

TABLE 41

Domestic R&D paid for by the company's foreign subsidiaries and performed by the company, by type of R&D, industry, and company size: 2021

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total ^a	Basic research ^b	Applied research ^b	Development ^b
All industries	21-23, 31-33, 42-81	32,055	760	3,534	27,760
Manufacturing industries	31-33	22,293	677	2,944	18,672
Food	311	508 - 544	0 - 37	0 - 134	337 - 489
Beverage and tobacco products	312	38	*	4	34
Textile, apparel, and leather products	313-16	1	0	0	1
Wood products	321	0	0	0	0
Paper	322	25	0	1	24
Printing and related support activities	323	0	0	0	0
Petroleum and coal products	324	117	28	44	44
Chemicals	325	3,842	301	587	2,954
Basic chemicals	3251	11	6	1	3
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	0	0	0	0
Pesticide, fertilizer, and other agricultural chemicals	3253	0	0	0	0
Pharmaceuticals and medicines	3254	3,815	292	584	2,939
Soap, cleaning compound, and toilet preparations	3256	12	0 - 3	0 - 3	10
Paint, coating, adhesive, and other chemicals	3255, 3259	4	0 - 3	0 - 3	2
Plastics and rubber products	326	72	8	9	56
Nonmetallic mineral products	327	1	0	*	1
Primary metals	331	0 - 141	*	*	0 - 141
Fabricated metal products	332	4	*	*	3
Machinery	333	37	3	4	30
Agricultural implement	33311	3 - 35	2	2	0 - 31
Semiconductor machinery	333242	0	0	0	0
Engine, turbine, and power transmission equipment	3336	*	*	*	*
Other machinery	other 333	2 - 34	2	1	0 - 31
Computer and electronic products	334	16,526	273	2,028	14,225
Communications equipment	3342	9 - 10,334	0 - 229	10	0 - 10,094
Semiconductor and other electronic components	3344	2,177	0 - 229	107 - 338	1,840
Navigational, measuring, electromedical, and control instruments	3345	184 - 4,093	45	40	100 - 4,008
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	99	*	*	99
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	2	*	*	2
Other measuring and controlling devices	other 3345	83 - 3,991	45	39	0 - 3,906
Other computer and electronic products	other 334	1,638 - 14,157	0 - 229	1,638 - 1,873	0 - 12,286
Electrical equipment, appliances, and components	335	24	*	1	22
Transportation equipment	336	151	13	13	125

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Motor vehicles, bodies, trailers, and parts	3361-63	143	13	12	119
Aerospace products and parts	3364	8	*	1	6
Aircraft, aircraft engine, and aircraft parts	336411-13	8	*	1	6
Guided missile, space vehicle, and related parts	336414-15, 336419	0	0	0	0
Military armored vehicle, tank, and tank components	336992	0	0	0	0
Other transportation	other 336	0	0	0	0
Furniture and related products	337	18	0	13	5
Miscellaneous	339	795 - 936	16 - 54	111 - 246	666 - 808
Medical equipment and supplies	3391	796	17	112	667
Other miscellaneous manufacturing	3399	0 - 141	0 - 37	0 - 134	0 - 141
Nonmanufacturing industries	21-23, 42-81	9,762 i	84	590 i	9,088 i
Mining, quarrying, oil and gas extraction, and support activities	21	0 - 1,131	0 - 67	0 - 138	0 - 927
Utilities	22	0	0	0	0
Wholesale trade	42	0 - 1,598	0	0 - 367	0 - 1,232
Electronic shopping and electronic auctions	454111-12	0 - 3,072 i	0	0 - 452 i	0 - 2,623 i
Transportation and warehousing	48-49	0 - 2,623	0	0	0 - 2,623
Information	51	6,649 i	14 - 82	137 - 207	6,429 i
Publishing	511	742	15	116	612
Newspaper, periodical, book, and directory publishers	5111	0	0	0	0
Software publishers	5112	742	15	116	612
Telecommunications	517	0	0	0	0
Data processing, hosting, and related services	518	484 - 526 i	0 - 67 i	0 - 91 i	392 - 526 i
Other information	other 51	5,380 - 5,424 i	0 - 67	0 - 91	5,290 - 5,424 i
Finance and insurance	52	0 - 2,623	0	0	0 - 2,623
Real estate and rental and leasing	53	0 - 1,651	0 - 67	0 - 452	0 - 1,133
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0
Other real estate and rental and leasing	other 53	0 - 1,651	0 - 67	0 - 452	0 - 1,133
Professional, scientific, and technical services	54	43	3	2	38
Architectural, engineering, and related services	5413	0	0	0	0
Computer systems design and related services	5415	31	2	2	27
Scientific research and development services	5417	2	*	0	2
Research and development in nanotechnology	541713	0	0	0	0
Research and development in biotechnology (except nanobiotechnology)	541714	0	0	0	0
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	2	*	0	2
Research and development in the social sciences and humanities	541720	0	0	0	0

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Other professional, scientific, and technical services	other 54	10	1	0	9
Health care services	621-23	0	0	0	0
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	0	0	0	0
All companies (number of domestic employees)	-	32,055	760	3,534	27,760
Small companies					
10-19 ^c	-	2	0	0	2
20-49	-	14	2	5 r	7
Medium companies					
50-99	-	87	11	5	72 i
100-249	-	49	4 i	1	44
Large companies					
250-499	-	606	68	94	444
500-999	-	767	14	114	639
1,000-4,999	-	3,083	104	285	2,694
5,000-9,999	-	962	57	145	760
10,000-24,999	-	4,262	280	394 i	3,588
25,000 or more	-	22,224	221	2,492	19,511 i

* = amount < \$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.

^a Statistics are based on companies in the United States that reported to the survey. No systematic item imputation was applied. These statistics include an adjustment to the weight to account for unit nonresponse.

^b Respondent was not asked to report categorical breakouts of research and development paid for by foreign subsidiaries. Rather, ratios of the company's basic research, applied research, and development were calculated as proportions of the overall domestic R&D performance paid for by the company. These ratios were applied to the company's domestic R&D performance paid for by foreign subsidiaries to get estimates of a company's basic research, applied research, and development paid for by foreign subsidiaries.

^c 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. 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.