

TABLE 19. Domestic R&D paid for by the company and performed by the company and others as a percentage of domestic net sales, by industry and company size: 2012

Industry and company size	NAICS code	Domestic R&D (US\$millions)	Percent	
			Domestic sales of R&D performers and funders ^a	Domestic sales of R&D performers ^b
All industries	21–23, 31–33, 42–81	277,398	3.0	3.1
Manufacturing industries	31–33	195,990	3.5	3.6
Food	311	4,316	0.8	0.8
Beverage and tobacco products	312	831	0.6	0.7
Textile, apparel, and leather products	313–16	551	1.0	1.0
Wood products	321	468 i	1.6	1.6
Paper	322	763	1.0	1.0
Printing and related support activities	323	257 i	1.0	1.0
Petroleum and coal products	324	D	D	D
Chemicals	325	68,509	5.1	5.7
Basic chemicals	3251	3,124	0.5	0.6
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	867	0.6	0.6
Pesticide, fertilizer, and other agricultural chemical	3253	1,387	4.1	4.1
Pharmaceuticals and medicines	3254	59,239	15.6	15.6
Soap, cleaning compound, and toilet preparation	3256	2,598	2.7	2.7
Paint, coating, adhesive, and other chemicals	3255, 3259	1,293	1.7	1.7
Plastics and rubber products	326	3,351	1.7	1.7
Nonmetallic mineral products	327	1,505 i	2.6	2.5
Primary metals	331	805	0.5	0.5
Fabricated metal products	332	1,766 i	1.4	1.4
Machinery	333	14,158	3.6	3.7
Agricultural implement	33311	1,757	3.8	3.8
Semiconductor machinery	333295	2,107	18.4	18.4
Engine, turbine, and power transmission equipment	3336	4,205	3.7	3.7
Other machinery	other 333	6,089	2.8	2.8
Computer and electronic products	334	58,210	8.8	8.8
Communications equipment	3342	13,294	7.9	7.9
Semiconductor and other electronic components	3344	26,266	19.3	19.4
Navigational, measuring, electromedical, and control instruments	3345	10,957	4.9	4.9
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	4,305	7.1	7.1
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	2,900	3.4	3.4
Other measuring and controlling device	other 3345	3,752	5.0	5.0
Other computer and electronic products	other 334	7,693	5.8	5.8
Electrical equipment, appliances, and components	335	3,029	2.7	2.7
Transportation equipment	336	24,896	2.7	2.7
Automobiles, bodies, trailers, and parts	3361–63	15,630	2.6	2.6
Aerospace products and parts	3364	8,219	3.3	3.3
Aircraft, aircraft engine, and aircraft parts	336411–13	7,670	3.3	3.3
Guided missile, space vehicle, and related parts	336414–15, 336419	548	3.4	3.4
Military armored vehicle, tank, and tank component	336992	22	3.0	3.0
Other transportation	other 336	1,026	1.6	1.6
Furniture and related products	337	368	1.1	1.1
Miscellaneous manufacturing	339	D	D	D
Medical equipment and supplies	3391	8,474	3.6	3.6
Other miscellaneous manufacturing	3399	D	D	D
Nonmanufacturing industries	21–23, 42–81	81,408	2.2	2.3
Mining, extraction, and support activities	21	2,703	1.0	1.1
Utilities	22	484	0.2	0.2
Wholesale trade	42	1,717 i	0.6	0.7
Electronic shopping and electronic auctions	454111–12	1,349	2.5	2.5
Transportation and warehousing	48–49	193	0.2	0.2
Information	51	47,196	4.5	4.5
Publishing	511	29,079	9.0	9.0
Newspaper, periodical, book, and directory publishers	5111	258 i	0.8	0.8
Software publishers	5112	28,820	9.9	9.9
Telecommunications	517	2,958 i	0.7	0.7

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Data processing, hosting, and related services	518	5,000	2.7	2.7
Other information	other 51	10,159	10.5	11.7
Finance and insurance	52	3,634	0.4	0.4
Real estate and rental and leasing	53	378	3.4	3.5
Lessors of nonfinancial intangible assets (except copyrighted works)	533	355	14.8	14.8
Other real estate and rental and leasing	other 53	22 i	0.3	0.3
Professional, scientific, and technical services	54	22,105	6.5	6.5
Architectural, engineering, and related services	5413	1,153	1.6	1.6
Computer systems design and related services	5415	9,314 i	7.7	7.7
Scientific research and development services	5417	8,493	11.9	11.9
Biotechnology research and development	541711	5,845	29.7	29.8
Physical, engineering, and life sciences (except biotechnology) research and development	541712	2,626	5.2	5.2
Social sciences and humanities research and development	541720	22 i	2.2	2.2
Other professional, scientific, and technical services	other 54	3,145	4.1	4.1
Health care services	621-23	453	0.9	0.9
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	1,197 i	0.4	0.4
All companies (number of domestic employees)	-	277,398	3.0	3.1
Small companies ^c				
5-499	-	44,492	4.2	4.3
5-99	-	22,855 i	5.3	5.3
5-49	-	14,862 i	5.3	5.3
5-9	-	2,264 i	5.4	5.5
10-24	-	5,760 i	6.2	6.2
25-49	-	6,839 i	4.7	4.7
50-99	-	7,993	5.2	5.2
100-249	-	11,155	3.2	3.2
250-499	-	10,482	3.9	4.2
Medium and large companies				
500-999	-	10,989	3.3	3.4
1,000-4,999	-	47,416	3.9	3.9
5,000-9,999	-	26,030	2.2	2.3
10,000-24,999	-	52,041	3.0	3.3
25,000 or more	-	96,430	2.6	2.6

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.

^c 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, unless indicated otherwise. Percentages are calculated as domestic R&D paid for by the company, 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, 2012.