

Appendix table 4-18

Domestic R&D paid for by others and performed by the company, by source of funds, industry, and company size: 2011

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Companies outside United States		U.S. federal government agencies	U.S. state government agencies	Foreign government agencies	All other, in United States	All other, outside United States	
			Companies in United States	Foreign parent companies						Unaffiliated companies
All industries	21–23, 31–33, 42–81	55,324	11,124	7,438	4,569	31,309 i	321	63	369	129
Manufacturing industries	31–33	38,021	4,196	5,871	2,999	24,698 i	55	46	103	54
Food	311	196	21	D	D	17	0	0	D	0
Beverage and tobacco products	312	D	*	D	D	D	0	0	0	0
Textile, apparel, and leather products	313–16	34	D	D	*	D	0	0	0	0
Wood products	321	9	D	3	D	0	0	0	*	0
Paper manufacturing	322	23	D	D	D	D	*	0	0	0
Printing and related support activities	323	1	*	0	*	1	0	0	0	0
Petroleum and coal products	324	D	D	0	0	D	*	0	0	0
Chemicals	325	5,337	1,320	2,209	1,658	110	19	0	14	8
Basic chemicals	3251	D	20	D	26	D	13	0	*	0
Resin, synthetic rubber, fiber, and filament	3252	12	D	D	6	D	*	0	*	0
Pesticide, fertilizer, and other agricultural chemical manufacturing	3253	D	D	D	0	D	0	0	0	0
Pharmaceuticals and medicines	3254	4,838	1,285	1,848	1,626	52	6	0	14	8
Soap, cleaning compound, and toilet preparation	3256	6	D	D	D	*	*	0	*	0
Paint, coating, adhesive, and other chemical manufacturing	3255, 3259	40	D	D	D	D	0	0	0	0
Plastic and rubber products	326	307 i	31	265 i	1	8	*	0	2	*
Nonmetallic mineral products	327	33	D	*	1	25	2	0	0	D
Primary metals	331	64	D	43	D	D	3 i	0	*	0
Fabricated metal products	332	115	D	D	D	D	2	0	17	0
Machinery	333	1,131	423	D	D	522	7	D	D	1
Agricultural implement manufacturing	33311	22	7	15	0	*	0	0	0	0
Semiconductor machinery manufacturing	333295	139	77	D	D	4	D	0	D	0
Engine, turbine, and power transmission equipment manufacturing	3336	693	182	D	D	D	D	0	D	0
Other machinery manufacturing	other 333	278	157	D	D	D	D	D	D	1
Computer and electronic products	334	9,040	1,087	1,735	991	5,161	15	D	D	D
Communication equipment	3342	1,858 i	171 i	619	283	784 i	0	1	*	0
Semiconductor and other electronic components	3344	1,245	184	802	D	89	D	0	D	0
Navigational, measuring, electromedical, and control instruments	3345	5,451	636	D	D	4,276	D	D	4 i	D

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Electromedical, electrotherapeutic, and irradiation apparatus manufacturing	334510, 334517	243	43	D	D	41	D	0	1	0
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument manufacturing	334511	5,111	566	D	D	4,182	1	D	0	0
Other measuring and controlling device manufacturing	other 3345	97	26	D	D	52	D	0	3 i	D
Other computer and electronic products	other 334	485	97 i	D	D	12	0	0	D	D
Electrical equipment, appliances, and components	335	178	24	73	1	76	3	0	*	0
Transportation equipment	336	20,605 i	1,086	D	D	D	1	D	D	7
Automobiles, bodies, trailers, and parts	3361, 3362, 3363	D	D	D	D	D	1	0	D	1
Aerospace products and parts	3364	18,469 i	592	D	D	17,806 i	0	D	D	6
Aircraft, aircraft engine, and aircraft parts manufacturing	336411-13	17,480 i	590	D	D	16,820 i	0	D	D	6
Guided missile, space vehicle, and related parts manufacturing	336414-15, 336419	989	2	0	0	987	0	0	0	0
Military armored vehicle, tank, and tank component manufacturing	336992	2	1	0	0	1	0	0	0	0
Other transportation	other 336	D	D	D	D	D	0	0	D	0
Furniture and related products	337	2	2	0	0	*	*	0	0	0
Miscellaneous manufacturing	339	D	D	D	D	60	2	0	14	D
Medical equipment and supply manufacturing	3391	406	D	280	D	18	1	0	13	D
Other miscellaneous manufacturing	3399	D	D	D	D	42	1	0	1	0
Nonmanufacturing industries	21-23, 42-81	17,303	6,928	1,568	1,570	6,611	267	17	266	76
Mining, extraction, and support activities	21	307	D	0	D	11	0	0	0	0
Utilities	22	84	D	0	D	60	19	0	2	0
Wholesale trade	42	248	21	100	92 i	18	*	0	1	18 i
Electronic shopping and electronic auctions	454111-12	0	0	0	0	0	0	0	0	0
Transportation and warehousing	48-49	*	*	0	0	*	0	0	0	0
Information	51	851	321	D	D	D	D	D	D	*
Publishing	511	687	D	334	D	136	D	D	D	*
Newspaper, periodical, book, and directory publishers	5111	1	0	0	0	0	0	0	1	0
Software publishers	5112	685	D	334	D	136	D	D	D	*
Telecommunications	517	117	D	D	D	D	0	0	0	0

