

TABLE 36

## Domestic R&amp;D paid for by others and performed by the company, by source of funds, industry, and company size: 2021

(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	74,695	26,587	20,806	2,450	23,582	329	155	78	1	674	34
Manufacturing industries	31-33	38,394	6,601	13,401	1,454	16,374	119	136	24	*	264	21
Food	311	297 - 302	38 - 77	212	1 - 35	0	0	0	*	0	0 - 27	0
Beverage and tobacco products	312	19	*	18	0	0	0	*	0	0	0	0
Textile, apparel, and leather products	313-16	11	5	0	*	1	0	0	0	0	5	0
Wood products	321	2 - 10	0	2 - 10	0	0	0	0	0	0	0	0
Paper	322	0	0	0	0	0	0	0	0	0	0	0
Printing and related support activities	323	0 - 7	0	0	0	0	0	0	0	0	0 - 7	4
Petroleum and coal products	324	5	5	0	0	0	0	0	0	0	*	0
Chemicals	325	12,393	2,654	7,695	723	1,223	5	0	15	*	72	6
Basic chemicals	3251	154	8	126	10	6	2	0	*	*	2	0
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	69 - 98	i 14	31 - 78	i *	3 - 23	0	0	*	0	0	0
Pesticide, fertilizer, and other agricultural chemicals	3253	211 - 241	i *	210 - 241	0	0	*	i 0	0	0	0	0
Pharmaceuticals and medicines	3254	11,697	2,631	7,066	711	1,194	4	0	14	0	70	6
Soap, cleaning compound, and toilet preparations	3256	209	*	209	0	0	0	0	0	0	0	0
Paint, coating, adhesive, and other chemicals	3255, 3259	19 - 28	1	0 - 25	2	1 - 21	0	0	*	*	i 0	0
Plastics and rubber products	326	183	56	103	*	3	r 0	0	*	r 0	20	r *
Nonmetallic mineral products	327	31	5	12	0	4	0	0	0	0	0	10
Primary metals	331	22 - 26	i 0 - 26	*	0 - 26	i *	0 - 3	0	*	0	0	0
Fabricated metal products	332	412	298	r 60	5	13	0	0	*	0	35	r 0
Machinery	333	1,003	211	117	161	503	0	2	3	*	3	3
Agricultural implement	33311	60 - 68	0 - 68	0 - 56	0 - 68	0 - 6	0	0	0	0	0	0
Semiconductor machinery	333242	167	8	55	91	14	0	0	0	0	*	0
Engine, turbine, and power transmission equipment	3336	128 - 134	28	8	0 - 7	93	0	*	0	0	0	0
Other machinery	other 333	641	106 - 177	0 - 56	0 - 71	391 - 397	0	2	3	*	3	3
Computer and electronic products	334	6,852	1,650	2,065	225	2,828	8	53	6	0	15	*

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Communications equipment	3342	1,218	462 - 570	99 - 207	0 - 12	421 - 504	*	17 - 39	0	0	0 - 12	0
Semiconductor and other electronic components	3344	1,880	75	1,527	187	81	6	0	*	0	4	0
Navigational, measuring, electromedical, and control instruments	3345	3,630	1,007	333	28	2,223	0 - 3	15 - 36	6	0	0 - 12	*
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	250	0 - 14	229	0	3 - 17	0	0	6	0	0 - 12	0
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	3,193	829 - 1,008	0 - 105	0 - 29	2,086 - 2,197	0 - 3	15 - 36	0	0	0	0
Other measuring and controlling devices	other 3345	187	0 - 164	0 - 105	0 - 29	23 - 121	0 - 3	0	*	r	0 - 12	*
Other computer and electronic products	other 334	123	0 - 104	0 - 104	0 - 12	19 - 102	0 - 3	0	0	0	0 - 12	0
Electrical equipment, appliances, and components	335	486	12	440	8	25	1	0	0	0	*	0
Transportation equipment	336	16,356	1,534	2,576	294	11,670	104	81	*	0 - 1	88 - 99	0 - 4
Motor vehicles, bodies, trailers, and parts	3361-63	3,637	808	2,479	234	48	0 - 70	0 - 70	*	0	0 - 70	0 - 4
Aerospace products and parts	3364	11,568	724	40 - 98	58 - 61	10,527	33 - 105	10 - 82	0	0 - 1	0 - 99	0 - 4
Aircraft, aircraft engine, and aircraft parts	336411-13	10,552	519	40 - 98	56 - 61	9,719	33 - 105	8 - 82	0	0 - 1	0 - 99	0 - 4
Guided missile, space vehicle, and related parts	336414-15, 336419	1,016	206	0	0 - 2	808	0	0 - 2	0	0	0	0
Military armored vehicle, tank, and tank components	336992	1	0 - 1	0	0 - 1	1	0	0	0	0	0	0
Other transportation	other 336	1,149	0 - 3	0 - 56	0	1,094	0	0	0	0	0 - 56	0
Furniture and related products	337	3	3	0	0	0	0	0	0	0	1	0
Miscellaneous	339	311	98	92 - 104	7	102	0 - 3	0	*	0 - 1	1 - 13	0
Medical equipment and supplies	3391	233	60	93	7	72	0	0	*	0	2	0
Other miscellaneous manufacturing	3399	78	38	0 - 11	*	30	0 - 3	0	*	0 - 1	0 - 11	0
Nonmanufacturing industries	21-23, 42-81	36,300	19,986	7,405	995	7,207	210	19	54	1	410	13
Mining, quarrying, oil and gas extraction, and support activities	21	183	19	145 - 158	6 - 20	0	0	0	0	0	0	0

