

TABLE 11

Domestic R&D paid for by the company and others and performed by the company, by industry and company size: 2017

(Millions of U.S. dollars)

Industry	NAICS code	Company size (domestic employees)											
		All companies	10-19 ^a	20-49	50-99	100-249	250-499	500-999	1,000-4,999	5,000-9,999	10,000-24,999	25,000 or more	
All industries	21-23, 31-33, 42-81	400,100	3,311	9,435	10,141	17,216	14,103	17,871	65,112	40,198	73,485	149,227	
Manufacturing industries	31-33	257,227	1,189	4,782	5,490	10,315	8,561	10,987	43,637	22,664	55,683	93,919	
Food	311	4,697	i 0	48	31	225	181	146	564	292	2,328	i 881	i
Beverage and tobacco products	312	1,076	0	5	14	10	120	17	41	177	140	553	
Textile, apparel, and leather products	313-16	920	0 - 47	10	28	38	46	22	222	284	89	130 - 186	
Wood products	321	175	2	4	4	8	7	33	57	22	38	0	
Paper	322	1,322	0	2	10	34	19	22	89	255	326	565	
Printing and related support activities	323	229	0	10	13	20	27	51	51	i 31	26	0	
Petroleum and coal products	324	316	2	8	23	14	84	i 46	20	0	119	0	
Chemicals	325	74,977	466	1,994	2,664	4,534	3,379	3,046	16,236	5,413	23,627	13,620	
Basic chemicals	3251	2,574	18	127	100	109	257	118	1,034	288	523	0	
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	628	9	16	22	41	73	66	112	0	289	0	
Pesticide, fertilizer, and other agricultural chemicals	3253	1,376 - 1,475	1	17	0 - 61	54	15	0	452	0 - 326	372 - 964	0	
Pharmaceuticals and medicines	3254	66,202	410	1,739	2,450	4,198	2,828	2,734	13,756	4,384	20,393	i 13,310	
Soap, cleaning compound, and toilet preparation	3256	2,605 - 2,701	4	29	34	63	63	76	315	417	i 1,461	0 - 280	i
Paint, coating, adhesive, and other chemicals	3255, 3259	1,495	23	66	0 - 61	70	141	52	566	0 - 326	0 - 587	29 - 311	
Plastics and rubber products	326	3,754	18	118	109	197	256	234	772	494	243	1,311	
Nonmetallic mineral products	327	1,334	3	20	i 40	39	12	69	257	69	826	0	
Primary metals	331	749	1	15	30	88	31	39	111	104	330	0	
Fabricated metal products	332	2,206	98	192	172	533	206	329	394	218	63	0	
Machinery	333	13,197	104	366	514	1,012	503	753	2,430	3,308	1,149	3,058	
Agricultural implement	33311	1,570	0 - 104	44	0 - 480	80	18	44	230	0 - 1,160	i 0	0 - 1,160	
Semiconductor machinery	333242	3,694	1	3	18	129	46	0 - 702	984	1,721 - 2,541	0	0	
Engine, turbine, and power transmission equipment	3336	2,080	0 - 104	35	18	69	62	4	168	0 - 1,587	0 - 1,150	0 - 1,738	
Other machinery	other 333	5,853	0 - 104	285	0 - 480	733	378	4 - 707	1,047	0 - 1,587	0 - 1,150	160 - 3,059	
Computer and electronic products	334	78,575	276	1,032	913	1,859	1,976	3,752	13,766	7,027	12,487	i 35,487	
Communications equipment	3342	12,687	19	127	0 - 219	356	321	1,209	3,035	1,362	178 - 2,117	i 3,911 - 6,097	