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Data processing, hosting, and related services	518	28	27	0	D	D	*	0	D	0
Other information	other 51	19	D	D	0	0	0	0	0	0
Finance and insurance	52	146	145	0	1	0	0	0	0	0
Real estate, 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, rental, and leasing	other 53	0	0	0	0	0	0	0	0	0
Professional, scientific, and technical services	54	14,851	6,227	1,038	1,175	5,848	229	17	258	58
Architectural, engineering, and related services	5413	1,966	557	18	78	1,123 i	130	14	46	0
Computer system design and related services	5415	1,553	626	156	53	598	38	0	51	31
Scientific research and development services	5417	9,131	3,834	809	1,024	3,226	57	2	151	27
Biotechnology research and development	541711	1,735	501	212	572	406	7	*	33	3
Physical, engineering, and life sciences (except biotechnology) research and development	541712	6,797	3,313	597	451	2,280	38	2	91	24
Social sciences and humanities research and development	541720	599	21	*	* i	540	12	0	27	0
Other professional, scientific, and technical services	other 54	2,202	1,210	55	20	902	4	1	10	0
Health care services	621-23	183	156	D	D	5	D	D	D	* i
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	632	D	D	D	D	D	0	D	0
All companies	-	55,324	11,124	7,438	4,569	31,309 i	321	63	369	129
Small companies (number of domestic employees) ^a										
5-499	-	10,283	3,316	1,916	480	3,938	247	17	252	118
5-99	-	6,382	2,066	883	265	2,766	147	D	191	D
5-49	-	4,525	1,581	352	200	2,065	115	D	158	D
5-9	-	1,221	496	41	61 i	533	23	0	64	3
10-24	-	1,872	719	124	62	795	70	D	60	D
25-49	-	1,432	367	186	77	738	23	3	33 i	6 i

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50–99	–	1,857	485	531	65	701	31	D	33	D
100–249	–	2,095	639	322	133	814	75	D	51	D
250–499	–	1,806	611	712	82	358	25	*	10	8
Medium and large companies (number of domestic employees)										
500–999	–	1,288	382	D	D	377	4 i	D	11	D
1,000–4,999	–	7,579	1,154	1,760	2,884	1,702	33	1	39	5
5,000–9,999	–	6,292	3,513	1,866	419	476	13	0	1	4
10,000–24,999	–	6,630	1,267	1,170	D	3,577	18	D	45	D
25,000 or more	–	23,253 i	1,492	D	189	21,240 i	6	D	21	D

* = < \$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 = 2007 North American Industry Classification System.

^a Upper bound is based on the U.S. Small Business Administration's definition of a small business; the Business R&D and Innovation Survey does not include companies with fewer than five domestic employees.

NOTES: Detail may not add to total due to 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, classification used for sampling was assigned. Statistics pertain to companies located in the United States that performed or funded R&D.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics and U.S. Census Bureau, Business R&D and Innovation Survey (2011).

Science and Engineering Indicators 2014