

TABLE 16. Foreign sales for companies located in the United States that performed or funded R&D, by business activity: 2008–13

(Millions of U.S. dollars)

Business activity ^a	Business code ^b	2008	2009	2010	2011	2012	2013
All business activities	21100–81000	3,180,177	2,773,429	3,373,035	3,814,885	3,715,718	3,664,125
Oil and gas extraction	21100	143,705	92,357	126,671	152,394	147,415	130,380
Mining	21200	NA	D	5,230	19,552	19,020	16,232
Support activities for mining, including oil and gas	21300	NA	22,162	26,223	25,878	28,461	27,924
Utilities	22100	NA	D	9,155	10,892	9,320	8,010
Construction	23000	NA	15,107	11,664	18,660	43,283	33,570
Food manufacturing	31100	81,184	127,453	193,432	196,015	184,889	247,910
Beverage manufacturing	31210	59,317	50,655	56,495	84,916	83,229	57,696
Tobacco manufacturing	31220	290	102,541	102,636	111,353	103,052	84,692
Textile, apparel, and leather products manufacturing	31990	NA	10,239	11,625	13,883	20,542	15,195
Wood products manufacturing	32100	6,381	1,613	3,101 i	1,821	4,144	5,773
Paper manufacturing	32200	39,895	30,504	36,481	40,196	41,303	40,462
Printing and related support activities	32300	3,748	4,212	5,234	6,013	5,885	3,298
Petroleum refineries	32401	NA	NA	297,333	372,811	333,710	328,477
Asphalt paving, roofing, and saturated materials manufacturing	32402	NA	NA	17	91	74 i	1,244
Other petroleum and coal products manufacturing, including motor oil, hydraulic fluid, and charcoal	32403	NA	NA	10,623	23,005	D	9,726
Basic chemicals manufacturing	32510	115,189	75,544	92,953	92,754	129,151	79,933
Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing	32520	29,537	33,110	44,009	30,499	29,307	27,726
Pesticide, fertilizer, and other agricultural chemicals manufacturing	32530	12,327	23,686	10,412	14,001	16,929	22,174 i
Pharmaceutical, medicinal, botanical, and biological products (except diagnostic) manufacturing ^c	32541	136,925	128,937	147,497	163,323	165,908	162,554
In-vitro diagnostic substances manufacturing ^c	32542	6,964	7,135	7,802	11,270	12,376	5,738
Biotechnology-based pharmaceutical and biological products (except diagnostics)	32543	NA	NA	NA	NA	NA	3,555
Soap, cleaning compound, and toilet preparations manufacturing	32591	72,271	80,113	86,107	99,565	84,423	98,242
Paint, adhesive, and other chemical manufacturing	32592	49,968	41,584	42,946	55,746	49,627	45,698
Plastics and rubber products manufacturing	32600	43,878	46,866	55,694	70,156	71,055	65,208
Clay and glass products manufacturing	32710	12,023	8,789	12,710	12,430	16,796	16,471
Cement, concrete, lime, gypsum, and other nonmetallic mineral product manufacturing	32790	5,307	3,931	7,648	8,629	6,833	9,218
Primary metal manufacturing	33100	NA	26,985	35,756	30,648	22,619	24,547
Fabricated metal products manufacturing	33200	45,571	29,870	42,347	49,138	52,129	31,476
Agricultural machinery and equipment manufacturing	33311	20,642	21,025	24,042 i	14,152	23,984	23,078
Construction machinery manufacturing	33312	13,881	10,015	11,205	17,120	11,502	20,647
Mining, oil, and gas field machinery and equipment manufacturing	33319	NA	35,907	36,300	48,499	49,800	37,123
Semiconductor machinery manufacturing	33321	10,928	5,740	9,670	10,941	3,134	13,615
Industrial machinery manufacturing (except semiconductor machinery)	33322	7,532	5,996	8,961	14,930	11,492	10,139
Photographic and photocopying equipment manufacturing	33331	NA	2,080	D	D	D	626

