-226	139	313
Thailand	4	-136	-109	-93	-140	-294	-718	8	5	-477	-518
All others	-68	-283	-65	-135	-1,692	-4,340	-9,519	-13,618	-13,746	-12,192	-12,730
Central Asia and Europe	9	4	8	9	12	16	19	27	28	22	32
Kazakhstan	0	0	0	0	0	0	1	0	2	0	1
Russia	-1	0	2	4	8	4	9	6	3	4	21
Turkey	9	1	6	4	4	12	8	19	17	11	9
Ukraine	0	0	0	0	0	0	1	1	3	4	1
All others	0	0	1	1	0	1	1	1	3	2	1
Middle East and North Africa	-89	-65	-79	-19	-72	-38	-90	-24	3	-40	-15
Algeria	93	0	0	0	0	0	1	0	0	0	0
Egypt	4	2	1	4	1	3	3	9	1	1	6
Iran	0	0	0	0	0	-4	0	0	0	0	0
Iraq	-155	-139	-112	-69	-132	-114	-177	-150	-124	8	15
Israel	51	65	26	37	45	49	55	88	75	-116	-121
Morocco	2	0	1	0	0	0	0	0	1	5	4
Saudi Arabia	1	1	2	2	1	5	7	7	18	25	20
Tunisia	0	0	0	0	0	0	0	0	3	1	0
United Arab Emirates	2	4	3	3	9	12	13	11	18	27	41
All others	6	2	2	4	3	6	8	9	10	8	20
South and Central America	-183	-386	-223	-273	-1,821	-4,492	-9,675	-13,560	-13,867	-12,403	-13,180
Argentina	5	4	1	2	4	21	10	9	7	11	9
Brazil	97	17	22	16	18	44	61	80	76	49	94
Chile	2	3	8	12	7	17	20	16	17	14	21
Colombia	3	5	5	4	6	12	17	21	34	31	17
Costa Rica	1	3	2	2	2	4	5	4	6	7	13
Mexico	-335	-430	-274	-316	-1,867	-4,637	-9,839	-13,775	-14,115	-12,591	-13,425
Peru	1	1	4	1	1	5	11	10	13	28	35
Venezuela	5	4	2	1	1	9	11	26	26	13	11
All others	36	6	8	4	5	32	29	49	69	37	44
Sub-Saharan Africa	16	11	11	13	16	24	15	18	34	25	24

Appendix table 6-42

## U.S. trade in optoelectronics products, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	0	0	0	0	0	0	0	2	4	1	1
Congo (Kinshasa)	0	0	0	0	0	0	0	0	0	0	0
Ethiopia	0	0	0	0	0	0	0	0	0	0	0
Kenya	0	0	0	3	3	1	1	1	1	1	2
Nigeria	0	0	1	0	0	5	3	1	9	7	5
South Africa	15	10	8	7	11	10	10	9	11	9	7
Tanzania	0	0	0	0	0	0	0	1	2	1	2
Uganda	0	6	0	1	0	0	0	0	1	1	0
All others	1	0	1	2	1	8	1	3	8	5	7
Other developed	178	152	214	135	165	140	208	94	183	245	481
Australia	36	23	20	20	41	25	31	37	56	44	32
Canada	213	181	208	134	164	187	238	101	193	230	505
New Zealand	2	2	3	2	1	6	5	2	3	4	4
Norway	4	4	3	2	3	16	22	13	7	3	8
Switzerland	-78	-58	-20	-23	-43	-95	-87	-59	-76	-36	-68
All others	0	-1	-1	0	-1	0	0	0	0	0	0
Other developing	1	2	5	2	9	10	4	-172	-127	-40	-73
Afghanistan	0	0	0	0	0	0	1	3	3	11	28
Bangladesh	0	0	1	1	0	0	0	1	0	0	0
Burma	0	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	1	0	0	0
Laos	0	1	0	0	0	0	0	0	0	0	0
Nepal	0	0	0	0	0	0	0	0	0	0	0
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	0	0	1	1	7	1	2	7	9	10	4
Sri Lanka	0	0	0	0	0	0	0	1	1	0	0
Vietnam	0	0	0	0	0	1	-3	-95	-72	-68	-109
All others	0	1	2	1	1	6	6	6	3	8	3

NA = not available; not provided by Census Bureau

EU = European Union

NOTES: Technologies classified by U.S. Census. China includes Hong Kong. Detail may not add to total because of rounding or minor discrepancies.

SOURCE: Census Bureau, Foreign Trade Statistics, Country and Product Trade Data, Advanced Technology Products, special tabulations (15 January 2011).

*Science and Engineering Indicators 2012*

Appendix table 6-43

## U.S. trade in advanced materials, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Exports</b>											
World	2,575	2,191	1,088	1,036	1,134	1,152	1,401	1,666	1,893	1,707	2,162
EU	749	573	255	277	335	324	356	435	473	370	539
Belgium	9	9	2	8	18	17	9	14	8	2	4
Czech Republic	1	1	1	2	3	4	2	2	3	2	7
France	173	68	20	14	24	23	31	52	64	48	64
Germany	122	131	96	92	97	92	87	82	79	66	86
Hungary	0	0	0	0	0	0	1	2	3	2	1
Ireland	46	46	26	31	43	46	41	46	55	33	12
Italy	19	16	16	26	31	20	30	41	52	50	65
Netherlands	79	60	16	34	26	21	15	23	34	50	59
Poland	2	1	1	1	2	4	6	21	36	25	26
Portugal	0	2	1	0	0	0	0	0	1	0	43
Spain	17	10	15	11	3	4	23	31	24	18	25
Sweden	9	19	6	3	7	6	8	7	6	7	5
United Kingdom	259	193	40	42	46	40	49	51	52	36	84
All others	13	18	16	14	34	48	54	64	55	28	59
Japan	372	296	239	198	159	138	157	196	151	163	169
China	122	462	84	116	99	85	161	267	328	282	262
Asia-8	266	206	201	218	246	189	237	325	358	246	347
India	2	11	7	8	7	4	3	7	9	8	5
Indonesia	3	1	1	6	4	2	3	4	7	5	5
Malaysia	21	15	13	12	20	12	18	19	24	17	41
Philippines	4	4	6	1	1	0	1	1	24	1	1
Singapore	105	47	53	65	63	50	47	70	68	47	85
South Korea	56	49	39	55	69	65	78	136	121	92	96
Taiwan	74	74	77	69	80	51	70	72	88	63	102
Thailand	1	5	4	2	3	4	17	17	17	13	12
All others	1,065	655	310	228	297	419	491	447	592	646	844
Central Asia and Europe	3	3	5	9	19	16	22	34	45	22	46
Kazakhstan	0	0	0	0	3	0	0	0	0	0	0
Russia	2	0	4	6	11	9	14	23	27	10	23
Turkey	0	0	1	3	4	7	7	7	14	8	16
Ukraine	0	0	0	0	0	0	0	3	2	1	2
All others	1	2	0	0	0	0	1	1	2	3	5
Middle East and North Africa	63	64	55	38	31	31	36	44	50	88	190
Algeria	0	1	0	1	0	0	0	0	2	3	1
Egypt	4	4	8	0	1	1	1	0	0	0	1
Iran	0	0	0	0	0	0	0	0	0	0	0
Iraq	0	0	0	0	0	1	1	1	0	0	1
Israel	56	53	38	32	23	22	25	29	36	51	49
Morocco	0	0	2	3	2	0	0	0	0	0	0
Saudi Arabia	1	3	2	1	2	2	7	7	4	7	10
Tunisia	0	0	1	0	0	0	0	0	0	0	0
United Arab Emirates	1	1	3	0	2	4	2	4	5	19	72
All others	1	1	1	0	1	1	1	3	2	8	57
South and Central America	342	181	116	83	132	251	257	176	270	311	357
Argentina	29	29	0	0	1	2	1	2	2	2	2
Brazil	107	47	4	2	4	4	7	7	13	9	20
Chile	5	2	1	1	0	1	3	2	4	6	4
Colombia	5	5	2	4	3	3	11	18	28	9	9
Costa Rica	1	1	4	1	1	2	4	4	8	8	9
Mexico	108	81	99	67	116	221	197	120	186	246	278
Peru	3	1	0	1	1	1	1	5	4	1	3
Venezuela	71	7	2	1	2	2	6	5	6	4	4
All others	12	8	4	5	4	14	27	12	18	26	28
Sub-Saharan Africa	3	1	1	2	4	4	1	6	44	48	14

Appendix table 6-43

## U.S. trade in advanced materials, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	0	0	0	0	0	0	0	0	0	0	1
Congo (Kinshasa)	0	0	0	0	0	0	0	0	0	0	0
Ethiopia	0	0	0	0	0	0	0	0	0	0	0
Kenya	0	0	0	0	0	0	0	1	0	1	0
Nigeria	0	0	0	0	0	0	0	3	0	1	3
South Africa	2	0	0	2	2	2	1	1	39	38	6
Tanzania	0	0	0	0	0	0	0	0	0	0	0
Uganda	0	0	0	0	0	0	0	0	0	0	0
All others	1	0	0	0	3	1	1	0	4	8	4
Other developed	650	383	132	93	105	110	170	174	161	168	225
Australia	30	31	10	6	11	9	58	62	19	17	21
Canada	612	347	117	82	89	95	105	103	129	140	187
New Zealand	1	1	0	1	0	1	1	1	1	2	1
Norway	1	1	2	3	1	3	2	4	4	2	8
Switzerland	5	4	3	2	3	3	5	5	8	7	8
All others	0	0	0	0	0	0	0	0	0	0	0
Other developing	5	23	2	4	5	6	6	14	23	9	12
Afghanistan	0	0	0	0	0	0	0	0	1	1	1
Bangladesh	0	0	0	0	0	0	0	0	0	0	0
Burma	0	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	0	0	0	0
Laos	0	0	0	0	0	0	0	0	0	0	0
Nepal	0	0	0	0	0	0	0	0	0	0	0
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	0	0	0	0	0	1	1	2	2	1	1
Sri Lanka	0	0	0	0	0	0	0	0	0	0	0
Vietnam	0	0	0	2	2	2	2	5	8	6	8
All others	5	23	1	1	0	1	1	2	5	0	1
Imports											
World	2,707	2,436	1,468	1,511	1,794	1,803	2,176	2,379	2,255	1,506	1,997
EU	638	668	394	369	392	429	530	538	419	310	411
Belgium	3	3	1	2	2	1	1	1	2	2	3
Czech Republic	6	4	7	8	8	11	15	19	21	14	17
France	66	71	61	68	83	102	154	142	92	79	114
Germany	289	280	193	184	175	182	219	200	172	112	145
Hungary	0	0	0	0	0	2	1	1	0	0	1
Ireland	2	2	0	1	2	27	1	3	2	0	0
Italy	6	16	17	13	24	19	31	24	25	14	24
Netherlands	27	45	12	13	15	15	11	23	12	11	13
Poland	1	1	1	0	1	1	1	1	2	2	5
Portugal	0	0	0	1	0	2	3	1	5	0	0
Spain	0	4	0	1	1	1	1	2	1	0	0
Sweden	1	3	2	1	1	1	1	1	2	1	2
United Kingdom	106	104	42	31	33	24	34	51	32	27	30
All others	131	135	57	48	47	45	58	71	54	47	57
Japan	862	776	656	714	841	846	960	1,157	1,099	650	837
China	80	75	41	76	98	85	119	124	151	111	167
Asia-8	371	503	244	229	270	228	273	307	246	161	297
India	21	26	3	3	2	4	4	2	5	4	2
Indonesia	11	3	1	2	1	1	1	2	7	3	7
Malaysia	75	43	33	27	35	205	36	41	44	18	39
Philippines	2	6	4	1	1	0	5	1	0	2	0
Singapore	26	32	31	35	48	23	28	35	33	25	49
South Korea	132	306	118	108	119	117	143	156	102	51	120
Taiwan	63	79	53	51	58	47	49	57	50	51	70
Thailand	26	8	1	1	2	2	5	30	42	7	10
All others	756	414	133	127	193	215	295	253	342	273	285



Appendix table 6-43

## U.S. trade in advanced materials, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Balance											
World	-133	-245	-380	-475	-660	-651	-774	-713	-362	201	165
EU	111	-96	-138	-91	-57	-105	-174	-104	54	60	128
Belgium	6	7	2	6	16	16	8	13	6	0	1
Czech Republic	-4	-3	-6	-5	-5	-7	-13	-17	-18	-12	-10
France	107	-3	-41	-54	-59	-79	-124	-90	-28	-31	-50
Germany	-167	-149	-97	-92	-78	-90	-133	-118	-93	-46	-59
Hungary	0	0	0	0	0	-2	0	1	3	2	0
Ireland	44	44	25	30	41	19	40	43	54	33	12
Italy	13	0	-1	13	7	1	-1	17	26	36	41
Netherlands	51	15	5	21	11	6	4	0	22	39	46
Poland	1	0	0	0	1	3	4	19	34	23	21
Portugal	0	2	1	-1	0	-2	-3	-1	-4	0	43
Spain	16	5	15	10	2	3	23	29	23	18	25
Sweden	8	16	4	3	6	5	7	6	4	6	3
United Kingdom	153	88	-2	12	13	15	15	-1	20	9	54
All others	-118	-117	-41	-34	-13	4	-4	-6	1	-19	2
Japan	-490	-480	-417	-516	-682	-709	-803	-961	-948	-487	-668
China	42	386	43	41	1	-1	42	143	177	171	95
Asia-8	-104	-297	-44	-11	-24	-39	-36	18	112	85	50
India	-20	-14	5	5	4	0	-1	5	4	4	3
Indonesia	-8	-3	0	4	3	1	2	2	0	2	-2
Malaysia	-54	-29	-20	-16	-14	-192	-18	-22	-21	-1	2
Philippines	2	-1	2	0	0	0	-4	0	24	-1	1
Singapore	79	15	22	31	15	28	19	35	36	22	36
South Korea	-76	-257	-79	-53	-50	-51	-65	-21	19	41	-24
Taiwan	11	-5	24	18	22	4	21	15	38	12	32
Thailand	-25	-3	3	1	1	2	12	-13	-25	6	2
All others	309	242	177	102	104	203	197	194	251	373	559
Central Asia and Europe	-8	-14	0	3	11	13	16	26	40	17	41
Kazakhstan	0	0	0	0	3	0	0	0	0	0	0
Russia	-3	-4	0	2	4	6	11	18	25	8	21
Turkey	-6	-90	0	2	4	7	6	7	13	8	16
Ukraine	0	0	0	0	0	0	0	2	1	1	2
All others	0	0	0	0	-1	0	0	-2	0	1	3
Middle East and North Africa	51	53	48	29	18	29	35	35	41	64	186
Algeria	0	1	0	1	0	0	0	0	2	3	1
Egypt	4	4	8	0	1	1	1	0	0	0	1
Iran	0	0	0	0	0	0	0	0	0	0	0
Iraq	0	0	0	0	0	1	1	1	0	0	1
Israel	50	48	31	24	12	21	23	20	28	27	45
Morocco	0	-82	2	3	2	0	0	-93	-90	0	0
Saudi Arabia	-4	-1	2	1	0	2	5	6	4	7	10
Tunisia	0	0	1	0	0	0	0	0	0	0	0
United Arab Emirates	1	1	3	0	2	4	2	4	5	19	72
All others	0	-1	1	0	1	1	1	3	2	8	57
South and Central America	197	66	51	19	6	64	5	-16	5	97	111
Argentina	29	29	0	0	1	2	1	2	2	2	2
Brazil	85	31	0	2	3	4	7	6	12	9	20
Chile	5	2	1	1	0	1	3	2	4	6	4
Colombia	5	5	2	4	3	3	11	18	27	9	9
Costa Rica	-1	-1	3	1	-1	-2	-1	-1	3	1	-9
Mexico	-10	-15	39	4	-8	38	-49	-63	-69	40	51
Peru	3	1	0	1	1	1	1	5	4	1	3
Venezuela	71	7	2	1	2	2	6	5	6	4	4
All others	9	7	4	5	4	14	27	8	15	26	28
Sub-Saharan Africa	-2	-5	1	2	4	4	1	6	43	48	14



Appendix table 6-43

## U.S. trade in advanced materials, by region/country/economy: 2000–10

(Millions of current dollars)

Region/country/economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Angola	0	0	0	0	0	0	0	0	0	0	1
Congo (Kinshasa)	0	0	0	0	0	0	0	0	0	0	0
Ethiopia	0	0	0	0	0	0	0	0	0	0	0
Kenya	0	0	0	0	0	0	0	1	0	1	0
Nigeria	0	0	0	0	0	0	0	3	0	1	3
South Africa	-3	-6	0	2	2	2	1	1	39	38	6
Tanzania	0	0	0	0	0	0	0	0	0	0	0
Uganda	0	0	0	0	0	0	0	0	0	0	0
All others	1	0	0	0	3	1	1	0	3	8	4
Other developed	66	119	75	47	60	89	135	131	98	138	196
Australia	-6	8	5	1	10	8	58	60	17	16	20
Canada	79	118	73	49	51	78	84	85	115	125	169
New Zealand	-1	-1	0	0	0	1	1	1	1	2	1
Norway	0	0	1	1	0	1	-8	-16	-38	-9	0
Switzerland	-5	-5	-2	-3	-1	1	1	1	3	4	5
All others	0	-2	-1	-1	-1	0	0	0	0	0	0
Other developing	4	23	2	2	4	5	5	14	22	9	11
Afghanistan	0	0	0	0	0	0	0	0	1	1	1
Bangladesh	0	0	0	0	0	0	0	0	0	0	0
Burma	0	0	0	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	0	0	0	0
Laos	0	0	0	0	0	0	0	0	0	0	0
Nepal	0	0	0	0	0	0	0	0	0	0	0
North Korea	0	0	0	0	0	0	NA	NA	NA	NA	NA
Pakistan	0	0	0	0	0	1	1	2	2	1	1
Sri Lanka	0	0	0	-2	-1	-1	0	0	0	0	0
Vietnam	0	0	0	2	2	2	2	5	8	6	7
All others	5	23	1	0	0	1	1	2	5	0	1

NA = not available; not provided by Census Bureau

EU = European Union

NOTES: Technologies classified by U.S. Census. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies.

SOURCE: Census Bureau, Foreign Trade Statistics, Country and Product Trade Data, Advanced Technology Products, special tabulations (15 January 2011).

