

TABLE 36

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

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Companies in the United States	Companies outside the United States		U.S. federal government agencies	U.S. state government agencies	Foreign government agencies	U.S. universities, colleges, and academic researchers	Foreign universities, colleges, and academic researchers	All other	
				Company's parent	Unaffiliated companies						In the United States	Outside the United States
All industries	21-23, 31-33, 42-81	83,489	27,125 i	21,005	2,599	31,626	208	104	38	10	720	52
Manufacturing industries	31-33	45,461	6,623	12,732	1,628	24,082	57	95	22	2 r	215	6
Food	311	D	D	269	D	0	0	0	0	0	D	0
Beverage and tobacco products	312	107	* i	106 i	* i	0	0	0	0	0	* i	0
Textile, apparel, and leather products	313-16	D	D	3	D	5	0	0	*	0	D	0
Wood products	321	5	0	5	0	*	0	0	0	0	0	0
Paper	322	*	*	*	0	0	0	0	0	0	0	0
Printing and related support activities	323	1	0	0	0	0	0	0	0	0	1	0
Petroleum and coal products	324	4	4	0	*	*	0	0	0	0	0	0
Chemicals	325	12,210	2,426	8,176	770	766	9	0	10	* i	49	4
Basic chemicals	3251	D	29	124	11	D	*	0	*	*	0	0
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	80 i	5	62 i	8	D	0	0	*	0	D	*
Pesticide, fertilizer, and other agricultural chemicals	3253	D	0	D	*	0	0	0	0	0	D	0
Pharmaceuticals and medicines	3254	11,353	2,388	7,447	748	703	8	0	10	0	46	4
Soap, cleaning compound, and toilet preparations	3256	D	2	229	0	0	0	0	0	0	D	0
Paint, coating, adhesive, and other chemicals	3255, 3259	29	2	4	3	19	1	0	0	* i	0	0
Plastics and rubber products	326	219	80	112	*	25	0	0	*	0	2 r	0
Nonmetallic mineral products	327	29	1	16	9	3	0	0	0	0	0	0
Primary metals	331	20 r	5 r	3	0	*	2 r	0	0	*	10 r	0
Fabricated metal products	332	222 i	133 i	61 i	1 r	16	0	0	0	0	11 r	0
Machinery	333	1,218	165	203	155	673	0	*	6	1 r	15	0
Agricultural implement	33311	D	0	D	D	D	0	0	0	0	0	0
Semiconductor machinery	333242	48	* i	34	* i	14	0	0	* i	* i	* i	0
Engine, turbine, and power transmission equipment	3336	D	51	9	5	235	0	*	*	D	2	0
Other machinery	other 333	725	113	D	D	D	0	0	6	D	13	0
Computer and electronic products	334	5,483	537 i	1,976	287	2,560	16 r	21	3 r	*	82	1 r
Communications equipment	3342	795 i	D	D	D	205	1 i	2 i	0	0	0	0
Semiconductor and other electronic components	3344	1,950	23	1,515	262	71	15 r	0	*	0	63	* r
Navigational, measuring, electromedical, and control instruments	3345	2,671	123	245	15	2,246	1	19	3 r	*	18	*
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	619 i	3	197	0	402 i	*	0	2 r	*	14	*
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	1,976	115	3	15	1,824	1	19	0	0	*	0

