

TABLE 20. Domestic R&D paid for by the company and others and performed by the company and others as a percent of domestic net sales, by industry and company size: 2013

Industry and company size	NAICS code	Domestic R&D (US\$millions)	Percent of domestic sales of R&D performers and funders ^a	Percent of domestic sales of R&D performers only ^b
All industries	21–23, 31–33, 42–81	365,630	3.8	3.9
Manufacturing industries	31–33	259,254	4.4	4.5
Food	311	5,569	0.8	0.8
Beverage and tobacco products	312	1,049	0.7	0.7
Textile, apparel, and leather products	313–16	687	1.3	1.3
Wood products	321	230	0.7	0.7
Paper	322	937	1.0	1.0
Printing and related support activities	323	271 i	1.1	1.1
Petroleum and coal products	324	573	0.2	0.1
Chemicals	325	86,503	6.4	6.4
Basic chemicals	3251	2,832	0.6	0.6
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,119	0.7	0.7
Pesticide, fertilizer, and other agricultural chemicals	3253	1,723 i	3.6	3.6
Pharmaceuticals and medicines	3254	76,653	15.0	15.1
Soap, cleaning compound, and toilet preparation	3256	2,776	2.7	2.7
Paint, coating, adhesive, and other chemicals	3255, 3259	1,400	1.9	1.9
Plastics and rubber products	326	3,840	2.3	2.3
Nonmetallic mineral products	327	1,492 i	2.6	2.6
Primary metals	331	683	0.5	0.5
Fabricated metal products	332	2,337 i	1.7	1.7
Machinery	333	13,216	3.6	3.6
Agricultural implement	33311	1,906	3.3	3.3
Semiconductor machinery	333295	3,214	28.6	28.6
Engine, turbine, and power transmission equipment	3336	1,503	3.0	3.0
Other machinery	other 333	6,594	2.6	2.6
Computer and electronic products	334	69,253	10.9	10.9
Communications equipment	3342	16,324	9.4	9.4
Semiconductor and other electronic components	3344	D	D	D
Navigational, measuring, electromedical, and control instruments	3345	15,182	8.7	8.7
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	2,804	10.1	10.1
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	8,536	9.9	9.9
Other measuring and controlling device	other 3345	3,843	6.3	6.4
Other computer and electronic products	other 334	D	D	D
Electrical equipment, appliances, and components	335	4,253	3.0	3.0
Transportation equipment	336	53,655	4.8	5.1
Automobiles, bodies, trailers, and parts	3361, 3362, 3363	19,305	2.8	3.0
Aerospace products and parts	3364	32,182	9.0	9.1
Aircraft, aircraft engine, and aircraft parts	336411–13	31,044	9.2	9.2
Guided missile, space vehicle, and related parts	336414–15, 336419	1,138	6.9	6.9
Military armored vehicle, tank, and tank components	336992	9 i	2.9	2.9
Other transportation	other 336	2,159	3.4	3.5
Furniture and related products	337	397	1.2	1.2
Miscellaneous manufacturing	339	14,306	4.2	4.2
Medical equipment and supplies	3391	11,579	4.7	4.7
Other miscellaneous manufacturing	3399	2,727	2.9	2.9
Nonmanufacturing industries	21–23, 42–81	106,376	2.8	2.9
Mining, extraction, and support activities	21	4,631	1.0	1.1
Utilities	22	509	0.2	0.2
Wholesale trade	42	678 i	0.2	0.2
Electronic shopping and electronic auctions	454111–12	1,357 i	2.1	2.1
Transportation and warehousing	48–49	D	D	D
Information	51	58,742	5.6	5.6
Publishing	511	36,762	8.8	8.8

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Newspaper, periodical, book, and directory publishers	5111	359 i	1.6	1.6
Software publishers	5112	36,403	9.2	9.2
Telecommunications	517	3,203	0.8	0.8
Data processing, hosting, and related services	518	6,614	8.3	8.4
Other information	other 51	12,164	9.1	9.6
Finance and insurance	52	4,388	0.7	0.7
Real estate and rental and leasing	53	153	1.5	1.5
Lessors of nonfinancial intangible assets (except copyrighted works)	533	58 i	15.4	15.4
Other real estate and rental and leasing	other 53	95	1.0	1.0
Professional, scientific, and technical services	54	33,605	9.1	9.0
Architectural, engineering, and related services	5413	3,373	3.7	3.7
Computer systems design and related services	5415	9,545 i	8.6	8.7
Scientific research and development services	5417	16,074	22.8	22.7
Biotechnology research and development	541711	4,847	20.8	20.8
Physical, engineering, and life sciences (except biotechnology) research and development	541712	10,253	22.3	22.2
Social sciences and humanities research and development	541720	974	75.1	75.1
Other professional, scientific, and technical services	other 54	4,612	4.7	4.7
Health care services	621-23	532 i	1.0	1.0
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	D	D	D
All companies (number of domestic employees)	-	365,630	3.8	
Small companies ^c				
5-499	-	59,631	4.8	4.8
5-99	-	31,353 i	5.7	5.8
5-49	-	21,135 i	7.1	7.2
5-9	-	3,850 i	7.7	7.8
10-24	-	8,103 i	7.4	7.4
25-49	-	9,182	6.8	6.7
50-99	-	10,218	4.1	4.1
100-249	-	15,129	4.3	4.3
250-499	-	13,148	3.9	3.9
Medium and large companies				
500-999	-	13,069	3.7	4.0
1,000-4,999	-	63,385	5.4	5.5
5,000-9,999	-	33,890	3.8	4.0
10,000-24,999	-	61,896	3.3	3.5
25,000 or more	-	133,760	3.2	3.3

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 Statistics used for the 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 the 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 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, unless indicated otherwise. Percentages are calculated as domestic R&D paid for by the company and others divided by domestic sales.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2013.