*Science and Engineering Indicators 2012*

Appendix table 6-44

## Companies in the United States reporting innovation activities, by industry: 2006–08

(Percent)

Industry and NAICS code	Companies (thousands) <sup>a</sup>	New or significantly improved product						New or significantly improved process							
		Any good/ service		Goods		Services		Any process		Manufacturing/ production methods		Logistics/delivery/ distribution methods		Support activities	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
All industries, 21–33, 42–81	1,545.1	9	86	5	91	7	88	9	86	4	91	3	92	7	88
Manufacturing industries, 31–33	127.1	22	74	18	77	10	85	22	72	18	77	7	88	13	82
Food, 311	9.1	17	75	16	77	5	87	17	75	13	80	6	86	7	85
Beverage/tobacco products, 312	1.2	17	77	13	81	6	87	15	75	9	81	6	84	8	81
Textile/apparel/leather and allied products, 313–16	6.1	19	77	15	81	9	87	18	78	13	83	7	89	12	84
Wood products, 321	6.1	9	88	6	91	5	92	16	81	13	84	3	95	6	91
Chemicals, 325	5.9	41	52	33	60	18	75	34	59	22	71	17	75	20	72
Pharmaceuticals/medicines, 3254	1.5	45	51	24	72	27	69	42	53	18	77	27	69	32	63
Other 325	4.4	40	52	36	56	15	77	31	60	23	69	14	78	16	75
Plastics/rubber products, 326	6.1	24	72	21	75	11	85	28	68	24	72	8	87	15	81
Nonmetallic mineral products, 327	5.4	13	84	11	85	5	91	14	83	11	85	4	92	8	88
Primary metals, 331	2.1	17	79	13	83	11	84	19	76	17	78	4	91	11	84
Fabricated metal products, 332	26.1	16	80	11	84	9	87	22	73	19	77	5	90	12	84
Machinery, 333	12.0	26	70	23	72	11	83	24	71	21	74	5	90	15	81
Computer/electronic products, 334	7.0	45	46	43	48	18	73	33	58	26	64	11	79	18	73
Computers/peripheral equipment, 3341	0.6	56	39	47	49	26	68	46	49	31	63	19	75	21	73
Communications equipment, 3342	0.8	51	41	51	42	21	72	33	58	25	67	7	85	17	75
Semiconductor/other electronic components, 3344	2.5	27	65	25	67	10	81	25	65	19	72	7	84	14	77
Navigational/measuring/electromedical/control instruments, 3345	2.6	59	30	58	31	24	64	40	48	36	53	16	72	22	66
Other 334	0.5	37	59	35	61	13	83	14	82	10	86	3	93	10	86
Electrical equipment/appliance/components, 335	2.8	37	60	36	60	11	85	28	67	24	72	12	84	21	75
Transportation equipment, 336	5.4	28	65	25	67	11	82	23	70	18	75	5	88	15	77
Motor vehicles/trailers/parts, 3361–63	3.3	24	67	22	69	8	83	22	69	19	71	3	87	14	77
Aerospace products/parts, 3364	0.9	32	60	29	63	19	74	25	67	16	76	7	86	20	72
Other 336	1.3	35	63	31	67	12	85	25	73	15	83	8	90	16	81
Furniture/related products, 337	7.8	14	81	13	82	6	88	19	75	12	83	5	90	12	83
Manufacturing nec, other 31–33	24.1	22	75	17	80	12	85	23	73	17	79	7	89	14	82
Nonmanufacturing industries, 21–23, 42–81	1,417.9	8	87	3	92	7	89	8	87	2	93	3	92	6	89
Information, 51	23.1	30	65	16	78	25	71	20	74	7	88	10	84	16	78
Software publishers, 5112	4.0	77	18	58	37	56	38	53	40	19	74	22	71	43	49
Telecommunications/Internet service providers/Web search portals/data processing services, 517–18	6.3	37	58	15	80	34	61	22	73	7	88	11	84	20	75
Other 51	12.9	12	83	4	91	11	85	10	86	4	92	7	88	6	89
Finance/insurance, 52	55.9	8	83	1	90	8	83	8	84	1	90	2	88	7	84
Real estate/rental/leasing, 53	49.0	7	90	6	91	5	92	6	90	2	95	2	95	6	91
Professional/scientific/technical services, 54	173.6	13	84	6	91	12	85	12	85	4	92	5	92	10	87
Computer systems design/related services, 5415	19.4	35	60	20	75	30	65	25	68	8	86	7	86	23	71
Scientific R&D services, 5417	3.1	33	59	24	69	22	71	26	67	15	77	6	86	14	78
Other 54	151.1	10	87	4	94	9	88	10	87	4	93	4	93	8	89
Health care services, 621–23	183.5	10	86	3	93	9	86	8	87	3	92	3	92	7	89
Nonmanufacturing nec, other 21–23, 42–81	932.8	6	89	3	92	5	90	7	88	2	93	2	93	5	90

nec = not elsewhere classified

NAICS = North American Industry Classification System

<sup>a</sup>Weighted totals for companies that reported on the 2008 Business R&D and Innovation Survey whether they did or did not perform/fund R&D. Weighted totals do not include the estimated 327,300 nonresponding companies for whom an R&D status was not reported.

NOTES: Survey asked companies to identify innovations introduced in 2006 to 2008. Sum of yes plus no percentages may not add to 100% due to item nonresponse to some innovation question items. Figures are preliminary and may later be revised. Data may not be internationally comparable.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics and Census Bureau, Business R&D and Innovation Survey (2008).

Appendix table 6-45

## USPTO patent grants, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	101,417	109,642	111,982	147,509	153,481	157,489	166,033	167,327	169,020	164,290	143,805	173,771	157,282	157,772	167,350	219,642
United States	55,600	60,935	61,488	79,990	83,580	84,721	87,339	86,645	87,599	83,929	74,264	89,352	79,138	77,152	81,912	107,154
EU	16,266	16,900	17,706	22,964	23,762	25,215	27,292	27,202	26,922	25,043	21,280	24,571	22,134	22,012	22,355	30,703
France	2,819	2,799	2,968	3,689	3,825	3,838	4,062	4,035	3,874	3,402	2,903	3,461	3,151	3,184	3,162	4,478
Germany	6,608	6,850	7,015	9,103	9,363	10,255	11,264	11,301	11,456	10,781	9,038	10,053	9,080	8,952	9,017	12,380
Italy	1,092	1,198	1,258	1,601	1,503	1,702	1,727	1,759	1,722	1,603	1,315	1,496	1,318	1,369	1,377	1,840
Netherlands	808	803	825	1,250	1,265	1,267	1,328	1,391	1,329	1,286	1,004	1,339	1,274	1,324	1,317	1,659
Sweden	803	855	863	1,232	1,405	1,583	1,744	1,667	1,511	1,286	1,131	1,249	1,067	1,064	1,009	1,433
United Kingdom	2,501	2,479	2,704	3,490	3,600	3,685	3,976	3,847	3,641	3,471	3,153	3,621	3,303	3,117	3,230	4,383
All others	1,636	1,916	2,073	2,598	2,800	2,886	3,193	3,203	3,389	3,213	2,736	3,352	2,942	3,001	3,243	4,530
Japan	21,795	23,089	23,207	30,876	31,139	31,338	33,257	34,889	35,545	35,403	30,361	36,852	33,401	33,720	35,524	44,905
China	168	147	154	254	266	326	460	561	613	740	744	1,057	1,192	1,607	2,041	3,213
Asia-8	2,907	3,552	4,153	6,645	7,628	8,478	9,518	10,048	10,156	11,344	10,369	13,371	13,574	15,154	16,792	21,945
India	40	39	52	90	118	141	187	265	354	369	401	511	566	651	709	1,143
South Korea	1,166	1,494	1,903	3,267	3,568	3,331	3,547	3,793	3,952	4,428	4,364	5,899	6,299	7,540	8,769	11,655
Taiwan	1,624	1,905	2,065	3,110	3,718	4,704	5,397	5,444	5,299	5,950	5,114	6,350	6,104	6,345	6,663	8,233
All others	77	114	133	178	224	302	387	546	551	597	490	611	605	618	651	914
All others	4,681	5,019	5,274	6,780	7,106	7,411	8,166	7,983	8,187	7,830	6,789	8,569	7,843	8,128	8,727	11,722
Central Asia and Europe	137	175	163	271	265	251	318	288	297	242	222	275	283	283	282	385
Russia	0	0	0	0	0	0	253	220	224	188	167	199	201	200	217	308
All others	137	175	163	271	265	251	65	68	74	54	54	76	82	83	65	77
Middle East and North Africa	413	504	562	781	793	854	1,029	1,094	1,240	1,094	986	1,279	1,169	1,253	1,483	1,949
Israel	392	482	539	754	755	789	983	1,046	1,188	1,052	934	1,217	1,112	1,183	1,411	1,839
All others	21	22	23	27	38	65	46	48	52	41	52	62	57	70	71	110
South and Central America	204	195	217	268	333	315	343	348	368	313	239	309	260	272	304	420
Argentina	31	28	36	42	48	55	50	54	61	47	27	42	41	35	47	47
Brazil	63	65	62	73	98	102	113	99	132	106	75	130	92	101	111	181
Mexico	45	46	50	65	80	79	90	108	91	91	82	72	59	64	64	101
All others	64	56	68	87	107	79	90	87	84	69	55	65	68	72	82	91
Sub-Saharan Africa	129	114	103	119	119	116	128	123	128	117	105	120	88	103	107	136
South Africa	124	110	99	115	110	111	119	112	111	102	90	109	79	90	90	121
All others	5	4	4	5	9	5	9	11	16	15	15	11	9	13	16	14
All others	3,798	4,031	4,229	5,341	5,596	5,875	6,348	6,130	6,154	6,064	5,237	6,586	6,043	6,217	6,551	8,832
Australia	452	468	480	722	708	709	882	861	908	957	929	1,333	1,270	1,295	1,242	1,770
Canada	2,098	2,228	2,382	2,972	3,215	3,399	3,590	3,445	3,447	3,395	2,917	3,601	3,342	3,375	3,668	4,854
Switzerland	1,049	1,117	1,104	1,278	1,283	1,342	1,423	1,364	1,333	1,267	991	1,211	1,032	1,126	1,192	1,583
All others	199	218	263	369	390	425	454	460	466	445	401	440	399	421	449	625

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-46

## U.S. patent applications and grants, by industry: 2009

(Number)

Industry and company size	NAICS code	Patent applications	Patents issued
All industries	21-23, 31-33, 42-81	116,972	60,583
Manufacturing industries	31-33	85,423	43,391
Food	311	2,698	917
Beverage and tobacco products	312	155	91
Textile, apparel and leather	313-316	302	221
Wood products	321	125	78
Paper	322	1,079	707
Printing and related support activities	323	44	40
Petroleum and coal products	324	353	146
Chemicals	325	12,305	6,485
Basic chemicals	3251	1,901	922
Resin, synthetic rubber, fibers, and filament	3252	598	489
Pesticide, fertilizer, and other agricultural chemicals	3253	768	513
Pharmaceuticals and medicines	3254	6,194	2,921
Soap, cleaning compound, and toilet preparations	3256	1,176	802
Paint, coating, adhesive, and other chemicals	3255, 3259	1,667	838
Plastics and rubber products	326	2,925	1,508
Nonmetallic mineral products	327	895	371
Primary metals	331	349	208
Fabricated metal products	332	1,678	916
Machinery	333	6,881	3,911
Agricultural implements	33311	479	348
Semiconductor machinery	333295	924	689
Engine, turbine, and power transmission equipment	3336	445	313
Other machinery	other 333	5,033	2,560
Computer and electronic products	334	35,012	16,850
Communications equipment	3342	4,338	2,855
Semiconductor and other electronic components	3344	9,372	7,117
Navigational, measuring, electromedical, and control instruments	3345	16,741	3,146
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	1,171	728
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	D	D
Other measuring and controlling devices	other 3345	D	D
Computer and peripheral equipment and other computer and electronic products	3341, 3343, 3346	4,561	3,733
Electrical equipment, appliances, and components	335	3,523	1,962
Transportation equipment	336	9,362	4,856
Automobiles, bodies, trailers, and parts	3361, 3362, 3363	3,620	2,030
Aerospace products and parts	3364	5,565	2,733
Aircraft, aircraft engine, and aircraft parts	336411-336413	4,788	2,375
Guided missile, space vehicle, and related parts	336414, 336415, 336419	777	358
Military armored vehicle, tank, and tank components	336992	17	11
Other transportation equipment	other 336	159	81
Furniture and related products	337	503	394
Miscellaneous manufacturing	339	7,235	3,729
Medical equipment and supplies	3391	4,647	2,620
Other miscellaneous manufacturing	3399	2,587	1,109
Nonmanufacturing industries	21-23, 42-81	31,549	17,192
Mining, extraction, and support activities	21	2,285	1,084
Utilities	22	158	36
Construction	23	42	14
Wholesale trade	42	670	329
Retail trade	44-45	382	113
Electronic shopping and mail-order houses	4541	344	102
Other retail trade	other 44-45	38	11
Transportation and warehousing	48-49	73	42
Information	51	13,041	10,263

## Appendix table 6-46

## U.S. patent applications and grants, by industry: 2009

(Number)

Industry and company size	NAICS code	Patent applications	Patents issued
Publishing	511	9,888	9,094
Newspaper, periodical, book, and directory publishers	5111	37	27
Software publishers	5112	9,851	9,066
Telecommunications	517	1,265	434
Internet service providers, web search portals, and data processing services	518	567	327
Other information	other 51	1,321	408
Finance and insurance	52	801	318
Real estate and rental and leasing	53	148	92
Professional, scientific, and technical services	54	13,611	4,714
Architectural, engineering, and related services	5413	1,247	393
Computer systems design and related services	5415	3,121	1,121
Scientific research and development services	5417	7,814	2,594
Biotechnology research and development	541711	3,800	1,304
Physical, engineering, and life sciences (except biotechnology) research and development	541712	3,958	1,257
Social sciences and humanities research and development	541720	56	33
Other professional, scientific, and technical services	other 54	1,430	606
Health care services	621-623	187	53
Other nonmanufacturing	55-56, 61, 624, 71-72, 81	151	134

D = data withheld to avoid disclosing operations of individual companies

NAICS = 2002 North American Industry Classification System

NOTES: Data are representative of companies where (worldwide R&D expense + worldwide R&D costs funded by others) > 0. Detail may not add to total because of rounding. Industry classification based on dominant business code for domestic R&D performance where available. For companies that did not report business codes, classification used for sampling was assigned.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics and Census Bureau, Business R&amp;D and Innovation Survey (2009, preliminary).

*Science and Engineering Indicators 2012*

Appendix table 6-47

## USPTO patents granted in information and communications technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	16,228	18,562	19,176	29,242	32,347	34,554	37,681	38,949	40,441	42,928	39,334	53,401	48,741	51,842	56,788	75,945
United States	8,104	9,593	10,118	15,982	17,761	19,245	20,751	21,238	22,224	23,562	21,834	29,771	26,454	27,586	30,392	40,232
EU	1,463	1,663	1,582	2,369	2,676	2,924	3,293	3,508	3,812	4,096	3,859	5,449	4,924	5,348	5,537	7,818
France	310	362	352	443	473	488	536	546	597	648	572	865	752	831	845	1,215
Germany	395	403	373	582	644	789	885	995	1,129	1,290	1,260	1,756	1,656	1,770	1,817	2,751
Italy	88	124	135	211	171	202	240	248	231	192	189	254	222	270	254	307
Netherlands	135	141	123	183	189	166	189	213	208	219	176	283	263	265	267	365
Sweden	92	143	140	205	284	363	368	378	346	272	274	324	238	256	257	446
United Kingdom	297	328	294	468	566	551	630	637	668	741	751	1,001	921	985	1,047	1,326
All others	145	162	165	278	349	365	446	493	633	733	639	965	872	971	1,050	1,409
Japan	5,570	5,841	5,690	7,849	8,215	8,080	8,673	9,308	9,430	9,628	8,353	10,874	9,829	9,964	10,679	13,829
China	16	18	22	30	27	43	62	73	90	138	174	277	312	483	672	1,065
Asia-8	758	1,025	1,306	2,293	2,815	3,330	3,864	3,725	3,591	4,069	3,766	4,973	5,279	6,240	6,995	9,437
India	7	7	6	5	10	13	29	34	76	84	126	198	252	323	373	682
South Korea	434	566	718	1,336	1,499	1,500	1,582	1,598	1,561	1,761	1,768	2,470	2,699	3,402	4,070	5,514
Taiwan	301	422	531	891	1,219	1,687	2,040	1,802	1,670	1,906	1,636	2,018	2,028	2,223	2,223	2,751
All others	16	30	51	61	87	130	213	291	284	318	236	287	300	292	329	490
All others	318	421	460	719	853	931	1,038	1,097	1,293	1,438	1,347	2,055	1,942	2,221	2,511	3,565
Central Asia and Europe	11	10	18	35	48	30	51	34	55	40	40	64	57	76	81	125
Russia	0	0	0	0	0	0	47	32	50	36	34	54	45	64	71	110
All others	11	10	18	35	48	30	4	2	4	4	6	10	13	12	10	14
Middle East and North Africa	73	104	116	186	201	228	270	296	377	399	375	532	469	540	641	869
Israel	72	102	114	185	199	221	263	291	371	392	368	522	463	524	625	840
All others	1	3	2	1	2	7	6	5	7	7	7	11	6	15	16	30
South and Central America	5	9	8	5	6	11	11	12	8	20	22	23	22	26	32	54
Argentina	1	0	2	1	0	1	0	0	0	2	0	3	4	1	5	4
Brazil	2	3	1	2	2	1	2	4	2	5	3	10	9	14	16	29
Mexico	2	2	1	0	2	8	6	5	4	9	13	6	6	2	2	9
All others	1	5	4	2	2	1	3	3	2	4	5	5	4	9	9	13
Sub-Saharan Africa	2	2	2	4	1	6	5	11	7	11	9	12	6	15	11	17
South Africa	2	2	1	4	1	6	3	8	6	9	8	12	4	15	10	16
All others	0	0	1	0	0	0	2	3	1	2	1	0	2	1	2	1
All others	227	296	316	489	597	656	701	744	846	968	901	1,424	1,388	1,564	1,746	2,500
Australia	17	22	24	36	42	53	58	72	100	113	118	242	258	250	249	381
Canada	140	228	220	355	455	515	537	542	605	684	627	962	923	1,090	1,232	1,755
Switzerland	49	39	60	62	74	62	70	91	89	119	109	153	141	147	195	266
All others	21	7	11	36	26	26	36	40	52	52	47	67	66	78	70	97

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. Information and communications technology includes computer systems, information processes, networking, semiconductors, and telecommunications. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-48

## USPTO patents granted in networking technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	674	739	756	1,253	1,438	1,785	1,931	2,320	2,626	3,379	3,321	5,239	4,859	5,806	6,921	9,861
United States	381	428	467	791	972	1,210	1,326	1,564	1,741	2,252	2,158	3,669	3,254	3,796	4,516	6,132
EU	102	103	80	123	125	185	189	260	316	439	445	537	552	692	748	1,059
France	29	31	33	23	31	45	43	44	53	68	67	78	86	130	107	184
Germany	28	22	11	34	20	29	28	45	68	78	91	121	127	142	196	268
Italy	0	1	4	4	0	4	4	5	8	12	7	11	14	26	26	48
Netherlands	13	8	7	8	5	8	7	7	5	10	24	22	17	30	23	41
Sweden	6	9	10	17	10	33	26	50	34	56	56	52	34	35	33	58
United Kingdom	22	22	8	28	35	42	48	58	61	93	90	126	126	154	167	200
All others	5	12	8	9	24	24	34	51	87	123	110	127	147	174	196	259
Japan	155	166	165	243	217	228	221	237	281	341	330	509	476	549	706	1,140
China	0	0	0	1	2	2	1	0	5	6	14	29	20	40	78	186
Asia-8	8	11	12	36	47	61	61	94	87	121	161	210	248	345	404	661
India	0	0	0	1	0	0	4	6	10	11	19	28	38	50	58	130
South Korea	3	8	10	28	31	45	41	56	59	67	97	100	108	204	224	369
Taiwan	4	2	2	7	13	14	15	26	15	35	36	74	90	82	98	139
All others	1	1	0	0	3	2	1	6	3	8	9	8	12	9	24	23
All others	28	31	32	60	76	96	133	165	194	220	212	283	310	385	470	685
Central Asia and Europe	0	1	1	0	2	0	2	2	0	2	3	2	4	9	6	14
Russia	0	0	0	0	0	0	1	2	0	2	1	2	2	7	4	11
All others	0	1	1	0	2	0	1	0	0	0	2	0	2	1	2	3
Middle East and North Africa	8	10	10	22	20	25	34	51	57	55	68	81	72	73	105	178
Israel	8	10	10	22	20	23	34	50	55	54	66	79	71	73	100	175
All others	0	0	0	0	0	2	0	0	2	1	2	2	1	1	5	3
South and Central America	1	0	0	0	0	0	0	2	0	2	3	1	3	3	7	11
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	2
Brazil	1	0	0	0	0	0	0	2	0	1	0	0	0	0	2	2
Mexico	0	0	0	0	0	0	0	1	0	0	2	0	0	1	0	1
All others	0	0	0	0	0	0	0	0	0	0	1	1	0	2	5	6
Sub-Saharan Africa	0	0	0	2	0	0	0	0	0	0	0	1	0	3	2	4
South Africa	0	0	0	2	0	0	0	0	0	0	0	1	0	3	2	3
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	19	20	21	36	54	71	97	110	137	162	138	198	231	297	350	478
Australia	2	1	3	1	2	4	8	5	9	10	14	17	34	45	36	57
Canada	9	14	15	30	42	61	85	97	114	137	110	159	167	218	268	362
Switzerland	8	5	3	2	7	6	4	4	6	11	9	11	21	20	34	41
All others	0	0	0	3	2	1	1	4	8	5	5	12	10	14	12	18

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-49

## USPTO patents granted in information processes technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	2,637	3,316	3,806	6,559	6,808	6,539	7,092	7,032	7,533	8,365	8,141	12,626	11,672	13,268	15,075	22,038
United States	1,549	2,006	2,459	4,483	4,731	4,754	5,095	5,051	5,410	5,887	5,699	8,228	7,542	8,382	9,779	14,308
EU	197	244	276	404	449	422	505	540	565	680	692	1,251	1,189	1,381	1,543	2,301
France	50	63	69	82	76	75	81	105	98	130	130	198	183	223	222	359
Germany	32	39	51	96	98	103	109	133	134	170	172	393	394	497	548	891
Italy	11	12	9	23	15	10	17	21	22	18	19	45	39	57	43	63
Netherlands	13	21	23	28	23	29	36	36	37	36	23	76	62	63	80	97
Sweden	13	17	19	17	32	34	47	39	38	32	32	69	60	57	62	99
United Kingdom	63	75	83	133	160	126	151	157	167	201	219	311	294	312	359	500
All others	14	18	22	25	45	44	63	49	71	93	96	160	157	171	228	293
Japan	768	901	868	1,307	1,209	972	1,043	957	979	1,125	1,076	1,956	1,733	1,983	2,026	2,856
China	9	5	7	7	6	11	17	18	20	27	41	82	100	162	185	274
Asia-8	56	65	84	157	178	151	158	163	209	250	273	508	509	678	717	1,108
India	3	2	1	1	4	6	12	11	28	43	50	73	76	113	164	283
South Korea	32	37	42	95	103	79	87	64	84	87	94	206	212	291	285	501
Taiwan	19	21	35	53	62	56	49	65	82	99	111	199	188	224	223	270
All others	2	5	6	8	9	10	10	23	15	21	18	30	33	50	45	54
All others	58	95	113	203	234	229	275	303	350	397	360	602	599	681	825	1,190
Central Asia and Europe	3	1	6	13	19	5	13	9	18	12	14	29	18	24	36	54
Russia	0	0	0	0	0	0	12	8	17	11	13	24	14	22	33	48
All others	3	1	6	13	19	5	2	1	2	1	1	5	4	2	3	6
Middle East and North Africa	20	36	38	70	73	78	86	94	118	126	104	165	140	171	201	258
Israel	20	35	37	70	72	77	83	93	116	125	104	160	138	163	194	242
All others	0	1	1	1	1	1	3	2	1	1	0	4	3	8	7	16
South and Central America	0	5	3	2	3	3	4	4	3	8	7	12	9	12	14	24
Argentina	0	0	1	0	0	0	0	0	0	2	0	0	1	1	2	0
Brazil	0	1	0	1	1	0	1	1	0	3	1	7	5	7	8	13
Mexico	0	0	0	0	1	2	1	0	0	1	2	4	2	1	2	6
All others	0	4	2	1	1	1	3	3	2	3	3	1	2	3	2	5
Sub-Saharan Africa	0	0	0	2	0	2	3	3	1	4	3	4	1	5	5	6
South Africa	0	0	0	2	0	2	2	1	1	4	3	4	1	5	5	6
All others	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0
All others	35	52	66	116	139	140	169	194	210	246	232	392	430	471	569	849
Australia	9	12	10	15	21	23	33	37	51	58	53	79	115	81	96	169
Canada	24	34	50	85	98	109	121	137	127	158	149	256	251	324	382	567
Switzerland	1	4	4	10	13	2	9	10	20	21	22	39	38	38	62	77
All others	2	2	2	7	7	5	5	9	12	9	9	18	26	28	29	37

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).



