

TABLE 22. Domestic R&D paid for by others and performed by the company, by type of cost, industry, and company size: 2011  
(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Salaries, wages, and fringe benefits	Stock-based compensation	Temporary staffing	Expensed equipment	Materials and supplies	Lease and rental payments	Depreciation	Other purchased services (except R&D)	Other <sup>a</sup>
All industries	21-23, 31-33, 42-81	55,324	33,003	228	1,345	346 i	6,340	723 i	1,049	925	11,364 i
Manufacturing industries	31-33	38,021	21,871	130	540	240	5,025	417 i	656	582	8,560 i
Food	311	196	117	*	2	2 i	13 i	D	D	5	D
Beverage and tobacco products	312	D	D	0	D	D	D	D	D	D	D
Textile, apparel, and leather products	313-316	34	D	0	0	D	D	0	0	D	D
Wood products	321	9	5	0	1	0	1 i	0	0	0	3
Paper	322	23	9	0	4 i	0	2	0	*	* i	6
Printing and related support activities	323	1	D	*	0	* i	* i	* i	*	*	D
Petroleum and coal products	324	D	D	0	D	0	D	0	0	D	D
Chemicals	325	5,337	2,610	97	170	19	280	88	273	208	1,593
Basic chemicals	3251	D	D	D	D	2	17	1	D	7	D
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	12	D	*	*	*	1 i	*	D	*	1 i
Pesticide, fertilizer, and other agricultural chemical	3253	D	D	D	D	D	D	D	D	D	D
Pharmaceuticals and medicines	3254	4,838	D	96	132	16	235	D	247	199	1,476
Soap, cleaning compound, and toilet preparation	3256	6	4 i	*	D	D	1	D	*	*	1 i
Paint, coating, adhesive, and other chemicals	3255, 3259	40	D	D	D	D	D	D	D	D	D
Plastics and rubber products	326	307 i	178 i	* i	D	D	22 i	D	D	D	D
Nonmetallic mineral products	327	33	19	*	*	*	7	D	1 i	D	4
Primary metals	331	64	33 i	*	0	*	29 i	*	* i	*	1
Fabricated metal products	332	115	72	* i	*	1 i	31 i	* i	D	1 i	D
Machinery	333	1,131	595	1	25	30	170	17 i	49	10	234
Agricultural implement	33311	22	13	*	1	*	3	D	1	*	D
Semiconductor machinery	333295	139	89	1	7	5 i	9 i	7 i	10 i	2	8 i
Engine, turbine, and power transmission equipment	3336	693	D	*	10	D	114	D	D	6	D
Other machinery	other 333	278	D	*	7	D	43	D	D	2	D
Computer and electronic products	334	9,040	5,695	29	122	92	1,325	48	216	138	1,376
Communications equipment	3342	1,858 i	1,293 i	0	34	D	171 i	3	D	D	D
Semiconductor and other electronic components	3344	1,245	805	8	18	35	40	10	68	10	250
Navigational, measuring, electromedical, and control instruments	3345	5,451	3,353	21	68	40 i	1,081	33	59	67	729
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	243	152	D	21	* i	19	D	2	D	D
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	5,111	3,131	D	43	37	1,058	D	56	67	D
Other measuring and controlling device	other 3345	97	70	D	3	2 i	4 i	D	1 i	D	D
Other computer and electronic products	other 334	485	244	*	4	D	32	2	D	D	D
Electrical equipment, appliances, and components	335	178	122	*	3	1 i	21 i	5 i	2 i	1 i	21 i
Transportation equipment	336	20,605 i	11,779 i	1	184	73 i	2,980 i	242 i	79	203	5,065 i
Motor vehicles, bodies, trailers, and parts	3361, 3362, 3363	D	D	*	136	D	D	D	D	D	D
Aerospace products and parts	3364	18,469 i	10,784 i	1	47	19 i	2,737 i	15	26	138	4,702 i