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Commercial, service industry, temperature control, and air-flow control machinery manufacturing	33332	NA	16,053	28,404	30,270	36,451	33,940
Engine, turbine, and power transmission equipment manufacturing	33360	28,100	16,787	37,994	44,319	45,968	55,661
Metalworking and other general purpose machinery manufacturing	33390	36,061	22,352	36,485	41,866	39,237	25,410
Computers and peripheral equipment manufacturing and magnetic and optical media	33412	NA	136,763	162,729	167,518	160,818	122,870
Telephone apparatus manufacturing, including routers, modems, and gateways	33421	22,369	30,531	46,528	32,477	29,869	36,897
Radio, television, and wireless communication equipment manufacturing	33422	29,526	18,039	18,034	37,667	54,443	59,772
Other communication equipment manufacturing (except radio, television, and wireless communication equipment)	33429	6,791	4,680	4,015	8,552	2,041	6,700 i
Audio and video equipment manufacturing	33430	2,243	4,112	3,100	4,180	3,294	4,819
Semiconductor and other electronic components manufacturing	33440	100,661	79,098	157,934	185,199	186,007	198,134
Electromedical, electrotherapeutic, and irradiation apparatus manufacturing	33451	12,419	8,728	9,394	13,503	11,985	12,004
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument manufacturing	33452	5,126	9,629	11,268	7,329	10,300	13,364
Measuring and control instruments manufacturing (not listed elsewhere)	33459	20,381	35,476	37,663	34,616	40,865	38,681
Electrical equipment, appliances, and components manufacturing	33500	47,654	43,416	54,549	58,580	54,904	49,258
Motor vehicles manufacturing	33610	174,950	124,140	146,852	166,401	166,616	155,417
Motor vehicle body and trailer manufacturing	33620	D	504	937	903	2,302	187
Motor vehicle parts manufacturing	33630	66,559	49,109	95,944	98,857	98,046	113,893
Aircraft manufacturing	33641	S	6,959	7,569	9,732 i	5,939	5,877
Aircraft engine and engine parts manufacturing	33642	7,773	12,349	9,361	15,023	13,670	7,269
Other aircraft parts and auxiliary equipment manufacturing	33643	9,178	9,959	10,547	12,611	10,015	12,854
Guided missiles, space vehicles, and related parts manufacturing	33644	D	D	D	D	1,899	2,431
Railroad rolling stock manufacturing	33651	894	875	1,980	1,666	2,455	1,764
Ship and boat building	33660	1,581	D	D	D	1,188 i	1,919 i
Motorcycle, bicycle, and parts manufacturing	33691	345	395	565	1,526	762	926
Military armored vehicle, tank, and tank components manufacturing	33692	249	462	D	484	224	164
All other transportation equipment manufacturing	33699	2,382	895	1,929	2,349	2,212	13,245
Furniture and related products manufacturing	33700	7,183	4,342	4,610	6,151	6,272	5,980
Medical equipment and supplies manufacturing	33910	58,419	57,025	73,646	79,038	80,885	81,992
Miscellaneous manufacturing not listed elsewhere (games, office supplies, slot machines, etc.)	33990	41,981	29,242	30,526	D	37,781	47,849
Merchant wholesalers, durable goods	42300	174,168	116,754	127,763	42,957	25,213	25,396 i
Merchant wholesalers, nondurable goods	42400	66,765	33,733	33,672	229,921	237,186	209,018