Appendix table 6-50

## USPTO patents granted in telecommunications technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	3,345	3,865	3,483	5,454	6,296	6,526	6,744	7,072	7,385	7,843	7,125	11,699	10,264	10,540	11,138	14,727
United States	1,723	2,007	1,862	2,881	3,343	3,522	3,624	3,714	3,834	4,182	3,796	6,342	5,467	5,294	5,676	7,293
EU	516	645	549	840	1,008	1,103	1,183	1,252	1,328	1,333	1,165	1,859	1,514	1,571	1,491	2,061
France	102	130	96	142	154	167	182	180	184	191	154	282	214	236	216	289
Germany	95	138	113	144	171	223	257	252	324	323	317	514	403	391	396	548
Italy	21	21	27	29	19	23	25	39	32	38	33	65	52	64	57	73
Netherlands	52	46	40	65	72	43	42	48	39	60	40	88	71	76	70	86
Sweden	63	102	82	125	189	233	221	237	224	149	137	153	97	120	120	224
United Kingdom	99	119	92	149	194	210	225	214	204	218	193	288	277	262	233	326
All others	83	90	99	187	209	203	232	283	321	355	291	469	400	421	400	514
Japan	926	961	820	1,250	1,319	1,258	1,253	1,396	1,408	1,331	1,199	1,844	1,559	1,650	1,702	2,283
China	1	4	3	9	8	10	11	4	9	24	24	69	67	91	164	277
Asia-8	82	110	103	236	291	301	349	388	448	521	528	907	1,090	1,302	1,453	1,888
India	0	1	0	0	1	1	4	5	10	12	26	36	45	64	63	96
South Korea	53	77	68	167	231	216	247	272	308	331	317	512	625	802	935	1,254
Taiwan	26	29	28	60	52	68	82	93	114	156	169	332	389	411	419	492
All others	4	3	8	9	7	16	16	18	15	22	16	27	31	25	36	46
All others	97	137	146	239	328	332	325	316	358	452	416	676	567	633	653	925
Central Asia and Europe	2	2	3	4	8	5	7	5	5	12	11	11	15	23	23	33
Russia	0	0	0	0	0	0	6	5	5	11	10	9	13	21	21	31
All others	2	2	3	4	8	5	1	1	1	1	1	2	2	3	2	3
Middle East and North Africa	16	19	26	40	51	49	56	61	93	116	103	157	134	150	181	224
Israel	16	19	25	40	50	47	54	60	92	113	99	155	133	146	179	218
All others	0	0	1	0	0	2	2	2	1	3	4	2	2	4	2	6
South and Central America	0	2	1	0	2	6	3	5	3	6	5	5	4	8	6	7
Argentina	0	0	0	0	0	1	0	0	0	0	0	1	0	0	3	1
Brazil	0	1	0	0	0	1	0	1	0	0	0	1	1	5	3	4
Mexico	0	1	0	0	1	3	3	4	3	6	4	2	2	0	0	1
All others	0	0	1	0	1	1	0	0	0	0	0	1	0	3	1	1
Sub-Saharan Africa	1	2	2	1	0	3	1	3	2	4	5	5	3	6	2	4
South Africa	1	2	1	1	0	3	0	3	2	4	4	5	2	5	2	4
All others	0	0	1	0	0	0	1	0	0	0	1	0	1	1	0	1
All others	78	112	114	193	267	270	258	242	255	314	293	498	411	447	441	657
Australia	4	7	4	13	9	11	10	16	12	20	26	48	37	37	52	73
Canada	57	98	88	155	229	228	218	183	203	244	223	377	322	355	337	500
Switzerland	14	5	17	12	24	21	13	25	21	30	29	55	37	40	42	62
All others	4	2	4	13	5	10	17	18	19	20	14	18	15	15	10	21

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-51

## USPTO patents granted in automation and control technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	1,200	1,302	1,265	1,694	1,599	1,591	1,710	1,791	1,843	1,987	1,856	3,276	2,773	2,889	3,225	3,951
United States	696	768	765	995	949	921	988	993	998	1,154	1,047	1,912	1,532	1,675	1,698	2,036
EU	140	162	172	228	230	264	287	316	319	298	310	455	354	354	406	549
France	28	36	25	34	38	39	31	48	47	44	51	58	40	45	47	104
Germany	55	53	83	99	97	104	139	145	157	155	163	189	160	143	166	200
Italy	8	9	20	22	19	29	26	24	28	22	15	43	32	27	44	39
Netherlands	8	16	3	11	9	10	12	9	15	10	8	17	13	19	19	25
Sweden	8	11	10	15	18	10	19	23	11	14	12	22	15	23	19	32
United Kingdom	21	28	18	28	30	47	32	32	31	29	30	79	53	51	58	67
All others	12	8	12	19	20	25	28	35	28	24	31	48	42	45	54	82
Japan	275	273	229	312	274	252	283	308	340	321	315	555	503	462	607	714
China	1	0	0	3	2	0	1	4	2	5	5	18	34	42	46	82
Asia-8	45	41	35	75	71	75	67	84	93	114	99	192	238	236	319	363
India	1	0	1	0	0	1	2	1	0	3	3	6	9	14	12	16
South Korea	24	16	20	33	33	33	33	30	32	29	27	74	88	87	130	148
Taiwan	18	20	12	38	34	35	31	50	54	75	64	102	130	125	156	173
All others	2	5	3	4	4	6	1	3	7	7	5	10	11	10	21	26
All others	44	59	64	80	73	79	84	86	91	95	80	143	113	121	149	206
Central Asia and Europe	1	1	0	1	0	2	5	2	1	3	1	1	1	3	4	5
Russia	0	0	0	0	0	0	2	1	1	2	1	1	1	2	3	3
All others	1	1	0	1	0	2	3	1	0	1	0	1	0	1	0	2
Middle East and North Africa	8	5	10	9	13	11	8	11	19	14	12	21	23	18	25	34
Israel	8	5	10	9	13	10	7	10	18	13	10	20	22	16	23	27
All others	0	0	0	0	0	1	1	1	1	1	1	1	1	3	2	7
South and Central America	4	3	2	5	2	3	2	3	5	1	4	7	2	0	10	8
Argentina	1	0	0	0	1	1	0	0	1	0	0	1	0	0	1	0
Brazil	1	0	1	2	0	1	1	0	1	1	2	1	0	0	5	2
Mexico	0	1	1	3	1	1	1	2	2	0	2	3	1	0	3	5
All others	2	2	0	0	0	0	0	1	1	0	0	2	1	0	2	2
Sub-Saharan Africa	0	2	0	3	3	2	4	1	2	1	1	1	3	0	4	3
South Africa	0	2	0	3	3	2	4	1	2	1	0	1	3	0	4	2
All others	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
All others	32	49	53	62	55	62	65	69	64	76	63	113	84	100	106	156
Australia	2	4	5	2	4	6	4	6	8	6	7	10	15	12	6	23
Canada	19	34	38	48	42	41	43	45	42	53	48	69	48	64	78	101
Switzerland	9	8	9	11	8	13	12	15	13	14	3	25	14	21	18	28
All others	2	3	2	2	2	2	6	4	2	4	5	8	7	3	5	5

EU = European Union; USPTO = U.S. Patent and Trademark Office

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SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-52

## USPTO patents granted in medical electronics technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	1,504	1,427	1,418	1,978	1,733	2,066	2,370	2,550	2,575	2,165	2,026	2,473	2,439	2,240	2,565	3,489
United States	965	960	944	1,362	1,215	1,439	1,554	1,649	1,624	1,372	1,282	1,531	1,537	1,291	1,586	2,213
EU	292	252	243	340	261	321	395	409	413	339	327	374	384	385	439	546
France	37	29	31	44	35	35	48	60	53	41	39	51	33	44	37	51
Germany	92	97	89	96	111	123	154	177	159	144	137	153	187	207	240	285
Italy	13	11	11	20	5	9	15	21	23	14	9	13	14	13	19	24
Netherlands	33	38	19	48	42	46	45	35	42	29	25	38	34	32	35	49
Sweden	60	27	35	51	21	41	43	34	40	39	37	37	38	23	20	27
United Kingdom	30	21	29	43	20	35	50	38	36	30	37	32	24	18	40	43
All others	27	30	30	40	27	32	40	44	62	42	43	50	54	47	49	67
Japan	178	156	161	169	156	155	216	283	312	265	242	383	331	358	297	408
China	0	1	2	3	4	2	1	6	2	4	6	5	6	11	20	33
Asia-8	7	0	7	19	18	24	28	40	41	36	42	37	35	47	43	60
India	0	0	0	0	1	1	2	1	3	4	2	7	6	5	9	6
South Korea	3	0	4	6	8	11	17	20	22	19	16	12	18	23	20	36
Taiwan	4	0	3	12	9	11	7	14	13	11	23	16	10	14	10	14
All others	0	0	0	1	0	2	2	5	3	2	1	2	1	5	4	4
All others	63	57	60	85	79	125	176	164	183	149	127	144	146	147	181	231
Central Asia and Europe	2	1	3	4	3	8	9	9	8	8	7	5	7	12	7	7
Russia	0	0	0	0	0	0	8	6	3	4	6	3	4	8	3	2
All others	2	1	3	4	3	8	1	4	5	4	1	2	3	4	4	5
Middle East and North Africa	15	17	15	28	25	34	82	71	82	67	55	70	58	64	94	99
Israel	15	17	15	28	25	34	82	70	81	67	54	70	57	61	93	98
All others	0	0	0	0	0	0	1	1	1	0	1	1	1	2	2	1
South and Central America	1	0	1	2	1	4	2	4	3	4	6	5	4	2	4	5
Argentina	0	0	0	0	0	1	0	1	1	0	1	1	1	1	1	2
Brazil	0	0	0	0	1	0	1	0	0	1	0	0	2	0	1	1
Mexico	0	0	1	1	0	2	1	0	0	1	3	1	2	0	0	1
All others	1	0	0	1	1	1	0	3	2	2	2	2	0	1	2	2
Sub-Saharan Africa	3	2	1	1	0	2	1	3	3	1	1	0	0	0	1	0
South Africa	3	2	1	1	0	2	1	1	1	0	1	0	0	0	1	0
All others	0	0	0	0	0	0	0	2	2	1	0	0	0	0	0	0
All others	42	37	40	50	51	78	83	77	87	69	58	64	77	70	75	120
Australia	7	12	8	9	14	22	11	16	15	14	9	19	19	20	21	33
Canada	26	19	18	27	24	31	47	36	43	32	30	28	38	32	29	54
Switzerland	5	4	8	11	10	12	15	10	12	14	13	9	10	11	15	17
All others	4	3	6	4	3	13	10	16	17	9	5	8	9	7	10	16

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-53

## USPTO patents granted in semiconductor technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	5,115	5,085	5,470	7,495	9,148	10,856	12,665	13,110	13,108	12,764	11,036	12,082	11,440	11,080	11,974	16,665
United States	2,304	2,334	2,457	3,398	4,155	5,061	5,842	6,080	6,133	5,783	5,058	5,556	5,080	4,644	4,712	6,383
EU	363	341	349	500	578	656	815	841	979	931	874	985	893	869	944	1,446
France	66	58	66	83	99	96	131	121	145	137	123	164	154	115	167	239
Germany	156	133	125	182	218	271	319	364	412	462	444	462	444	437	425	716
Italy	42	44	55	78	74	93	113	101	99	60	47	60	43	50	59	63
Netherlands	27	28	20	27	33	33	59	75	84	59	55	47	54	45	35	82
Sweden	7	10	18	35	38	47	48	31	24	19	26	22	23	18	20	32
United Kingdom	48	51	42	65	80	75	82	89	122	104	103	119	89	93	109	116
All others	18	18	23	30	37	42	64	60	94	91	76	110	87	111	130	200
Japan	1,972	1,813	1,896	2,357	2,766	2,985	3,359	3,766	3,764	3,713	3,091	3,164	3,033	2,872	3,271	4,624
China	4	5	4	4	9	9	17	26	29	40	54	42	54	67	83	151
Asia-8	404	523	686	1,142	1,544	2,035	2,486	2,265	2,025	2,147	1,838	2,166	2,215	2,463	2,790	3,805
India	1	3	3	0	2	1	3	6	13	11	16	29	42	30	25	56
South Korea	187	220	293	526	608	629	725	787	733	831	786	972	1,037	1,280	1,636	2,206
Taiwan	210	285	360	580	883	1,320	1,595	1,262	1,096	1,128	892	999	948	988	962	1,252
All others	6	15	30	36	51	85	163	210	183	177	144	166	188	165	167	291
All others	67	68	78	94	97	108	145	134	178	149	121	169	165	166	175	256
Central Asia and Europe	5	4	5	14	14	16	25	13	26	11	10	16	14	16	6	12
Russia	0	0	0	0	0	0	24	12	24	9	8	13	10	10	5	9
All others	5	4	5	14	14	16	1	1	2	1	2	3	4	6	1	3
Middle East and North Africa	8	12	18	18	25	27	40	36	39	33	29	37	42	48	48	62
Israel	8	11	17	18	24	26	39	35	37	32	28	35	42	45	47	59
All others	0	1	1	0	1	1	1	0	2	1	1	2	0	2	1	3
South and Central America	1	2	1	0	1	0	2	0	0	0	1	1	2	1	1	7
Argentina	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1
Brazil	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	6
Mexico	1	1	0	0	0	0	1	0	0	0	1	0	1	0	0	0
All others	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Sub-Saharan Africa	1	0	0	0	1	1	0	1	1	1	1	1	0	0	1	4
South Africa	1	0	0	0	1	1	0	0	0	0	1	1	0	0	0	4
All others	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0
All others	52	50	54	62	57	64	78	84	112	104	80	114	107	101	120	171
Australia	1	1	2	2	6	2	4	7	14	16	8	21	15	17	18	18
Canada	26	35	27	37	28	42	45	43	68	51	48	60	71	62	72	99
Switzerland	22	14	25	20	23	18	27	31	25	31	22	26	16	16	26	48
All others	3	0	0	3	0	2	2	3	5	7	3	7	5	6	4	6

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-54

## USPTO patents granted in optics technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	2,582	2,953	3,186	4,584	4,313	4,550	4,910	5,349	6,417	7,169	6,696	7,466	6,597	6,606	6,683	6,875
United States	1,057	1,144	1,241	1,647	1,679	1,705	1,966	2,190	2,513	2,671	2,459	2,629	2,257	2,235	1,979	2,057
EU	300	338	368	574	476	557	620	662	786	823	682	750	671	647	651	700
France	67	66	93	119	79	82	98	97	112	108	82	79	80	65	85	78
Germany	90	118	114	189	171	208	221	267	352	348	337	313	301	293	276	333
Italy	8	11	17	27	19	11	29	22	40	46	29	40	39	29	31	34
Netherlands	24	29	27	56	54	38	46	45	57	73	38	74	62	84	94	68
Sweden	9	14	12	20	21	39	36	36	34	30	23	35	25	18	17	25
United Kingdom	87	89	80	135	113	151	149	154	146	158	118	141	106	100	89	107
All others	15	11	25	29	19	28	41	41	45	61	55	67	56	58	59	56
Japan	1,063	1,288	1,366	1,954	1,751	1,888	1,885	1,896	2,288	2,680	2,519	2,865	2,442	2,360	2,506	2,463
China	4	2	0	4	11	6	2	9	14	25	21	24	37	42	46	70
Asia-8	71	95	107	255	241	261	269	401	572	715	807	954	977	1,107	1,274	1,341
India	1	0	1	1	0	1	0	1	1	1	4	1	5	3	3	3
South Korea	51	72	88	204	187	203	199	269	369	449	535	643	681	728	820	811
Taiwan	20	23	17	48	51	51	63	122	193	246	238	292	272	362	439	507
All others	0	0	1	2	3	7	7	9	9	20	30	18	19	14	12	20
All others	87	87	105	151	158	134	167	192	244	256	208	244	213	215	227	244
Central Asia and Europe	15	6	4	10	8	5	11	8	10	19	11	15	10	10	7	18
Russia	0	0	0	0	0	0	7	7	7	15	10	12	8	8	4	13
All others	15	6	4	10	8	5	3	2	4	4	1	3	2	3	3	5
Middle East and North Africa	15	9	13	25	21	21	48	42	59	41	35	39	52	51	61	60
Israel	14	9	13	25	20	21	48	42	59	40	34	38	50	51	60	59
All others	1	0	0	0	0	0	0	0	1	1	1	0	2	0	1	1
South and Central America	3	1	2	1	3	0	3	1	2	1	1	2	4	2	2	1
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	2	1	1	0	2	0	1	0	0	2	1	1	1	1
Mexico	3	1	0	0	2	0	0	0	1	0	0	0	3	0	1	0
All others	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0
Sub-Saharan Africa	1	1	0	1	2	0	0	0	0	2	0	0	0	0	0	0
South Africa	1	1	0	1	1	0	0	0	0	1	0	0	0	0	0	0
All others	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
All others	53	70	86	115	124	108	106	141	173	193	161	188	147	152	157	165
Australia	5	5	10	8	15	10	9	9	10	17	13	24	20	22	13	20
Canada	37	49	60	81	69	72	65	89	116	111	106	112	79	87	95	87
Switzerland	11	14	16	22	31	22	29	38	41	57	34	35	36	32	39	49
All others	1	3	1	4	9	5	3	5	7	8	8	18	12	11	10	9

