

TABLE 48

Domestic R&D performance by performer and source of funds, by industry and company size: 2017

(Millions of U.S. dollars)

Industry and company size	NAICS code	Performed by the company			Performed 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	400,100	339,036	61,065	52,492	42,704	9,789 i
Manufacturing industries	31-33	257,227	216,155	41,072	46,803	39,185	7,619 i
Food	311	4,697 i	4,453 i	244	157	150	7
Beverage and tobacco products	312	1,076	968	107	218	218	0
Textile, apparel, and leather products	313-16	920	919	1	22	22	*
Wood products	321	175	170	5	9	9	0
Paper	322	1,322	1,292	29	43	42	1
Printing and related support activities	323	229	218	11	4	4	*
Petroleum and coal products	324	316	301	15	65	63	2
Chemicals	325	74,977	63,285	11,692	36,053	31,294	4,759
Basic chemicals	3251	2,574	2,393	181	77 - 126	77 - 90	0 - 36
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	628	612	16	17	17	*
Pesticide, fertilizer, and other agricultural chemicals	3253	1,376 - 1,475	1,092	284 - 383	115 - 153	116	0 - 36
Pharmaceuticals and medicines	3254	66,202	55,229	10,973	35,478	30,755	4,723
Soap, cleaning compound, and toilet preparation	3256	2,605 - 2,701	2,488	118 - 213	263 - 301	264	0 - 36
Paint, coating, adhesive, and other chemicals	3255, 3259	1,495	1,471	23	55 - 104	55 - 68	0 - 36
Plastics and rubber products	326	3,754	3,637	117	173	160	13
Nonmetallic mineral products	327	1,334	1,303	30 i	20	19	*
Primary metals	331	749	741	8	56	54	2
Fabricated metal products	332	2,206	2,099	107	96	91	5
Machinery	333	13,197	12,257	940	516	482	34
Agricultural implement	33311	1,570	1,511	59 i	176 - 196	176 - 193	0 - 3 i
Semiconductor machinery	333242	3,694	3,228	465	21	0 - 22	0 - 21
Engine, turbine, and power transmission equipment	3336	2,080	1,921	159	61 - 80	51 - 69	10
Other machinery	other 333	5,853	5,596	257	219 - 259	215 - 254	0 - 25
Computer and electronic products	334	78,575	69,942	8,633	2,051	1,886	166
Communications equipment	3342	12,687	10,972	1,715 i	766 i	754 i	12 i
Semiconductor and other electronic components	3344	30,148	27,859	2,289	414	394	20
Navigational, measuring, electromedical, and control instruments	3345	14,509	10,089	4,420	471	345	126
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	2,696	2,545	150	98 - 109	97	1 - 12

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Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	7,297	3,214	4,083	239 - 271	131 - 154 i	107 - 118
Other measuring and controlling device	other 3345	4,516	4,329	187	100 - 124	95 - 117	6
Other computer and electronic products	other 334	21,231	21,022	209	399	392	7
Electrical equipment, appliances, and components	335	4,291	4,110	181	217	210	7
Transportation equipment	336	53,292	34,629	18,663 i	6,015 i	3,427	2,588 i
Automobiles, bodies, trailers, and parts	3361-63	23,881	21,137	2,745	2,838	2,714	124
Aerospace products and parts	3364	26,383	11,903	14,480 i	3,130 i	670	2,460 i
Aircraft, aircraft engine, and aircraft parts	336411-13	24,576 i	11,473	13,103 i	3,018 i	559	2,460 i
Guided missile, space vehicle, and related parts	336414-15, 336419	1,807	430	1,377	112	111	1
Military armored vehicle, tank, and tank component	336992	9	4	5	1	1	0
Other transportation	other 336	3,018	1,585	1,433	46	43	3
Furniture and related products	337	422	419	3	20	19	*
Miscellaneous manufacturing	339	15,695	15,410	285	1,069	1,034	35
Medical equipment and supplies	3391	13,589	13,348	240	942	909	33
Other miscellaneous manufacturing	3399	2,106	2,062	44	127	125	2
Nonmanufacturing industries	21-23, 42-81	142,874	122,881	19,993	5,689	3,519	2,170
Mining, extraction, and support activities	21	3,150	2,841	309	299 - 307	300	0 - 6
Utilities	22	317	281	36 i	244	200	45
Wholesale trade	42	534	503	31	119	108	11
Electronic shopping and electronic auctions	454111-12	9,318	9,318	0	3	3	0
Transportation and warehousing	48-49	1,147	1,116	31	45	44	*
Information	51	80,252	78,898	1,354	1,897	1,814	83
Publishing	511	34,338	33,276	1,062	1,167	1,088	80
Newspaper, periodical, book, and directory publishers	5111	74	74	0	10	10	*
Software publishers	5112	34,264	33,201	1,062	1,157	1,078	80
Telecommunications	517	3,682 - 3,806	3,643	40 - 163	239	237	3
Data processing, hosting, and related services	518	16,155	16,037	119	240	239	1
Other information	other 51	25,954 - 26,077	25,943	11 - 134	250	250	0
Finance and insurance	52	7,616	7,565	51	362	362	0
Real estate and rental and leasing	53	718	708	10	5 i	4 i	1
Lessors of nonfinancial intangible assets (except copyrighted works)	533	138 i	138 i	0	2 i	2 i	0

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Other real estate and rental and leasing	other 53	579	570	10	2	1	1
Professional, scientific, and technical services	54	36,922	18,972	17,951	2,549	557	1,992
Architectural, engineering, and related services	5413	2,708	1,561	1,147	400	85	315
Computer systems design and related services	5415	13,327	11,669	1,658	157	120	37
Scientific research and development services	5417	17,321	2,817	14,504	1,863	332	1,531 i
Biotechnology research and development	541711	4,449	795	3,653	162	117	46
Physical, engineering, and life sciences (except biotechnology) research and development	541712	11,913	1,936	9,978	1,544 i	216	1,328 i
Social sciences and humanities research and development	541720	959	86	873	157	*	157
Other professional, scientific, and technical services	other 54	3,566	2,925	641	129	20	109
Health care services	621-23	1,101	958 i	144	33 - 40 i	34 i	0 - 6
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	1,799	1,722	76	128	93	35
All companies (number of domestic employees)	-	400,100	339,036	61,065	52,492	42,704	9,789 i
Small companies							
10-19 ^a	-	3,311	2,402	909	576	449	127
20-49	-	9,435	7,593	1,842	1,559	1,245	314
Medium companies							
50-99	-	10,141	8,070	2,071	1,890	1,468	422
100-249	-	17,216	13,514	3,703	4,026	3,048	978
Large companies							
250-499	-	14,103	11,773	2,331	1,506	1,189	317
500-999	-	17,871	16,295	1,576	2,483	2,237	246
1,000-4,999	-	65,112	52,341	12,771	10,291	8,357	1,933 i
5,000-9,999	-	40,198	32,701	7,497	4,353	3,213	1,140 i
10,000-24,999	-	73,485	63,415	10,070	13,499 i	11,816	1,683 i
25,000 or more	-	149,227	130,931	18,295 i	12,310	9,681	2,629 i

* = amount < \$500,000; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

^a Business 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 R&D. 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 U.S. Census Bureau, Business Research and Development Survey, 2017.