

Table 2. Worldwide, domestic, and foreign R&D paid for by the company and others and performed by the company, by industry and company size: 2024

(Millions of U.S. dollars)

Industry and company size	NAICS code	Worldwide R&D performance			Domestic R&D performance			Foreign R&D performance		
		Total	Paid for by the company	Paid for by others	Total	Paid for by the company	Paid for by others	Total	Paid for by the company	Paid for by others
All industries	21–23, 31–33, 42–81	929,809	829,569	100,240	765,082	679,371	85,711	164,727	150,198	14,529
Manufacturing industries	31–33	495,527	444,976	50,550	405,092	356,431	48,661	90,435	88,546	1,890
Food	311	7,810	7,541	269	6,288	6,020	268	1,523	1,522	1
Beverage and tobacco products	312	2,457	2,457	*	1,459	1,459	*	998	998	0
Textile, apparel, and leather products	313–16	907	901	6	788	783	6	118	118	0
Wood products	321	269	263	6	267	261	6	2	2	0
Paper	322	1,317	1,316	1	1,240	1,238	1	78	78	0
Printing and related support activities	323	260	259	2	255	253	2	5	5	0
Petroleum and coal products	324	1,205	1,203	2	1,006	1,004	2	199	199	*
Chemicals	325	170,685	158,186	12,499	143,745	131,790	11,954	26,941	26,396	545
Basic chemicals	3251	4,041	3,793	248	3,120	2,883	237	921	910	11
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,870	1,806	64	1,354	D	D	516	D	D
Pesticide, fertilizer, and other agricultural chemicals	3253	1,421	D	D	1,253	D	D	168	D	D
Pharmaceuticals and medicines	3254	157,749	146,269	11,480	133,627	122,656	10,971	24,122	23,612	509
Soap, cleaning compound, and toilet preparations	3256	3,905	3,634	272	2,956	2,684	272	950	950	0
Paint, coating, adhesive, and other chemicals	3255, 3259	1,699	D	D	1,435	D	D	264	D	D
Plastics and rubber products	326	3,326	3,171	155	2,908	2,767	141	418	404	14
Nonmetallic mineral products	327	1,804	1,782	22	1,578	1,556	22	227	226	*
Primary metals	331	1,352	1,305	47	1,174	1,129	45	178	176	2
Fabricated metal products	332	3,978	3,871	107	3,230	3,137	93	748	734	14
Machinery	333	28,454	26,169	2,285	22,035	19,844	2,191	6,419	6,325	94
Agricultural implement	33311	3,657	D	D	2,561	D	D	1,096	D	D
Semiconductor machinery	333242	8,798	D	D	6,851	D	D	1,947	D	D
Engine, turbine, and power transmission equipment	3336	5,485	5,031	453	4,230	D	D	1,255	D	D
Other machinery	other 333	10,515	10,161	353	8,394	8,060	333	2,121	2,101	20
Computer and electronic products	334	153,232	144,408	8,824	115,599	107,038	8,561	37,633	37,370	263
Communications equipment	3342	16,688	15,898	790	12,839	12,069	771	3,848	3,829	19

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Semiconductor and other electronic components	3344	74,100	70,109	3,991	52,358	48,546	3,812	21,742	21,563	179
Navigational, measuring, electromedical, and control instruments	3345	17,442	14,036	3,406	14,083	10,736	3,347	3,359	3,300	59
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	3,793	3,577	216	3,245	3,046	199	548	531	17 i
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	6,645	3,652	2,993	6,161	3,190	2,971	484	463	21
Other measuring and controlling devices	other 3345	7,004	6,807	197	4,677	4,501	177	2,327	2,307	20
Other computer and electronic products	other 334	45,002	44,365	637	36,318	35,687	631	8,683	8,678	6
Electrical equipment, appliances, and components	335	8,880	8,001	879	6,999	6,135	864	1,880 i	1,866 i	14
Transportation equipment	336	79,271	54,192	25,078	71,231	47,039	24,192	8,040	7,153	886
Motor vehicles, bodies, trailers, and parts	3361–63	37,737	35,557	2,180	31,812	D	D	5,925	D	D
Aerospace products and parts	3364	37,835	16,655	21,180	35,904	15,130	20,774 i	1,931	1,525	406
Aircraft, aircraft engine, and aircraft parts	336411–13	26,748	11,593	15,155 i	D	D	D	D	D	D
Guided missile, space vehicle, and related parts	336414–15, 336419	11,087	5,063	6,024	D	D	D	D	D	D
Military armored vehicle, tank, and tank components	336992	33	23	10	33	23	10	0	0	0
Other transportation	other 336	3,665	1,957	1,709	3,481	D	D	184	D	D
Furniture and related products	337	498	497	1 i	450	450	0	47	47	1 i
Miscellaneous	339	29,822	29,454	368	24,840	24,528	312	4,981	4,926	56
Medical equipment and supplies	3391	26,707	26,367	340	22,126	21,840	285	4,582	4,527	55
Other miscellaneous manufacturing	3399	3,114	3,086	28	2,715	2,688	27	399	398	1 i
Nonmanufacturing industries	21–23, 42–81	434,282	384,593	49,690	359,990	322,940	37,050	74,292	61,652	12,640
Mining, quarrying, oil and gas extraction, and support activities	21	2,217	1,554	663 i	1,862	1,224	638 i	355	330	25
Utilities	22	623	D	D	613	D	D	10	10	0
Wholesale trade	42	1,802 i	D	D	1,692 i	D	D	110 i	105 i	5 i