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-55

## USPTO patents granted in measuring techniques and instrumentation technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	5,529	6,076	5,544	6,989	6,958	7,391	7,802	8,527	9,219	9,311	8,406	9,803	9,478	9,694	9,790	10,919
United States	3,355	3,603	3,207	3,906	3,942	4,103	4,304	4,635	5,019	4,985	4,510	5,088	4,832	4,934	4,821	5,252
EU	777	931	883	1,139	1,068	1,235	1,369	1,523	1,593	1,536	1,399	1,681	1,636	1,604	1,646	2,000
France	156	172	138	198	161	191	177	176	181	165	179	203	217	238	218	291
Germany	307	391	377	508	494	557	656	739	828	770	695	834	783	752	762	924
Italy	27	36	32	42	42	46	57	55	59	64	53	61	63	63	69	79
Netherlands	36	36	44	55	50	53	71	77	80	73	51	69	76	107	87	90
Sweden	23	38	34	57	62	75	91	84	71	66	72	89	79	59	69	89
United Kingdom	165	174	172	189	166	195	228	247	218	249	233	268	241	221	253	319
All others	63	84	87	90	93	119	90	145	156	147	116	158	178	163	187	208
Japan	1,056	1,155	1,098	1,408	1,461	1,451	1,450	1,616	1,785	1,901	1,640	1,998	1,895	1,910	1,963	2,120
China	3	8	3	3	3	5	13	15	20	33	33	54	60	93	146	180
Asia-8	71	84	102	168	168	234	258	270	303	335	366	457	502	579	620	674
India	0	2	0	2	2	3	3	8	10	17	17	16	29	34	33	39
South Korea	33	41	51	95	76	93	93	96	103	110	124	201	225	266	287	307
Taiwan	34	34	48	62	80	120	139	134	147	169	195	206	200	226	258	292
All others	4	7	3	9	11	18	23	32	43	39	30	34	48	53	42	36
All others	268	297	251	364	316	364	408	468	500	520	458	524	553	572	595	694
Central Asia and Europe	4	10	11	17	15	15	23	25	29	19	12	20	22	19	20	21
Russia	0	0	0	0	0	0	22	22	25	17	10	16	17	12	17	15
All others	4	10	11	17	15	15	1	3	5	2	2	4	5	8	3	6
Middle East and North Africa	31	30	33	42	40	61	68	89	74	71	80	90	84	97	104	110
Israel	28	29	32	41	40	60	68	84	70	70	70	85	75	89	95	98
All others	3	1	1	1	0	2	0	4	4	2	9	5	9	8	9	12
South and Central America	3	5	3	8	7	5	12	6	18	16	11	21	17	11	12	16
Argentina	0	0	2	2	0	1	1	1	4	2	0	2	3	2	3	3
Brazil	0	2	0	4	2	2	5	1	5	1	2	4	5	6	4	6
Mexico	0	1	0	0	3	0	2	3	8	9	8	9	5	3	3	3
All others	3	2	1	2	2	2	5	1	1	3	1	6	3	0	2	3
Sub-Saharan Africa	3	6	2	4	6	5	4	4	1	4	2	6	5	3	4	4
South Africa	3	6	2	4	6	5	4	4	1	3	2	6	5	2	3	3
All others	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1
All others	227	247	202	294	248	277	301	344	378	410	352	387	425	442	455	543
Australia	18	18	14	34	18	22	32	29	36	45	32	59	65	51	57	67
Canada	108	97	96	130	133	133	144	160	182	181	145	166	182	168	182	208
Switzerland	89	112	77	111	75	94	103	122	130	145	129	125	137	157	163	193
All others	11	20	15	18	22	27	23	32	30	39	47	36	40	67	54	75

EU = European Union; USPTO = U.S. Patent and Trademark Office

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SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-56

## USPTO patents granted in pharmaceuticals technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	3,754	4,167	5,025	5,214	5,687	5,388	5,753	6,152	5,590	4,324	3,911	4,492	3,835	3,796	4,275	5,471
United States	1,907	2,232	2,732	2,809	3,135	2,946	3,082	3,449	3,133	2,348	2,203	2,442	1,971	1,941	2,152	2,756
EU	1,047	1,065	1,329	1,381	1,466	1,448	1,465	1,523	1,386	1,056	957	1,141	1,060	1,060	1,117	1,462
France	200	190	242	256	234	226	230	250	242	152	156	179	177	175	187	217
Germany	356	330	443	423	462	476	471	501	446	359	291	377	331	332	334	442
Italy	110	121	120	129	125	124	127	122	87	85	79	84	88	89	93	140
Netherlands	30	17	25	31	39	31	50	41	43	35	30	30	32	34	38	53
Sweden	31	38	61	63	61	64	67	84	68	39	42	49	34	53	49	67
United Kingdom	196	212	290	300	331	361	325	311	292	213	221	253	240	226	230	283
All others	124	158	149	178	215	166	196	214	207	172	138	169	158	150	187	259
Japan	547	523	552	588	575	527	666	620	494	422	334	407	359	313	450	539
China	6	4	8	10	6	8	9	11	22	23	22	19	23	21	45	61
Asia-8 (sum 17-20)	26	53	71	76	107	98	120	158	184	157	137	150	167	164	175	222
India	7	6	15	22	35	32	44	64	86	57	67	75	77	82	85	109
South Korea	13	31	40	34	44	46	53	67	65	67	44	45	64	47	48	64
Taiwan	5	16	15	19	26	19	22	25	29	30	24	25	21	29	39	44
All others	1	0	1	1	2	1	1	2	5	3	2	5	5	6	3	5
All others	221	290	333	350	399	360	413	390	373	319	257	334	256	298	333	431
Central Asia and Europe	10	10	16	20	19	17	18	19	14	12	13	10	19	13	14	10
Russia	0	0	0	0	0	0	9	11	7	6	6	4	8	4	6	8
All others	10	10	16	20	19	17	9	8	6	6	7	5	11	9	9	2
Middle East and North Africa	18	37	34	32	48	51	44	54	60	49	44	55	47	57	80	70
Israel	18	35	32	30	47	48	41	52	58	47	39	53	46	56	79	69
All others	0	2	2	2	1	3	2	1	2	2	5	1	1	0	2	1
South and Central America	6	11	12	11	12	15	14	13	18	10	7	13	7	12	10	17
Argentina	2	3	3	6	5	5	7	9	9	3	1	7	4	3	3	2
Brazil	1	1	1	0	3	4	1	1	4	4	1	4	1	2	4	10
Mexico	3	4	3	2	2	4	3	1	4	1	2	0	0	3	2	2
All others	0	2	4	3	2	2	3	2	1	2	3	3	2	3	1	2
Sub-Saharan Africa	3	4	5	5	3	3	8	4	6	3	1	2	3	0	2	2
South Africa	2	4	5	4	2	2	5	3	5	3	1	1	3	0	2	2
All others	1	1	0	1	1	1	3	1	1	0	0	1	0	0	1	0
All others	184	228	266	282	317	274	329	300	275	245	192	254	180	216	227	332
Australia	11	13	17	29	30	19	47	33	25	19	21	28	17	20	19	28
Canada	63	92	109	133	152	136	148	153	138	130	91	119	85	98	105	139
Switzerland	101	108	123	106	113	92	116	101	93	87	67	89	69	87	87	139
All others	9	15	17	15	21	27	18	13	19	10	14	18	9	12	16	26

EU = European Union; USPTO = U.S. Patent and Trademark Office

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SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-57

## USPTO patents granted in materials technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	5,432	5,297	5,013	5,718	5,762	5,580	6,002	5,932	5,793	5,515	4,006	4,236	3,658	3,407	3,582	5,193
United States	2,471	2,522	2,341	2,564	2,608	2,497	2,644	2,626	2,557	2,345	1,805	1,839	1,538	1,359	1,399	2,035
EU	1,112	1,111	1,107	1,335	1,230	1,255	1,330	1,180	1,226	1,173	797	869	743	655	656	1,135
France	159	147	137	174	164	156	177	150	168	158	109	130	106	111	96	158
Germany	514	514	513	629	567	596	585	538	568	563	377	419	345	298	291	517
Italy	84	90	77	69	70	69	81	71	65	66	51	60	38	34	54	70
Netherlands	49	43	44	76	77	70	67	67	88	75	43	47	53	38	49	84
Sweden	27	38	34	33	42	57	61	45	33	40	25	20	32	27	25	31
United Kingdom	147	128	126	172	124	121	127	102	104	113	59	73	81	61	56	100
All others	132	152	177	182	186	186	232	207	200	158	134	120	88	85	85	176
Japan	1,542	1,401	1,294	1,480	1,547	1,463	1,619	1,660	1,512	1,491	1,023	1,084	1,001	1,013	1,043	1,341
China	5	6	8	7	10	13	9	17	16	20	9	18	23	28	28	65
Asia-8	79	74	86	116	126	137	161	176	218	259	210	243	200	197	283	343
India	1	3	5	8	8	10	13	15	17	24	20	21	24	25	25	38
South Korea	55	41	45	65	74	81	100	106	138	161	125	159	116	127	187	202
Taiwan	20	28	34	39	36	42	44	47	54	65	54	53	50	38	62	91
All others	3	2	2	4	8	4	4	8	9	9	11	10	10	7	9	12
All others	223	184	177	218	242	217	238	275	264	229	165	182	152	154	171	275
Central Asia and Europe	10	16	17	17	21	14	14	15	17	15	10	13	13	11	11	19
Russia	0	0	0	0	0	0	9	11	11	13	10	8	10	10	9	16
All others	10	16	17	17	21	14	5	5	6	2	0	5	3	1	2	3
Middle East and North Africa	5	5	5	11	13	15	16	16	22	11	15	21	12	15	12	19
Israel	4	4	4	10	10	9	12	10	16	7	13	18	12	14	11	15
All others	1	1	1	1	2	6	4	6	6	4	2	3	0	1	2	4
South and Central America	12	7	11	10	11	13	14	19	22	14	6	6	8	9	13	20
Argentina	1	0	2	0	0	0	2	0	1	0	1	0	0	0	0	0
Brazil	6	1	1	3	2	3	6	4	7	3	2	2	2	2	5	8
Mexico	4	2	1	3	4	6	0	5	7	5	0	2	3	5	4	5
All others	2	3	7	4	5	3	6	10	8	6	2	2	4	3	4	7
Sub-Saharan Africa	6	2	2	3	6	5	11	13	5	7	4	5	3	3	6	6
South Africa	6	1	2	3	6	5	11	13	5	6	3	5	3	3	6	6
All others	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
All others	190	154	142	177	191	170	183	212	198	182	130	137	116	116	129	211
Australia	16	15	10	15	29	13	19	21	28	30	15	24	17	18	20	33
Canada	106	84	65	91	91	83	94	119	98	86	70	68	53	58	70	96
Switzerland	63	44	56	62	66	62	61	63	55	52	34	37	37	29	32	64
All others	5	10	11	9	5	12	10	9	16	14	10	9	8	11	7	18

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).



Appendix table 6-58

## USPTO patents granted in aerospace and defense technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	1,391	1,301	1,271	1,654	1,525	1,702	2,077	2,197	2,110	1,993	1,781	1,660	1,434	1,358	1,679	2,098
United States	989	876	883	1,175	1,014	1,095	1,360	1,507	1,371	1,290	1,202	1,046	898	888	1,067	1,344
EU	292	299	272	331	343	389	432	423	457	418	350	366	316	299	368	470
France	114	111	105	139	105	132	125	95	93	111	89	110	106	99	124	149
Germany	74	89	97	105	145	128	175	179	199	166	118	114	106	92	121	143
Italy	8	10	8	6	7	11	11	24	16	22	26	14	7	13	16	19
Netherlands	3	10	5	3	3	5	5	2	4	5	3	2	1	3	3	3
Sweden	16	11	11	15	15	19	26	23	23	24	20	24	15	14	10	23
United Kingdom	68	55	42	51	55	70	64	74	91	70	74	83	72	58	64	95
All others	10	12	5	12	13	24	27	27	29	21	21	18	10	19	29	37
Japan	30	38	38	46	65	97	112	112	127	122	109	93	66	52	59	86
China	2	0	0	0	0	0	3	3	0	3	4	5	3	1	4	4
Asia-8	5	9	5	16	9	9	22	17	20	23	17	21	30	20	41	25
India	0	0	0	0	0	1	0	0	0	2	2	1	3	0	6	5
South Korea	0	2	2	7	3	2	6	5	7	4	2	5	7	7	15	3
Taiwan	5	6	3	8	6	4	12	7	12	10	7	15	20	13	18	16
All others	0	1	0	1	0	2	4	5	1	7	6	0	0	0	1	1
All others	74	79	73	88	93	111	149	136	136	136	101	128	122	98	141	169
Central Asia and Europe	2	7	3	7	3	13	18	16	16	12	3	5	5	2	5	15
Russia	0	0	0	0	0	0	16	15	12	9	3	4	4	1	4	10
All others	2	7	3	7	3	13	2	1	4	3	0	1	1	1	0	5
Middle East and North Africa	12	14	13	14	16	9	20	14	18	15	16	14	15	16	16	27
Israel	12	14	13	14	13	8	20	13	18	15	15	14	13	15	12	27
All others	0	0	0	0	3	1	0	1	0	0	1	0	2	1	4	0
South and Central America	2	1	1	3	4	7	5	2	4	4	2	3	2	3	1	10
Argentina	0	0	0	0	0	0	0	1	1	0	1	2	0	0	0	0
Brazil	0	0	1	1	3	4	3	1	2	1	1	0	1	2	0	7
Mexico	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0
All others	2	1	0	2	0	2	2	0	0	2	0	1	1	1	1	3
Sub-Saharan Africa	7	6	3	3	3	5	5	0	5	4	4	3	0	4	5	5
South Africa	7	6	3	3	3	5	5	0	5	4	4	3	0	4	5	5
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	51	51	53	61	67	77	101	104	93	101	76	103	100	74	114	112
Australia	4	6	10	7	3	10	8	8	12	10	8	5	14	9	14	16
Canada	29	18	28	25	35	38	45	50	46	47	51	56	54	32	69	61
Switzerland	17	26	15	26	24	25	38	43	29	40	14	41	27	29	26	27
All others	2	1	1	3	6	3	9	4	6	4	3	2	5	4	5	9

EU = European Union; USPTO = U.S. Patent and Trademark Office

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SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-59

## USPTO patents granted in computer systems technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	4,457	5,557	5,661	8,481	8,657	8,848	9,249	9,415	9,789	10,577	9,711	11,755	10,506	11,148	11,680	12,654
United States	2,147	2,818	2,873	4,430	4,560	4,697	4,864	4,829	5,105	5,457	5,123	5,975	5,111	5,471	5,710	6,116
EU	284	329	327	501	516	558	601	615	624	713	684	818	776	837	812	951
France	63	80	88	113	112	104	100	96	118	122	97	143	116	127	134	144
Germany	85	72	73	125	136	163	172	202	190	258	237	266	288	303	252	328
Italy	14	47	40	77	64	72	81	82	70	65	83	74	74	73	68	60
Netherlands	30	39	33	55	57	54	45	46	44	54	34	52	58	51	59	58
Sweden	4	6	12	12	16	17	27	21	26	18	22	27	24	25	22	33
United Kingdom	66	62	68	93	97	98	124	118	114	127	145	157	135	164	180	184
All others	24	24	13	28	34	51	53	50	62	71	66	98	80	94	96	143
Japan	1,748	1,999	1,941	2,692	2,704	2,637	2,796	2,953	2,998	3,118	2,658	3,401	3,028	2,911	2,973	2,927
China	3	4	8	9	2	10	17	25	27	41	41	54	72	123	162	177
Asia-8	207	317	421	722	757	779	811	817	822	1,028	967	1,183	1,217	1,452	1,633	1,974
India	3	1	2	3	3	4	6	6	15	7	15	32	51	66	63	117
South Korea	159	225	306	520	527	530	483	420	377	444	475	680	716	825	991	1,184
Taiwan	42	85	106	191	209	228	299	357	362	488	428	414	414	518	522	598
All others	3	5	7	8	18	17	23	34	68	89	49	57	36	43	57	75
All others	68	92	90	127	119	166	160	177	213	219	238	325	302	355	390	511
Central Asia and Europe	1	2	3	5	5	4	5	6	5	3	2	7	7	5	10	12
Russia	0	0	0	0	0	0	5	6	5	3	1	6	6	4	8	11
All others	1	2	3	5	5	4	0	0	0	0	1	1	1	0	1	1
Middle East and North Africa	21	28	24	37	33	49	54	54	70	69	71	93	80	98	107	148
Israel	20	27	24	36	32	48	54	53	70	68	71	93	80	97	105	146
All others	1	1	0	0	0	1	1	1	1	1	0	0	0	1	1	2
South and Central America	3	1	2	3	0	2	2	0	3	5	6	3	5	2	4	5
Argentina	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
Brazil	1	0	0	1	0	0	1	0	2	1	2	2	2	1	2	4
Mexico	1	1	1	0	0	2	1	0	1	3	4	1	1	0	1	1
All others	0	0	0	1	0	0	0	0	0	1	0	1	2	2	1	0
Sub-Saharan Africa	0	0	0	0	0	0	1	3	3	1	0	2	2	2	2	0
South Africa	0	0	0	0	0	0	1	3	3	1	0	2	1	2	1	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
All others	43	62	61	82	81	111	98	114	132	141	159	221	208	248	267	346
Australia	1	1	4	6	4	12	2	7	14	10	18	77	57	70	47	65
Canada	24	47	42	48	57	74	69	82	93	94	97	111	113	130	173	227
Switzerland	5	11	11	18	8	15	17	19	17	26	27	22	28	33	32	39
All others	12	3	5	11	12	9	10	6	8	11	16	11	11	15	15	15

EU = European Union; USPTO = U.S. Patent and Trademark Office

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SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-60

## USPTO patents granted in biotechnology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	2,417	3,271	4,685	6,679	6,367	5,606	6,278	5,827	5,379	4,806	4,117	6,008	5,940	5,703	5,826	8,206
United States	1,526	2,126	3,182	4,409	4,164	3,658	4,053	3,799	3,456	3,042	2,611	3,726	3,724	3,438	3,558	4,853
EU	401	553	804	1,164	1,155	1,035	1,182	1,025	1,023	901	735	1,047	998	1,004	1,025	1,527
France	57	98	144	206	182	175	202	165	186	135	138	187	157	164	153	232
Germany	125	153	212	297	276	256	325	277	308	273	201	290	272	273	282	440
Italy	23	42	49	62	64	38	37	39	40	27	28	56	40	44	48	95
Netherlands	18	23	58	75	73	86	70	72	46	58	51	55	65	70	86	95
Sweden	28	25	38	55	67	59	75	67	72	56	44	52	60	61	43	76
United Kingdom	80	100	166	243	260	221	254	219	185	183	133	203	204	184	186	259
All others	70	111	137	225	233	200	218	184	186	168	140	205	201	207	227	330
Japan	313	351	386	587	507	406	453	412	367	373	361	514	513	559	493	715
China	5	2	6	9	8	9	17	20	14	20	25	40	64	54	53	83
Asia-8	19	25	40	63	74	75	117	111	118	111	119	229	185	209	210	380
India	6	4	7	13	8	17	21	28	44	35	35	50	44	44	28	60
South Korea	9	14	20	24	41	36	55	44	44	37	44	92	80	84	97	180
Taiwan	4	5	10	19	15	15	33	37	22	32	31	68	50	60	69	114
All others	0	2	3	7	10	7	8	2	8	7	9	19	11	21	16	26
All others	153	212	267	448	459	423	456	461	401	357	265	453	456	440	488	649
Central Asia and Europe	2	15	8	21	14	18	17	22	11	13	12	15	28	27	26	37
Russia	0	0	0	0	0	0	11	18	9	11	10	12	23	21	22	31
All others	2	15	8	21	14	18	6	3	2	2	2	4	5	6	4	6
Middle East and North Africa	16	24	26	62	72	51	54	56	62	49	35	68	66	65	86	113
Israel	14	24	23	61	70	47	52	56	61	48	34	64	63	63	85	108
All others	2	1	3	1	2	4	2	0	1	1	2	4	3	2	1	5
South and Central America	8	3	12	20	8	12	14	21	17	19	9	25	17	23	26	43
Argentina	1	1	3	3	1	1	1	1	0	5	0	5	3	3	3	3
Brazil	1	1	2	3	1	3	6	4	8	8	2	12	7	5	7	14
Mexico	4	1	3	4	2	4	4	2	4	3	2	3	1	3	7	9
All others	1	0	4	9	4	4	3	14	5	3	5	4	6	11	9	17
Sub-Saharan Africa	0	2	1	1	3	4	4	4	5	2	0	3	2	5	4	9
South Africa	0	2	0	0	3	2	3	3	2	2	0	2	1	2	2	5
All others	0	0	1	1	0	2	1	1	2	0	0	1	1	3	2	4
All others	127	168	220	344	362	338	367	359	306	274	209	342	343	320	346	447
Australia	36	35	39	72	81	56	81	59	54	49	44	71	62	72	76	93
Canada	60	84	122	187	207	206	204	220	180	161	110	183	204	174	185	237
Switzerland	25	38	50	63	51	52	61	53	48	37	35	63	46	49	46	83
All others	7	11	9	22	22	24	22	26	25	27	21	25	31	25	38	33