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Other measuring and controlling devices	other 3345	77	5	46	*	20	0	0	* r	* r	4	0
Other computer and electronic products	other 334	67	D	D	D	38	0	0	0	0	1	0
Electrical equipment, appliances, and components	335	429 i	35	361 i	8	21	1	0	*	0	4	0
Transportation equipment	336	24,790	3,060	1,348	328 i	19,934	28	73	0	0	17 i	2 r
Motor vehicles, bodies, trailers, and parts	3361-63	2,159	528	1,322	237 i	D	25	*	0 i	0	D	* i
Aerospace products and parts	3364	21,570	2,529	12	91	18,855 i	D	73	0	0	D	1
Aircraft, aircraft engine, and aircraft parts	336411-13	15,268 i	815	12	71	14,298 i	0	D	0	0	D	1
Guided missile, space vehicle, and related parts	336414-15, 336419	6,302	1,714	0	20	4,557	D	D	0	0	D	0
Military armored vehicle, tank, and tank components	336992	4	3	0	0	1	0	0	0	0	0	0
Other transportation	other 336	1,057	*	14	0	D	D	0	0	0	0	1 r
Furniture and related products	337	5	5	0	0	0	0	0	0	0	*	0
Miscellaneous	339	350	114	94	57	77	0	*	2	0	5	0
Medical equipment and supplies	3391	282	93	83	45	58	0	0	2	0	1 r	0
Other miscellaneous manufacturing	3399	68	21 r	11	12	19	0	*	* i	0	5	0
Nonmanufacturing industries	21-23, 42-81	38,028 i	20,502 i	8,273 i	972 i	7,544	152	9	17	9	506	46
Mining, quarrying, oil and gas extraction, and support activities	21	D	D	0	21 i	0	0	0	0	0	0	0
Utilities	22	D	*	0	0	D	*	0	0	0	*	0
Wholesale trade	42	41	7 i	32	0	1 r	*	0	0	0	* r	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	D	0	0	D	0	0	0	0	0	0
Information	51	947	332	375	38	176	3	0	1	0	13	10
Publishing	511	693	308	261	0	102 r	3	0	0	0	10	10
Newspaper, periodical, book, and directory publishers	5111	1	0	1	0	0	0	0	0	0	0	0
Software publishers	5112	693	308	260	0	102 r	3	0	0	0	10	10
Telecommunications	517	76	D	D	0	41 r	*	0 i	0	0	0	0
Data processing, hosting, and related services	518	137	13	49	38	33	0	0	1	0	4 i	0
Other information	other 51	42	D	D	0	0	0	0	0	0	0	0
Finance and insurance	52	49	49	0	0	0	0	0	0	0	0	0
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	19,452 i	7,837 i	911 i	7,273	107	9	16	9	488	36

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Architectural, engineering, and related services	5413	971	374	53	6	475	38	3 r	3	*	19	*
Computer systems design and related services	5415	3,656	408	2,277	1	897	28	*	*	0	44 r	0
Scientific research and development services	5417	30,328 i	18,562 i	5,285 i	885 i	5,084	40	6	10	8	413 i	36
Research and development in nanotechnology	541713	102	22	5	1	71	2	0	*	0	2	0
Research and development in biotechnology (except nanobiotechnology)	541714	7,310	6,222 i	204	14	701	2	0	1 i	0	145	22
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	22,244 i	12,296 i	5,077 i	870 i	3,700	28	1	9	4	245 i	14 i
Research and development in the social sciences and humanities	541720	672	22	0	0	612	8	5	0	3	21	0
Other professional, scientific, and technical services	other 54	1,184	108	222	20	818	1	*	2 i	1	12	* r
Health care services	621-23	D	46	0	*	D	0	0	*	*	3	0
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	94	22	28	2	1	40	0	0	0	0	0
All companies (number of domestic employees)	-	83,489	27,125 i	21,005	2,599	31,626	208	104	38	10	720	52
Small companies												
10-19 ^a	-	1,269	433	211	31	495	7	1	4	1	83	2
20-49	-	1,907	553	412	63	741	32	D	10	2 r	81	D
Medium companies												
50-99	-	1,990	358	745	69	746	21	3 r	13	*	34	1
100-249	-	3,003	554	832	114	1,402	13	3	3	*	80	0
Large companies												
250-499	-	3,080	607	1,250	338	687	26	0	1	4	141	26
500-999	-	2,795	980	1,015	73	679	12	*	5	0	31	0
1,000-4,999	-	9,890	2,346	5,203	575	1,672	62	* i	1 i	*	32 i	* i
5,000-9,999	-	4,692	1,299	384	329	2,573	8	12 i	*	3	83	* i
10,000-24,999	-	25,072 i	11,010 i	10,954 i	926 i	1,960	D	D	* i	* i	D	D
25,000 or more	-	29,792	8,985	0	82	20,670	D	29	0	0	D	1

* = 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.