

TABLE 32

Domestic R&D paid for and performed by the company as a percentage of domestic net sales, by industry and company size: 2017

(Millions of U.S. dollars and percent)

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 ^b
All industries	21–23, 31–33, 42–81	339,036	3.5	3.7
Manufacturing industries	31–33	216,155	4.0	4.0
Food	311	4,453	0.7	0.7
Beverage and tobacco products	312	968	0.6	0.6
Textile, apparel, and leather products	313–16	919	1.1	1.2
Wood products	321	170	0.6	0.6
Paper	322	1,292	0.8	0.8
Printing and related support activities	323	218	0.5	0.5
Petroleum and coal products	324	301	0.1	0.1
Chemicals	325	63,285	7.0	7.1
Basic chemicals	3251	2,393	1.5	1.5
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	612	1.4	1.4
Pesticide, fertilizer, and other agricultural chemicals	3253	1,092	1.6	1.6
Pharmaceuticals and medicines	3254	55,229	11.8	11.9
Soap, cleaning compound, and toilet preparation	3256	2,488	2.5	2.5
Paint, coating, adhesive, and other chemicals	3255, 3259	1,471	2.2	2.3
Plastics and rubber products	326	3,637	1.9	2.0
Nonmetallic mineral products	327	1,303	2.9	3.2
Primary metals	331	741	0.8	0.9
Fabricated metal products	332	2,099	1.9	1.9
Machinery	333	12,257	3.8	3.8
Agricultural implement	33311	1,511	3.2	3.3
Semiconductor machinery	333242	3,228	16.1	16.1
Engine, turbine, and power transmission equipment	3336	1,921	5.3	5.3
Other machinery	other 333	5,596	2.5	2.5
Computer and electronic products	334	69,942	10.0	10.0
Communications equipment	3342	10,972	12.4	12.4
Semiconductor and other electronic components	3344	27,859	16.2	16.2
Navigational, measuring, electromedical, and control instruments	3345	10,089	6.0	6.0
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	2,545	11.3	11.4
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	3,214	4.2	4.2
Other measuring and controlling device	other 3345	4,329	6.3	6.3

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Other computer and electronic products	other 334	21,022	7.8	7.8
Electrical equipment, appliances, and components	335	4,110	3.6	3.6
Transportation equipment	336	34,629	3.0	3.1
Automobiles, bodies, trailers, and parts	3361-63	21,137	2.8	3.0
Aerospace products and parts	3364	11,903	3.4	3.4
Aircraft, aircraft engine, and aircraft parts	336411-13	11,473	3.5	3.5
Guided missile, space vehicle, and related parts	336414-15, 336419	430	2.3	2.3
Military armored vehicle, tank, and tank component	336992	4	1.3	1.4
Other transportation	other 336	1,585	2.4	2.4
Furniture and related products	337	419	1.0	1.0
Miscellaneous manufacturing	339	15,410	4.0	4.0
Medical equipment and supplies	3391	13,348	4.3	4.3
Other miscellaneous manufacturing	3399	2,062	2.6	2.7
Nonmanufacturing industries	21-23, 42-81	122,881	2.9	3.1
Mining, extraction, and support activities	21	2,841	1.1	D
Utilities	22	281	0.1	0.1
Wholesale trade	42	503	0.3	0.3
Electronic shopping and electronic auctions	454111-12	9,318	6.8	6.8
Transportation and warehousing	48-49	1,116	0.6	D
Information	51	78,898	6.6	6.7
Publishing	511	33,276	14.3	14.4
Newspaper, periodical, book, and directory publishers	5111	74	3.4	4.0
Software publishers	5112	33,201	14.4	14.5
Telecommunications	517	3,643	0.7	0.7
Data processing, hosting, and related services	518	16,037	5.3	5.3
Other information	other 51	25,943	19.3	21.2
Finance and insurance	52	7,565	1.0	1.1
Real estate and rental and leasing	53	708	6.5	7.3
Lessors of nonfinancial intangible assets (except copyrighted works)	533	138	6.7	7.3
Other real estate and rental and leasing	other 53	570	6.5	7.4
Professional, scientific, and technical services	54	18,972	4.7	4.8
Architectural, engineering, and related services	5413	1,561	1.7	1.7

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Computer systems design and related services	5415	11,669	7.7	7.7
Scientific research and development services	5417	2,817	4.1	4.1
Biotechnology research and development	541711	795	3.0	3.0
Physical, engineering, and life sciences (except biotechnology) research and development	541712	1,936	4.7	4.7
Social sciences and humanities research and development	541720	86	6.9	6.9
Other professional, scientific, and technical services	other 54	2,925	3.4	3.4
Health care services	621-23	958	i 0.8	0.8
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	1,722	0.3	0.4
All companies (number of domestic employees)	-	339,036	3.5	3.7
Small companies				
10-19 ^c	-	2,402	10.0	11.2
20-49	-	7,593	8.8	9.4
Medium companies				
50-99	-	8,070	6.9	7.2
100-249	-	13,514	5.2	5.4
Large companies				
250-499	-	11,773	4.2	4.3
500-999	-	16,295	4.4	4.6
1,000-4,999	-	52,341	4.2	4.3
5,000-9,999	-	32,701	3.5	3.6
10,000-24,999	-	63,415	3.4	3.5
25,000 or more	-	130,931	2.9	3.1

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 Business Research and Development Survey does not include companies with fewer than 10 domestic employees.

Note(s)

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(s)

National Center for Science and Engineering Statistics and U.S. Census Bureau, Business Research and Development Survey, 2017.