

TABLE 17. Domestic R&D paid for by the company and others and performed by the company and others as a percentage of domestic net sales, by industry and company size: 2014

Industry and company size	NAICS code	Domestic R&D (US\$millions)	Percent of domestic sales of R&D performers or funders ^a	Percent of domestic sales of R&D performers only ^b
All industries	21–23, 31–33, 42–81	386,703	4.0	4.1
Manufacturing industries	31–33	273,017	4.8	4.8
Food	311	5,846 i	0.9	0.9
Beverages and tobacco products	312	1,126	0.8	0.8
Textiles, apparel, and leather products	313–316	644	1.2	1.2
Wood products	321	377 i	0.8	0.8
Paper	322	747	1.0	1.0
Printing and related support activities	323	242	0.9	0.9
Petroleum and coal products	324	280	0.1	0.1
Chemicals	325	95,162	7.0	7.0
Basic chemicals	3251	3,044	0.6	0.6
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,227	0.7	0.7
Pesticides, fertilizers, and other agricultural chemicals	3253	1,932 i	3.8	3.8
Pharmaceuticals and medicines	3254	84,677	20.0	20.0
Soaps, cleaning compounds, and toilet preparations	3256	2,895	2.0	2.0
Paints, coatings, adhesives, and other chemicals	3255, 3259	1,387	2.4	2.4
Plastics and rubber products	326	3,741	2.3	2.3
Nonmetallic mineral products	327	1,616 i	3.7	3.5
Primary metals	331	726	0.7	0.7
Fabricated metal products	332	2,167	1.4	1.4
Machinery	333	12,798	D	3.8
Agricultural implements	33311	1,857	3.9	3.9
Semiconductor machinery	333295	2,946	26.8	26.8
Engines, turbines, and power transmission equipment	3336	2,406	D	4.7
Other machinery	other 333	5,589	2.5	2.5
Computer and electronic products	334	75,955	10.4	10.5
Communications equipment	3342	18,966	10.4	10.4
Semiconductors and other electronic components	3344	32,703	15.7	15.7
Navigational, measuring, electromedical, and control instruments	3345	16,688	9.2	9.2
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	4,078	10.1	10.1
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	8,288	10.8	10.8
Other measuring and controlling devices	other 3345	4,322	6.8	6.8
Other computer and electronic products	other 334	7,598	4.9	4.9
Electrical equipment, appliances, and components	335	4,618	3.0	3.0
Transportation equipment	336	53,049	4.6	4.9
Automobiles, bodies, trailers, and parts	3361–63	21,125	3.0	3.2
Aerospace products and parts	3364	29,744 i	8.0	8.0
Aircraft, aircraft engines, and aircraft parts	336411–13	D	D	D
Guided missiles, space vehicles, and related parts	336414–15, 336419	D	D	D
Military armored vehicles, tanks, and tank components	336992	18	2.6	2.6
Other transportation	other 336	2,162 i	3.6	3.7
Furniture and related products	337	399	D	1.1
Miscellaneous manufacturing	339	13,522	4.2	4.2
Medical equipment and supplies	3391	10,925	4.6	4.6
Other miscellaneous manufacturing	3399	2,597	2.9	2.9

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Nonmanufacturing industries	21–23, 42–81	113,686	2.8	3.0
Mining, extraction, and support activities	21	5,188	1.1	1.2
Utilities	22	574	0.2	0.2
Wholesale trade	42	424 i	0.2	0.2
Electronic shopping and electronic auctions	454111–12	1,388	2.2	2.2
Transportation and warehousing	48–49	700	0.5	0.5
Information	51	65,589	5.9	6.0
Publishing	511	37,369	D	10.0
Newspaper, periodical, book, and directory publishers	5111	98 i	1.9	1.9
Software publishers	5112	37,272	D	10.1
Telecommunications	517	4,029	0.8	0.8
Data processing, hosting, and related services	518	9,206	9.2	9.2
Other information	other 51	14,985	D	13.2
Finance and insurance	52	4,213	0.7	0.7
Real estate and rental and leasing	53	270	10.7	10.7
Lessors of nonfinancial intangible assets (except copyrighted works)	533	55	17.5	17.5
Other real estate and rental and leasing	other 53	215	9.8	9.8
Professional, scientific, and technical services	54	33,846 i	7.8	7.8
Architectural, engineering, and related services	5413	3,582	3.4	3.4
Computer systems design and related services	5415	11,221 i	9.3	9.6
Scientific R&D services	5417	15,149	26.9	26.8
Biotechnology R&D	541711	3,875	24.0	24.0
Physical, engineering, and life sciences (except biotechnology) R&D	541712	10,445	26.6	26.4
Social sciences and humanities R&D	541720	828	86.6	87.0
Other professional, scientific, and technical services	other 54	3,895	2.6	2.6
Health care services	621–23	543 i	1.0	1.0
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	952 i	0.2	0.2
All companies (number of domestic employees)	–	386,703	4.0	4.1
Small companies ^c				
5–499	–	62,598	5.7	5.8
5–99	–	34,155 i	7.7	7.7
5–49	–	21,978 i	8.6	8.6
5–9	–	3,920 i	12.0	12.4
10–24	–	8,284 i	10.1	10.1
25–49	–	9,773 i	6.9	6.9
50–99	–	12,178	6.4	6.5
100–249	–	15,163	4.2	4.2
250–499	–	13,279	4.6	4.7
Medium and large companies				
500–999	–	14,520	3.8	3.9
1,000–4,999	–	66,032	5.2	5.3

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5,000–9,999	–	42,016	4.7	4.9
10,000–24,999	–	66,291	3.2	3.4
25,000 or more	–	135,246	3.3	3.4

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 = 2012 North American Industry Classification System.

^a Statistics used for both the numerator and denominator in the calculation of these percentages are representative of companies located in the United States that performed or funded R&D.

^b Statistics used for both the numerator and denominator in the calculation of these percentages are representative of companies located in the United States that performed R&D. The calculation of percentages in this column excludes R&D and sales of companies that fund R&D but do not perform R&D.

^c 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. 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, unless indicated otherwise.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2014.