

TABLE 41

Domestic R&D paid for by the company's foreign subsidiaries and performed by the company, by type of R&D, industry, and company size: 2022

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total ^a	Basic research ^b	Applied research ^b	Development ^b
All industries	21–23, 31–33, 42–81	30,161	977	3,671	25,512
Manufacturing industries	31–33	19,950	933	3,549	15,467
Food	311	D	D	D	124
Beverage and tobacco products	312	0	0	0	0
Textile, apparel, and leather products	313–16	D	0	0	D
Wood products	321	23	2	2	20
Paper	322	0	0	0	0
Printing and related support activities	323	0	0	0	0
Petroleum and coal products	324	D	D	D	D
Chemicals	325	3,390	185	491	2,713
Basic chemicals	3251	37	D	8	D
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	0	0	0	0
Pesticide, fertilizer, and other agricultural chemicals	3253	0	0	0	0
Pharmaceuticals and medicines	3254	3,335	179	481	2,675
Soap, cleaning compound, and toilet preparations	3256	13	D	1	D
Paint, coating, adhesive, and other chemicals	3255, 3259	4	D	1	D
Plastics and rubber products	326	42	6	3	33
Nonmetallic mineral products	327	0	0	0	0
Primary metals	331	2	*	*	1
Fabricated metal products	332	1	0	*	1
Machinery	333	280	61	62	157
Agricultural implement	33311	D	D	*	3
Semiconductor machinery	333242	27	4	4	19
Engine, turbine, and power transmission equipment	3336	D	D	1	2
Other machinery	other 333	245	56	57	132
Computer and electronic products	334	14,546	593	2,653	11,301
Communications equipment	3342	D	*	4	D
Semiconductor and other electronic components	3344	D	D	D	D
Navigational, measuring, electromedical, and control instruments	3345	D	D	44	D
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	D	46	0	D
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	*	*	*	*
Other measuring and controlling devices	other 3345	D	D	44	D
Other computer and electronic products	other 334	D	D	D	D
Electrical equipment, appliances, and components	335	100	1	2	98
Transportation equipment	336	214	9	2	203
Motor vehicles, bodies, trailers, and parts	3361–63	209	8	1	199

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Aerospace products and parts	3364	5	1	1	3
Aircraft, aircraft engine, and aircraft parts	336411-13	5	1	1	3
Guided missile, space vehicle, and related parts	336414-15, 336419	0	0	0	0
Military armored vehicle, tank, and tank components	336992	0	0	0	0
Other transportation	other 336	0	0	0	0
Furniture and related products	337	65	0	65	i 0
Miscellaneous	339	D	D	D	D
Medical equipment and supplies	3391	865	12	136	717
Other miscellaneous manufacturing	3399	D	D	D	D
Nonmanufacturing industries	21-23, 42-81	10,211	i 44	122	i 10,045
Mining, quarrying, oil and gas extraction, and support activities	21	D	D	D	D
Utilities	22	0	0	0	0
Wholesale trade	42	3	1	*	2
Electronic shopping and electronic auctions	454111-12	D	D	D	D
Transportation and warehousing	48-49	0	0	0	0
Information	51	8,742	i 12	85	i 8,645
Publishing	511	D	1	58	i D
Newspaper, periodical, book, and directory publishers	5111	0	0	0	0
Software publishers	5112	D	1	58	i D
Telecommunications	517	49	0	5	44
Data processing, hosting, and related services	518	197	11	i 21	165
Other information	other 51	D	0	2	D
Finance and insurance	52	D	0	0	D
Real estate and rental and leasing	53	0	0	0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0
Other real estate and rental and leasing	other 53	0	0	0	0
Professional, scientific, and technical services	54	149	25	12	112
Architectural, engineering, and related services	5413	5	*	*	4
Computer systems design and related services	5415	79	2	7	69
Scientific research and development services	5417	24	1	4	19
Research and development in nanotechnology	541713	9	1	4	4
Research and development in biotechnology (except nanobiotechnology)	541714	3	i 0	1	i 2
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	12	0	0	12
Research and development in the social sciences and humanities	541720	0	0	0	0
Other professional, scientific, and technical services	other 54	41	22	0	19
Health care services	621-23	0	0	0	0

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Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	25	*	D	D
All companies (number of domestic employees)	-	30,161	977	3,671	25,512
Small companies					
10-19 ^c	-	17	2	5	11
20-49	-	128	r 3	r 4	i 122
Medium companies					
50-99	-	91	8	18	66
100-249	-	102	r 2	3	97
Large companies					
250-499	-	256	92	20	i 144
500-999	-	1,057	4	249	804
1,000-4,999	-	3,477	401	450	2,626
5,000-9,999	-	1,049	11	196	841
10,000-24,999	-	1,852	60	143	1,649
25,000 or more	-	22,133	395	2,585	19,152

* = amount < \$500,000; D = data withheld to avoid disclosing operations of individual companies; i = more than 50% of the estimate is a combination of imputation and reweighting to account for nonresponse; r = relative standard error is more than 50%.

NAICS = 2017 North American Industry Classification System.

^a Statistics are based on companies in the United States that reported to the survey. No systematic item imputation was applied. These statistics include an adjustment to the weight to account for unit nonresponse.

^b Respondent was not asked to report categorical breakouts of research and development paid for by foreign subsidiaries. Rather, ratios of the company's basic research, applied research, and development were calculated as proportions of the overall domestic R&D performance paid for by the company. These ratios were applied to the company's domestic R&D performance paid for by foreign subsidiaries to get estimates of a company's basic research, applied research, and development paid for by foreign subsidiaries.

^c The Business Enterprise 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 \$50,000 or more of R&D and are not comparable with estimates published for years prior to 2018.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2022.