

TABLE 35

Domestic R&D paid for by others and performed by the company, by industry and company size: 2016

(Millions of U.S. dollars)

Industry	NAICS code	Company size (domestic employees)												
		All companies	5 – 9 ^a	10 – 19	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	56,954	536 i	1,071 i	2,189	1,570	3,153	1,654	924	10,666	4,746	12,210	18,232	
Manufacturing industries	31–33	38,893	87 i	211 i	932	557	1,361	885	632	6,785	3,866	8,446	15,131	
Food	311	217	0	* i	D	0	81	6	1	76	47	*	D	
Beverages and tobacco products	312	D	0	0	0	0	0	D	0	0	1	0	0	
Textiles, apparel, and leather products	313–16	9	2 i	0	2	2 i	0	3	0	* i	0	0	0	
Wood products	321	7 i	0	0	0	0	0	0	3	4 i	0	*	0	
Paper	322	*	0	0	0	0	*	0	0	0	0	0	0	
Printing and related support activities	323	* i	0	0	* i	* i	* i	0	0	*	0	0	0	
Petroleum and coal products	324	14	0	1	0	0	2	0	*	0	0	11	0	
Chemicals	325	9,410	D	106 i	235	345	539	276	163	3,312	1,686	2,693 i	D	
Basic chemicals	3251	261	0	D	0	D	45 i	33	0	D	36	*	0	
Resins, synthetic rubber, fibers, and artificial synthetic fibers and filaments	3252	18	D	0	* i	D	D	D	0	D	0	D	0	
Pesticides, fertilizers, and other agricultural chemicals	3253	D	0	0	D	0	0	0	0	D	0	D	0	
Pharmaceuticals and medicines	3254	8,644	37	D	227	334	479	236	163	2,918	1,650	D	D	
Soaps, cleaning compounds, and toilet preparation	3256	141	0	* i	D	* i	D	0	0	D	0	D	0	
Paints, coatings, adhesives, and other chemicals	3255, 3259	D	0	D	D	D	D	D	0	1	0	D	*	
Plastics and rubber products	326	169	0	21 i	4	11 i	28 i	*	13	87	*	4	0	
Nonmetallic mineral products	327	14	0	1 i	* i	3	6	2	1	0	*	*	0	
Primary metals	331	10	1 i	0	1 i	* i	* i	*	1	1	2	4	0	
Fabricated metal products	332	112 i	3 i	3 i	74 i	9 i	6 i	8	0	8	1	0	0	
Machinery	333	886	8 i	6 i	184 i	56	79	21	13	386	125	3	5	
Agricultural implements	33311	12	1 i	0	3	0	1	1	0	8	0	0	0	
Semiconductor machinery	333242	383	D	D	*	*	D	*	0	D	0	0	0	
Engines, turbines, and power transmission equipment	3336	58 i	D	0	0	D	1	4	6	0	D	0	5	
Other machinery	other 333	432	D	D	181 i	D	D	16	6	D	D	3	0	
Computer and electronic products	334	8,869	25 i	48 i	301	70	377	293	243	1,483	978	2,884	2,168	
Communications equipment	3342	1,818 i	0	4 i	1	1	110	D	27	598 i	D	D	0	
Semiconductors and other electronic components	3344	2,215	0	14 i	264	33	140	160	117	545	698	214	31 i	
Navigational, measuring, electromedical, and control instruments	3345	4,753	24 i	30 i	35 i	35	125	D	73	306	D	D	2,137	
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	165	D	7	5 i	1 i	80	12	0	44	D	0	0	
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	4,412	0	D	9	10	D	D	D	D	D	D	2,137	
Other measuring and controlling devices	other 3345	176	D	D	21 i	24	D	D	D	D	0	0	0	
Other computer and electronic products	other 334	82	1 i	* i	2	1	3	15	25	34	0	2	0	
Electrical equipment, appliances, and components	335	469 i	2 i	5	6	2	46	4	4	32	0	367 i	0	
Transportation equipment	336	18,371	0	8	94 i	51	173 i	156	124	1,352	1,026 i	2,463	12,924	

