

TABLE 5

Worldwide R&D paid for by the company and performed by the company and others, by industry and company size: 2022

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Performed by the company	Performed by others
All industries	21–23, 31–33, 42–81	799,154	743,067	56,087
Manufacturing industries	31–33	458,721	409,728	48,993
Food	311	8,600	8,247	353
Beverage and tobacco products	312	1,555	1,290	265
Textile, apparel, and leather products	313–16	744	733	10
Wood products	321	281	258	22
Paper	322	1,094	1,085	8
Printing and related support activities	323	179	166	13
Petroleum and coal products	324	1,361	1,098	263
Chemicals	325	174,210	138,276	35,935
Basic chemicals	3251	3,691	3,604	87
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,981	D	D
Pesticide, fertilizer, and other agricultural chemicals	3253	D	D	D
Pharmaceuticals and medicines	3254	161,890	126,722	35,167
Soap, cleaning compound, and toilet preparations	3256	4,026	3,564	462
Paint, coating, adhesive, and other chemicals	3255, 3259	D	D	D
Plastics and rubber products	326	3,977	3,903	74
Nonmetallic mineral products	327	1,613	1,594	19
Primary metals	331	1,140	1,117	23
Fabricated metal products	332	3,551	3,501	50
Machinery	333	24,494	24,024	470
Agricultural implement	33311	3,390	3,132	258
Semiconductor machinery	333242	7,021	7,008	12
Engine, turbine, and power transmission equipment	3336	3,789	3,760	29
Other machinery	other 333	10,295	10,124	170
Computer and electronic products	334	139,330	134,627	4,703
Communications equipment	3342	15,605	14,367	1,238
Semiconductor and other electronic components	3344	69,617	69,078	538
Navigational, measuring, electromedical, and control instruments	3345	13,085	12,736	350
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	4,493	4,380	112
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	2,489	2,475	15
Other measuring and controlling devices	other 3345	6,103	5,880	223
Other computer and electronic products	other 334	41,023	38,446	2,577
Electrical equipment, appliances, and components	335	8,319	8,226	93
Transportation equipment	336	58,854	53,533	5,321
Motor vehicles, bodies, trailers, and parts	3361–63	41,244	36,269	4,975
Aerospace products and parts	3364	15,428	15,151	277
Aircraft, aircraft engine, and aircraft parts	336411–13	9,904	9,801	103
Guided missile, space vehicle, and related parts	336414–15, 336419	5,523	5,350	173
Military armored vehicle, tank, and tank components	336992	28	27	1
Other transportation	other 336	2,154	2,085	69
Furniture and related products	337	447	440	7
Miscellaneous	339	28,972	27,609	1,363
Medical equipment and supplies	3391	25,536	24,291	1,244
Other miscellaneous manufacturing	3399	3,436	3,317	118
Nonmanufacturing industries	21–23, 42–81	340,433	333,339	7,094
Mining, quarrying, oil and gas extraction, and support activities	21	1,117	952	164
Utilities	22	D	D	641
Wholesale trade	42	1,968	1,820	148

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Electronic shopping and electronic auctions	454111-12	D	D	60
Transportation and warehousing	48-49	D	D	41
Information	51	221,843	218,176	3,666
Publishing	511	63,474	61,855	1,618
Newspaper, periodical, book, and directory publishers	5111	95	72	23
Software publishers	5112	63,379	61,783	1,595
Telecommunications	517	4,335	3,812	523
Data processing, hosting, and related services	518	62,583	61,500	1,083
Other information	other 51	91,452	91,010	442
Finance and insurance	52	20,197	19,735	462
Real estate and rental and leasing	53	2,501	2,500	2
Lessors of nonfinancial intangible assets (except copyrighted works)	533	6	5	1
Other real estate and rental and leasing	other 53	2,495	2,494	1
Professional, scientific, and technical services	54	46,586	45,005	1,581
Architectural, engineering, and related services	5413	3,178	2,942	236
Computer systems design and related services	5415	23,951	23,412	538
Scientific research and development services	5417	10,946	10,258	687
Research and development in nanotechnology	541713	225	202	23
Research and development in biotechnology (except nanobiotechnology)	541714	3,321	2,992	329
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	7,372	7,037	334
Research and development in the social sciences and humanities	541720	28	27	1
Other professional, scientific, and technical services	other 54	8,512	8,393	120
Health care services	621-23	3,123	2,877	246
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	3,529	3,446	83
All companies (number of domestic employees)	-	799,154	743,067	56,087
Small companies				
10-19 ^a	-	5,086	4,252	834
20-49	-	15,852	13,702	2,150
Medium companies				
50-99	-	16,506	14,201	2,305
100-249	-	30,581	26,777	3,803
Large companies				
250-499	-	34,377	30,553	3,825
500-999	-	35,421	33,265	2,156
1,000-4,999	-	125,023	118,460	6,563
5,000-9,999	-	70,979	67,222	3,758
10,000-24,999	-	134,411	120,150	14,261
25,000 or more	-	330,918	314,486	16,432

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 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.