EU = European Union; USPTO = U.S. Patent and Trademark Office

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SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-61

## USPTO patents granted in medical equipment technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	4,786	5,046	5,374	7,022	6,994	6,929	6,840	6,481	7,412	6,064	4,913	5,219	4,582	4,022	4,691	7,424
United States	3,567	3,807	3,984	5,201	5,140	4,979	4,828	4,423	5,158	4,178	3,446	3,581	3,103	2,717	3,205	5,211
EU	632	643	754	922	930	1,046	1,039	1,004	1,065	922	694	707	697	545	672	1,035
France	109	94	137	144	139	161	174	150	170	130	94	83	96	103	92	161
Germany	242	230	271	348	317	374	365	395	365	334	239	255	261	186	270	408
Italy	36	45	51	57	62	72	69	68	84	77	52	45	55	36	46	61
Netherlands	34	25	40	49	48	43	49	47	31	37	24	29	31	20	26	41
Sweden	52	60	43	91	78	95	115	91	99	66	56	67	42	41	46	46
United Kingdom	95	104	119	133	159	167	147	139	163	144	117	114	108	87	91	145
All others	64	85	93	100	127	134	120	114	154	135	111	114	105	71	101	174
Japan	273	298	301	411	418	367	408	410	463	343	271	335	316	319	315	490
China	4	4	4	10	9	11	7	13	19	18	16	22	21	19	18	32
Asia-8	72	67	59	91	101	119	114	163	170	164	136	186	144	115	101	139
India	1	0	0	4	5	3	2	2	5	2	3	7	3	6	4	3
South Korea	7	13	12	21	18	26	27	39	61	36	34	47	39	25	29	44
Taiwan	64	50	44	62	74	87	81	114	92	120	95	122	99	79	58	78
All others	0	4	3	4	4	3	4	8	12	6	4	10	3	5	10	14
All others	238	227	272	388	396	407	445	470	538	439	350	387	300	306	380	515
Central Asia and Europe	9	11	6	14	18	24	18	13	16	11	10	11	14	11	13	10
Russia	0	0	0	0	0	0	15	11	13	5	9	8	9	7	10	8
All others	9	11	6	14	18	24	3	2	3	6	2	3	4	4	3	2
Middle East and North Africa	23	27	50	79	75	71	90	95	115	90	71	80	66	59	85	133
Israel	22	26	47	77	72	69	85	93	111	89	71	78	66	57	83	132
All others	1	1	3	2	3	1	5	2	4	1	0	3	0	2	1	2
South and Central America	13	18	23	26	37	25	30	32	38	22	18	15	8	9	20	16
Argentina	6	6	10	12	15	9	11	13	15	9	8	3	4	1	11	2
Brazil	3	6	6	7	6	7	7	6	12	1	5	7	0	4	1	6
Mexico	3	3	3	4	2	3	2	3	2	6	1	4	0	3	1	4
All others	1	3	5	4	14	7	10	9	8	5	4	2	4	2	6	4
Sub-Saharan Africa	9	3	2	7	7	8	6	4	7	4	6	10	3	3	5	6
South Africa	9	3	2	7	7	8	6	4	6	4	5	8	3	2	4	6
All others	0	0	0	0	0	0	0	0	0	0	1	2	0	1	1	0
All others	184	169	191	263	260	279	301	326	362	312	245	271	209	224	257	350
Australia	34	31	26	49	45	45	50	65	74	58	58	72	56	39	57	74
Canada	90	71	100	113	108	112	128	121	149	119	90	88	64	74	85	103
Switzerland	51	57	56	80	85	96	99	111	105	104	76	82	70	98	94	138
All others	10	11	9	20	23	25	24	29	35	32	21	28	20	13	20	35

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-62

**Regions and countries/economies in USPTO patent data**

United States	Asia-8 (continued)	South and Central America (continued)	Sub-Saharan Africa
United States	Taiwan	All others	All others (continued)
Puerto Rico	Thailand	Antigua and Barbuda	Kenya
EU	All others	Bahamas	Liberia
France	Central Asia and Europe	Barbados	Madagascar
Germany	Russia	Belize	Mali
Italy	Turkey	Bolivia	Mauritius
Netherlands	All others	Costa Rica	Namibia
Sweden	Albania	Cuba	Niger
United Kingdom	Andorra	Dominica	Nigeria
All others	Armenia	Dominican Republic	Rwanda
Austria	Azerbaijan	Ecuador	Senegal
Belgium	Belarus	El Salvador	Seychelles
Bulgaria	Bosnia and Herzegovina	Grenada	Sierra Leone
Cyprus	Kyrgyzstan	Guatemala	Swaziland
Czech Republic	Macedonia	Guyana	Tanzania
Denmark	Moldova	Haiti	Uganda
Estonia	Tajikistan	Honduras	Zambia
European Patent Office	Ukraine	Jamaica	Zimbabwe
Finland	Uzbekistan	Nicaragua	All others
Greece	Yugoslavia	Panama	Australia
Hague Agreement	Middle East and North Africa	Paraguay	Canada
Hungary	Israel	Peru	Switzerland
Ireland	All others	St. Kitts and Nevis	All others
Latvia	Algeria	St. Lucia	Afghanistan
Lithuania	Bahrain	Suriname	Bangladesh
Luxembourg	Egypt	Trinidad and Tobago	Brunei
Malta	Iran	Uruguay	Burma
Poland	Kuwait	Sub-Saharan Africa	French Guiana
Portugal	Lebanon	South Africa	Greenland
Romania	Morocco	All others	Iceland
Slovakia	Oman	Africa Regional Industrial Property Org.	Laos
Slovenia	Pakistan	African Intellectual Property Org.	Liechtenstein
Spain	Qatar	Benin	Monaco
Japan	Saudi Arabia	Burkina Faso	Nauru
China	Syria	Cameroon	Nepal
China	Tunisia	Chad	New Zealand
Hong Kong	United Arab Emirates	Congo (Brazzaville)	North Korea
Macau	Yemen	Congo (Kinshasa)	Norway
Asia-8	South and Central America	Côte d'Ivoire	Papua New Guinea
India	Argentina	Djibouti	Sri Lanka
Indonesia	Brazil	Ethiopia	Vatican City
Malaysia	Chile	Gabon	Vietnam
Philippines	Colombia	Gambia	
Singapore	Mexico	Ghana	
South Korea	Venezuela	Guinea	

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTE: European Patent Office and Hague Agreement are part of EU.

SOURCE: The Patent Board™, Proprietary Patent Database (15 February 2011).

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Appendix table 6-63

**Triadic patent families, by region/country/economy: 1999–2008**

Region/country/economy	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
World	44,396	44,479	44,212	45,485	46,532	47,851	48,792	49,390	48,868	47,949
United States	14,513	13,658	13,532	14,381	14,720	15,098	15,272	15,088	14,823	14,399
EU	14,004	13,074	13,241	13,108	13,206	13,875	14,204	14,684	14,727	14,525
Austria	256	273	255	316	334	376	422	429	418	406
Belgium	375	321	335	342	325	413	411	409	420	396
Denmark	235	216	221	227	242	292	308	273	305	312
Finland	442	342	345	271	299	335	344	365	348	348
France	2,335	2,100	2,168	2,194	2,243	2,379	2,369	2,428	2,452	2,423
Germany	5,983	5,738	5,613	5,468	5,409	5,598	5,733	6,011	6,029	5,875
Hungary	40	27	29	28	41	44	41	44	48	46
Ireland	73	30	50	50	64	66	74	68	76	83
Italy	659	625	703	705	702	746	738	754	746	730
Netherlands	911	1,007	1,042	952	966	984	961	997	942	979
Poland	9	9	11	10	11	16	13	16	20	22
Spain	124	143	155	158	153	211	214	214	217	223
Sweden	876	603	666	690	670	692	826	899	951	948
United Kingdom	1,624	1,585	1,585	1,630	1,645	1,638	1,647	1,671	1,652	1,621
All others	61	55	62	66	102	84	103	107	105	114
Japan	12,848	14,379	13,858	13,909	13,948	13,699	13,610	13,872	13,599	13,446
China	81	98	129	179	236	243	326	402	498	503
Asia-8	719	890	1,133	1,510	1,999	2,306	2,535	2,667	2,603	2,480
India	39	53	85	120	128	122	149	127	139	141
Indonesia	1	4	2	2	1	2	1	1	0	1
Singapore	56	68	84	82	95	116	115	118	113	136
South Korea	580	726	908	1,202	1,680	1,953	2,112	2,255	2,145	2,006
Taiwan	44	40	54	103	95	112	157	166	206	196
All others	2,147	2,297	2,238	2,303	2,335	2,541	2,753	2,583	2,524	2,505
Other developed	2,010	2,139	2,090	2,154	2,178	2,375	2,552	2,380	2,317	2,301
Australia	287	360	317	338	331	353	354	314	302	297
Canada	521	513	528	582	566	645	711	648	623	609
Iceland	7	11	4	8	4	2	4	5	3	3
Israel	278	313	311	261	289	343	446	390	372	389
New Zealand	47	45	41	60	56	62	57	55	52	49
Norway	106	98	89	105	97	104	123	118	116	115
Switzerland	763	799	801	800	835	867	858	850	849	838
Other developing	137	158	147	149	158	166	201	203	207	204
Argentina	7	7	6	7	6	7	10	10	9	8
Brazil	26	29	43	41	42	47	51	56	64	60
Chile	2	2	5	5	3	5	5	6	4	5

Appendix table 6-63

**Triadic patent families, by region/country/economy: 1999–2008**

Region/country/economy	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Mexico	10	8	12	10	14	15	13	16	15	16
Russia	62	72	49	50	52	50	73	66	63	66
South Africa	27	36	23	27	32	29	36	33	30	28
Turkey	3	4	9	8	8	13	12	17	22	21

EU = European Union

NOTES: Triadic patent families include patents applied for in U.S. Patent and Trademark Office, European Patent Office, and Japan Patent Office. Patent families fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. EU includes all 27 member states; the countries in "all others" are Bulgaria, Cyprus, Czech Republic, Estonia, Greece, Latvia, Lithuania, Luxembourg, Malta, Portugal, Romania, Slovakia, and Slovenia. China includes Hong Kong and Macau. Asia-8 economies Malaysia, Philippines, and Thailand do not have activity in triadic patents.

SOURCE: Organization for Economic Cooperation and Development, Patent Statistics, Patents by Region database, <http://stats.oecd.org/WBOS/index.aspx>, accessed 16 February 2011.

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Appendix table 6-64

**USPTO trademark applications, by region/country/economy: 1998–2008**

Region/country/economy	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
World	246,611	260,761	292,464	216,308	212,637	220,965	248,406	264,510	277,579	304,129	294,070
United States	207,429	229,721	251,220	181,713	181,693	191,902	213,495	224,271	233,312	256,429	246,222
EU	19,988	13,658	18,426	14,443	11,711	12,906	14,670	17,361	19,481	21,632	22,414
Austria	418	231	307	306	271	241	279	387	418	392	420
Czech Republic	28	22	31	26	31	33	33	63	78	94	114
Denmark	366	223	359	297	277	329	240	383	397	448	504
France	3,347	2,272	2,591	2,160	2,013	1,933	2,057	2,521	2,631	2,752	2,834
Germany	5,262	3,548	4,661	3,937	2,114	3,485	3,587	4,436	4,361	4,646	4,987
Hungary	12	21	29	24	12	26	50	59	54	40	59
Ireland	246	270	314	221	186	224	219	222	317	347	369
Italy	1,653	1,270	1,499	1,265	1,235	1,258	1,335	1,861	2,369	2,266	2,034
Netherlands	1,250	899	1,299	926	843	863	454	469	457	602	520
Poland	20	13	41	33	40	63	97	99	98	115	123
Portugal	69	81	85	74	57	88	72	138	171	180	201
Spain	657	568	877	665	570	685	877	783	948	978	1,040
Sweden	1,148	656	922	595	511	529	501	575	551	635	690
United Kingdom	4,727	3,044	4,600	3,238	2,862	2,528	2,918	3,249	3,737	4,869	4,983
All others	785	540	811	676	689	621	1,951	2,116	2,894	3,268	3,536
Japan	2,971	2,374	3,027	4,370	2,607	2,845	3,015	3,126	3,158	2,957	3,284
China	329	291	356	332	418	1,030	1,407	1,263	1,530	3,717	2,579
Asia-8	537	605	943	809	881	797	1,017	996	1,259	1,974	1,942
India	86	134	198	159	235	192	229	176	282	307	360
Indonesia	0	0	0	0	0	32	27	0	0	35	40
Malaysia	0	0	0	0	0	0	79	0	0	72	98
Philippines	0	0	0	0	0	0	28	0	0	45	58
Singapore	0	0	0	0	0	1	159	77	91	306	287
South Korea	451	471	745	650	646	572	393	743	886	1,107	967
Thailand	0	0	0	0	0	0	102	0	0	102	132
All others	15,496	14,235	18,686	14,774	15,471	11,644	14,962	17,661	19,056	17,617	17,776
Central Asia and Europe	111	100	103	151	142	238	360	567	600	649	697
Russia	53	65	56	61	73	101	119	213	211	211	293
Turkey	58	35	47	90	69	134	163	283	302	281	295
All others	0	0	0	0	0	3	78	71	87	157	109
Middle East and North Africa	442	619	880	561	392	390	526	460	523	815	849
Israel	442	619	880	561	392	326	423	434	502	584	548
United Arab Emirates	0	0	0	0	0	11	20	0	0	91	152
All others	442	619	880	561	392	368	486	460	523	633	545
South and Central America	1,125	994	1,240	1,265	1,378	2,274	2,738	1,619	1,780	3,207	2,818
Argentina	126	149	239	179	195	228	167	202	203	236	202
Brazil	232	183	357	370	324	373	369	398	407	364	376
Chile	0	0	0	0	0	162	190	0	0	190	194
Colombia	0	0	0	0	0	131	132	0	0	196	151
Costa Rica	0	0	0	0	0	29	40	0	0	57	73
Mexico	767	662	644	716	859	768	948	1,018	1,166	1,311	1,103
All others	0	0	0	0	0	583	892	1	4	853	719
Sub-Saharan Africa	139	123	194	133	144	175	173	169	224	212	165
South Africa	139	123	194	133	144	159	160	168	217	197	147
All others	0	0	0	0	0	16	13	1	7	15	18
Other developed	10,352	8,747	11,096	8,279	7,403	8,121	9,327	9,935	10,766	12,043	11,794
Australia	1,095	1,104	1,526	1,093	1,116	1,331	1,414	1,612	1,910	2,174	1,999
Canada	6,856	5,961	7,483	5,248	4,434	4,816	5,490	5,920	6,090	6,660	6,569
New Zealand	200	266	246	257	221	280	318	306	348	374	327
Norway	237	144	179	144	105	109	116	209	199	221	280



## Appendix table 6-64

**USPTO trademark applications, by region/country/economy: 1998–2008**

Region/country/economy	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Switzerland	1,847	1,222	1,603	1,486	1,496	1,537	1,809	1,767	2,077	2,371	2,338
All others	117	50	59	51	31	48	180	121	142	243	281
All others and unknown	3,327	3,652	5,173	4,385	6,012	462	1,851	4,912	5,170	706	1,471

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: EU includes 27 member countries; the countries in "all others" are Belgium, Bulgaria, Cyprus, Estonia, Finland, Greece, Latvia, Lithuania, Luxembourg, Malta, Romania, Slovakia, and Slovenia. China includes Hong Kong. Data are not available for Taiwan. Detail may not add to total because of rounding or minor discrepancies.

SOURCE: World Intellectual Property Organization, Intellectual Property Statistics, <http://www.wipo.int/ipstats/en>, accessed 15 November 2010.

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## Appendix table 6-65

## U.S. venture capital investment, by financing stage and industry/technology: 1995–2010

(Millions of dollars)

Financing stage and industry/technology	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All financing stages																
All industries/technologies	5,885	8,936	12,002	43,809	16,083	86,823	35,308	21,509	19,471	22,322	24,207	29,668	32,200	31,243	22,348	26,415
Aerospace and defense	18	7	6	0	6	63	5	44	17	33	25	165	51	76	45	97
Agriculture and forestry	12	12	26	15	71	39	43	7	32	15	50	17	121	48	32	34
Biopharmaceuticals	480	798	1,021	1,693	1,279	4,046	3,452	3,243	3,636	4,595	4,074	4,837	5,822	4,626	4,030	3,246
Business support services	230	564	928	7,960	1,601	18,133	3,978	1,471	1,332	1,233	1,719	2,415	2,989	2,808	2,120	2,516
Communications and networking	1,208	1,562	2,385	9,842	3,432	21,293	8,460	4,470	2,985	2,644	2,895	3,927	2,580	1,665	1,587	1,027
Construction and civil engineering	51	73	11	75	33	48	97	82	66	94	50	52	240	199	336	141
Consumer information services	68	226	272	2,567	505	2,425	222	152	213	452	661	1,288	1,740	2,525	1,792	4,552
Electronics and computer hardware	385	447	489	815	517	2,049	1,431	1,074	867	1,235	1,191	1,278	1,648	1,361	1,061	1,282
Financial institutions and services	85	185	153	2,026	558	3,334	1,185	446	456	530	677	679	824	673	544	631
Food and beverage	35	53	93	55	63	18	23	17	26	12	58	54	183	113	69	100
Healthcare services	423	662	732	394	577	425	489	402	289	397	526	560	537	415	359	1,144
Household and office goods	26	11	19	6	22	17	3	5	17	21	21	23	6	60	48	71
Machinery and industrial goods	85	41	110	97	28	167	109	8	46	115	90	97	235	468	214	188
Materials and chemicals	48	80	91	62	93	81	114	212	208	148	366	218	487	276	289	413
Media and content	225	477	591	2,141	725	3,050	775	235	247	369	511	488	495	698	306	343
Medical devices and equipment	456	498	756	1,397	982	2,196	1,799	1,776	1,824	1,726	2,361	2,724	3,791	3,615	2,959	2,249
Medical software and information services	198	409	514	1,108	479	2,231	730	409	369	337	498	411	307	365	374	478
Non-renewable energy	0	44	71	0	64	0	47	22	13	11	81	335	297	54	239	296
Personal goods	18	129	47	16	12	23	8	7	40	19	37	35	77	72	59	47
Renewable energy	2	5	7	21	13	75	144	92	42	309	249	1,026	1,690	3,664	1,123	2,118
Retailers	423	452	519	3,362	671	2,143	268	161	100	179	355	368	177	176	130	182
Semiconductors	276	350	560	1,347	623	3,379	2,586	1,480	1,865	2,063	1,922	2,284	1,709	1,303	814	764
Software	972	1,741	2,455	8,492	3,408	20,956	8,990	5,612	4,707	5,594	5,591	5,933	5,669	5,153	3,231	3,762
Travel and leisure	139	104	143	253	302	365	186	49	62	130	188	301	244	376	93	133
Utilities	0	1	0	6	0	69	0	13	0	18	0	23	44	47	39	141
Vehicles and parts	9	9	5	31	19	16	87	7	3	44	13	112	236	396	455	460
Wholesale trade and shipping	13	0	0	28	1	182	79	12	12	0	0	17	0	10	0	0
Early stage																
All industries/technologies	2,010	3,238	4,324	15,492	6,136	29,322	8,067	4,351	3,880	5,091	5,958	6,275	8,104	6,999	4,242	4,570
Aerospace and defense	0	0	6	0	0	63	0	26	17	12	7	25	3	35	7	21
Agriculture and forestry	12	2	20	2	13	1	20	0	5	0	3	2	1	17	3	11
Biopharmaceuticals	121	197	338	573	461	1,112	1,163	932	622	1,001	1,139	1,223	1,601	1,345	854	578
Business support services	122	247	497	3,603	726	6,426	627	217	175	325	514	716	905	841	503	462
Communications and networking	234	582	622	3,719	1,467	6,852	1,668	503	286	514	399	391	450	242	109	315
Construction and civil engineering	17	3	5	57	32	25	53	20	19	25	4	18	163	53	60	18
Consumer information services	37	60	81	744	177	777	34	43	62	93	340	602	878	870	382	623
Electronics and computer hardware	134	159	165	204	250	603	426	172	249	315	252	181	351	225	121	127
Financial institutions and services	72	45	69	745	141	1,384	154	41	68	199	447	156	194	128	140	196
Food and beverage	34	20	23	8	3	10	10	12	15	3	43	25	62	25	11	37
Healthcare services	229	321	309	89	233	117	75	123	75	109	194	141	166	62	222	134
Household and office goods	17	8	6	2	2	14	3	4	6	0	2	3	6	48	22	37
Machinery and industrial goods	42	9	15	17	7	5	81	3	35	21	31	43	20	94	21	15
Materials and chemicals	37	45	24	32	25	27	51	74	46	34	92	74	103	112	63	39
Media and content	66	169	243	787	246	1,163	140	29	47	90	218	214	100	190	105	110

