

TABLE 26

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

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Salaries, wages, and fringe benefits	Stock-based compensation	Temporary staffing	Expensed equipment	Materials and supplies	Lease and rental payments	Depreciation	Royalties and licensing fees	Other purchased services (except R&D)	Other
All industries	21-23, 31-33, 42-81	608,058	323,313	70,482	28,058	10,260	36,945	9,732	20,232	3,580	18,775	86,682
Manufacturing industries	31-33	326,998	164,537	20,954	12,816	4,181	31,464	5,476	12,995	2,975	13,230	58,369
Food	311	D	3,256	82	276	20	1,009	95	D	7 r	230	1,561 r
Beverage and tobacco products	312	660	351	3	34 i	1	53	5	27	*	22	162
Textile, apparel, and leather products	313-16	D	446	10	18	4	62	7	D	1	25	35
Wood products	321	254	191	1	r 4	9 r	32	2	3	* r	3	9
Paper	322	1,004	513	2	2 i	13	378	5	7	0	6	77
Printing and related support activities	323	164	99	*	i 11	1	15 i	5	10 i	1	12 i	9 i
Petroleum and coal products	324	856	444	1	53	2	54	2	36	0	103	161
Chemicals	325	113,518	46,687	7,217	7,068	949	11,003	2,439	3,765	1,415	8,480	24,494
Basic chemicals	3251	D	1,561	29	D	11	252	78	D	22	130	D
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,413	873	1	53	4	D	16	D	23	83	D
Pesticide, fertilizer, and other agricultural chemicals	3253	D	D	3	i D	12 i	D	D	D	D	12 i	D
Pharmaceuticals and medicines	3254	104,720	41,226	7,169	6,804	907	10,324	2,286	3,332	1,351	8,186	23,135
Soap, cleaning compound, and toilet preparations	3256	D	1,680	13	78	2	145	D	D	D	36	D
Paint, coating, adhesive, and other chemicals	3255, 3259	1,195	D	3	6	12	D	12	49	D	34	D
Plastics and rubber products	326	3,251	1,791	6	83	127 i	455	18	102	7	83	578
Nonmetallic mineral products	327	1,435	912	6	44	7	73	8	74	2	54	254
Primary metals	331	1,099	410	1	2	*	574	1	31	*	39	41
Fabricated metal products	332	3,304	2,145	7	55	45	622	25	88	9	55	253 i
Machinery	333	18,246	10,298	439	721	175	2,567	150	720	62	654	2,461
Agricultural implement	33311	D	1,173	*	122	8	267	9	D	1 i	107	382
Semiconductor machinery	333242	5,390	2,672	352	48	50	652	47	397	*	51	1,120
Engine, turbine, and power transmission equipment	3336	D	1,648	16	273	3	272 i	3	D	7	180	246 i
Other machinery	other 333	7,987	4,804	70	279	114	1,375	91	172	54	317	711
Computer and electronic products	334	99,234	52,827	11,429	1,913	1,977	8,054	2,027	5,530	950	1,009	13,518
Communications equipment	3342	10,870	6,328	986	360	161	260	824	376	8	175	1,392
Semiconductor and other electronic components	3344	47,380	24,362	4,495	1,025	187	4,664	401	2,668	531	176	8,871
Navigational, measuring, electromedical, and control instruments	3345	10,105	6,190	352	323	118	792	104	244	25 i	294	1,662
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	3,959	2,031	236	92	21	273	43	105	23 i	197	937
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	2,170	1,444	51	169	4	169	32	11	0	44 i	245
Other measuring and controlling devices	other 3345	3,976	2,715	64	62	92	350	29	128	2	53	480

