

Table 44-B. R&D paid for by the company and others and performed by the company outside of the United States, by selected location, industry, and company size (part B): 2024

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total outside the United States	Argentina	Brazil	Chile	Mexico	Other Latin American locations	Australia	China	Hong Kong	India	Indonesia	Japan	Malaysia	New Zealand	Singapore	South Korea	Taiwan	Thailand	Other Asian or Pacific locations	Israel	Other Middle Eastern locations	South Africa	Other African locations	Undistributed ^a
All industries	21–23, 31–33, 42–81	164,727	591	1,967	272	2,185	1,337	2,594	13,495	426	23,622	59	4,368	1,075	343	4,186	1,913	3,878	263	1,433	9,818	618	394	222	155
Manufacturing industries	31–33	90,435	244	1,342	132	1,452	1,033	1,110	9,609	244	10,667	29	2,903	949	194	2,555	1,316	2,466	215	687	5,495	336	103	28	87
Food	311	1,523	26	172	43	95	12	34	224	2	61	8	6	5	8	31	1	1	8	15	2	4	20	3	3
Beverage and tobacco products	312	998	3	16	*	53	6	10	64	11	16	4	14	0	*	27	0	16	14	7	0	11	11	0	0
Textile, apparel, and leather products	313–16	118	0	1	*	5	3	1	16	14	1	*	*	*	0	0	5	0	2	2	0	0	0	0	D
Wood products	321	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*
Paper	322	78	2	3	1	0	5	0	5	0	0	0	0	*	0	*	12	0	0	*	2	D	1	*	D
Printing and related support activities	323	5	0	0	0	*	*	0	0	0	1	0	0	0	0	*	0	2	0	D	0	0	0	0	D
Petroleum and coal products	324	199	0	D	0	0	0	0	24	0	2	0	1	0	0	D	0	0	*	0	0	D	0	0	*
Chemicals	325	26,941	146	383	73	212	331	363	1,719	58	861	8	1,333	34	22	304	208	101	41	136	331	149	54	14	27
Basic chemicals	3251	921	3	28	1	12	7	3	81	1	9	2	10	*	2	33	1	1	3	6	5	18	2	1	*
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	516	2	18	*	5	D	1	82	5	9	*	27	*	0	10	12	1	2	*	0	7	*	D	D
Pesticide, fertilizer, and other agricultural chemicals	3253	168	1	17	*	2	D	1	3	1	7	1	1	*	*	11	D	D	*	1	0	0	1	*	D
Pharmaceuticals and medicines	3254	24,122	135	280	69	130	305	352	1,364	49	816	3	1,270	26	20	143	188	98	34	96	326	120	50	12	D
Soap, cleaning compound, and toilet preparations	3256	950	3	31	*	46	15	5	138	3	5	1	22	7	*	105	4	*	2	22	0	4	D	1	D
Paint, coating, adhesive, and other chemicals	3255, 3259	264	1	9	2	17	2	*	50	*	14	1	3	1	*	2	D	D	*	11	0	*	D	D	*
Plastics and rubber products	326	418	4	12	0	18	1	4	40	1	3	*	16	2	*	2	1	*	5	*	16	*	0	0	1
Nonmetallic mineral products	327	227	0	1	0	4	0	21	23	3	1	0	2	0	*	1	41	12	0	*	8	0	0	0	1
Primary metals	331	178	0	3	0	*	0	33	47	0	2	0	0	1	0	D	0	0	5	D	0	0	0	0	*
Fabricated metal products	332	748	2	3	1	11	1	3	335	0	10	*	76	1	*	2	42	1	*	34	0	8	1	*	3
Machinery	333	6,419	15	171	4	120	2	61	752	4	836	2	211	6	23	300	253	197	22	6	445	18	4	1	3
Agricultural implement	33311	1,096	4	D	0	D	0	1	22	0	D	0	0	*	3	2	0	0	0	0	D	0	*	0	D
Semiconductor machinery	333242	1,947	0	0	0	0	0	0	175	3	301	0	54	D	0	D	235	171	0	D	391	0	0	0	0
Engine, turbine, and power transmission equipment	3336	1,255	*	26	2	21	1	44	173	*	D	2	D	*	D	3	*	*	*	*	5	D	2	1	D
Other machinery	other 333	2,121	11	D	2	D	1	16	381	*	100	0	D	D	D	D	18	25	21	D	D	D	2	0	1
Computer and electronic products	334	37,633	41	210	2	222	551	189	4,544	60	8,024	5	925	882	127	1,675	333	2,066	84	463	4,285	91	7	1	5
Communications equipment	3342	3,848	4	12	0	14	1	51	271	D	1,076	1	4	D	60	18	D	143	D	2	208	D	1	*	D
Semiconductor and other electronic components	3344	21,742	36	D	*	152	D	37	3,024	15	5,756	D	580	614	22	1,252	198	1,211	D	398	2,827	36	0	*	D
Navigational, measuring, electromedical, and control instruments	3345	3,359	*	97	*	D	D	43	283	13	192	D	50	79	D	134	17	12	D	42	100	4	1	1	1
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	548	0	*	0	0	6	2	11	*	41	0	1	0	0	98	7	*	0	0	0	*	0	0	0
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	484	*	94	*	*	*	8	9	*	28	D	2	2	17	2	1	1	D	1	41	3	1	1	1
Other measuring and controlling devices	other 3345	2,327	0	2	*	D	D	33	264	13	122	D	47	77	D	34	9	11	D	41	59	*	0	*	0
Other computer and electronic products	other 334	8,683	1	D	1	D	D	58	966	D	1,000	D	291	D	D	271	D	700	D	21	1,151	D	4	*	D
Electrical equipment, appliances, and components	335	1,880	0	66	0	86	1	1	346	8	91	0	58	0	5	61	13	17	9	*	35	*	*	0	11
Transportation equipment	336	8,040	1	249	1	591	9	230	1,030	3	299	*	84	1	*	62	362	33	17	4	12	3	3	4	20