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Automobiles, bodies, trailers, and parts	3361–63	2,749	0	1	D	42	D	D	D	1,278	106	389	D	
Aerospace products and parts	3364	14,373	0	8	* i	D	27 i	0	D	72	920 i	2,074	11,215	
Aircraft, aircraft engines, and aircraft parts	336411–13	13,291	0	1	* i	D	27 i	0	D	72	315	1,608	11,215	
Guided missiles, space vehicles, and related parts	336414–15, 336419	1,083	i 0	7	*	5 i	0	0	0	0	605 i	465	0	
Military armored vehicles, tanks, and tank components	336992	D	0	0	D	D	D	D	0	0	0	0	0	
Other transportation	other 336	D	0	0	* i	0	D	D	D	2	*	0	D	
Furniture and related products	337	*	0	0	0	0	* i	* i	0	*	0	0	0	
Miscellaneous manufacturing	339	D	D	11 i	D	7	22	D	66	43	0	15	D	
Medical equipment and supplies	3391	194	D	11 i	26	5	6	13	62	41	0	15	D	
Other miscellaneous manufacturing	3399	D	D	0	D	3	16	D	4	2	0	0	0	
Nonmanufacturing industries	21–23, 42–81	18,061	449 i	860 i	1,258	1,013	1,793	769	292	3,881	880 i	3,764	3,101	
Mining, extraction, and support activities	21	400	*	0	D	20	D	0	0	0	0	D	*	
Utilities	22	26	0	0	D	0	0	0	0	1	1	D	D	
Wholesale trade	42	10	i D	1 i	4	1 i	3	D	* i	0	0	0	0	
Electronic shopping and electronic auctions	454111–12	0	0	0	0	0	0	0	0	0	0	0	0	
Transportation and warehousing	48–49	3	0	0	0	0	3	0	0	0	0	0	0	
Information	51	674	D	83	21	D	D	31	49 i	83	14	0	270	
Publishing	511	400	0	D	6 i	1	*	0	49 i	D	0	0	D	
Newspaper, periodical, book, and directory publishers	5111	3	i 0	0	3 i	0	0	0	0	0	0	0	0	
Software publishers	5112	397	0	D	4 i	1	*	0	49 i	D	0	0	D	
Telecommunications	517	D	0	0	13	D	0	0	0	D	0	0	0	
Data processing, hosting, and related services	518	138	0	D	2	D	0	31	* i	0	14	0	D	
Other information	other 51	D	D	0	0	0	D	0	0	D	0	0	0	
Finance and insurance	52	94	0	0	0	8 i	*	0	0	0	0	0	86	
Real estate and rental and leasing	53	0	0	0	0	0	0	0	0	0	0	0	0	
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0	0	0	0	0	0	0	0	0	
Other real estate and rental and leasing	other 53	0	0	0	0	0	0	0	0	0	0	0	0	
Professional, scientific, and technical services	54	16,750	446 i	769 i	1,210	932	1,667	720	238	3,768	865 i	3,418	2,718	
Architectural, engineering, and related services	5413	1,596	24 i	75 i	224 i	40	282 i	78	74	38 i	121	26	614	
Computer systems design and related services	5415	2,492	i 42 i	38 i	304 i	97	386 i	25	1 i	150	1	1,115 i	332	
Scientific research and development services	5417	12,031	336 i	514	567	664	948	528	106	3,580	742 i	2,277	1,769	
Biotechnology research and development	541711	3,714	99 i	100 i	82	D	82 i	96	0	D	0	0	1,769	
Physical, engineering, and life sciences (except biotechnology) research and development	541712	7,630	D	406	476	528	864	432	106	1,583	D	2,277	0	
Social sciences and humanities research and development	541720	687	D	8 i	9	D	2 i	0	0	D	D	0	0	
Other professional, scientific, and technical services	other 54	632	43 i	142 i	114	131	51	89	58	0	2 i	0	2	

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Health care services	621–23	66	D	6	9	14	8 i	14	5 i	D	0	0	D
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	38	0	1	D	D	1 i	D	0	D	0	0	0

* = amount < \$500,000; D = data withheld to avoid disclosing operations of individual companies; 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 R&D and Innovation Survey does not include companies with fewer than five 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.

Source(s)

National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2016.