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Other computer and electronic products	other 334	30,879	15,947	5,596	205	1,511	2,338	698	2,241	386	364	1,592
Electrical equipment, appliances, and components	335	6,657	4,026	293	179	73	436	127	166	42	340	975
Transportation equipment	336	46,468	27,015	634	1,359	439	4,465	326	1,273	296	1,154	9,506
Motor vehicles, bodies, trailers, and parts	3361-63	30,722	18,096	D	1,029	365	3,133	192	990	278	526	D
Aerospace products and parts	3364	13,786	7,636	D	287	63	987	104	241	12	610	D
Aircraft, aircraft engine, and aircraft parts	336411-13	9,303	4,534	58	i 199	35	618	39	107	3	555	3,155
Guided missile, space vehicle, and related parts	336414-15, 336419	4,483	3,102	D	88	28	369	65	134	10	55	D
Military armored vehicle, tank, and tank components	336992	26	13	0	2	0	4	0	*	0	2	5
Other transportation	other 336	1,935	1,269	D	41	11	342	30	43	6	17	D
Furniture and related products	337	405	290	*	6	4	41	3	9	1	12	39
Miscellaneous	339	23,032	12,835	821	987	335	1,570	232	886	180	948	4,238
Medical equipment and supplies	3391	20,112	10,861	738	904	297	1,429	180	796	165	866	3,876
Other miscellaneous manufacturing	3399	2,921	1,974	83	83	38	141	52	90	16	82	361
Nonmanufacturing industries	21-23, 42-81	281,060	158,776	49,528	15,242	6,079	5,481	4,256	7,237	604	5,544	28,312
Mining, quarrying, oil and gas extraction, and support activities	21	D	641	i 16	i D	14	i 89	i D	D	1	i D	D
Utilities	22	D	D	*	42	D	43	*	D	*	47	D
Wholesale trade	42	D	1,202	2	D	74	i 146	i D	D	2	40	D
Electronic shopping and electronic auctions	454111-12	D	9,112	i D	147	i D	170	i 262	i D	* i	D	D
Transportation and warehousing	48-49	D	4,057	1,112	i 189	199	i 983	i 275	i 325	68	D	D
Information	51	181,392	100,974	37,611	11,125	4,611	1,638	3,005	4,011	D	3,100	D
Publishing	511	49,674	29,098	8,311	2,526	515	997	517	620	D	2,034	D
Newspaper, periodical, book, and directory publishers	5111	72	68	0	2	*	* i	0	0	0	2	* i
Software publishers	5112	49,602	29,030	8,311	2,524	515	997	517	620	D	2,032	D
Telecommunications	517	3,614	D	30	724	10	57	19	30	i D	19	D
Data processing, hosting, and related services	518	49,270	31,240	8,735	1,614	623	438	532	557	209	749	4,573
Other information	other 51	78,834	D	20,535	6,260	3,463	145	1,938	2,805	D	298	D
Finance and insurance	52	17,173	12,447	1,035	1,504	227	D	112	738	37	124	D
Real estate and rental and leasing	53	2,398	i 1,215	i 728	i 115	i 30	i 3	i D	48	D	D	D
Lessors of nonfinancial intangible assets (except copyrighted works)	533	5	i 1	i *	i 0	0	2	i 0	0	0	0	2
Other real estate and rental and leasing	other 53	2,393	i 1,214	i 728	i 115	i 30	i 1	D	48	D	D	D
Professional, scientific, and technical services	54	38,633	24,714	2,323	1,708	616	2,073	439	985	127	1,286	4,363
Architectural, engineering, and related services	5413	2,912	2,444	2	29	19	205	28	19	1	55	109
Computer systems design and related services	5415	18,878	12,529	1,445	915	258	415	133	566	72	389	2,156

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Scientific research and development services	5417	9,297	4,919	449	287	238	1,043	250	295	31	762	1,023
Research and development in nanotechnology	541713	179	96	9	5	6	17	6	8	*	2	30
Research and development in biotechnology (except nanobiotechnology)	541714	2,916	1,235	211	107	65	424	83	101	16	219	455
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	6,176	3,572	228	172	167	601	160	185	15	539	536
Research and development in the social sciences and humanities	541720	27	17	* i	3	* i	1	1	*	0	1	2
Other professional, scientific, and technical services	other 54	7,547	4,822	428	478	100	410	28	104	22	81	1,075
Health care services	621-23	D	1,440	D	125	29	189	D	D	13	180	D
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	3,300	D	D	D	D	D	D	D	D	D	D
All companies (number of domestic employees)	-	608,058	323,313	70,482	28,058	10,260	36,945	9,732	20,232	3,580	18,775	86,682
Small companies												
10-19 ^a	-	4,009	2,694	67 i	138	33	327	67	59	32	204	388
20-49	-	12,788	8,360	293	374	115	1,154	255	240	91	650	1,256
Medium companies												
50-99	-	13,274	8,292	459	693	191	1,243	332	227	79	607	1,152
100-249	-	24,844	14,628	1,908	1,001	290	2,127	559	544	271	1,225	2,291
Large companies												
250-499	-	26,469	14,396	2,008	1,296	204	2,252	402	693	238	1,219	3,760
500-999	-	29,007	15,335	3,273	1,310	392	1,997	623	928	531	1,258	3,359
1,000-4,999	-	94,615	52,500	12,873	3,213	1,212	5,217	1,533	2,347	663	3,635	11,423
5,000-9,999	-	54,018	30,385	5,402	1,493	796	3,738	917	2,265	299	2,425	6,298
10,000-24,999	-	96,071	48,984	7,928	5,707	1,086	7,878	1,230	4,017	434	3,605	15,202
25,000 or more	-	252,964	127,738	36,271	12,832	5,941	11,013	3,815	8,912	942	3,949	41,551

* = 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.