

TABLE 28

**Domestic R&D paid for and performed by the company, by type of R&D, industry, and company size: 2020**

(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	466,162	29,330	60,620	376,213
Manufacturing industries	31-33	264,596	21,388	38,696	204,513
Food	311	4,985	515	1,151	3,319
Beverage and tobacco products	312	1,056	90	209	757
Textile, apparel, and leather products	313-16	812	87	93	632
Wood products	321	183	17	29	138
Paper	322	927	131	207	590
Printing and related support activities	323	282	29	71	182
Petroleum and coal products	324	1,222	214 - 235	376 - 412	576 - 625
Chemicals	325	89,403	13,313	17,797	58,293
Basic chemicals	3251	2,523	274	678	1,570
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,161	197	277	687
Pesticide, fertilizer, and other agricultural chemicals	3253	775	131 - 144	205 - 219	423 - 431
Pharmaceuticals and medicines	3254	80,858	12,480	15,898	52,481
Soap, cleaning compound, and toilet preparation	3256	2,476	130	309	2,037
Paint, coating, adhesive, and other chemicals	3255, 3259	1,610	90 - 100	418 - 428	1,085 - 1,093
Plastics and rubber products	326	2,607	204	388	2,016
Nonmetallic mineral products	327	1,619	306	205	1,108
Primary metals	331	795	49	172	573
Fabricated metal products	332	3,336	196	812	2,328
Machinery	333	15,071	783	1,575	12,714
Agricultural implement	33311	1,760	109	90 - 143	1,508 - 1,560
Semiconductor machinery	333242	4,121	111	345	3,665
Engine, turbine, and power transmission equipment	3336	1,523	38	165	1,320
Other machinery	other 333	7,667	525	920 - 974	6,169 - 6,223
Computer and electronic products	334	88,505	2,500	8,672	77,333
Communications equipment	3342	11,107	484 - 538	736 - 790	9,834
Semiconductor and other electronic components	3344	40,801	933	2,753	37,115
Navigational, measuring, electromedical, and control instruments	3345	11,012	637	1,787	8,588
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	2,606	208	710	1,687
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	3,561	94	515	2,952
Other measuring and controlling device	other 3345	4,844	334	562	3,948
Other computer and electronic products	other 334	25,585	393 - 446	3,343 - 3,396	21,796
Electrical equipment, appliances, and components	335	4,492	325	556	3,611
Transportation equipment	336	30,232	1,467	4,055	24,710
Motor vehicles, bodies, trailers, and parts	3361-63	19,522	798	2,626	16,098
Aerospace products and parts	3364	9,111	634	1,281	7,195
Aircraft, aircraft engine, and aircraft parts	336411-13	8,281	630	1,261	6,390
Guided missile, space vehicle, and related parts	336414-15, 336419	831	4	20	806
Military armored vehicle, tank, and tank component	336992	4	0	0	4

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Other transportation	other 336	1,594	34	148	1,412
Furniture and related products	337	492	39	99	354
Miscellaneous	339	18,576	1,110 - 1,117	2,188 - 2,221	15,238 - 15,272
Medical equipment and supplies	3391	15,944	878	1,871	13,195
Other miscellaneous manufacturing	3399	2,632	232 - 239	317 - 349	2,043 - 2,077
Nonmanufacturing industries	21-23, 42-81	201,566	7,942	21,924	171,700
Mining, quarrying, oil and gas extraction, and support activities	21	1,121	57 - 65	309 - 318	746
Utilities	22	224	25	51	148
Wholesale trade	42	1,001	109	84	808
Electronic shopping and electronic auctions	454111-12	3,837 - 19,343	20	171 - 3,455	363 - 17,304
Transportation and warehousing	48-49	4,954	178	291	4,484
Information	51	128,350	3,706	7,503	117,140
Publishing	511	34,516	1,200	1,571	31,745
Newspaper, periodical, book, and directory publishers	5111	60	*	2	58
Software publishers	5112	34,456	1,200	1,569	31,686
Telecommunications	517	3,371	234	776	2,362
Data processing, hosting, and related services	518	41,105	1,493	2,705	36,907
Other information	other 51	49,358	779	2,451	46,127
Finance and insurance	52	12,204	387	1,678	10,139
Real estate and rental and leasing	53	3,249	3 - 824	762 - 1,585	1,662
Lessors of nonfinancial intangible assets (except copyrighted works)	533	7	4	2	1
Other real estate and rental and leasing	other 53	3,242	0 - 821	760 - 1,583	1,660
Professional, scientific, and technical services	54	28,322	2,462	7,279	18,582
Architectural, engineering, and related services	5413	2,214	218	477	1,518
Computer systems design and related services	5415	14,293	1,027	2,442	10,823
Scientific research and development services	5417	6,246	612	2,900	2,735
Research and development in nanotechnology	541713	126	16	21	89
Research and development in biotechnology (except nanobiotechnology)	541714	1,176	114	362	700
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	4,906	461 - 483	2,496 - 2,519	1,927
Research and development in the social sciences and humanities	541720	38	0 - 20	0 - 20	19
Other professional, scientific, and technical services	other 54	5,570	605	1,459	3,506
Health care services	621-23	1,374	173	510	691
Other nonmanufacturing	23, 44-45 (excluding 454111- 12), 55-56, 624, 71-72, 81	1,429 - 16,934	0 - 821	0 - 3,284	0 - 16,934
All companies (number of domestic employees)	-	466,162	29,330	60,620	376,213
Small companies					
10-19 <sup>a</sup>	-	4,019	387	782	2,849
20-49	-	10,970	1,195	2,404	7,371
Medium companies					
50-99	-	11,177	1,034	2,380	7,763

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100–249	–	22,132	2,601	5,780	13,751
Large companies					
250–499	–	18,067	1,252	2,080	14,735
500–999	–	18,458	947	2,670	14,840
1,000–4,999	–	75,917	6,418	11,444	58,054
5,000–9,999	–	42,451	2,656	5,219	34,577
10,000–24,999	–	72,827	4,668	9,054	59,106
25,000 or more	–	190,145	8,172	18,808	163,166

\* = amount < \$500,000; 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.

<sup>a</sup> 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. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

**Source(s):**

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2020.