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Electronic shopping and electronic auctions	454111-12	10,188	10,188	0	7,898	7,898	0	2,291	2,291	0
Transportation and warehousing	48-49	11,610	D	D	11,341	D	D	270	270	0
Information	51	274,536	273,014	1,521	228,174	226,853	1,322	46,361	46,162	200
Publishing	511	80,509	79,860	649	63,596	63,085	511	16,913	16,775	138
Newspaper, periodical, book, and directory publishers	5111	497	497	0	489	489	0	9	9	0
Software publishers	5112	80,012	79,363	649	63,108	62,597	511	16,904	16,767	138
Telecommunications	517	3,547	D	D	3,323	D	D	224	D	D
Data processing, hosting, and related services	518	72,547	71,785	762	58,772	58,017	755	13,775	13,768	7
Other information	other 51	117,933	D	D	102,484	D	D	15,449	D	D
Finance and insurance	52	29,593	29,422	170	25,463	25,362	101	4,129	4,060	69
Real estate and rental and leasing	53	2,856	2,856	0	2,750	2,750	0	106	106	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	23	23	0	23	23	0	0	0	0
Other real estate and rental and leasing	other 53	2,833	2,833	0	2,727	2,727	0	106	106	0
Professional, scientific, and technical services	54	94,925	48,169	46,755	74,548	40,134	34,415	20,377	8,036	12,341
Architectural, engineering, and related services	5413	3,931	3,269	662	3,893	3,240	654	37	29	8
Computer systems design and related services	5415	32,634	28,167	4,466	26,764	22,353	4,411	5,870	5,814	56
Scientific research and development services	5417	47,162	6,655	40,507	33,942	5,705	28,237	13,219	949	12,270
Research and development in nanotechnology	541713	568	453	115	548	434	115	19	19	0
Research and development in biotechnology (except nanobiotechnology)	541714	9,580	1,221	8,360	6,751	1,204	5,547	2,830	17	2,812
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	36,299	4,972	31,327	25,931	4,060	21,872	10,368	912	9,456

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Research and development in the social sciences and humanities	541720	714	8	706	712	8	704	2	0	2
Other professional, scientific, and technical services	other 54	11,199 i	10,079 i	1,120	9,949 i	8,835 i	1,113	1,250 i	1,243 i	7
Health care services	621–23	2,118	1,986	131	2,020	1,888	131	98 i	98 i	0
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	3,814	3,766	49	3,628	3,579	49	186	186	0
All companies (number of domestic employees)	–	929,809	829,569	100,240	765,082	679,371	85,711	164,727	150,198	14,529
Small companies										
10–19 ^a	–	5,434	4,370	1,064	4,790	3,734	1,056	644	636	8
20–49	–	17,384	15,317	2,066	16,179	14,153	2,026	1,205	1,164	40
Medium companies										
50–99	–	18,251	16,140	2,111	17,078	14,998	2,080	1,173	1,142	31
100–249	–	32,183	29,316	2,867	29,325	26,548	2,777	2,858	2,768	90
Large companies										
250–499	–	33,288	30,529	2,759	28,852	26,185	2,667	4,436	4,344	92
500–999	–	49,792	45,042	4,750	44,697	40,152	4,545	5,095	4,890	205
1,000–4,999	–	152,811	137,920	14,891	123,813	110,612	13,201	28,998	27,308	1,690 i
5,000–9,999	–	76,317	67,394	8,924	62,950	55,804	7,146	13,367	11,590	1,777
10,000–24,999	–	177,871	152,304	25,567	140,348	120,991	19,357	37,522	31,313	6,210
25,000 or more	–	366,479	331,238	35,241	297,050	266,195	30,855	69,429	65,043	4,386 i

* = 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.

Source(s):

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