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Motor vehicles, bodies, trailers, and parts	3361–63	5,925	1	240	1	515	5	205	973	3	230	*	84	0	*	54	361	10	16	*	3	0	*	4	20
Aerospace products and parts	3364	1,931	0	8	0	76	4	23	56	0	61	*	1	1	*	8	1	0	1	3	9	3	2	*	0
Aircraft, aircraft engine, and aircraft parts	336411–13	D	0	8	0	75	4	D	D	0	D	D	D	*	*	D	D	0	1	*	8	D	2	*	0
Guided missile, space vehicle, and related parts	336414–15, 336419	D	0	0	0	1	0	D	D	0	D	D	D	1	0	D	D	0	*	3	1	D	0	0	0
Military armored vehicle, tank, and tank components	336992	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other transportation	other 336	184	0	1	0	*	0	1	1	0	8	0	0	0	0	0	0	23	0	0	0	0	0	0	0
Furniture and related products	337	47	0	0	0	D	0	0	0	0	5	0	0	0	0	0	0	0	*	2	0	0	0	0	D
Miscellaneous	339	4,981	4	D	10	D	111	159	440	81	455	2	176	17	8	89	46	20	8	16	359	43	2	3	10
Medical equipment and supplies	3391	4,582	4	35	10	30	110	134	423	3	380	2	153	14	8	86	41	12	7	16	340	43	2	3	8
Other miscellaneous manufacturing	3399	399	0	D	0	D	1	25	17	78	75	0	23	2	0	4	5	8	1	0	19	0	0	0	2
Nonmanufacturing industries	21–23, 42–81	74,292	347	625	140	733	304	1,484	3,886	181	12,955	29	1,466	126	149	1,631	596	1,411	48	746	4,323	282	292	194	68
Mining, quarrying, oil and gas extraction, and support activities	21	355	0	D	0	0	*	D	0	0	*	0	D	0	0	D	0	0	0	2	0	D	D	0	0
Utilities	22	10	0	D	0	D	0	*	*	0	0	*	0	0	*	0	0	0	*	0	D	0	D	0	0
Wholesale trade	42	110	0	0	0	*	11	4	19	7	*	*	1	0	0	*	0	3	0	3	0	D	*	5	D
Electronic shopping and electronic auctions	454111–12	2291	1	D	D	14	8	D	229	D	D	*	D	D	1	D	D	D	D	*	D	D	D	*	*
Transportation and warehousing	48–49	270	0	D	0	*	0	7	28	D	9	0	D	D	0	D	0	0	0	*	2	D	0	0	0
Information	51	46,361	104	323	117	366	157	816	2,318	84	8,795	25	528	107	87	1,043	317	1,244	18	247	3,438	131	76	79	35
Publishing	511	16,913	D	100	18	83	54	D	1,691	21	4,111	D	132	87	D	390	200	279	D	155	D	D	D	D	28
Newspaper, periodical, book, and directory publishers	5111	9	0	0	0	0	0	0	0	0	*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Software publishers	5112	16,904	D	100	18	83	54	D	1,691	21	4,111	D	132	87	D	390	200	279	D	155	D	D	D	D	28
Telecommunications	517	224	0	*	0	D	4	*	0	*	D	0	0	0	0	*	D	0	0	0	D	0	D	0	0
Data processing, hosting, and related services	518	13,775	93	D	D	238	81	342	332	D	3,563	D	D	D	40	D	12	D	2	D	1,170	19	48	24	6
Other information	other 51	15,449	D	D	D	D	18	D	295	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	*
Finance and insurance	52	4,129	16	19	*	31	D	52	97	10	1,493	1	45	*	34	158	14	D	D	28	97	35	D	17	D
Real estate and rental and leasing	53	106	1	D	D	D	1	*	42	D	32	0	D	0	0	1	*	0	0	*	0	0	0	0	D
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other real estate and rental and leasing	other 53	106	1	D	D	D	1	*	42	D	32	0	D	0	0	1	*	0	0	*	0	0	0	0	D
Professional, scientific, and technical services	54	20,377	220	207	21	317	97	482	1,154	32	2,381	3	692	18	27	326	195	130	30	461	643	68	193	93	27
Architectural, engineering, and related services	5413	37	0	*	0	*	*	2	1	0	4	0	0	0	0	0	*	0	0	0	*	1	0	0	1
Computer systems design and related services	5415	5,870	6	40	*	122	19	198	180	15	1,133	1	64	5	9	68	9	50	13	16	489	47	6	4	22
Scientific research and development services	5417	13,219	208	148	17	191	74	267	961	17	1,096	2	620	13	18	243	182	74	17	428	103	12	176	83	1
Research and development in nanotechnology	541713	19	0	0	0	0	*	0	1	*	3	0	0	0	0	*	0	0	0	0	0	0	0	0	*
Research and development in biotechnology (except nanobiotechnology)	541714	2,830	36	15	5	27	6	74	202	5	132	1	106	2	3	15	40	14	1	4	32	0	6	0	*
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	10,368	172	133	12	164	67	193	758	12	961	1	514	11	14	227	141	61	15	424	71	12	170	83	1
Research and development in the social sciences and humanities	541720	2	0	0	0	0	*	0	0	0	0	0	0	0	0	0	0	0	*	0	0	0	*	0	0