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Semiconductor and other electronic components	3344	30,148	48	468	305	738	1,134	1,526	5,743	1,975	i	8,426	i	9,786
Navigational, measuring, electromedical, and control instruments	3345	14,509	162	365	391	611	373	353	3,788	645		1,946		5,875
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	2,696	12 - 163	129	i	105		273	85	78	1,186	0	628 - 842	0
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	7,297	0 - 150	66		0 - 287	94	78	23	773	0 - 646	221 - 1,318		4,995
Other measuring and controlling device	other 3345	4,516	0 - 150	170		0 - 287	244	210	252	1,829	0 - 646	0 - 941		880
Other computer and electronic products	other 334	21,231	47	71		0 - 219	154	148	665	1,200	3,044	0 - 1,939		13,728 - 15,914
Electrical equipment, appliances, and components	335	4,291	64	169		239	312	337	607	1,016	286	807		453
Transportation equipment	336	53,292	52	253		176	518	983	1,067	4,252	2,876	8,419		34,696
Automobiles, bodies, trailers, and parts	3361-63	23,881	0 - 23	179		0 - 80	291	613	759	3,372	1,268	3,793		13,490 - 13,750
Aerospace products and parts	3364	26,383	29	56		95	167	211	205	706	1,176	4,626		19,112
Aircraft, aircraft engine, and aircraft parts	336411-13	24,576	i	24		46	69	164	211	143	i	546	415	3,845
Guided missile, space vehicle, and related parts	336414-15, 336419	1,807	5	10		26	3	0	62	161	761	781		0
Military armored vehicle, tank, and tank components	336992	9	2	*		3	0 - 6	0 - 6	0	0	0	0		0
Other transportation	other 336	3,018	0 - 23	18		0 - 80	53 - 62	152 - 161	103	173	432	0		1,833 - 2,093
Furniture and related products	337	422	1	10		14	45	22	16	79	220	14		0
Miscellaneous manufacturing	339	15,695	61 - 108	528		496	828	371	737	3,278	1,589	4,652		3,104 - 3,160
Medical equipment and supplies	3391	13,589	62	438		375	618	240	558	2,424	1,282	4,652		2,939
Other miscellaneous manufacturing	3399	2,106	0 - 47	89		121	210	131	179	854	307	i	0	164 - 220
Nonmanufacturing industries	21-23, 42-81	142,874	2,123	4,653		4,651	6,902	5,543	6,883	21,475	17,535	17,802		55,308
Mining, extraction, and support activities	21	3,150	2	0 - 93		68	0 - 154	0 - 166	44	91	222	i	1,822	124 - 911
Utilities	22	317	0	11		*	1	*	6	48	11	115		126
Wholesale trade	42	534	38	93		111	i	149	86	i	41	i	11	i

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Electronic shopping and electronic auctions	454111-12	9,318	3	4	0	26	23	24	5	457 - 1,509	i	0	7,717 - 8,779
Transportation and warehousing	48-49	1,147	4	1	2	78	3	634	45	0		25	356
Information	51	80,252	571	1,446	1,394	2,472	2,855	4,038	12,730	8,192		11,420	35,135
Publishing	511	34,338	249	707	550	842	651	903	6,541	5,806		586	17,503
Newspaper, periodical, book, and directory publishers	5111	74	0	14	i	2	10	39	9	0		0	0
Software publishers	5112	34,264	249	692		547	833	612	894	6,541		586	17,503
Telecommunications	517	3,682 - 3,806	6	69		46	0 - 267	0 - 347	36	214		0 - 3,441	0 - 3,441
Data processing, hosting, and related services	518	16,155	249	9 - 672		0 - 800	1,364	1,859	2,852	4,769		1,508	0 - 3,554
Other information	other 51	25,954 - 26,077	66	0 - 663		0 - 800	0 - 267	0 - 347	246	1,207		878	3,838 - 10,835
Finance and insurance	52	7,616	53	21		30	118	118	139	1,376		1,601	i
Real estate and rental and leasing	53	718	0 - 6	144	i	10	32	0 - 6	13	517		0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	138	i	0 - 6	125	i	0 - 11	0 - 14	i	0		0	0
Other real estate and rental and leasing	other 53	579	0	19		0 - 11	17 - 33	0 - 6	13	517		0	0
Professional, scientific, and technical services	54	36,922	1,406	2,768		2,894	3,688	2,037	1,445	6,181		5,905	2,708
Architectural, engineering, and related services	5413	2,708	164	281		381	493	329	126	289		22	236
Computer systems design and related services	5415	13,327	332	619		831	820	457	559	2,601		451	2,203
Scientific research and development services	5417	17,321	800	1,625		1,361	2,024	873	300	2,924		5,392	174
Biotechnology research and development	541711	4,449	231	373		290	85	140	0	1,482		0	0
Physical, engineering, and life sciences (except biotechnology) research and development	541712	11,913	564	1,240		1,065	1,832	733	300	1,171		4,834	174
Social sciences and humanities research and development	541720	959	5	13		6	107	0	0	270		558	0
Other professional, scientific, and technical services	other 54	3,566	109	243		321	351	378	460	367		40	95
Health care services	621-23	1,101	15	65		61	189	i	259	257		52	98

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Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	1,799	20 - 35	12 - 105	80	0 - 154	0 - 166	243	420	0 - 1,044	17	0 - 1,044

* = 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.