

TABLE 28

Domestic R&D paid for 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	Basic research	Applied research	Development
All industries	21–23, 31–33, 42–81	608,058	35,918	80,834	491,307
Manufacturing industries	31–33	326,998	26,083	53,647	247,268
Food	311	D	D	1,075	5,222
Beverage and tobacco products	312	660	77	175	408
Textile, apparel, and leather products	313–16	D	D	82	476
Wood products	321	254	17	19	217
Paper	322	1,004	131	224	649
Printing and related support activities	323	164	8	38	118
Petroleum and coal products	324	856	165	359	333
Chemicals	325	113,518	15,913	22,975	74,630
Basic chemicals	3251	D	389	707	D
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,413	214	420	778
Pesticide, fertilizer, and other agricultural chemicals	3253	D	124	264	D
Pharmaceuticals and medicines	3254	104,720	15,035	20,938	68,747
Soap, cleaning compound, and toilet preparations	3256	D	75	380	D
Paint, coating, adhesive, and other chemicals	3255, 3259	1,195	76	266	852
Plastics and rubber products	326	3,251	216	611	2,423
Nonmetallic mineral products	327	1,435	160	323	952
Primary metals	331	1,099	61	146	893
Fabricated metal products	332	3,304	241	485	2,578
Machinery	333	18,246	1,451	2,637	14,158
Agricultural implement	33311	D	D	222	D
Semiconductor machinery	333242	5,390	670	899	3,821
Engine, turbine, and power transmission equipment	3336	D	D	509	2,194
Other machinery	other 333	7,987	D	1,007	D
Computer and electronic products	334	99,234	3,524	12,481	83,229
Communications equipment	3342	10,870	222	1,100	9,547
Semiconductor and other electronic components	3344	47,380	2,040	4,518	40,822
Navigational, measuring, electromedical, and control instruments	3345	10,105	446	1,835	7,824
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	3,959	151	901	2,907
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	2,170	106	277	1,788
Other measuring and controlling devices	other 3345	3,976	189	657	3,130
Other computer and electronic products	other 334	30,879	816	5,027	25,036
Electrical equipment, appliances, and components	335	6,657	280	629	5,747
Transportation equipment	336	46,468	2,450	8,446	35,572
Motor vehicles, bodies, trailers, and parts	3361–63	30,722	1,769	4,917	24,035
Aerospace products and parts	3364	13,786	614	3,268	9,904
Aircraft, aircraft engine, and aircraft parts	336411–13	9,303	414	2,150	6,738
Guided missile, space vehicle, and related parts	336414–15, 336419	4,483	200	1,118	3,166
Military armored vehicle, tank, and tank components	336992	26	1	4	20
Other transportation	other 336	1,935	66	257	1,612
Furniture and related products	337	405	23	133	249
Miscellaneous	339	23,032	809	2,808	19,415
Medical equipment and supplies	3391	20,112	597	2,440	17,075
Other miscellaneous manufacturing	3399	2,921	212	368	2,341
Nonmanufacturing industries	21–23, 42–81	281,060	9,835	27,186	244,039
Mining, quarrying, oil and gas extraction, and support activities	21	D	41	236	D
Utilities	22	D	34	48	D
Wholesale trade	42	D	159	279	D

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Electronic shopping and electronic auctions	454111-12	D	27	D	D
Transportation and warehousing	48-49	D	D	703	D
Information	51	181,392	4,891	11,400	165,101
Publishing	511	49,674	1,727	2,948	44,999
Newspaper, periodical, book, and directory publishers	5111	72	3	3	66
Software publishers	5112	49,602	1,724	2,944	44,934
Telecommunications	517	3,614	234	674	2,707
Data processing, hosting, and related services	518	49,270	1,801	4,072	43,397
Other information	other 51	78,834	1,130	3,706	73,998
Finance and insurance	52	17,173	655	2,936	13,582
Real estate and rental and leasing	53	2,398	i 23	812	1,562
Lessors of nonfinancial intangible assets (except copyrighted works)	533	5	i 1	i 2	i 2
Other real estate and rental and leasing	other 53	2,393	i 22	810	1,560
Professional, scientific, and technical services	54	38,633	3,316	6,806	28,512
Architectural, engineering, and related services	5413	2,912	211	507	2,194
Computer systems design and related services	5415	18,878	1,842	3,270	13,766
Scientific research and development services	5417	9,297	1,016	2,208	6,073
Research and development in nanotechnology	541713	179	13	62	104
Research and development in biotechnology (except nanobiotechnology)	541714	2,916	408	816	1,691
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	6,176	595	1,307	4,274
Research and development in the social sciences and humanities	541720	27	*	22	4
Other professional, scientific, and technical services	other 54	7,547	247	822	6,478
Health care services	621-23	D	307	523	D
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	3,300	D	D	D
All companies (number of domestic employees)	-	608,058	35,918	80,834	491,307
Small companies					
10-19 ^a	-	4,009	379	986	2,644
20-49	-	12,788	1,028	3,397	8,364
Medium companies					
50-99	-	13,274	1,317	2,878	9,079
100-249	-	24,844	2,464	5,339	17,041
Large companies					
250-499	-	26,469	3,195	4,739	18,535
500-999	-	29,007	1,734	4,819	22,453
1,000-4,999	-	94,615	6,310	14,073	74,231
5,000-9,999	-	54,018	3,265	6,149	44,604
10,000-24,999	-	96,071	6,639	11,716	77,715
25,000 or more	-	252,964	9,587	26,738	216,639

* = 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.

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.