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Wholesale electronic markets and agents and brokers (business to business)	42500	119	D	16	1,714 i	50,376 i	20,233
Retail trade (except electronic shopping and electronic auctions)	44000	NA	D	27,253	34,498	42,738	26,671
Electronic shopping and electronic auctions	45411	NA	NA	D	D	34,500	37,403
Transportation	48000	NA	D	86,945	25,930	32,403	9,088
Couriers, messengers, and express delivery services	49200	D	D	11,199	D	0	30,377
Warehousing and storage	49300	2,512	240	474	975	826	1,296
Newspaper, periodical, book, and directory publishers (except Internet)	51110	4,670	8,159	7,754	8,343	7,008 i	2,952 i
Software publishers (except Internet) ^d	51120	89,158	77,832	84,710	97,929	100,697	116,811
Motion picture and sound recording (except Internet)	51200	6,721	6,341	6,635	5,141	2,185	7,140
Broadcasting (except Internet)	51500	NA	5,624	7,533	4,466	7,504 i	8,215
Wired telecommunications carriers	51710	D	D	1,214	6,862	7,093	871
Wireless telecommunications carriers (except satellite)	51720	1,085	745	6	171	154 i	D
Satellite telecommunications	51740	5,325	5,919 i	176	353 i	234	D
Other telecommunications (not listed elsewhere)	51790	1,230	1,015	515	2,875	3,193 i	2,179
Data processing, hosting, and related services ^d	51800	NA	6,292	7,107	9,443	12,874	9,050
Cloud computing applications and Internet-based software services	51801	NA	NA	NA	NA	NA	6,498 i
Other information services, including Internet publishing, broadcasting, and Web search portals ^d	51910	NA	13,753	29,921	11,126	16,969	28,518
Finance: banking and credit intermediation	52200	NA	45,027	76,052 i	29,501	41,335	41,126
Securities, commodity contracts, and other financial investments and related activities, including funds and trusts	52310	NA	D	34,345	35,268	16,671	22,752
Insurance carriers and related activities	52400	NA	11,594	16,234	14,985	8,907	10,120
Real estate	53100	D	D	D	D	D	D
Rental and leasing services	53200	NA	D	8,580 i	5,232 i	7,232	8,610
Lessors of nonfinancial intangible assets, including patent licensing	53300	D	352	225	359	764	640
Legal, accounting, tax preparation, bookkeeping, and payroll services	54111	NA	864 i	1,623	D	2,222	2,491
Architectural, engineering, and related services	54130	4,931	14,969	33,706	36,917	19,373	44,629
Specialized design services	54140	D	D	454	228	345	870
Computer systems design and related services ^d	54150	86,084	76,243	80,239	153,776 i	104,306	90,581
Management, scientific, and technical consulting services	54160	18,909	23,315	14,838	24,421	27,236	21,830
Research and development services in social sciences and humanities	54172	NA	2	2	7	D	4
Research and development services in biotechnology ^c	54173	NA	3,663 i	1,299	1,269	1,547	1,702
Research and development services in physical, engineering, and life sciences (except biotechnology)	54174	NA	3,817	2,994	4,352	5,625	4,816
Advertising and related services	54180	D	D	1,656	D	25,263	D
Professional, scientific, and technical services (not listed elsewhere)	54190	3,456	2,025	2,186	4,901	9,285	9,802

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Management of companies and enterprises	55100	76	23	266	5,428	1,304	881
Administrative and support services	56100	NA	6,821	19,476	10,588	11,810	17,245
Waste management and remediation services	56200	NA	D	201	959	484	595
Offices of physicians	62110	0	* i	0	0	0	0
Medical and diagnostic laboratories	62150	1,037	857	1,662	1,269	1,383	890
Other ambulatory health care services (ambulance, dental, home health care)	62199	NA	D	154	D	27	0
Hospitals and nursing care facilities	62200	NA	0	D	D	D	D
Social assistance services	62400	D	D	0	0	0	29
Arts, entertainment, and recreation	71000	NA	3,074	3,169	3,297	3,096	D
Accommodation and food services	72000	NA	9,891	32,256	11,945	34,612	49,449
Other services (not listed elsewhere)	81000	NA	5,946	7,784	10,816	12,789	21,612
Less: intersegment eliminations	–	161,647	127,244	101,536	164,044	172,709	165,202
Undistributed	–	335,723	452,404	103,862	147,756 i	58,997 i	D

* = amount < \$500,000; D = data withheld to avoid disclosing operations of individual companies; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse; NA = not available; S = negative value due to intersegment eliminations.

NAICS = 2007 North American Industry Classification System. For survey year 2008, industry classification was based on the 2002 NAICS.

^a Data tabulated independent of the industry classification of the company. Companies were asked to report their sales and R&D activity in one or more business activity codes.

^b Business codes and descriptions based on 2007 NAICS industry definitions.

^c Estimates for this business code may not be comparable to those from prior years due to the introduction of a related business code for survey year 2013: 32543, Biotechnology-based pharmaceutical and biological products (except diagnostics).

^d Estimates for this business code may not be comparable to those from prior years due to the introduction of a related business code for survey year 2013: 51801, Cloud computing applications and Internet-based software services.

NOTES: Detail may not add to total because of rounding. Statistics are representative of companies located in the United States that performed or funded R&D. 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 U.S. Census Bureau, Business R&D and Innovation Survey.