

Table 12. Domestic R&D paid for by the company and others and performed by the company, by type of R&D, industry, and company size: 2024

(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	765,082	40,530	116,358	608,194
Manufacturing industries	31–33	405,092	24,254	71,944	308,894
Food	311	6,288 i	357	1,369	4,561
Beverage and tobacco products	312	1,459	182	192	1,085
Textile, apparel, and leather products	313–16	788	68	66	654
Wood products	321	267	88	30	149
Paper	322	1,240	22	321	896
Printing and related support activities	323	255	51	39	165
Petroleum and coal products	324	1,006	168	309	530
Chemicals	325	143,745	13,729	35,020	94,996
Basic chemicals	3251	3,120	467	751	1,902
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,354	262	346	746
Pesticide, fertilizer, and other agricultural chemicals	3253	1,253	152	273	827
Pharmaceuticals and medicines	3254	133,627	12,631	32,751	88,245
Soap, cleaning compound, and toilet preparations	3256	2,956	78	495	2,383
Paint, coating, adhesive, and other chemicals	3255, 3259	1,435	139	404	893
Plastics and rubber products	326	2,908	184	476	2,248
Nonmetallic mineral products	327	1,578 i	213 i	340 i	1,025 i
Primary metals	331	1,174	116	168	890
Fabricated metal products	332	3,230	291	483	2,456
Machinery	333	22,035	1,108	3,350	17,578
Agricultural implement	33311	2,561	126	174	2,261
Semiconductor machinery	333242	6,851	238	880	5,733
Engine, turbine, and power transmission equipment	3336	4,230	88	830	3,311
Other machinery	other 333	8,394	656	1,465	6,272
Computer and electronic products	334	115,599	3,759	13,392	98,448
Communications equipment	3342	12,839	450 i	1,105	11,285
Semiconductor and other electronic components	3344	52,358	1,909 i	3,931 i	46,519 i
Navigational, measuring, electromedical, and control instruments	3345	14,083	521	2,674	10,889
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	3,245	83 i	949 i	2,213 i
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	6,161	170	917	5,074
Other measuring and controlling devices	other 3345	4,677	268	808	3,602
Other computer and electronic products	other 334	36,318	880	5,683	29,755
Electrical equipment, appliances, and components	335	6,999	409	1,078	5,512
Transportation equipment	336	71,231	2,593 i	11,764	56,875
Motor vehicles, bodies, trailers, and parts	3361–63	31,812	748	3,409	27,655
Aerospace products and parts	3364	35,904	1,745 i	8,007	26,152
Aircraft, aircraft engine, and aircraft parts	336411–13	D	D	D	18,926
Guided missile, space vehicle, and related parts	336414–15, 336419	D	D	D	7,226
Military armored vehicle, tank, and tank components	336992	33	2	2	30
Other transportation	other 336	3,481	97	346	3,038
Furniture and related products	337	450	41	57	352
Miscellaneous	339	24,840	876	3,490	20,474
Medical equipment and supplies	3391	22,126	559	3,281	18,286
Other miscellaneous manufacturing	3399	2,715	317	209	2,189
Nonmanufacturing industries	21–23, 42–81	359,990	16,276	44,414	299,300
Mining, quarrying, oil and gas extraction, and support activities	21	1,862	63	120	1,679
Utilities	22	613	20	150 i	443 i
Wholesale trade	42	1,692 i	D	D	1,208 i

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Electronic shopping and electronic auctions	454111–12	7,898 i	56 i	3,450 i	4,392 i
Transportation and warehousing	48–49	11,341	170	1,075	10,095
Information	51	228,174	8,688	14,132	205,354
Publishing	511	63,596	2,001	3,146	58,449
Newspaper, periodical, book, and directory publishers	5111	489 i	1 i	2 i	485 i
Software publishers	5112	63,108	2,000	3,144	57,964
Telecommunications	517	3,323	248	606	2,468
Data processing, hosting, and related services	518	58,772	2,291	6,119	50,361
Other information	other 51	102,484	4,147	4,261	94,076
Finance and insurance	52	25,463	1,289	4,149	20,025
Real estate and rental and leasing	53	2,750	123	994	1,633
Lessors of nonfinancial intangible assets (except copyrighted works)	533	23	0	*	23
Other real estate and rental and leasing	other 53	2,727	123	994	1,610
Professional, scientific, and technical services	54	74,548	5,052	19,449	50,047
Architectural, engineering, and related services	5413	3,893	228	980	2,685
Computer systems design and related services	5415	26,764	1,668	6,441	18,655
Scientific research and development services	5417	33,942	2,398	10,044	21,500 i
Research and development in nanotechnology	541713	548	7	332	209
Research and development in biotechnology (except nanobiotechnology)	541714	6,751	802	1,089	4,859 i
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	25,931	934	8,596 i	16,402 i
Research and development in the social sciences and humanities	541720	712	655	27 i	30 i
Other professional, scientific, and technical services	other 54	9,949 i	758 i	1,984 i	7,207 i
Health care services	621–23	2,020	256	228	1,536
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	3,628	D	D	2,888
All companies (number of domestic employees)	–	765,082	40,530	116,358	608,194
Small companies					
10–19 ^a	–	4,790	436	1,219	3,134
20–49	–	16,179	1,325	3,750	11,104
Medium companies					
50–99	–	17,078	1,493	4,105	11,479
100–249	–	29,325	2,757	6,314	20,254
Large companies					
250–499	–	28,852	2,995	5,982	19,875
500–999	–	44,697	5,668	8,653	30,376
1,000–4,999	–	123,813	8,146	18,722	96,945
5,000–9,999	–	62,950	2,938	9,678	50,334
10,000–24,999	–	140,348	7,472	26,556	106,321
25,000 or more	–	297,050	7,300	31,379	258,371

* = 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.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2024.