

TABLE 47

Domestic R&D paid for by the company and performed by others, by type of performer, industry, and company size: 2018

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Companies in the United States	Companies outside the United States		U.S. federal government agencies	U.S. state and local government agencies	U.S. universities, colleges, and academic researchers	All other	
				Company's parent	Other				In the United States	Outside the United States
All industries	21-23, 31-33, 42-81	42,668	36,524	1,297	i 3,761	102	8	340	482	155
Manufacturing industries	31-33	39,079	33,476	1,294	i 3,456	91	7	316	390	49
Food	311	232	198	i 0	11	i *	i *	i 15	i 7	i 2
Beverage and tobacco products	312	233	220	0	0	0	0	6	6	0
Textile, apparel, and leather products	313-16	18	16	1	* i	0	0	* i	0-3	i 0-3
Wood products	321	13	12	0	0	*	*	0	*	0
Paper	322	14	13	*	i *	i 0	0	* i	1	* i
Printing and related support activities	323	3	3	0	0	0	0	0	*	0
Petroleum and coal products	324	230	128	0	7	5	0	31	52	8
Chemicals	325	31,571	27,938	184	i 3,030	7	*	i 176	217	21
Basic chemicals	3251	72	59	0	4	0	0	7	*	1
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	6-18	7	0-10	* i	0	0	*	0-4	0
Pesticide, fertilizer, and other agricultural chemicals	3253	101	i 84	i 1	i 9	i *	i *	i 6	i 1	i *
Pharmaceuticals and medicines	3254	31,078	27,502	175	i 3,012	7	*	i 161	206	16
Soap, cleaning compound, and toilet preparation	3256	271	256	*	i 3	i *	i *	i *	8	3
Paint, coating, adhesive, and other chemicals	3255, 3259	33-45	30	0-10	3	0	*	2	0-4	*
Plastics and rubber products	326	68	42	21	2	0	*	i 1	1	* i
Nonmetallic mineral products	327	15	11	*	3	0	0	0	* i	*
Primary metals	331	37	37	*	i *	i 0	0	*	*	* i
Fabricated metal products	332	85	80	*	i 2	0	0	2	* i	1
Machinery	333	429	369	7	44	0-3	0	1	2-11	0
Agricultural implement	33311	188	184	0	4	0	0	*	0	0
Semiconductor machinery	333242	1-10	2	0	*	0	0	0	0-9	0
Engine, turbine, and power transmission equipment	3336	50	45	*	1	0	0	*	2	0
Other machinery	other 333	182-191	138	7	39	0-3	0	* i	0-9	0
Computer and electronic products	334	1,785	1,075	544	113	3	*	i 13	29	i 8
Communications equipment	3342	779	206	540	30	*	i *	i 1	i 3	* i
Semiconductor and other electronic components	3344	384	332	4	35	3	0	4	7	*

