

TABLE 37

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

(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 government agencies	U.S. universities, colleges, and academic researchers	All other	
				Company's parent	Unaffiliated companies				In the United States	Outside the United States
All industries	21-23, 31-33, 42-81	56,954	14,239	14,766	2,926	23,772	171	127	851	100
Manufacturing industries	31-33	38,893	4,812	12,264	1,930	19,217	14	116	453	87
Food	311	217	7 i	205	* i	2	* i	0	3	0
Beverages and tobacco products	312	D	0	D	D	0	0	0	0	0
Textiles, apparel, and leather products	313-16	9	3	D	D	5	0	0	0	0
Wood products	321	7 i	D	7 i	D	* i	0	0	0	0
Paper	322	*	*	0	* i	* i	0	0	0	0
Printing and related support activities	323	* i	D	* i	D	* i	* i	0	* i	* i
Petroleum and coal products	324	14	3	10	1	0	0	0	0	0
Chemicals	325	9,410	1,484 i	6,184	1,421	212	5	D	D	45
Basic chemicals	3251	261	D	145	D	46	0	0	* i	0
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	18	D	D	* i	1 i	0	0	0	0
Pesticides, fertilizers, and other agricultural chemicals	3253	D	D	D	D	2	0	0	1 i	0
Pharmaceuticals and medicines	3254	8,644	1,414 i	5,613	1,363	147	5	D	D	45
Soaps, cleaning compounds, and toilet preparations	3256	141	10	131	0	*	0	0	0	0
Paints, coatings, adhesives, and other chemicals	3255, 3259	D	D	D	0	16 i	*	0	* i	0
Plastics and rubber products	326	169	140	25 i	*	4	0	0	* i	0
Nonmetallic mineral products	327	14	D	D	0	6	D	0	0	0
Primary metals	331	10	4	0	0	6	0	0	0	0
Fabricated metal products	332	112 i	89 i	9 i	* i	12	* i	0	* i	1 i
Machinery	333	886	159	529	16 i	152	D	1	D	* i
Agricultural implements	33311	12	1 i	8	1	3	* i	0	0	0
Semiconductor machinery	333242	383	8	371	1	3	0	*	1 i	0
Engines, turbines, and power transmission equipment	3336	58 i	5	11	*	41 i	1	0	0	0
Other machinery	other 333	432	145	139	14 i	106	D	*	D	* i

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Computer and electronic products	334	8,869	1,272	2,791	268	4,410	D	D	D	D
Communications equipment	3342	1,818	254	766	9	787	0	0	3	0
Semiconductors and other electronic components	3344	2,215	284	1,519	133	278	D	*	D	*
Navigational, measuring, electromedical, and control instruments	3345	4,753	724	475	111	3,320	D	D	D	D
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	165	13	135	D	1	0	D	D	0
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	4,412	D	D	D	3,274	D	D	0	D
Other measuring and controlling devices	other 3345	176	D	D	D	45	0	0	* i	*
Other computer and electronic products	other 334	82	11	31	15	26	0	0	0	0
Electrical equipment, appliances, and components	335	469	9	348	45	46	0	0	D	D
Transportation equipment	336	18,371	1,587	1,959	145	14,325	*	D	D	20
Automobiles, bodies, trailers, and parts	3361-63	2,749	D	1,937	94	D	*	0	D	D
Aerospace products and parts	3364	14,373	1,110	D	D	12,904	0	D	D	D
Aircraft, aircraft engines, and aircraft parts	336411-13	13,291	1,100	D	D	11,839	0	0	D	D
Guided missiles, space vehicles, and related parts	336414-15, 336419	1,083	11	D	*	1,065	0	D	* i	* i
Military armored vehicles, tanks, and tank components	336992	D	D	0	*	D	0	0	0	0
Other transportation	other 336	D	D	D	D	D	0	0	* i	0
Furniture and related products	337	*	0	0	0	*	0	0	*	0
Miscellaneous	339	D	53	91	31	36	* i	2	D	0
Medical equipment and supplies	3391	194	48	88	12	27	0	2	17	0
Other miscellaneous manufacturing	3399	D	5	3	19	10	* i	*	D	0

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			Company's parent	Unaffiliated companies	In the United States	Outside the United States							
Nonmanufacturing industries	21-23, 42-81	18,061	9,427	i	2,502	996	4,555	157	12	399	13		
Mining, extraction, and support activities	21	400	54	i	*	337	2	0	0	0	5		
Utilities	22	26	0		2	0	D	D	0	D	D		
Wholesale trade	42	10	i	3	i	5	1	0	0	1	i	0	
Electronic shopping and electronic auctions	454111-12	0	0		0	0	0	0	0	0	0		
Transportation and warehousing	48-49	3	0		0	0	3	0	0	0	0		
Information	51	674	142		375	128	25	3	0	1	0		
Publishing	511	400	50		216	127	7	0	0	0	0		
Newspaper, periodical, book, and directory publishers	5111	3	i	*	i	0	3	i	*	i	0	0	
Software publishers	5112	397	50		216	125	7	0	0	0	0		
Telecommunications	517	D	*	i	D	*	i	*	0	0	0		
Data processing, hosting, and related services	518	138	D		D	1	16	3	0	1	0		
Other information	other 51	D	D		D	0	2	0	0	0	0		
Finance and insurance	52	94	*		8	i	0	0	0	86	0		
Real estate and rental and leasing	53	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		
Other real estate and rental and leasing	other 53	0	0		0	0	0	0	0	0	0		
Professional, scientific, and technical services	54	16,750	9,174	i	2,093	526	4,496	137	12	D	D		
Architectural, engineering, and related services	5413	1,596	275		137	i	4	964	13	0	203	i	*
Computer systems design and related services	5415	2,492	i	432	1,433	1	583	43	i	0	*	0	
Scientific research and development services	5417	12,031	8,374	i	362	501	2,675	17	12	85	5		
Biotechnology research and development	541711	3,714	3,253		43	297	93	*	3	22	3		
Physical, engineering, and life sciences (except	541712	7,630	5,099	i	316	204	i	1,956	6	8	38	2	

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biotechnology) research and development																		
Social sciences and humanities research and development	541720	687	22	i	3	i	*	i	626	11	0	26	*					
Other professional, scientific, and technical services	other 54	632	93		161	i	20		274	65	*	D	D					
Health care services	621-23	66	46		8	i	4		2	0	*	6	0					
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	38	8		10		0		D	D	*	0	0					
All companies (number of domestic employees)	-	56,954	14,239		14,766		2,926		23,772	171	127	851	100					
Micro companies ^a																		
5-9	-	536	i	D	44		D		263	i	10	i	2	D	D			
Small companies																		
10-19	-	1,071	i	394	i	203	i	32	i	393	i	8	i	3	32	i	6	
20-49	-	2,189		598	i	417	i	73	i	899		63		3	127		9	
Medium companies																		
50-99	-	1,570		427		580		87		451		7		3	15		2	i
100-249	-	3,153		716		1,378		103		839		28	i	4	85	i	1	i
Large companies																		
250-499	-	1,654		390		476		290		462		18		D	D		*	i
500-999	-	924		100		383		181		258		*	i	0	2		1	i
1,000-4,999	-	10,666		3,076		5,414		933		1,134		26		D	D		D	
5,000-9,999	-	4,746		D		2,186		D		1,132	i	*		0	151		4	
10,000-24,999	-	12,210		3,767	i	3,434		881		3,994		7		D	D		18	i
25,000 or more	-	18,232		3,570		252		73	i	13,948	i	5		6	D		D	

* = 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.