

TABLE 3. Worldwide R&D paid for by the company and others and performed by the company, by industry and company size: 2008–13

(Millions of U.S. dollars)

Industry and company size	NAICS code	2008 ^a	2009	2010	2011	2012	2013
All industries	21–23, 31–33, 42–81	NA	336,571	338,451	359,490	374,916	395,628
Manufacturing industries	31–33	NA	236,858	243,611	253,821	261,697	272,580
Food	311	NA	4,916	D	5,589	5,163	6,343
Beverage and tobacco products	312	NA	933	D	D	D	1,358
Textile, apparel, and leather products	313–16	NA	519	522	656	605	760
Wood products	321	NA	283	254	211	282	222
Paper	322	NA	NA	1,665	769	858	1,022
Printing and related support activities	323	NA	217	269	212	291 i	258 i
Petroleum and coal products	324	NA	NA	D	1,281	D	288
Chemicals	325	NA	64,442	72,610	72,068	70,218	74,397
Basic chemicals	3251	NA	NA	2,671	5,166	3,400	3,373
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	NA	NA	1,038	1,117	D	1,570
Pesticide, fertilizer, and other agricultural chemicals	3253	NA	NA	D	2,049	D	1,966 i
Pharmaceuticals and medicines	3254	NA	53,456	60,537	58,866	58,920	62,477
Soap, cleaning compound, and toilet preparation	3256	NA	NA	3,285	3,386	3,212	3,393
Paint, coating, adhesive, and other chemicals	3255, 3259	NA	NA	D	1,485	D	1,618
Plastics and rubber products	326	NA	2,982	2,515	2,640	4,446	4,580
Nonmetallic mineral products	327	NA	1,153 i	1,596	1,428	1,588 i	1,578
Primary metals	331	NA	993	802	763	818	706
Fabricated metal products	332	NA	2,174	1,818	1,993	1,949 i	2,328 i
Machinery	333	NA	11,156	12,403	18,312	17,462	15,502
Agricultural implement	33311	NA	NA	D	1,570	2,142	2,243
Semiconductor machinery	333295	NA	NA	2,469	2,727	1,357	3,645
Engine, turbine, and power transmission equipment	3336	NA	NA	D	D	D	1,795
Other machinery	other 333	NA	NA	6,566	D	D	7,819
Computer and electronic products	334	NA	68,772	75,345	79,145	87,406	85,480
Communications equipment	3342	NA	NA	17,069	15,197	18,877	20,353
Semiconductor and other electronic components	3344	NA	26,082	29,354	32,146	38,300	40,609
Navigational, measuring, electromedical, and control instruments	3345	NA	16,498	17,905	18,242	18,640	16,769
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	NA	NA	4,548	4,987	4,999	2,837
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	NA	NA	8,769	8,641	8,312	8,753
Other measuring and controlling device	other 3345	NA	NA	4,588	4,615	5,329	5,179
Other computer and electronic products	other 334	NA	NA	11,017	13,559	11,589	7,748
Electrical equipment, appliances, and components	335	NA	4,475	4,767	5,319	4,140	5,741
Transportation equipment	336	NA	56,183	51,362	49,030	50,415	55,191
Automobiles, bodies, trailers, and parts	3361, 3362, 3363	NA	NA	17,764	D	D	23,605
Aerospace products and parts	3364	NA	36,409	31,627	26,858	D	29,331
Aircraft, aircraft engine, and aircraft parts	336411–13	NA	NA	D	D	D	D