## Appendix table 6-65

## U.S. venture capital investment, by financing stage and industry/technology: 1995–2010

(Millions of dollars)

Financing stage and industry/technology	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Medical devices and equipment	97	143	225	331	327	474	213	337	380	440	437	541	722	784	356	333
Medical software and information services	89	149	150	362	179	788	114	53	67	80	75	54	73	103	64	156
Non-renewable energy	0	35	63	0	1	0	47	22	2	11	44	26	129	54	32	178
Personal goods	9	3	36	12	0	7	3	4	15	12	18	6	29	39	17	11
Renewable energy	2	0	3	0	3	22	47	47	21	61	45	483	597	477	151	146
Retailers	82	141	161	1,023	239	399	14	30	26	85	88	40	50	32	41	89
Semiconductors	72	73	251	393	235	1,062	748	331	525	411	367	308	117	132	45	69
Software	422	780	978	2,732	1,203	7,795	2,255	1,299	1,082	1,201	1,139	957	1,190	839	788	726
Travel and leisure	62	42	30	47	157	57	11	11	34	40	60	15	69	33	17	24
Utilities	0	1	0	6	0	14	0	13	0	0	0	10	30	25	3	86
Vehicles and parts	3	6	5	0	8	3	84	6	2	8	0	7	95	181	106	28
Wholesale trade and shipping	0	0	0	7	1	122	28	0	0	0	0	17	0	10	0	0
Expansion stage																
All industries/technologies	1,602	2,152	3,250	12,320	4,549	28,390	12,585	6,356	5,093	5,665	4,933	7,788	6,885	7,291	5,048	4,772
Aerospace and defense	0	0	0	0	6	0	5	1	0	21	18	0	44	4	24	7
Agriculture and forestry	0	10	6	13	13	0	0	4	15	0	0	14	3	0	10	3
Biopharmaceuticals	114	201	151	613	330	1,006	1,213	1,097	979	1,712	1,049	1,388	1,185	943	1,087	609
Business support services	68	177	219	2,398	368	6,812	1,790	291	313	162	232	562	678	613	635	576
Communications and networking	501	257	616	2,154	1,017	6,442	3,281	1,231	743	342	358	1,417	370	267	180	158
Construction and civil engineering	1	23	7	18	1	23	44	15	36	28	5	0	2	41	58	21
Consumer information services	25	108	72	972	154	593	91	40	27	231	93	384	482	809	508	424
Electronics and computer hardware	112	139	99	354	134	508	481	455	204	339	269	395	246	250	284	261
Financial institutions and services	1	58	41	740	199	1,248	430	110	149	46	39	185	137	92	130	122
Food and beverage	0	28	50	9	2	7	7	1	10	0	0	23	41	46	13	6
Healthcare services	38	190	187	89	157	227	69	48	17	119	120	133	130	135	54	97
Household and office goods	0	1	2	4	1	0	0	0	11	5	4	1	0	2	24	9
Machinery and industrial goods	0	28	7	0	18	11	9	0	0	54	0	37	142	49	65	61
Materials and chemicals	2	8	31	4	18	9	36	84	82	9	32	50	225	75	88	139
Media and content	60	78	196	553	182	888	326	50	51	180	26	163	110	71	47	75
Medical devices and equipment	190	92	177	355	330	621	473	468	444	358	568	487	718	831	650	412
Medical software and information services	44	60	185	363	135	841	273	73	38	78	94	91	40	45	49	46
Non-renewable energy	0	4	8	0	51	0	0	0	11	0	37	47	8	0	57	68
Personal goods	3	3	0	4	5	11	3	3	4	2	4	12	31	6	1	26
Renewable energy	0	4	3	0	0	3	61	8	12	60	126	232	545	1,419	168	685
Retailers	118	53	188	936	227	868	62	1	11	13	48	124	29	108	0	70
Semiconductors	74	96	92	468	139	1,095	770	563	537	529	445	571	475	288	108	44
Software	193	496	852	2,255	1,026	6,961	3,091	1,811	1,386	1,332	1,246	1,429	1,170	1,154	698	783
Travel and leisure	56	38	62	6	32	170	18	4	0	7	106	33	51	15	23	22
Utilities	0	0	0	0	0	33	0	0	0	18	0	0	0	0	36	0
Vehicles and parts	4	0	1	6	6	6	0	1	0	20	13	10	26	29	52	48
Wholesale trade and shipping	0	0	0	6	0	7	51	0	12	0	0	0	0	0	0	0
Later stage																
All industries/technologies	2,222	3,360	4,093	15,742	5,154	28,707	14,042	9,407	8,648	9,848	11,307	13,516	15,661	15,617	12,165	16,420
Aerospace and defense	18	7	0	0	0	0	0	18	0	0	0	140	5	33	15	68
Agriculture and forestry	0	0	0	0	45	37	23	3	11	8	45	2	118	30	20	20
Biopharmaceuticals	244	401	504	491	488	1,874	1,005	1,052	1,864	1,745	1,796	2,112	2,877	2,188	1,961	2,024

## Appendix table 6-65

## U.S. venture capital investment, by financing stage and industry/technology: 1995–2010

(Millions of dollars)

Financing stage and industry/technology	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Business support services	36	120	212	1,921	507	4,849	1,526	852	641	581	889	996	1,215	1,311	935	1,453
Communications and networking	465	717	965	3,960	925	7,924	3,442	2,339	1,531	1,557	1,748	1,533	1,390	933	1,016	506
Construction and civil engineering	33	47	0	0	0	0	0	47	11	41	41	34	61	105	217	101
Consumer information services	7	58	118	851	173	1,055	97	59	71	129	176	276	380	774	888	3,504
Electronics and computer hardware	129	132	222	254	131	932	523	385	380	496	648	645	998	830	625	883
Financial institutions and services	12	42	38	541	216	677	558	272	166	212	130	177	469	441	251	272
Food and beverage	0	5	14	38	57	0	6	5	1	9	15	5	80	41	45	58
Healthcare services	154	151	235	216	187	81	204	168	138	151	169	286	218	204	83	900
Household and office goods	9	2	3	0	17	2	0	0	0	15	15	14	0	10	2	25
Machinery and industrial goods	43	4	78	50	4	151	19	6	4	25	59	17	59	325	126	101
Materials and chemicals	9	27	37	26	50	46	24	48	76	73	225	89	159	89	131	235
Media and content	99	230	152	801	296	997	294	145	144	64	222	87	254	437	136	139
Medical devices and equipment	168	239	321	693	263	1,074	1,058	900	869	821	1,163	1,516	2,256	1,719	1,848	1,407
Medical software and information services	66	192	173	355	162	551	343	262	176	172	118	209	128	206	241	240
Non-renewable energy	0	0	0	0	12	0	0	0	0	0	0	262	160	0	150	50
Personal goods	6	123	9	0	7	6	3	0	21	5	15	17	17	27	41	10
Renewable energy	0	1	1	21	10	50	36	27	9	188	78	303	540	1,747	766	1,287
Retailers	218	258	142	1,403	200	876	193	106	54	61	206	147	98	36	89	23
Semiconductors	118	159	217	486	218	1,211	1,037	535	714	1,016	928	1,134	1,014	743	620	587
Software	353	421	602	3,394	1,087	6,110	3,506	2,136	1,746	2,431	2,603	3,159	2,927	2,921	1,609	2,001
Travel and leisure	21	23	50	200	95	122	145	32	21	33	16	248	124	282	53	88
Utilities	0	0	0	0	0	22	0	0	0	0	0	13	0	0	0	55
Vehicles and parts	2	3	0	25	5	7	2	0	0	16	0	95	115	185	297	384
Wholesale trade and shipping	13	0	0	15	0	53	0	12	0	0	0	0	0	0	0	0

NOTES: Industries and technologies classified by Dow Jones VentureSource. Early stage consists of seed, startup, and initiation of commercial sales. Expansion consists of second-round financing that provides working capital for company expansion, and financing to prepare for initial public offering. Later stage includes acquisition financing and management and leverage buyouts. Sum of financing stages does not add up to total.

SOURCE: Dow Jones, special tabulations (February 2011) of VentureSource database, <http://www.dowjones.com/info/venture-capital-data.asp>.

*Science and Engineering Indicators 2012*

Appendix table 6-66

## USPTO patents granted in clean energy and pollution control technologies, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	2,991	3,171	3,080	3,678	3,619	3,641	4,046	4,065	4,218	4,027	3,533	3,887	3,638	3,688	4,238	6,145
United States	1,640	1,791	1,633	1,899	1,837	1,777	2,002	1,894	1,954	1,875	1,632	1,871	1,721	1,759	2,000	2,788
EU	498	504	525	621	633	621	678	698	717	609	581	534	589	592	634	992
France	91	90	92	105	94	106	106	119	97	67	82	61	98	85	97	152
Germany	227	209	234	281	287	306	321	307	352	314	283	262	261	274	310	466
Italy	16	24	25	24	26	31	25	36	28	30	23	27	26	29	25	44
Netherlands	20	21	16	21	36	20	35	29	31	24	19	12	22	31	16	37
Sweden	35	32	45	38	64	42	54	64	40	35	33	34	31	32	21	41
United Kingdom	63	71	61	87	70	55	65	66	79	63	54	78	74	70	64	93
All others	46	57	52	66	55	62	73	78	91	76	86	61	78	71	100	158
Japan	613	620	650	816	799	924	990	1,088	1,150	1,111	920	1,055	933	905	1,031	1,441
China	8	2	5	8	3	10	7	7	12	12	10	19	20	23	32	67
Asia-8	35	56	63	108	99	76	125	145	142	157	135	161	178	177	306	533
India	2	2	1	1	1	3	4	6	7	7	8	4	13	9	11	19
South Korea	13	25	37	65	56	45	76	89	84	98	75	105	105	106	209	390
Taiwan	19	25	21	36	39	26	39	43	47	46	46	50	52	61	79	108
All others	1	5	4	6	4	3	7	8	5	7	6	3	9	3	7	16
All others	197	199	205	225	249	234	245	233	243	264	256	246	197	232	235	326
Central Asia and Europe	12	13	9	11	14	7	16	14	15	12	15	9	8	15	11	16
Russia	0	0	0	0	0	0	14	12	10	9	10	7	5	14	9	11
All others	12	13	9	11	14	7	2	2	4	3	5	2	3	1	2	4
Middle East and North Africa	20	24	17	24	18	18	21	21	26	26	19	17	14	20	27	48
Israel	20	24	15	23	16	13	19	18	24	24	15	17	11	19	24	38
All others	0	0	2	1	2	5	2	3	2	3	4	0	2	1	3	10
South and Central America	7	11	7	7	11	2	8	14	9	11	8	6	5	11	8	15
Argentina	0	0	2	1	1	1	1	1	4	0	0	0	0	0	0	1
Brazil	5	2	2	4	2	1	1	2	2	4	3	2	3	3	3	6
Mexico	1	7	3	1	0	0	4	9	3	3	3	2	1	4	1	8
All others	1	3	0	1	8	0	3	3	0	4	2	2	1	5	4	1
Sub-Saharan Africa	5	4	6	4	7	7	8	3	2	4	4	7	6	6	5	11
South Africa	5	3	6	4	7	7	8	3	2	3	3	6	6	6	3	11
All others	0	1	0	0	0	0	0	0	0	1	1	1	1	0	2	1
All others	153	147	166	179	200	200	192	181	191	212	211	207	165	181	184	236
Australia	9	20	29	21	26	20	17	21	28	28	26	24	24	22	31	26
Canada	97	103	98	111	125	130	116	135	131	142	140	139	111	120	110	159
Switzerland	40	22	28	35	33	36	46	19	22	30	31	31	19	23	27	32
All others	8	2	11	13	16	15	14	7	9	11	14	13	12	16	16	19

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Clean energy and pollution control technologies include alternative energy, energy storage, smart grid, and pollution mitigation. Alternative energy includes solar, wind, nuclear, hydropower, wave/tidal/ocean, geothermal, and electric/hybrid. Energy storage includes batteries, compressed air, flywheels, superconductivity, magnet energy systems, ultracapacitors, hydrogen production and storage, and thermal energy. Pollution mitigation includes recycling, control of air, water, and solid waste pollution, environmental remediation, cleaner coal, and capture and storage of carbon and other greenhouse gases. Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, special tabulations (2011) of U.S. Patent and Trademark Office (USPTO), Patent Grant Bibliographic Data. Proprietary Patent Database, special tabulations (2011).

Appendix table 6-67

## USPTO patents granted in alternative energy, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	825	920	834	1,062	1,080	1,154	1,330	1,509	1,563	1,578	1,482	1,644	1,565	1,606	1,952	2,993
United States	430	484	418	510	500	513	610	652	681	701	636	754	728	712	871	1,351
EU	135	142	135	197	183	188	201	241	262	239	262	223	270	296	326	501
France	39	35	33	49	27	30	28	38	34	25	31	31	41	29	34	61
Germany	52	54	55	93	94	103	106	116	139	130	139	125	134	163	183	255
Italy	2	7	5	2	9	7	9	14	7	7	7	9	7	13	10	21
Netherlands	3	4	2	3	5	10	12	8	12	10	7	4	14	16	11	17
Sweden	13	8	14	5	17	11	14	22	16	11	11	10	9	9	9	12
United Kingdom	15	20	19	23	18	12	14	20	20	23	27	21	29	36	27	40
All others	11	14	9	20	14	16	19	23	34	33	40	25	36	31	52	95
Japan	201	228	206	279	294	356	415	506	499	483	434	505	432	427	504	714
China	3	1	1	1	0	1	1	2	2	3	3	8	9	11	15	32
Asia-8	9	22	14	17	28	23	31	34	29	48	43	52	53	74	145	264
India	0	0	0	0	0	0	1	1	1	1	1	0	5	3	3	6
South Korea	3	10	9	9	13	13	14	13	17	26	28	28	28	42	90	185
Taiwan	6	11	4	7	12	9	10	19	9	20	13	22	20	28	48	63
All others	0	1	1	1	3	1	5	1	2	1	1	2	0	1	4	11
All others	47	43	61	59	75	74	73	75	90	104	105	102	73	87	91	131
Central Asia and Europe	1	3	1	0	0	1	3	7	4	2	5	2	3	3	2	6
Russia	0	0	0	0	0	0	2	7	2	2	3	1	2	3	2	4
All others	1	3	1	0	0	1	1	0	2	0	2	1	1	0	1	2
Middle East and North Africa	8	13	13	10	12	9	11	8	12	13	7	6	6	7	9	23
Israel	8	13	11	10	11	7	10	8	11	13	6	6	5	7	7	18
All others	0	0	2	0	1	2	1	0	1	0	1	0	1	1	1	5
South and Central America	1	2	1	0	4	1	2	3	0	3	4	3	2	2	2	3
Argentina	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Brazil	0	0	0	0	1	1	0	0	0	1	2	1	2	0	1	0
Mexico	0	1	1	0	0	0	1	3	0	1	1	0	0	1	0	2
All others	1	1	0	0	3	0	0	0	0	1	1	2	0	0	1	0
Sub-Saharan Africa	0	1	2	1	1	1	0	1	0	0	2	2	2	0	2	6
South Africa	0	1	2	1	1	1	0	1	0	0	1	2	2	0	1	6
All others	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
All others	38	25	43	47	58	62	56	56	75	86	87	90	61	75	76	93
Australia	3	4	6	5	14	9	8	9	13	11	3	12	9	6	15	13
Canada	21	15	23	27	25	35	25	38	55	63	71	65	42	48	48	62
Switzerland	11	6	9	11	16	9	21	6	5	10	11	10	8	11	5	14
All others	3	0	4	5	3	9	2	3	2	3	2	3	2	10	8	5

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Alternative energy consists of solar, wind, nuclear, bioenergy, hydropower, wave/tidal/ocean, geothermal, fuel cells, and electric/hybrid. Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-68

## USPTO patents granted in energy storage, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	227	309	354	416	399	476	546	592	620	621	461	534	519	526	633	980
United States	115	156	152	195	173	184	214	200	220	238	175	215	194	215	219	332
EU	21	31	32	34	33	39	55	59	55	59	43	31	35	41	46	75
France	4	10	12	5	9	11	16	16	11	9	3	3	6	9	13	21
Germany	4	10	9	11	13	20	22	22	26	36	22	13	21	12	18	34
Italy	2	3	3	2	1	2	2	3	1	2	2	2	1	2	1	7
Netherlands	1	0	2	3	1	0	2	3	4	3	5	1	0	8	1	1
Sweden	0	1	0	0	0	0	1	1	1	1	1	2	1	1	0	3
United Kingdom	9	4	2	4	4	3	7	5	6	4	5	9	7	5	5	6
All others	2	4	4	9	5	2	6	9	5	4	5	2	0	5	7	3
Japan	65	90	131	153	149	210	220	263	268	243	176	208	213	203	237	319
China	2	1	0	0	1	3	1	0	1	2	1	2	1	3	2	18
Asia-8	1	10	15	12	16	15	26	45	44	44	34	47	55	41	85	192
India	0	0	0	0	0	0	0	1	1	0	1	0	1	0	0	3
South Korea	0	5	12	10	14	13	22	39	36	36	29	43	46	36	81	172
Taiwan	1	4	3	3	2	3	4	4	7	6	3	6	7	5	11	22
All others	0	1	1	0	0	0	0	2	0	1	1	0	2	0	0	1
All others	23	23	24	21	27	23	30	25	32	35	31	29	20	24	37	37
Central Asia and Europe	2	3	1	0	3	2	3	5	4	5	5	3	1	4	4	3
Russia	0	0	0	0	0	0	3	4	3	3	3	3	1	4	3	3
All others	2	3	1	0	3	2	0	2	1	2	1	0	0	1	0	0
Middle East and North Africa	9	6	1	3	3	1	3	1	1	4	1	1	2	1	5	3
Israel	9	6	1	3	3	1	3	1	1	3	1	1	1	1	5	1
All others	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
South and Central America	0	0	0	0	0	0	3	0	0	0	0	1	0	1	0	0
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	2	0	0	0	0	1	0	1	0	0
Sub-Saharan Africa	4	0	1	1	2	0	0	0	0	1	0	0	0	1	1	4
South Africa	4	0	1	1	2	0	0	0	0	1	0	0	0	1	1	4
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	8	14	21	17	19	20	21	19	27	25	25	24	17	17	27	27
Australia	0	0	4	3	1	1	1	1	5	2	4	4	4	4	6	2
Canada	7	13	16	13	16	17	17	15	18	17	16	15	7	8	17	16
Switzerland	1	1	1	0	0	1	2	1	2	5	3	5	3	3	4	7
All others	0	0	0	1	2	2	2	1	1	2	3	0	3	1	1	4

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Energy storage includes batteries, compressed air, flywheels, superconductivity magnet energy systems, ultracapacitors, hydrogen production and storage, and thermal energy storage. Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-69

## USPTO patents granted in smart grid technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	295	289	295	312	304	277	316	305	350	305	288	384	360	385	378	528
United States	140	153	160	178	160	158	186	174	195	172	162	226	218	248	230	303
EU	40	36	47	42	69	51	48	63	57	42	47	43	45	50	59	81
France	13	10	9	3	15	6	8	9	12	4	9	2	8	5	7	15
Germany	11	7	13	17	19	19	13	20	20	14	14	11	13	20	25	29
Italy	1	1	1	2	3	4	3	3	4	8	7	8	6	4	2	4
Netherlands	0	0	0	2	2	0	1	0	1	2	0	1	0	1	2	0
Sweden	5	8	16	7	22	8	10	17	10	3	6	7	5	5	2	12
United Kingdom	8	9	8	11	8	10	10	10	6	6	1	10	7	5	10	7
All others	2	1	1	1	1	4	4	4	5	5	11	4	6	10	11	15
Japan	93	77	65	59	52	43	54	41	52	42	31	53	40	36	33	66
China	0	0	1	0	0	0	2	0	1	0	1	1	1	4	6	5
Asia-8	4	6	3	9	6	5	9	6	13	10	12	22	20	15	20	24
India	0	1	0	1	0	0	1	1	1	2	1	2	3	2	1	4
South Korea	2	2	1	8	4	3	6	3	5	5	3	14	10	6	14	9
Taiwan	2	3	2	0	1	2	2	1	6	3	8	6	6	7	4	10
All others	0	0	0	0	1	0	0	1	1	0	0	0	1	0	1	1
All others	18	18	19	25	18	20	19	21	33	38	34	40	36	33	30	50
Central Asia and Europe	1	0	0	0	0	1	0	1	1	0	0	0	0	1	1	0
Russia	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
All others	1	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0
Middle East and North Africa	1	1	1	1	0	1	0	1	2	2	5	6	3	5	5	8
Israel	1	1	1	1	0	1	0	1	2	2	4	6	3	5	5	6
All others	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2
South and Central America	0	1	0	2	0	0	0	0	3	1	1	1	0	0	1	3
Argentina	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Brazil	0	0	0	2	0	0	0	0	1	1	0	0	0	0	0	0
Mexico	0	1	0	0	0	0	0	0	1	0	1	1	0	0	0	3
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Sub-Saharan Africa	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	1
South Africa	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0
All others	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
All others	16	15	18	21	17	18	19	19	27	35	28	33	32	27	22	38
Australia	1	1	1	2	1	2	0	1	3	5	4	4	3	0	2	3
Canada	7	7	8	10	11	5	11	13	15	19	12	19	23	21	14	29
Switzerland	8	7	7	8	2	8	8	4	10	7	9	10	5	5	6	4
All others	0	0	3	2	3	3	1	1	0	4	3	0	1	2	0	2

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).