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Navigational, measuring, electromedical, and control instruments	3345	359	310	*	24	*	i	0	7	18	i	*		
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	80	54	0	6	*	i	0	0-8	10-19		* i		
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	177-186	170	0	8	0		0	0-8	0		*		
Other measuring and controlling device	other 3345	94-103	86	*	9	0		0	*	0-9	i	* i		
Other computer and electronic products	other 334	261	227	*	25	*	i	0	2	*	i	7		
Electrical equipment, appliances, and components	335	109	95	1	13	*		0	*	1		0		
Transportation equipment	336	3,218	2,388	529	i	143	74	6	48	26		3 i		
Motor vehicles, bodies, trailers, and parts	3361-63	2,608	1,877	526	i	134	3	2	38	25		3 i		
Aerospace products and parts	3364	555	463	0	6	71		4	9	1		0		
Aircraft, aircraft engine, and aircraft parts	336411-13	422	339	0	6	71		4	1	1		0		
Guided missile, space vehicle, and related parts	336414-15, 336419	133	125	0	0	0		*	8	0		0		
Military armored vehicle, tank, and tank component	336992	0	0	0	0	0		0	0	0		0		
Other transportation	other 336	55	47	4	3	0		0	*	0		0		
Furniture and related products	337	19	14	*	i	5	0	0	*	i	0-2	i	0-2 i	
Miscellaneous	339	1,003	839	7	83	1-4		*	i	23	i	42	5-8	
Medical equipment and supplies	3391	839	732	7	28	2		*	i	23	i	42	6	
Other miscellaneous manufacturing	3399	163	107	i	*	i	56	0-2	i	0		*	i	0-2 i
Nonmanufacturing industries	21-23, 42-81	3,589	3,047	2	305	11		1	24	93		106		
Mining, quarrying, oil and gas extraction, and support activities	21	141	116	0	4	0		0	2	19		1		
Utilities	22	211	170	0	3	i	0	1	2	35		0		
Wholesale trade	42	36	28	i	*	i	5	i	0	0	3	i	0	
Electronic shopping and electronic auctions	454111-12	0-131	i	0-131	i	0	0	0	0	0	0	0		
Transportation and warehousing	48-49	31	26	0	*	0		0	0	4		0		
Information	51	2,062	1,874	1	126	0		0	7	14		40		
Publishing	511	1,108	983	1	74	0		0	7	13		31		
Newspaper, periodical, book, and directory publishers	5111	5	5	i	0	0		0	0	0		0		
Software publishers	5112	1,103	978	1	74	0		0	7	13		31		
Telecommunications	517	352	336	0	15	0		0	0	0		0		

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Data processing, hosting, and related services	518	207	170	0	26	0	0	*	1	9
Other information	other 51	395	385	0	10	0	0	* i	* i	* i
Finance and insurance	52	347	241	* i	106	0	0	0	*	0
Real estate and rental and leasing	53	*	* i	0	0	0	0	0	0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	*	* i	0	0	0	0	0	0	0
Other real estate and rental and leasing	other 53	*	* i	0	0	0	0	0	0	0
Professional, scientific, and technical services	54	552	410	1	50	11	0	9	7	64 i
Architectural, engineering, and related services	5413	103	101	* i	1	* i	0	1	*	* i
Computer systems design and related services	5415	111	81	0	21	* i	0	1	* i	7 i
Scientific research and development services	5417	238	185	1	27	11	0	7	6	1
Research and development in biotechnology	541711	71	57	1	5	1	0	6	*	0
Research and development in the physical, engineering, and life sciences (except biotechnology)	541712	167	128	0	21	10	0	1	6	1
Research and development in the social sciences and humanities	541720	0	0	0	0	0	0	0	0	0
Other professional, scientific, and technical services	other 54	100	43	* i	2	* i	0	* i	*	55 i
Health care services	621-23	80	56 i	0	11 i	0	0	2 i	11 i	0
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	3 - 134	0 - 131	1	0	0	0	1	1 i	2
All companies (number of domestic employees)	-	42,668	36,524	1,297 i	3,761	102	8	340	482	155
Small companies										
10-19 ^a	-	415	344	2	34	1 i	0	20	12	3
20-49	-	1,562	1,363	6	127	3	*	37	17	9
Medium companies										
50-99	-	1,836	1,416	19	243	1	* i	37	64	56 i
100-249	-	2,062	1,807	13	203	13	* i	15	8	2
Large companies										
250-499	-	2,352	2,003	27	279	*	*	15	23	4
500-999	-	1,227	889	66	127	* i	*	30	70	46
1,000-4,999	-	5,696	4,844	56	676	3	1	40	65	11 i

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5,000–9,999	–	6,239	6,102	4	i 79	*	i *	i 13		37	3	
10,000–24,999	–	14,801	12,092	741	1,787	1	i *	i 39	i	127	13	
25,000 or more	–	6,478	5,664	362	i 206	80		6		92	59	10

* = 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. Beginning in survey year 2018, statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D. This change has affected the comparability of these estimates with estimates published for years prior to 2018. The "undistributed" column shown in prior years is no longer necessary because of processing improvements implemented beginning in 2017. 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, 2018.