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Utilities	22	35	i 0 - 8	0 - 8	0	28	i 0 - 8	0	0	0	*	0	
Wholesale trade	42	84	27 r	45	i 0	0	*	i 0	0	0	12	i *	r
Electronic shopping and electronic auctions	454111-12	4 - 8	0	0	0	0	0	0	0	0	4 - 8	0	
Transportation and warehousing	48-49	8 - 10	9	0	0 - 1	0	0	0	0	0	0	0	
Information	51	1,366	271	649	45	377	18	r 0	*	r 0	6	0	
Publishing	511	631	240	325	r 11	36	r 18	r 0	*	r 0	*	0	
Newspaper, periodical, book, and directory publishers	5111	23	r 0	0	0	23	r 0	0	0	0	0	0	
Software publishers	5112	608	240	325	r 11	13	18	r 0	*	r 0	*	0	
Telecommunications	517	30 - 98	0 - 32	0 - 96	0	3	0	0	0	0	0	0	
Data processing, hosting, and related services	518	607	0 - 32	195 - 236	34	338	0	0	0	0	0 - 7	0	
Other information	other 51	29 - 99	0 - 32	0 - 99	0	0	0	0	*	r 0	0 - 7	0	
Finance and insurance	52	45	45	0	0	0	0	0	0	0	0	0	
Real estate and rental and leasing	53	0 - 1	0	0	0	0	*	0	0	0	0 - 1	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 - 1	0	0	0	0	*	0	0	0	0 - 1	0	
Professional, scientific, and technical services	54	34,413	i 19,555	i 6,550	i 920	6,790	172	19	40	1	353	i 13	i
Architectural, engineering, and related services	5413	2,007	442	36	8	1,318	121	*	3	*	77	0	
Computer systems design and related services	5415	3,221	553	2,010	33	569	8	r 11	3	0	34	r *	
Scientific research and development services	5417	28,019	i 18,420	i 4,365	i 798	4,106	39	8	32	*	240	i 13	i
Research and development in nanotechnology	541713	73	i 13	i 12	1	47	i 1	i 0	0	0	0	0	
Research and development in biotechnology (except nanobiotechnology)	541714	7,374	6,657	549	27	78	*	7	25	*	30	*	
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	20,046	i 11,741	i 3,804	i 770	3,476	31	1	6	*	i 205	i 13	i
Research and development in the social sciences and humanities	541720	525	9	0	0	504	8	1	*	0	4	0	
Other professional, scientific, and technical services	other 54	1,166	140	139	82	797	4	*	3	0	2	0	
Health care services	621-23	95	45	6	2	10	0	0	13	r *	i 19	r 0	
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	62 - 66	3 - 19	0	5 - 24	3	10 - 22	0	0	0	15	0	

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				Company's parent	Unaffiliated companies						In the United States	Outside the United States	
All companies (number of domestic employees)	-	74,695	26,587	i	20,806	2,450	23,582	329	155	78	1	674	34
Small companies													
10-19 <sup>a</sup>	-	1,219	385 - 577		175	0 - 73	444	17	1	7	1	0 - 192	0 - 8
20-49	-	2,434	792		392	69	912	28	r	8	0	209	3
Medium companies													
50-99	-	2,052	483		684	90	694	13		9	*	71	2
100-249	-	3,993	971		1,232	205	1,421	27	r	2	*	104	*
Large companies													
250-499	-	3,358	491		1,520	249	1,065	*		0	*	24	6
500-999	-	3,777	912		1,193	297	1,271	38		1	0	44	10
1,000-4,999	-	11,006	2,329	i	5,885	509	2,137	95	i	21 - 34	*	19	0 - 8
5,000-9,999	-	8,944	3,416	i	3,540	i	1,107	0 - 115		2	*	10 - 132	8
10,000-24,999	-	20,549	11,200	i	6,098	i	2,961	0 - 71		0 - 71	0	0 - 71	0
25,000 or more	-	17,361	5,411 - 5,603		86	0 - 73	11,570	i	115	29 - 106	0	0 - 192	0

\* = amount &lt; \$500,000; 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.

<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&amp;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&amp;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, 2021.