Appendix table 6-70

## USPTO patents granted in pollution mitigation, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	1,717	1,742	1,704	2,011	1,944	1,864	1,998	1,825	1,831	1,685	1,456	1,497	1,343	1,321	1,427	1,887
United States	992	1,050	957	1,076	1,062	984	1,058	945	932	831	744	767	666	668	764	945
EU	317	307	323	363	369	364	393	361	360	291	254	251	268	229	229	371
France	40	35	41	51	46	65	60	60	42	33	42	27	50	42	46	60
Germany	163	146	161	166	166	173	187	156	176	145	120	119	103	89	98	161
Italy	12	13	16	18	16	17	13	17	16	14	10	9	13	11	13	17
Netherlands	17	17	12	14	30	13	21	19	14	13	9	7	9	9	2	20
Sweden	17	15	17	26	26	24	29	27	15	20	15	17	18	18	11	18
United Kingdom	36	40	37	51	46	31	35	36	47	32	24	41	37	29	23	44
All others	32	40	40	38	39	42	49	47	52	35	34	31	38	30	36	52
Japan	267	243	278	365	326	350	346	327	374	398	305	334	274	267	287	376
China	5	1	3	7	2	6	4	5	8	6	5	9	11	9	10	13
Asia-8	23	18	33	71	51	34	66	64	57	60	52	43	52	53	55	64
India	1	1	1	1	1	3	2	4	4	4	5	2	4	4	8	5
South Korea	8	8	17	38	26	18	36	38	26	34	19	23	23	25	29	40
Taiwan	12	8	12	27	24	12	25	19	26	17	25	17	19	23	16	15
All others	1	2	3	5	0	1	3	4	2	5	4	1	5	2	2	4
All others	114	123	109	129	133	125	131	123	99	98	97	94	73	96	83	118
Central Asia and Europe	8	8	7	11	11	4	10	3	6	5	7	5	4	6	6	7
Russia	0	0	0	0	0	0	9	3	6	4	4	4	2	6	4	4
All others	8	8	7	11	11	4	1	0	0	1	3	1	2	0	1	2
Middle East and North Africa	5	7	3	12	3	7	8	12	14	10	5	5	2	7	8	16
Israel	5	6	3	11	2	4	7	9	13	8	4	5	2	7	6	13
All others	0	0	0	1	1	3	1	3	1	3	1	0	0	0	2	3
South and Central America	6	8	6	5	7	1	4	12	6	7	3	2	3	9	5	8
Argentina	0	0	2	1	1	1	0	1	3	0	0	0	0	0	0	0
Brazil	5	2	2	2	1	0	1	2	1	2	1	1	1	2	2	6
Mexico	1	5	2	1	0	0	3	7	2	2	1	1	1	3	1	2
All others	0	2	0	1	5	0	0	3	0	3	1	0	1	4	2	0
Sub-Saharan Africa	1	2	3	2	3	6	8	2	2	2	2	5	4	5	1	2
South Africa	1	2	3	2	3	6	8	2	2	2	2	4	3	5	0	2
All others	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0
All others	95	98	90	100	110	108	102	93	71	74	81	77	60	69	64	85
Australia	5	15	18	12	11	9	8	11	8	13	16	7	9	12	10	10
Canada	64	73	55	63	77	78	68	71	51	50	47	52	42	47	33	57
Switzerland	20	8	13	20	14	19	17	8	6	8	9	8	4	5	12	7
All others	5	2	4	5	7	2	9	3	6	5	8	10	5	5	8	11

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Pollution mitigation includes recycling; control of air, solid waste, and water pollution; environmental remediation; cleaner coal; and capture and storage of carbon and other greenhouse gases. Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-71

## USPTO patents granted in fuel cells, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	104	109	93	131	173	219	281	370	476	567	518	604	533	534	677	1,031
United States	44	55	46	60	101	125	166	211	251	284	249	288	241	215	245	373
EU	16	17	17	20	27	43	38	46	69	73	63	59	74	83	76	119
France	0	1	0	0	0	1	2	4	1	4	1	7	10	4	8	12
Germany	10	7	6	11	20	33	33	29	56	50	44	38	50	54	46	75
Italy	0	3	2	0	3	3	1	4	2	4	3	2	2	4	3	7
Netherlands	1	0	1	0	1	1	2	4	2	2	2	1	3	4	1	3
Sweden	0	0	1	0	0	0	0	0	0	0	0	2	0	1	0	1
United Kingdom	3	5	5	4	3	6	0	5	5	7	7	7	6	13	10	12
All others	2	1	2	5	0	0	0	1	3	6	6	2	3	3	8	9
Japan	33	30	22	39	31	36	55	81	111	149	143	189	169	175	250	366
China	0	0	0	0	0	0	0	0	1	1	0	2	2	3	5	5
Asia-8	2	1	1	0	3	3	2	3	4	7	10	19	21	29	67	137
India	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
South Korea	2	1	1	0	2	3	2	2	4	6	7	13	14	23	51	118
Taiwan	0	0	0	0	1	0	0	1	0	1	3	6	5	6	16	16
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
All others	10	7	7	12	11	11	20	29	40	52	52	44	26	29	34	32
Central Asia and Europe	0	0	0	0	0	0	0	0	2	0	2	0	0	1	0	1
Russia	0	0	0	0	0	0	0	0	2	0	2	0	0	1	0	1
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Middle East and North Africa	0	0	2	0	0	0	0	4	2	4	2	3	0	2	2	4
Israel	0	0	2	0	0	0	0	4	2	4	1	3	0	2	2	2
All others	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2
South and Central America	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Saharan Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	10	7	5	12	11	11	20	25	36	48	48	41	26	26	32	27
Australia	1	0	0	1	1	1	2	4	0	2	1	3	2	2	2	3
Canada	8	7	3	10	7	9	12	19	35	43	45	34	25	21	27	18
Switzerland	1	0	2	1	3	1	6	2	1	2	2	4	0	2	2	5
All others	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-72

## USPTO patents granted in nuclear energy, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	263	257	229	278	218	144	175	180	177	145	127	93	83	83	104	120
United States	149	145	139	157	113	63	93	86	72	67	47	48	39	43	63	48
EU	64	61	54	76	67	39	44	46	48	31	34	20	24	22	21	32
France	29	27	26	39	16	15	14	17	21	10	14	11	15	10	11	17
Germany	19	16	13	22	29	16	13	13	14	6	14	6	3	9	5	10
Italy	1	0	2	0	1	1	0	0	1	1	0	0	0	0	0	0
Netherlands	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
Sweden	9	8	7	3	14	4	8	10	6	4	1	2	2	1	3	4
United Kingdom	4	7	6	10	7	2	8	7	3	6	5	1	3	1	1	0
All others	1	3	0	3	0	2	1	0	2	4	1	1	0	1	1	2
Japan	43	45	28	35	26	35	26	31	49	34	31	16	14	14	9	23
China	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asia-8	1	2	2	4	4	3	9	5	7	9	9	4	3	3	8	10
India	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
South Korea	1	2	2	4	3	3	7	3	6	9	9	4	2	3	8	10
Taiwan	1	0	0	0	1	0	1	2	0	0	0	1	0	0	0	0
All others	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
All others	4	5	6	7	8	4	3	11	2	4	5	6	3	1	3	7
Central Asia and Europe	0	2	1	0	0	0	1	5	0	2	0	1	1	0	1	2
Russia	0	0	0	0	0	0	1	5	0	2	0	1	1	0	1	2
All others	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Middle East and North Africa	0	0	0	1	2	1	0	0	0	0	0	0	0	0	1	0
Israel	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
South and Central America	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Saharan Africa	0	0	0	0	1	0	0	0	0	0	1	2	1	0	0	1
South Africa	0	0	0	0	1	0	0	0	0	0	1	2	1	0	0	1
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	4	3	5	6	5	3	2	6	2	2	4	3	1	1	1	4
Australia	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0
Canada	2	3	4	2	3	2	1	5	2	1	3	2	0	1	1	3
Switzerland	2	0	0	3	0	0	1	0	0	0	1	0	1	0	0	1
All others	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-73

## USPTO patents granted in air pollution control, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	701	696	685	848	826	835	908	864	929	896	819	822	708	719	827	1,076
United States	344	359	330	391	375	391	418	415	397	385	369	376	296	325	392	499
EU	143	144	135	165	184	182	211	182	214	175	166	164	160	147	156	228
France	19	14	17	28	27	36	35	23	25	19	19	14	29	30	34	31
Germany	78	80	75	88	94	100	120	100	119	103	94	99	79	72	74	124
Italy	3	4	7	6	6	5	6	8	8	6	7	5	6	5	9	3
Netherlands	8	5	4	4	11	4	9	7	6	4	5	2	2	3	1	11
Sweden	8	8	6	13	11	8	12	16	10	12	10	10	10	12	10	9
United Kingdom	16	19	12	19	21	13	10	17	27	18	18	21	20	15	13	27
All others	12	15	14	9	14	15	18	12	21	13	14	13	15	10	16	22
Japan	178	154	178	237	214	221	217	209	256	285	228	238	201	199	227	283
China	0	1	0	3	0	2	2	2	6	2	1	2	7	4	4	6
Asia-8	5	3	12	21	15	14	25	23	30	24	23	17	22	21	22	29
India	0	0	1	0	0	1	1	0	0	1	0	0	1	1	0	1
South Korea	1	0	3	12	7	7	12	14	18	15	10	12	15	15	14	18
Taiwan	4	3	7	9	8	5	11	7	11	7	12	6	6	5	6	8
All others	0	0	1	0	0	0	1	3	1	1	1	0	0	0	1	1
All others	31	35	30	31	38	25	36	34	26	25	32	25	22	23	28	32
Central Asia and Europe	4	3	5	2	5	0	2	1	0	1	1	3	1	0	3	3
Russia	0	0	0	0	0	0	2	1	0	1	1	3	0	0	2	2
All others	4	3	5	2	5	0	0	0	0	0	0	0	0	0	1	1
Middle East and North Africa	0	2	1	1	1	0	2	2	2	2	2	0	0	1	3	2
Israel	0	2	1	1	1	0	1	2	2	1	2	0	0	1	2	2
All others	0	0	0	1	0	0	1	0	0	1	0	0	0	0	1	0
South and Central America	2	3	0	1	3	0	0	1	1	2	1	1	0	2	1	2
Argentina	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Brazil	1	1	0	0	0	0	0	0	0	0	1	1	0	0	1	2
Mexico	1	1	0	0	0	0	0	1	0	2	0	0	0	1	0	0
All others	0	2	0	1	3	0	0	0	0	0	0	0	0	1	0	0
Sub-Saharan Africa	0	2	0	1	2	2	0	0	0	0	0	1	1	0	0	0
South Africa	0	2	0	1	2	2	0	0	0	0	0	1	1	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	24	25	24	25	28	23	32	31	22	21	28	20	21	20	21	24
Australia	0	3	7	5	4	0	1	2	0	1	3	0	1	0	0	1
Canada	17	18	11	13	14	18	17	23	15	16	17	17	13	17	11	18
Switzerland	6	3	5	6	7	5	5	5	4	2	5	1	4	1	5	2
All others	1	1	2	1	3	0	8	1	3	2	3	3	3	2	5	3

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-74

## USPTO patents granted in water pollution control, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	301	312	286	332	351	385	433	373	323	299	274	287	303	281	274	319
United States	187	190	167	194	213	226	252	202	201	183	173	178	182	164	166	180
EU	52	54	57	56	50	63	75	66	44	38	35	30	41	36	29	53
France	5	9	8	5	7	7	16	14	7	5	8	7	10	8	4	11
Germany	23	18	23	21	20	25	26	20	18	9	14	7	13	8	7	13
Italy	2	0	2	3	1	5	0	2	1	1	0	1	1	4	1	5
Netherlands	3	8	2	2	11	2	6	9	4	4	2	1	2	1	0	2
Sweden	5	2	5	7	2	7	5	4	2	5	1	3	4	3	1	8
United Kingdom	8	7	8	8	3	5	9	5	7	4	5	7	6	4	7	4
All others	6	10	9	11	5	12	14	13	4	10	5	4	5	8	9	11
Japan	30	33	30	27	38	45	45	37	31	32	23	35	36	28	30	36
China	3	0	0	1	2	3	1	1	0	1	1	3	3	3	3	5
Asia-8	5	7	10	25	19	9	16	25	13	18	13	16	21	20	22	14
India	0	0	0	1	1	1	0	1	4	0	3	2	1	1	5	1
South Korea	3	4	9	18	12	5	6	17	6	11	3	8	7	5	9	11
Taiwan	2	2	1	6	6	3	9	7	3	5	6	6	11	13	7	2
All others	0	1	0	1	0	0	0	0	0	2	1	0	2	2	1	0
All others	24	28	23	29	29	40	44	42	34	26	28	25	21	30	25	30
Central Asia and Europe	3	1	2	4	3	1	4	2	2	1	1	1	1	2	0	2
Russia	0	0	0	0	0	0	3	2	2	1	1	0	1	2	0	1
All others	3	1	2	4	3	1	1	0	0	0	0	1	0	0	0	1
Middle East and North Africa	0	1	0	3	1	4	3	5	6	3	3	1	2	3	3	8
Israel	0	1	0	3	0	1	3	2	5	2	2	1	2	3	2	7
All others	0	0	0	0	1	3	0	3	1	1	1	0	0	0	1	1
South and Central America	1	2	1	0	0	0	3	2	1	1	2	0	1	2	2	1
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	1	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0
Mexico	0	2	1	0	0	0	3	1	1	0	1	0	0	0	0	1
All others	0	0	0	0	0	0	0	1	0	0	1	0	0	1	2	0
Sub-Saharan Africa	0	0	3	1	1	2	5	2	2	1	1	3	3	1	1	0
South Africa	0	0	3	1	1	2	5	2	2	1	1	2	2	1	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0
All others	20	24	17	22	24	32	30	31	23	20	22	20	14	22	19	20
Australia	2	3	3	0	2	3	4	6	3	6	7	2	2	6	3	5
Canada	10	19	10	18	18	26	23	25	17	14	13	16	11	15	13	11
Switzerland	6	2	1	1	2	3	3	0	0	1	2	0	0	0	0	1
All others	2	1	2	3	3	1	0	0	3	0	0	2	1	1	3	4

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-75

## USPTO patents granted in recycling, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	327	338	325	395	379	322	326	303	291	266	170	167	154	120	132	186
United States	193	217	179	203	208	161	163	144	145	117	77	62	63	51	67	85
EU	70	69	74	79	78	68	74	68	57	46	27	28	42	17	26	40
France	10	5	8	7	6	12	9	9	2	3	3	1	2	0	4	8
Germany	39	34	37	36	35	26	33	23	23	21	8	7	6	4	7	7
Italy	4	4	3	8	7	7	3	4	5	6	0	3	4	1	4	8
Netherlands	4	4	5	6	5	3	4	3	0	0	1	3	3	1	0	0
Sweden	2	3	3	4	4	5	4	4	2	1	3	3	4	1	1	1
United Kingdom	3	6	8	9	8	4	8	7	6	5	2	2	8	2	2	3
All others	9	13	10	9	14	11	14	19	19	10	10	10	16	8	8	13
Japan	28	24	40	61	46	58	46	53	58	57	37	46	27	23	21	33
China	1	0	2	3	0	0	0	2	2	2	1	3	0	0	1	1
Asia-8	4	4	5	10	11	9	16	12	8	15	13	6	9	8	6	6
India	1	0	0	0	0	1	1	1	0	2	2	0	2	1	2	1
South Korea	2	1	3	3	6	4	13	6	1	7	5	2	2	3	3	2
Taiwan	1	2	2	6	5	3	1	4	7	5	4	3	2	4	1	2
All others	0	1	0	1	0	1	1	1	0	1	2	1	3	0	0	1
All others	31	24	26	39	36	27	26	23	21	29	15	21	13	20	11	21
Central Asia and Europe	1	2	0	3	0	1	0	0	1	1	1	1	3	2	2	2
Russia	0	0	0	0	0	0	0	0	1	0	1	1	2	2	1	1
All others	1	2	0	3	0	1	0	0	0	1	0	0	1	0	0	0
Middle East and North Africa	2	2	0	3	0	1	1	1	3	2	0	1	0	2	1	3
Israel	2	2	0	3	0	1	1	1	3	2	0	1	0	2	1	2
All others	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
South and Central America	2	1	4	2	1	0	1	5	2	1	0	0	2	1	2	4
Argentina	0	0	2	1	1	0	0	0	1	0	0	0	0	0	0	0
Brazil	2	1	2	0	0	0	1	2	0	0	0	0	0	0	1	2
Mexico	0	0	0	1	0	0	0	3	1	0	0	0	1	1	1	2
All others	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
Sub-Saharan Africa	0	0	0	0	0	1	1	0	0	1	1	1	0	3	0	1
South Africa	0	0	0	0	0	1	1	0	0	1	1	1	0	3	0	1
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	26	19	22	31	35	24	24	17	14	24	13	18	9	12	7	12
Australia	0	7	5	4	2	2	1	2	2	3	2	0	2	3	2	0
Canada	22	11	13	19	28	14	16	15	11	16	9	12	7	9	2	8
Switzerland	4	2	4	7	4	8	5	0	1	3	2	3	0	0	2	3
All others	0	0	0	1	1	1	1	0	0	3	0	3	0	0	0	1

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-76

## USPTO patents granted in bioenergy, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	43	62	50	95	65	71	67	78	69	62	60	69	98	100	167	222
United States	25	41	30	59	40	38	40	37	39	33	33	41	61	56	112	149
EU	11	13	12	18	16	16	10	18	18	13	13	14	18	20	27	35
France	3	1	5	2	1	3	2	1	2	0	1	2	2	1	3	6
Germany	3	5	2	7	2	7	1	7	6	4	3	3	3	5	9	8
Italy	0	2	0	0	1	1	1	1	1	0	1	2	1	3	1	5
Netherlands	1	0	0	1	2	2	2	0	1	3	0	0	2	2	2	2
Sweden	2	0	3	1	1	2	0	3	0	2	1	1	1	1	3	0
United Kingdom	1	2	1	3	3	0	0	0	1	2	2	2	4	4	1	4
All others	1	3	1	4	6	1	4	6	7	2	5	4	6	5	8	10
Japan	1	2	2	5	3	8	10	10	6	6	6	6	4	9	10	13
China	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	1
Asia-8	1	2	1	1	1	1	2	4	0	2	0	1	2	3	3	8
India	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
South Korea	0	2	1	0	1	1	1	3	0	1	0	0	1	0	0	3
Taiwan	1	0	0	1	0	0	1	1	0	1	0	1	1	3	1	4
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
All others	5	4	6	13	4	8	5	10	6	8	8	7	12	13	14	16
Central Asia and Europe	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	2
Russia	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
All others	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1
Middle East and North Africa	0	2	0	2	0	0	0	2	3	2	2	0	3	2	1	2
Israel	0	2	0	2	0	0	0	2	3	2	2	0	2	2	1	2
All others	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
South and Central America	0	0	0	0	0	0	0	1	0	0	2	1	1	1	1	0
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	0	0	2	1	1	0	1	0
Mexico	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Saharan Africa	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0
South Africa	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	5	2	6	10	4	8	5	5	3	6	3	6	7	10	11	12
Australia	0	0	0	0	0	1	0	1	1	1	0	0	2	1	3	1
Canada	4	1	4	7	4	6	4	3	2	3	3	6	4	7	8	11
Switzerland	0	1	2	3	0	1	1	1	0	2	0	0	1	1	0	0
All others	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-77

