

TABLE 45

Domestic R&D paid for by sources located outside the United States and performed by the company, by source of funds, industry, and company size: 2017

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Foreign companies			Foreign government agencies	Foreign universities, colleges, and academic researchers	All other
			Subsidiaries	Company's parent	Unaffiliated companies			
All industries	21-23, 31-33, 42-81	37,822	19,240	15,426	2,978	7	24	i 147
Manufacturing industries	31-33	30,596	15,012	13,315	2,119	3	22	i 126
Food	311	324	88	232	4	0	0	0
Beverage and tobacco products	312	115	8	107	*	0	0	0
Textile, apparel, and leather products	313-16	1	1	0	* i	0	0	0
Wood products	321	5	0	5	* i	0	0	0
Paper	322	3	1	1	* i	0	0	* i
Printing and related support activities	323	8 - 10	0	8	1 i	0	0	0 - 2 i
Petroleum and coal products	324	11	*	10	0	0	0	0
Chemicals	325	12,008	3,243	7,115	1,592	0 - 4	0 - 23	31 - 60
Basic chemicals	3251	194	25	129 - 169	0 - 39	0	0	0
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	15	1	13	* i	0	0	* i
Pesticide, fertilizer, and other agricultural chemicals	3253	266 - 385	1	231 - 383	0 - 39	i 0	0	0 - 4 i
Pharmaceuticals and medicines	3254	11,280	3,202	6,465	1,554	0 - 4	0 - 23	31 - 60
Soap, cleaning compound, and toilet preparation	3256	119 - 220	6	111 - 212	* i	0	0	0 - 4 i
Paint, coating, adhesive, and other chemicals	3255, 3259	7 - 32	7	0 - 24	* i	0	0	0
Plastics and rubber products	326	59	47	11	*	0	0	0
Nonmetallic mineral products	327	13 - 29	14	0 - 14	0 - 14	i 0	0	0 - 14 i
Primary metals	331	2 i	1	0 - 2	* i	0	0 - 2	0 - 2 i
Fabricated metal products	332	6	2	4	* i	0	0	* i
Machinery	333	657	18	621	19	i 0	0	* i
Agricultural implement	33311	58 i	2	50	6	i 0	0	0
Semiconductor machinery	333242	454	0	449	5	i 0	0	0
Engine, turbine, and power transmission equipment	3336	9	0	9	*	i 0	0	0
Other machinery	other 333	137	16	113	8	0	0	* i
Computer and electronic products	334	14,267	10,960	2,889	326 - 352	0 - 4	0 - 23	i 39 - 94

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Communications equipment	3342	3,794	3,131 - 3,167	628	0 - 30	0 - 4	0	* i
Semiconductor and other electronic components	3344	3,088	1,098	1,754	214	0	0 - 23	i 0 - 24
Navigational, measuring, electromedical, and control instruments	3345	622 - 687	82	418	109	0	*	14 - 79
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	104	6	92	6	0	0	0
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	417	0 - 77	i 193 - 327	0 - 104	0	*	14 - 79
Other measuring and controlling device	other 3345	100 - 167	0 - 77	0 - 132	0 - 104	0	0	0
Other computer and electronic products	other 334	6,700 - 6,765	6,611 - 6,650	89	0 - 30	0	0	0
Electrical equipment, appliances, and components	335	248	171	77	*	i 0	0	0
Transportation equipment	336	2,387 - 2,443	170	2,073	146	0 - 4	i 0	0 - 55
Automobiles, bodies, trailers, and parts	3361-63	26 - 2,443	26 - 171	0 - 2,074	0 - 147	0 - 4	0	0 - 55
Aerospace products and parts	3364	0 - 2,158	0 - 145	0 - 2,012	0 - 147	0 - 4	i 0	0 - 55
Aircraft, aircraft engine, and aircraft parts	336411-13	0 - 2,158	0 - 145	0 - 2,012	0 - 147	0 - 4	i 0	0 - 55
Guided missile, space vehicle, and related parts	336414-15, 336419	*	0	0	*	0	0	0
Military armored vehicle, tank, and tank component	336992	0	0	0	0	0	0	0
Other transportation	other 336	0 - 1,434	0	0 - 1,434	0 - 147	i 0	0	0
Furniture and related products	337	8	8	*	*	i 0	0	* i
Miscellaneous manufacturing	339	425 - 458	279	138 - 169	9	0	0	0
Medical equipment and supplies	3391	406	265	132	8	0	0	0
Other miscellaneous manufacturing	3399	20 - 52	14	6 - 37	1	i 0	0	0
Nonmanufacturing industries	21-23, 42-81	7,226	4,229	2,111	859	4	2	21
Mining, extraction, and support activities	21	834	615	6	213	0	0	0
Utilities	22	4	*	4	0	0	0	*
Wholesale trade	42	27	i 5	i 22	i 1	i 0	0	0
Electronic shopping and electronic auctions	454111-12	0	0	0	0	0	0	0
Transportation and warehousing	48-49	0	0	0	0	0	0	0
Information	51	4,467	3,328	1,047	91	0	0	1
Publishing	511	1,702	767	843	90	0	0	1
Newspaper, periodical, book, and directory publishers	5111	0	0	0	0	0	0	0

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Software publishers	5112	1,702	767	843	90	0	0	1	
Telecommunications	517	24 - 162	4	21 - 158	0	0	0	0	
Data processing, hosting, and related services	518	236	188	48	*	0	0	0	
Other information	other 51	2,367 - 2,503	2,368	0 - 134	*	i	0	* i	
Finance and insurance	52	36	36	0	0	0	0	0	
Real estate and rental and leasing	53	10	0	10	0	0	0	0	
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0	0	0	0	
Other real estate and rental and leasing	other 53	10	0	10	0	0	0	0	
Professional, scientific, and technical services	54	1,772	216	1,001	529	4	2	20 i	
Architectural, engineering, and related services	5413	68	11	45	12	*	0	0	
Computer systems design and related services	5415	346	143	177	24	1	0	0	
Scientific research and development services	5417	1,231	49	685	475	i	3	2	16 i
Biotechnology research and development	541711	317	0	104	210	2	0	1	
Physical, engineering, and life sciences (except biotechnology) research and development	541712	914	49	582	266	i	1	2	15 i
Social sciences and humanities research and development	541720	0	0	0	0	0	0	0	
Other professional, scientific, and technical services	other 54	126	12	93	17	0	0	3	
Health care services	621-23	33 i	23	0	10	i	0	0	
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	43	6	22	15	0	0	0	
All companies (number of domestic employees)	-	37,822	19,240	15,426	2,978	7	24	i	147
Small companies									
10-19 ^a	-	171	58	59	0 - 54	2	*	i	0 - 54
20-49	-	693	135	434	97	1	21	i	5
Medium companies									
50-99	-	766	120	494	105	1	i	1	47
100-249	-	1,734	195	1,426	98	*	i	1	15 i
Large companies									
250-499	-	1,205	338	668	195	1	*		3
500-999	-	1,738	698	795	243	*		1	1 i
1,000-4,999	-	11,280	2,741	7,446	1,085	2	*		6

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5,000–9,999	–	2,270	1,258	i 909	102	i 0	*	* i
10,000–24,999	–	6,741	2,824	2,987	930	0	0	0
25,000 or more	–	11,222	10,873	209	64 - 127	1	i 0	12 - 74

* = 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. In all other tables, R&D costs of foreign-company subsidiaries of U.S. companies are included in company-funded U.S. domestic R&D totals. Only in this table are such R&D costs classified as being part of R&D paid for by sources located outside of the United States. 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.