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Other professional, scientific, and technical services	other 54	1,250	i	5	19	4	3	4	16	13	* r	148	0	9	1	*	15	4	6	0	17 i	51	9	11	6	2 i
Health care services	621–23	98	i	6	*	1 i	1 i	* i	*	0	0	1	0	D	0	D	0	0	0	0	24 i	0	0	0	0	0
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	186		1	D	*	D	D	D	*	D	D	0	0	0	*	*	D	0	*	4	D	D	D	1	D
All companies (number of domestic employees)	–	164,727		591	1,967	272	2,185	1,337	2,594	13,495	426	23,622	59	4,368	1,075	343	4,186	1,913	3,878	263	1,433	9,818	618	394	222	155 i
Small companies																										
10–19 ^b	–	644		*	4	0	1	1	10	189 r	4	75 r	*	1	6	0	1	20	7	0	16 r	6	*	1	*	31 i
20–49	–	1,205		7	4	*	40 r	17	23	396 r	3	69	*	9	*	4	6	55 r	23	1	8 i	79	1	* r	3	27 i
Medium companies																										
50–99	–	1,173		1	3	*	9	15	23	196	13	155	1	4	*	1	21	21	36	1	5	92	13	3	* i	10 i
100–249	–	2,858		17	47	2	43	26	17	207	17	325	*	12	3	7	25	56	171	1	37	85	70 i	*	1	42
Large companies																										
250–499	–	4,436		9	30	1	100	23	37	202	23	855	2	42	38	24	186	114	145	2	71	212	5	20	1	8 i
500–999	–	5,095		14	47	17	75	10	121	329	9	754	1	114	25	77	119	15	89	14	76	350	9	6	*	8 i
1,000–4,999	–	28,998		73	311	12	244	120	585	1,554	143	4,618	12	445 i	69	52	742	217	476	10	216	1,483	60	52	23	27
5,000–9,999	–	13,367		66	185	43	327	424 i	224	1,220	16	1,392	5	834	174 i	22	864	165	267	86	283 i	720	64	28	9	1 i
10,000–24,999	–	37,522		215	435	20	267	177	443	4,324	42	7,804	11	1,422	231	77	989	612	1,144	63	430	1,602 i	119	144	92	2 i
25,000 or more	–	69,429		188 i	901	176	1,078	524	1,111	4,877	155	7,575	27	1,486	530	79	1,233	637	1,520	86	291	5,189	278	140	93	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 Undistributed includes data reported that were not allocated to a specific country.

^b 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. Country detail was not collected from companies reporting less than \$1 million of R&D paid for by the company or reporting less than \$1 million of R&D paid for by others. 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.