

TABLE 3. Worldwide R&D paid for by the company and others and performed by the company, by industry and company size, by worldwide R&D program size: 2012
(Millions of U.S. dollars)

Industry	NAICS code	R&D program size					
		All companies	Less than \$1 million	\$1 million–\$9,999 million	\$10 million–\$49,999 million	\$50 million–\$99,999 million	\$100 million or more
All industries	21–23, 31–33, 42–81	374,234	9,826 i	25,428	29,310	16,400	293,271
Manufacturing industries	31–33	261,281	4,676 i	11,215	15,950	11,727	217,712
Food	311	5,168	262 i	375	594	586	3,351
Beverage and tobacco products	312	D	7 i	47	97	D	982
Textile, apparel, and leather products	313–16	612	101 i	223	288	0	0
Wood products	321	463 i	D	89 i	125	0	D
Paper	322	858	63 i	106	195	0	494
Printing and related support activities	323	291 i	61 i	145 i	13	72	0
Petroleum and coal products	324	D	24 i	56	35	D	D
Chemicals	325	70,593	420 i	1,848	3,048	2,984	62,293
Basic chemicals	3251	3,641	74 i	328	595	588	2,056
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	D	40 i	129	152	D	875
Pesticide, fertilizer, and other agricultural chemical	3253	D	16 i	88 i	D	D	D
Pharmaceuticals and medicines	3254	59,139	110 i	1,007	1,921	1,697	54,403
Soap, cleaning compound, and toilet preparation	3256	3,212	64 i	104	114	342	2,589
Paint, coating, adhesive, and other chemicals	3255, 3259	D	116 i	192	D	D	D
Plastics and rubber products	326	4,337	383 i	632	657	238	2,427
Nonmetallic mineral products	327	1,588 i	86 i	144	158	87	1,112 i
Primary metals	331	818	90 i	204 i	321	0	203
Fabricated metal products	332	1,956 i	600 i	772	452	132	0
Machinery	333	18,424	588 i	1,362	1,771	1,020	13,683
Agricultural implement	33311	2,142	20 i	110	0	58	1,955
Semiconductor machinery	333295	2,739	7 i	75	286	169	2,203
Engine, turbine, and power transmission equipment	3336	D	25 i	114	104	D	5,480
Other machinery	other 333	D	536 i	1,064	1,382	D	4,046
Computer and electronic products	334	85,605	767 i	2,158	3,754	3,370	75,555
Communications equipment	3342	18,514	71 i	414	615	637 i	16,777
Semiconductor and other electronic components	3344	36,888	180 i	504	1,555	988	33,661
Navigational, measuring, electromedical, and control instruments	3345	18,623	294 i	952	858	910	15,608
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	4,982	47 i	191	178	392	4,174
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	8,312	24 i	158	205	154	7,771
Other measuring and controlling device	other 3345	5,328	223 i	603	476	364	3,663
Other computer and electronic products	other 334	11,581	223 i	287	726	835	9,510
Electrical equipment, appliances, and components	335	4,150	280 i	585	1,118	452	1,715
Transportation equipment	336	50,378	268 i	912	1,533	1,471	46,194
Automobiles, bodies, trailers, and parts	3361–63	D	124 i	577	998	1,109	D
Aerospace products and parts	3364	D	D	188	366	D	24,598 i
Aircraft, aircraft engine, and aircraft parts	336411–13	D	D	D	267	189	23,375 i

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Guided missile, space vehicle, and related parts	336414–15, 336419	1,425	1 i	D	99	D	1,223
Military armored vehicle, tank, and tank component	336992	D	D	25	0	0	0
Other transportation	other 336	D	D	122	170	D	D
Furniture and related products	337	372	96 i	88	188	0	0
Miscellaneous manufacturing	339	D	D	1,468	1,604	1,059	D
Medical equipment and supplies	3391	10,297	236 i	1,061	1,152	732	7,117
Other miscellaneous manufacturing	3399	D	D	407	453	327	D
Nonmanufacturing industries	21–23, 42–81	112,953	5,149 i	14,213 i	13,360	4,672	75,559
Mining, extraction, and support activities	21	D	D	225	87	0	2,767
Utilities	22	368	D	71	151	D	0
Wholesale trade	42	1,938 i	573 i	994 i	371 i	0	0
Electronic shopping and electronic auctions	454111–12	D	52 i	162 i	87	0	D
Transportation and warehousing	48–49	186	61 i	D	D	D	0
Information	51	56,711	911 i	3,232	3,652	1,741	47,175
Publishing	511	36,858	434 i	1,558	2,267	824	31,775
Newspaper, periodical, book, and directory publishers	5111	244 i	38 i	88 i	118 i	0	0
Software publishers	5112	36,614	396 i	1,470	2,149	824	31,775
Telecommunications	517	2,882 i	66 i	167	254	295	2,101 i
Data processing, hosting, and related services	518	5,574	330 i	1,000	758	482	3,002
Other information	other 51	11,397	82 i	508 i	372	140	10,296
Finance and insurance	52	4,147	92 i	196	294	348	3,217
Real estate and rental and leasing	53	400	20 i	10 i	48	0	323
Lessors of nonfinancial intangible assets (except copyrighted works)	533	379	7 i	2	48	0	323
Other real estate and rental and leasing	other 53	21 i	14 i	8 i	0	0	0
Professional, scientific, and technical services	54	41,149	2,876 i	8,751 i	7,934	2,400	19,187
Architectural, engineering, and related services	5413	2,571 i	374 i	856 i	747	435	158
Computer systems design and related services	5415	13,649 i	1,447 i	2,931 i	2,464	638	6,169 i
Scientific research and development services	5417	20,471	589 i	3,798	3,936	1,066	11,081
Biotechnology research and development	541711	8,364	D	1,438	1,861	815	D
Physical, engineering, and life sciences (except biotechnology) research and development	541712	11,506	402 i	2,309 i	2,076	251	6,469
Social sciences and humanities research and development	541720	600	D	51	0	0	D
Other professional, scientific, and technical services	other 54	4,459	466 i	1,165 i	787	261	1,779
Health care services	621–23	712 i	250 i	122	211	0	129
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	D	D	D	D	0	D
All companies (number of domestic employees)	–	374,234	9,826 i	25,428	29,310	16,400	293,271
Small companies ^a							
5–499	–	53,611	9,591 i	21,703	15,904	3,888	2,525

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5–99	–	27,355 i	8,280 i	14,150 i	4,585	339	0
5–49	–	17,507 i	6,806 i	9,099 i	1,602	0	0
5–9	–	3,025 i	2,101 i	853 i	71 i	0	0
10–24	–	7,026 i	2,827 i	3,877 i	321 i	0	0
25–49	–	7,456 i	1,878 i	4,368	1,210	0	0
50–99	–	9,848	1,475 i	5,051 i	2,983	339	0
100–249	–	13,696	989 i	4,969	5,610	1,572	556
250–499	–	12,561	322 i	2,583	5,709	1,978	1,969
Medium and large companies							
500–999	–	12,921	149 i	1,678	3,973	3,197	3,925
1,000–4,999	–	63,154	78 i	1,660	6,542	6,216	48,658
5,000–9,999	–	40,640	3 i	176	1,570	1,680	37,211
10,000–24,999	–	59,713	5 i	136	798	983	57,792
25,000 or more	–	144,194	0	75	522	436	143,161

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.

NAICS = 2007 North American Industry Classification System.

^a The upper bound is based on the U.S. Small Business Administration's definition of a small business; the 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. The industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the 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, 2012.