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Guided missile, space vehicle, and related parts	336414–15, 336419	NA	NA	D	D	1,425	D
Military armored vehicle, tank, and tank components	336992	NA	NA	D	52	D	9 i
Other transportation	other 336	NA	NA	D	D	D	2,246
Furniture and related products	337	NA	433	407	347	383	402
Miscellaneous manufacturing	339	NA	NA	9,528	D	D	16,422
Medical equipment and supplies	3391	NA	NA	7,461	D	10,311	13,456
Other miscellaneous manufacturing	3399	NA	NA	2,066	D	D	2,966
Nonmanufacturing industries	21–23, 42–81	NA	99,713	94,840	105,669	113,220	123,048
Mining, extraction, and support activities	21	NA	NA	2,785	2,597	D	4,449
Utilities	22	NA	NA	442	396	368	317
Wholesale trade	42	NA	NA	1,145	1,697 i	2,165 i	554 j
Electronic shopping and electronic auctions	454111–12	NA	NA	D	D	D	1,846
Transportation and warehousing	48–49	NA	NA	124	159	186	D
Information	51	NA	43,197	45,099	52,341	56,815	70,857
Publishing	511	NA	33,171	33,883	36,310	36,947	47,012
Newspaper, periodical, book, and directory publishers	5111	NA	NA	826	401	221 i	348 j
Software publishers	5112	NA	NA	33,058	35,910	36,726	46,664
Telecommunications	517	NA	1,609	2,043	2,267	2,787 i	3,104
Data processing, hosting, and related services	518	NA	3,008	2,895	5,450	5,574	7,077
Other information	other 51	NA	5,410	6,278	8,313	11,506	13,665
Finance and insurance	52	NA	NA	2,568	3,943	4,159	5,011
Real estate and rental and leasing	53	NA	NA	367	D	400	161
Lessors of nonfinancial intangible assets (except copyrighted works)	533	NA	NA	NA	365	379	D
Other real estate and rental and leasing	other 53	NA	NA	NA	D	21 i	D
Professional, scientific, and technical services	54	NA	47,709	37,108	39,731	40,843	37,560
Architectural, engineering, and related services	5413	NA	3,384	4,156	D	2,541 i	3,174
Computer systems design and related services	5415	NA	15,310	12,458	13,181	13,404 i	10,563 j
Scientific research and development services	5417	NA	19,307	16,408	19,295	20,225	18,464
Biotechnology research and development	541711	NA	8,492	6,266	7,985	8,364	5,899
Physical, engineering, and life sciences (except biotechnology) research and development	541712	NA	10,129	9,591	10,697	11,261	11,771
Social sciences and humanities research and development	541720	NA	686	551	613	600	795
Other professional, scientific, and technical services	other 54	NA	9,708	4,086	D	4,674	5,359
Health care services	621–23	NA	NA	D	D	708 i	533 j
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	NA	NA	NA	D	D	D
All companies (number of domestic employees)	–	NA	336,571	338,451	359,490	374,916	395,628
Small companies ^b							
5–499	–	NA	62,281	55,645	57,411	53,585	57,172

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5–99	–	NA	35,601	31,218	29,483	27,227 i	28,670 i
5–49	–	NA	21,815	21,748	19,649	17,499 i	19,415 i
5–9	–	NA	NA	3,792	4,143	3,025 i	3,454 i
10–24	–	NA	NA	9,083	7,192	7,027 i	7,580 i
25–49	–	NA	9,852	8,873	8,314	7,446 i	8,381 i
50–99	–	NA	13,785	9,470	9,834	9,728	9,254
100–249	–	NA	14,365	12,989	13,354	13,665	14,941
250–499	–	NA	12,315	11,439	14,573	12,693	13,562
Medium and large companies							
500–999	–	NA	12,124	11,794	11,388	12,955	13,658
1,000–4,999	–	NA	54,600	60,782	63,801	62,729	69,097
5,000–9,999	–	NA	27,461	34,453	32,578	41,006	42,350
10,000–24,999	–	NA	61,681	50,710	61,593	60,544	60,999
25,000 or more	–	NA	118,424	125,067	132,719	144,097	152,351

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.

NAICS = 2007 North American Industry Classification System. For survey year 2008, industry classification was based on the 2002 NAICS. Beginning with survey year 2011, the composition of the other nonmanufacturing industry changed.

^a Worldwide R&D paid for by the company and others and performed by the company was not published in 2008.

^b Upper bound based on U.S. Small Business Administration's definition of a small business; Business R&D and Innovation Survey does not include companies with fewer than five domestic employees.

NOTES: 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. Statistics are representative of companies located in the United States that performed or funded R&D.

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