## USPTO patents granted in solar energy, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	210	228	210	210	276	377	386	390	372	303	244	243	252	238	353	651
United States	113	115	99	94	120	156	149	149	137	134	109	115	136	118	200	355
EU	17	21	24	35	40	49	47	57	55	31	39	39	36	42	43	102
France	2	2	1	3	6	6	1	6	5	3	3	5	3	9	7	13
Germany	9	12	14	26	24	27	29	35	29	20	20	22	15	17	25	51
Italy	0	1	1	1	1	1	2	1	2	0	1	2	1	2	0	4
Netherlands	0	1	0	1	0	4	5	1	5	3	3	1	5	3	1	7
Sweden	1	0	0	0	1	1	2	2	2	0	1	0	1	2	0	3
United Kingdom	3	2	3	2	4	4	2	5	6	1	4	4	4	4	4	9
All others	2	2	5	2	4	7	6	7	7	4	7	6	7	6	7	15
Japan	64	73	65	73	75	139	166	161	149	114	71	61	54	50	54	97
China	1	0	1	0	0	0	1	2	1	0	1	3	3	3	4	8
Asia-8	1	8	2	0	13	9	4	11	7	11	8	9	11	11	28	62
India	0	0	0	0	0	0	0	1	0	0	1	0	1	1	1	0
South Korea	0	2	0	0	5	3	0	2	5	3	1	1	4	3	10	22
Taiwan	1	5	2	0	7	5	4	7	1	7	6	7	6	8	14	31
All others	0	1	0	0	1	1	0	1	1	1	0	1	0	0	3	9
All others	14	11	19	9	28	25	20	11	23	13	17	17	12	14	24	27
Central Asia and Europe	1	0	0	0	0	1	1	0	1	0	1	0	0	0	2	0
Russia	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
All others	1	0	0	0	0	1	0	0	1	0	1	0	0	0	1	0
Middle East and North Africa	6	3	4	2	5	4	6	0	2	6	2	2	4	2	3	9
Israel	6	3	4	2	5	4	6	0	2	6	2	2	4	2	3	7
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
South and Central America	0	1	1	0	2	1	1	1	0	1	2	0	0	0	0	0
Argentina	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Mexico	0	0	1	0	0	0	0	1	0	1	1	0	0	0	0	0
All others	0	1	0	0	2	0	0	0	0	0	1	0	0	0	0	0
Sub-Saharan Africa	0	1	2	0	0	1	0	0	0	0	1	0	0	0	1	2
South Africa	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	2
All others	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
All others	8	6	13	7	21	18	13	10	20	6	11	15	8	11	18	16
Australia	2	3	4	4	10	3	3	3	10	2	2	7	3	2	10	7
Canada	1	0	5	2	3	5	2	2	7	3	4	6	3	3	6	4
Switzerland	4	3	2	1	6	6	8	3	4	1	5	2	2	4	1	5
All others	1	0	2	0	2	4	0	1	0	0	0	0	0	2	1	0

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).



Appendix table 6-78

## USPTO patents granted in hybrid and electric vehicles, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	129	189	188	272	271	247	313	400	384	353	365	423	388	377	395	532
United States	54	74	69	91	77	75	97	117	123	104	117	150	144	134	139	215
EU	8	23	26	42	26	28	43	52	50	48	48	38	45	51	44	68
France	1	3	1	5	2	4	6	10	3	6	6	3	7	6	5	12
Germany	6	11	18	30	19	19	29	25	36	31	28	28	29	41	30	44
Italy	0	1	1	1	3	1	5	5	1	1	1	3	1	0	1	3
Netherlands	0	2	0	1	0	0	0	1	2	0	0	1	1	1	2	1
Sweden	1	0	2	0	0	1	1	6	4	5	7	0	2	2	1	5
United Kingdom	0	2	4	2	1	1	2	3	2	4	2	3	2	1	2	1
All others	0	4	0	3	1	2	0	3	3	1	4	0	3	1	3	4
Japan	58	76	82	126	154	131	152	219	188	178	180	212	176	166	178	199
China	1	1	0	1	0	1	0	0	0	0	0	2	1	2	2	4
Asia-8	2	7	5	4	3	6	6	6	8	13	11	11	12	15	29	36
India	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
South Korea	0	2	4	3	2	4	3	3	1	6	8	5	8	11	19	26
Taiwan	2	5	1	1	1	2	2	3	7	7	2	6	3	4	10	9
All others	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
All others	7	8	6	8	12	6	15	5	15	11	9	11	10	8	3	10
Central Asia and Europe	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
Russia	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Middle East and North Africa	1	3	0	1	1	0	0	0	0	1	1	0	0	1	0	0
Israel	1	3	0	1	0	0	0	0	0	1	0	0	0	1	0	0
All others	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
South and Central America	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
Mexico	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Saharan Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	6	4	6	7	10	6	13	5	15	9	8	11	10	6	3	10
Australia	0	0	0	0	0	1	2	0	2	1	0	1	1	0	0	1
Canada	2	2	3	4	4	4	6	4	12	4	7	6	7	3	2	8
Switzerland	3	2	3	1	6	0	5	0	0	4	1	3	2	2	1	1
All others	1	0	0	2	0	1	0	1	1	1	0	0	0	1	0	0

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-79

## USPTO patents granted in wind energy, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	28	34	29	34	28	55	58	65	69	98	137	151	174	197	221	355
United States	19	25	16	20	17	31	32	33	31	41	59	74	80	92	82	153
EU	5	5	4	7	3	7	17	21	28	36	56	42	68	63	102	139
France	0	0	0	0	0	0	3	0	1	1	6	2	3	0	0	1
Germany	1	2	1	2	0	4	4	12	10	20	30	29	39	42	66	71
Italy	0	0	0	0	0	0	0	1	0	0	1	0	1	3	3	2
Netherlands	0	1	1	0	0	2	1	1	2	2	1	0	3	3	3	6
Sweden	0	0	1	0	1	0	2	1	4	0	2	2	1	1	1	0
United Kingdom	1	1	0	2	1	0	2	0	0	2	3	2	6	4	6	4
All others	3	1	1	3	1	1	5	6	11	11	13	7	15	12	23	55
Japan	0	1	3	1	1	4	6	4	3	5	8	16	14	18	12	19
China	0	0	0	0	0	0	0	0	1	0	1	1	1	2	3	14
Asia-8	1	0	1	3	3	2	1	3	2	4	5	6	5	10	12	8
India	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2
South Korea	0	0	1	0	1	0	1	0	1	1	3	4	0	2	4	3
Taiwan	1	0	0	3	1	2	0	3	1	3	2	1	5	6	7	3
All others	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0
All others	3	3	5	3	4	11	2	4	4	12	9	12	6	13	10	23
Central Asia and Europe	1	1	0	0	0	0	1	1	0	0	0	0	1	1	1	0
Russia	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0
All others	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Middle East and North Africa	0	0	2	0	0	1	0	1	2	0	1	2	0	1	1	5
Israel	0	0	0	0	0	1	0	1	1	0	1	2	0	0	1	4
All others	0	0	2	0	0	0	0	0	1	0	0	0	0	1	0	1
South and Central America	0	0	0	0	1	0	0	0	0	1	0	2	0	0	0	1
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
All others	0	0	0	0	1	0	0	0	0	1	0	2	0	0	0	0
Sub-Saharan Africa	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
South Africa	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	2	2	3	3	3	10	1	2	2	11	7	8	5	11	8	15
Australia	0	1	0	0	0	0	1	0	1	3	0	1	1	1	1	3
Canada	1	1	2	2	3	7	0	2	1	7	6	7	2	7	7	11
Switzerland	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
All others	0	0	1	1	0	3	0	0	0	0	1	1	2	2	0	1

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-80

## USPTO patents granted in battery technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	124	189	229	239	213	285	299	347	334	325	224	251	247	235	333	547
United States	62	94	89	94	84	87	101	96	85	81	62	65	63	55	73	104
EU	10	15	19	14	16	22	18	28	29	23	15	9	10	10	10	34
France	2	5	7	3	5	8	5	11	7	5	2	1	2	3	3	16
Germany	1	6	5	3	6	11	4	9	10	12	6	2	4	1	3	9
Italy	0	0	2	2	0	2	2	1	1	1	1	0	1	0	0	3
Netherlands	0	0	0	0	1	0	1	3	3	1	0	0	0	0	0	0
Sweden	0	1	0	0	0	0	1	0	1	0	0	2	1	1	0	1
United Kingdom	5	2	2	1	2	1	2	2	4	3	3	3	2	2	2	3
All others	2	1	3	5	1	0	3	3	4	2	3	2	0	3	1	2
Japan	36	58	95	108	90	144	140	181	181	173	107	127	128	125	150	219
China	1	0	0	0	1	3	1	0	0	2	0	2	0	2	2	13
Asia-8	0	7	10	10	11	14	23	30	29	38	31	42	40	35	82	165
India	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
South Korea	0	3	8	7	9	11	20	29	29	34	28	38	38	34	74	153
Taiwan	0	4	1	3	2	3	3	1	0	2	2	4	1	1	8	12
All others	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
All others	16	17	17	14	12	15	16	12	10	8	9	6	6	9	17	12
Central Asia and Europe	0	1	1	0	0	0	1	1	0	1	2	0	0	0	1	1
Russia	0	0	0	0	0	0	1	1	0	0	1	0	0	0	1	1
All others	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0
Middle East and North Africa	7	5	1	3	2	1	3	1	0	0	0	0	0	0	1	0
Israel	7	5	1	3	2	1	3	1	0	0	0	0	0	0	1	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South and Central America	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0
Sub-Saharan Africa	4	0	1	1	2	0	0	0	0	1	0	0	0	1	1	4
South Africa	4	0	1	1	2	0	0	0	0	1	0	0	0	1	1	4
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	5	11	14	10	8	14	10	10	9	6	7	6	6	7	14	8
Australia	0	0	0	0	0	1	0	1	4	1	0	1	1	2	2	0
Canada	4	11	13	10	8	12	9	7	5	5	7	3	3	5	11	5
Switzerland	1	0	1	0	0	0	0	1	1	0	0	2	1	0	0	1
All others	0	0	0	0	0	1	1	1	0	0	1	0	1	0	1	2

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-81

## USPTO patents granted in hydrogen production and storage, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	54	76	73	89	111	114	156	140	169	187	161	192	179	193	198	278
United States	23	35	31	34	43	50	71	70	86	104	77	107	95	118	109	166
EU	8	13	7	12	12	14	30	22	19	25	23	18	19	25	28	30
France	1	4	2	1	4	3	7	3	2	2	1	2	4	4	7	5
Germany	2	2	2	6	4	7	14	9	12	16	13	7	10	6	12	16
Italy	2	3	1	0	1	0	0	2	0	0	1	2	0	1	1	4
Netherlands	0	0	1	2	0	0	0	0	1	2	5	0	0	8	1	0
Sweden	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1
United Kingdom	3	1	0	1	1	2	5	3	2	1	1	6	5	3	3	3
All others	0	3	1	3	3	1	3	5	1	2	2	0	0	2	5	1
Japan	18	21	24	35	40	40	44	38	49	44	42	51	43	39	41	44
China	1	1	0	0	0	1	1	0	1	0	0	0	1	1	0	1
Asia-8	1	4	6	2	6	4	4	5	3	1	3	2	13	4	7	21
India	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
South Korea	0	2	5	2	6	4	3	4	1	0	1	1	5	2	5	13
Taiwan	1	1	1	0	0	0	1	0	1	1	1	1	5	2	2	6
All others	0	1	0	0	0	0	0	1	0	0	1	0	2	0	0	0
All others	3	2	5	6	10	5	7	5	12	13	15	14	10	6	12	16
Central Asia and Europe	0	1	0	0	0	0	0	0	0	0	2	0	0	0	1	1
Russia	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	1
All others	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Middle East and North Africa	1	0	0	0	0	0	0	0	0	2	0	1	1	0	3	2
Israel	1	0	0	0	0	0	0	0	0	1	0	1	0	0	3	0
All others	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
South and Central America	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Sub-Saharan Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	2	1	5	6	10	5	7	5	12	11	13	12	9	6	8	13
Australia	0	0	3	2	1	0	0	0	0	0	2	0	2	2	2	1
Canada	2	1	2	3	7	4	5	5	11	10	8	11	4	3	6	8
Switzerland	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0	2
All others	0	0	0	1	2	1	1	0	1	2	2	0	2	1	0	2

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-82

## USPTO patents granted in cleaner coal technology, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	64	73	82	85	68	72	57	52	71	54	60	48	35	54	85	158
United States	43	49	45	52	42	46	29	37	51	35	42	33	28	38	57	111
EU	12	11	15	6	11	8	7	8	8	5	4	4	5	7	11	19
France	2	1	2	0	2	4	0	3	1	2	2	0	3	1	2	3
Germany	2	4	3	4	5	3	3	4	6	2	3	2	1	2	5	5
Italy	0	1	1	0	1	0	1	0	0	0	0	0	0	1	0	0
Netherlands	1	1	1	0	0	0	1	0	0	1	0	1	0	0	0	5
Sweden	1	0	1	1	2	0	1	1	0	0	0	0	0	0	2	1
United Kingdom	2	3	3	1	0	1	0	0	0	0	0	0	1	1	0	5
All others	3	1	5	0	1	0	1	0	1	1	0	1	0	2	2	0
Japan	5	8	15	17	10	15	18	3	6	11	6	5	0	4	6	14
China	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
Asia-8	0	1	1	0	2	0	0	0	1	0	0	1	0	0	1	6
India	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
South Korea	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	4
Taiwan	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	4	5	5	10	3	4	3	3	6	3	8	6	2	5	10	7
Central Asia and Europe	0	0	0	0	0	0	0	0	1	0	2	0	0	0	1	1
Russia	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	1
Middle East and North Africa	0	0	0	3	1	1	1	2	2	1	0	0	0	0	0	1
Israel	0	0	0	3	1	1	1	2	2	1	0	0	0	0	0	1
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South and Central America	0	0	1	0	0	0	0	0	1	1	0	1	0	1	0	0
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mexico	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
Sub-Saharan Africa	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
South Africa	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	4	5	4	7	1	3	2	1	2	1	5	5	2	4	9	5
Australia	0	0	2	1	1	2	0	0	0	0	1	1	1	1	2	2
Canada	3	5	2	4	0	0	1	1	0	1	2	4	1	3	2	3
Switzerland	1	0	0	1	0	1	1	1	0	0	0	0	0	0	5	0
All others	0	0	0	1	0	0	0	0	2	0	2	0	0	0	1	0

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™, Proprietary Patent Database, special tabulations (2011).

Appendix table 6-83

## USPTO patents granted in capture and storage of carbon and other greenhouse gases, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	41	39	57	49	70	71	80	87	98	65	72	61	62	74	96	152
United States	21	27	31	23	42	44	50	50	57	36	40	33	31	46	56	88
EU	9	7	6	11	12	10	13	19	20	9	11	12	16	20	15	31
France	0	3	0	4	5	4	7	11	8	3	7	4	7	4	4	10
Germany	4	0	1	4	1	5	1	6	3	2	1	3	5	7	8	7
Italy	1	0	0	0	1	0	1	1	0	1	0	0	0	1	0	0
Netherlands	1	1	0	1	1	0	0	1	0	2	2	0	2	3	1	6
Sweden	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
United Kingdom	3	3	5	2	4	2	3	0	7	1	1	5	2	5	1	6
All others	1	0	0	0	0	0	1	1	2	0	0	0	0	1	2	1
Japan	8	4	14	11	10	13	11	14	13	16	11	8	7	4	16	12
China	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Asia-8	0	0	1	2	0	0	0	0	2	2	1	0	2	0	1	6
India	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
South Korea	0	0	1	1	0	0	0	0	2	0	0	0	2	0	1	4
Taiwan	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	1
All others	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
All others	3	1	4	3	6	4	6	4	6	3	9	9	6	4	8	15
Central Asia and Europe	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0
Russia	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
All others	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Middle East and North Africa	0	0	2	0	1	0	1	0	0	1	0	0	0	0	0	0
Israel	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	0
All others	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
South and Central America	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0
Argentina	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
Sub-Saharan Africa	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0
South Africa	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	3	1	2	3	4	4	4	3	6	1	7	8	6	4	7	15
Australia	0	0	0	1	1	0	0	1	0	0	0	1	0	0	2	0
Canada	2	1	2	1	3	3	2	1	3	0	4	5	3	2	2	12
Switzerland	0	0	0	0	0	1	0	1	1	0	1	2	0	1	0	0
All others	1	0	0	1	0	0	2	0	2	1	2	0	3	1	3	3

EU = European Union; USPTO = U.S. Patent and Trademark Office

NOTES: Technologies classified by The Patent Board™. Patents fractionally allocated among regions/countries/economies based on proportion of residences of all named inventors. United States includes Puerto Rico. EU includes 27 member countries. China includes Hong Kong and Macau. Detail may not add to total because of rounding or minor discrepancies. See appendix table 6-62 for full list of countries by region.

SOURCE: The Patent Board™. Proprietary Patent Database, special tabulations (2011).

Appendix table 6-84

## USPTO patents granted in solid waste control, by region/country/economy: 1995–2010

Region/country/economy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
World	304	311	283	332	263	235	219	239	178	163	137	140	101	116	104	129
United States	180	201	167	185	147	119	111	118	81	74	68	75	55	61	68	59
EU	55	50	57	64	58	56	39	45	40	33	26	24	21	20	15	29
France	7	7	10	13	7	8	4	10	7	5	8	5	7	4	3	3
Germany	29	26	28	21	21	30	9	9	14	14	6	9	4	4	6	10
Italy	3	5	4	5	2	0	3	4	2	1	2	1	2	0	1	2
Netherlands	1	1	2	2	2	4	2	1	3	2	0	1	1	1	0	1
Sweden	4	2	4	5	7	1	5	2	1	2	2	1	1	2	0	1
United Kingdom	5	5	4	7	10	8	6	8	5	3	1	5	5	4	2	6
All others	5	4	7	12	10	5	11	11	10	7	7	2	1	5	3	6
Japan	34	30	32	39	31	33	38	37	33	30	17	19	13	14	3	10
China	2	0	0	1	0	1	1	0	1	1	2	3	1	1	2	1
Asia-8	9	6	7	17	8	2	10	11	9	5	5	6	2	6	5	12
India	1	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0
South Korea	2	4	2	6	3	0	5	6	2	4	0	4	1	4	2	6
Taiwan	5	2	3	9	5	2	5	4	6	0	4	2	1	1	3	3
All others	1	0	2	2	0	0	0	1	0	0	0	0	0	0	0	2
All others	24	25	20	25	19	24	20	27	14	20	19	13	10	13	12	18
Central Asia and Europe	0	0	0	4	2	2	3	1	2	2	1	1	2	1	1	1
Russia	0	0	0	0	0	0	3	1	2	2	1	1	2	1	1	0
All others	0	0	0	4	2	2	0	0	0	0	0	0	0	0	0	0
Middle East and North Africa	2	1	1	0	1	1	1	2	2	2	1	3	0	1	1	4
Israel	2	1	1	0	1	1	1	2	2	2	1	3	0	1	1	3
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
South and Central America	0	2	0	2	1	0	0	4	2	1	0	0	0	2	0	0
Argentina	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Brazil	0	1	0	2	1	0	0	0	0	1	0	0	0	1	0	0
Mexico	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	0
All others	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
Sub-Saharan Africa	1	0	1	0	0	0	0	0	0	0	1	0	0	1	0	2
South Africa	1	0	1	0	0	0	0	0	0	0	1	0	0	1	0	2
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All others	21	22	18	20	16	22	16	20	9	15	16	10	8	8	9	11
Australia	3	1	6	2	3	2	2	4	3	3	1	3	2	1	2	1
Canada	13	17	8	7	8	14	8	11	6	9	10	6	6	4	6	6
Switzerland	5	4	3	11	6	6	7	4	0	2	2	1	0	3	1	2
All others	1	0	1	1	0	0	0	1	0	1	3	0	0	0	0	2

EU = European Union; USPTO = U.S. Patent and Trademark Office

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