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Aircraft, aircraft engine, and aircraft parts	336411-13	17,480 i	10,495 i	1	D	19 i	2,237 i	15	26	D	D
Guided missile, space vehicle, and related parts	336414-15, 336419	989	289	0	D	*	500	0	*	D	D
Military armored vehicle, tank, and tank component	336992	2	D	*	D	*	D	D	*	*	D
Other transportation equipment	other 336	D	D	0	D	D	D	D	D	D	D
Furniture and related products	337	2	2 i	*	0	*	*	*	*	*	*
Miscellaneous manufacturing	339	D	D	2 i	21	6 i	133 i	5 i	21 i	2 i	D
Medical equipment and supplies	3391	406	305	2 i	19	6 i	32 i	4 i	20 i	2 i	19 i
Other miscellaneous manufacturing	3399	D	D	* i	2	*	101 i	2	1 i	* i	D
Nonmanufacturing industries	21-23, 42-81	17,303	11,132	98	806	105 i	1,315	307 i	393 i	343 i	2,804
Mining, extraction, and support activities	21	307	D	2	D	*	D	D	5	*	D
Utilities	22	84	D	* i	10 i	* i	2 i	D	0	*	D
Wholesale trade	42	248	171 i	*	13 i	2 i	5 i	4 i	3 i	11 i	38 i
Electronic shopping and electronic auctions	454111-12	0	0	0	0	0	0	0	0	0	0
Transportation and warehousing	48-49	*	*	0	0	0	*	0	0	0	*
Information	51	851	656	* i	26	2	104	7	11	1 i	44
Publishing	511	687	525	*	22	D	D	5	9	*	D
Newspaper, periodical, book, and directory publishers	5111	1	1	0	0	0	0	0	0	0	0
Software publishers	5112	685	523	*	22	D	D	5	9	*	D
Telecommunications	517	117	96	0	3 i	D	D	1	2	0	D
Data processing, hosting, and related services	518	28	27	0	1	0	0	0	0	0	*
Other information	other 51	19	8	*	0	D	D	1	1	1	D
Finance and insurance	52	146	146	0	0	0	0	0	0	0	0
Real estate and rental and leasing	53	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
Other real estate and rental and leasing	other 53	0	0	0	0	0	0	0	0	0	0
Professional, scientific, and technical services	54	14,851	9,487	95	730	99 i	1,163 i	278 i	371 i	331 i	2,296
Architectural, engineering, and related services	5413	1,966	1,601	2 i	71	40 i	96 i	28 i	14 i	23 i	91 i
Computer systems design and related services	5415	1,553	1,205	*	59	2 i	35 i	12 i	4 i	30 i	206 i
Scientific research and development services	5417	9,131	5,310	93	365	49 i	822 i	195 i	311 i	272 i	1,713 i
Biology research and development	541711	1,735	980	51	30	15	196	31	74	17	339
Physical, engineering, and life sciences (except biotechnology) research and development	541712	6,797	3,901	31 i	325	28 i	625 i	152 i	232 i	254 i	1,247 i
Social sciences and humanities research and development	541720	599	428	11	10	6	1 i	12	4	1 i	127
Other professional, scientific, and technical services	other 54	2,202	1,371	*	235	8	210	43	43	5	286
Health care services	621-23	183	153 i	*	2	1	4 i	1	1	*	21
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	632	D	*	D	*	D	D	1	*	D

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All companies (number of domestic employees)	-	55,324	33,003	228	1,345	346 i	6,340	723 i	1,049	925	11,364 i
Small companies <sup>b</sup>											
5-499	-	10,283	6,718	40 i	374	76 i	914 i	197	216 i	217 i	1,531 i
5-99	-	6,382	4,247	22 i	241	46 i	472 i	114 i	130 i	134 i	974 i
5-49	-	4,525	3,039	18 i	187	33 i	315 i	71 i	94 i	101 i	667 i
5-9	-	1,221	830	5	76	5	64 i	14 i	22 i	28	175 i
10-24	-	1,872	1,316	9	64 i	15	120 i	27	38	38 i	244 i
25-49	-	1,432	894	4 i	47	12 i	131 i	29 i	33 i	34 i	248 i
50-99	-	1,857	1,208	4 i	54	14 i	157 i	43	36 i	33 i	307 i
100-249	-	2,095	1,341	13	75	9 i	238	42	44 i	53	280
250-499	-	1,806	1,130	5	58	21	203 i	40	42	29 i	277
Medium and large companies											
500-999	-	1,288	764	5	36	30	102	25	84	73	168
1,000-4,999	-	7,579	4,536	107	219	83	587	158	319	236	1,333
5,000-9,999	-	6,292	3,282	65	353	37 i	453	85 i	250	105	1,661
10,000-24,999	-	6,630	4,058	8 i	122	35 i	1,012	45	104	201	1,045
25,000 or more	-	23,253 i	13,645 i	2	242	84	3,271 i	213 i	76	93	5,627 i

\* = amount < \$500,000; D = data withheld to avoid disclosing operations of individual companies; i = value > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2007 North American Industry Classification System.

<sup>a</sup> Includes R&D costs allocated to subsidiaries by parent companies.

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

NOTES: Detail may not add to total because of rounding. Industry classification based on 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 are representative of 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.