

TABLE 34

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

(Millions of U.S. dollars)

Industry	NAICS code	Company size (domestic employees)											
		All companies	10–19 ^a	20–49	50–99	100–249	250–499	500–999	1,000–4,999	5,000–9,999	10,000–24,999	25,000 or more	
All industries	21–23, 31–33, 42–81	83,489	1,269	1,907	1,990	3,003	3,080	2,795	9,890	4,692	25,072	29,792	
Manufacturing industries	31–33	45,461	299	499	687	1,033	1,694	1,248	7,079	2,877	7,979	22,065	
Food	311	D	0	D	6	D	7	r 7	D	D	D	2	
Beverage and tobacco products	312	107	0	0	0	0	88	0	19	0	0	0	
Textile, apparel, and leather products	313–16	D	D	0	D	4	1	0	4	0	0	0	
Wood products	321	5	0	0	0	0	0	5	0	*	0	0	
Paper	322	*	0	0	0	*	0	0	*	0	0	0	
Printing and related support activities	323	1	0	* r	*	0	*	0	0	0	0	0	
Petroleum and coal products	324	4	0	0	0	*	0	*	0	1	3	0	
Chemicals	325	12,210	D	167	251	317	698	392	4,904	D	4,678	342	
Basic chemicals	3251	D	*	D	D	19	10	9	D	0	39	0	
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	80	i 3	D	D	*	D	1	D	0	0	D	
Pesticide, fertilizer, and other agricultural chemicals	3253	D	0	D	0	D	0	0	D	0	0	0	
Pharmaceuticals and medicines	3254	11,353	D	154	239	278	663	378	4,427	D	4,416	D	
Soap, cleaning compound, and toilet preparations	3256	D	0	*	0	D	2	4	0	0	210	0	
Paint, coating, adhesive, and other chemicals	3255, 3259	29	D	D	D	D	D	0	D	0	12	0	
Plastics and rubber products	326	219	D	3 r	7	17	6	1	73	0	D	0	
Nonmetallic mineral products	327	29	0	1	1	4	2	4	17	0	0	0	
Primary metals	331	20	r 10	r 3	r 2	2	3	0	0	*	0	0	
Fabricated metal products	332	222	i 7	34	69	r 6	6	5	95	i 0	0	0	
Machinery	333	1,218	4	134	92	88	r 20	40	67	517	237	18	
Agricultural implement	33311	D	0	4 r	0	5	0	0	0	0	D	0	
Semiconductor machinery	333242	48	1	i 22	24	0	0	0	0	0	0	0	
Engine, turbine, and power transmission equipment	3336	D	*	7	D	*	2	*	0	180	D	18	
Other machinery	other 333	725	3	101 r	D	82	r 18	40	67	337	D	0	
Computer and electronic products	334	5,483	25	98	168	254	692	477	878	698	i 41	2,151	
Communications equipment	3342	795	i 2	D	D	D	D	D	18	D	0	0	
Semiconductor and other electronic components	3344	1,950	D	24	D	36	531	363	829	D	D	0	
Navigational, measuring, electromedical, and control instruments	3345	2,671	D	D	55	203	D	D	9	D	0	2,151	
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	619	i 3	26	3	91	*	i 97	0	8	0	390	i
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	1,976	D	D	18	106	51	0	0	D	0	1,761	
Other measuring and controlling devices	other 3345	77	1	D	34	6	D	D	9	0	0	0	
Other computer and electronic products	other 334	67	0	D	4	r D	D	0	22	0	D	0	
Electrical equipment, appliances, and components	335	429	i 0	9	8	15	34	17	125	0	220	i 0	

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Transportation equipment	336	24,790	54 r	11	42	199	69	268	776 i	1,239	2,599	19,533 i	
Motor vehicles, bodies, trailers, and parts	3361–63	2,159	5	D	22	175	31	247	555 i	234	784	D	
Aerospace products and parts	3364	21,570	49 r	4	12	23	38	19 i	213	999	1,816	18,397 i	
Aircraft, aircraft engine, and aircraft parts	336411–13	15,268 i	48 r	D	11	D	D	D	D	D	1,816	12,977 i	
Guided missile, space vehicle, and related parts	336414–15, 336419	6,302	1	D	1	D	D	D	D	D	0	5,420	
Military armored vehicle, tank, and tank components	336992	4	0	0	0	0	0	0	4	0	0	0	
Other transportation	other 336	1,057	0	D	8 r	1	0	2	4	7	0	D	
Furniture and related products	337	5	0	4	*	1	0	0	0	0	0	0	
Miscellaneous	339	350	D	D	D	D	67	32	D	88	16	19	
Medical equipment and supplies	3391	282	21	20	14	13	56	3	31	88	16	19	
Other miscellaneous manufacturing	3399	68	D	D	D	D	11	28	D	0	0	0	
Nonmanufacturing industries	21–23, 42–81	38,028 i	970	1,408	1,303	1,970	1,385	1,547	2,811	1,814	17,092 i	7,727	
Mining, quarrying, oil and gas extraction, and support activities	21	D	0	0	D	0	0	0	0	5 i	D	0	
Utilities	22	D	0	D	0	0	0	0	D	D	*	D	
Wholesale trade	42	41	D	7	3	20 i	0	0	0	0	D	0	
Electronic shopping and electronic auctions	454111–12	0	0	0	0	0	0	0	0	0	0	0	
Transportation and warehousing	48–49	D	0	0	0	0	0	2	0	D	0	0	
Information	51	947	D	161	38	113	117	115	0	D	287	35	
Publishing	511	693	D	94 r	7	80	93	D	0	0	287	35	
Newspaper, periodical, book, and directory publishers	5111	1	0	0	0	1	0	0	0	0	0	0	
Software publishers	5112	693	D	94 r	7	80	93	D	0	0	287	35	
Telecommunications	517	76	30 r	33	0	11	2	0	0	0	0	0	
Data processing, hosting, and related services	518	137	D	33	D	22	21	35	0	0	0	0	
Other information	other 51	42	0	*	D	0	0	D	0	D	0	0	
Finance and insurance	52	49	0	0	0	D	0	0	0	0	0	D	
Real estate and rental and leasing	53	0	0	0	0	0	0	0	0	0	0	0	
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0	0	0	0	0	0	0	0	
Other real estate and rental and leasing	other 53	0	0	0	0	0	0	0	0	0	0	0	
Professional, scientific, and technical services	54	36,139 i	892	1,225	1,237	1,819	1,235	1,414	2,747	1,183	16,780 i	7,607 i	
Architectural, engineering, and related services	5413	971	119	163	236	153	92	106	71	0	31	0	
Computer systems design and related services	5415	3,656	271	111	112	151	39	100	110	0	2,478	283	
Scientific research and development services	5417	30,328 i	419	802	750	1,409	954	1,077	2,565	1,183	14,271 i	6,897 i	
Research and development in nanotechnology	541713	102	32	21	49	0	0	0	0	0	0	0	
Research and development in biotechnology (except nanobiotechnology)	541714	7,310	99	137	183	31	130	0	438 i	582	2,319 i	3,391	

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Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	22,244	i	285	644	511	1,316	824	1,077	2,128	0	11,952	i	3,506	i
Research and development in the social sciences and humanities	541720	672		3	0	6	62	0	0	0	601	0		0	
Other professional, scientific, and technical services	other 54	1,184		84	148	139	105	149	130	0	0	0		427	
Health care services	621–23	D		D	D	D	D	33	6	18	0	0		D	
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	94		0	D	D	D	0	10	D	D	0		0	

* = 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 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.