

TABLE 15. Domestic R&D performed by the company and performed by others, by industry and company size: 2011
(Millions of U.S. dollars)

Industry and company size	NAICS code	Performed by the company			Performed by others		
		Total	Paid for by the company	Paid for by others	Total	Paid for by the company	Paid for by others
All industries	21-23, 31-33, 42-81	294,093	238,768	55,324	41,128	29,608	11,520 i
Manufacturing industries	31-33	201,361	163,340	38,021	32,719	23,588	9,131 i
Food	311	4,399	4,204	196	434	423	11
Beverage and tobacco products	312	D	684	D	164	164	0
Textile, apparel, and leather products	313-316	634	600	34	D	D	7
Wood products	321	211	202	9	10	10	*
Paper	322	1,346	1,323	23	68	65	3
Printing and related support activities	323	175	174	1	7	6	1
Petroleum and coal products	324	D	1,025	D	D	D	4
Chemicals	325	55,324	49,988	5,337	18,199	15,735	2,464
Basic chemicals	3251	D	3,674	D	307	287	20
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	798	787	12	29	26	3
Pesticide, fertilizer, and other agricultural chemical	3253	D	703	D	70	67	3
Pharmaceuticals and medicines	3254	45,949	41,111	4,838	17,370	14,938	2,432
Soap, cleaning compound, and toilet preparation	3256	2,477	2,471	6	336	336	*
Paint, coating, adhesive, and other chemicals	3255, 3259	1,281	1,242	40	88	82	6
Plastics and rubber products	326	2,280	1,973	307 i	86	72	14
Nonmetallic mineral products	327	1,179	1,145	33	210	207	3
Primary metals	331	655	591	64	126	119	7
Fabricated metal products	332	1,853	1,738	115	62	54	8
Machinery	333	14,709	13,578	1,131	1,089	833	257
Agricultural implement	33311	1,277	1,255	22	220	213	6
Semiconductor machinery	333295	2,359	2,220	139	42	31	11
Engine, turbine, and power transmission equipment	3336	4,292	3,599	693	D	436	D
Other machinery	other 333	6,781	6,503	278	D	153	D
Computer and electronic products	334	62,704	53,664	9,040	2,104	1,717	386
Communications equipment	3342	12,655	10,796	1,858 i	709	689	20
Semiconductor and other electronic components	3344	24,100	22,855	1,245	387	325	63
Navigational, measuring, electromedical, and control instruments	3345	16,094	10,643	5,451	637	338	299
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	4,379	4,135	243	133	125	9
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	7,935	2,823	5,111	D	D	283
Other measuring and controlling device	other 3345	3,781	3,684	97	D	D	7
Other computer and electronic products	other 334	9,855	9,370	485	371	366	5
Electrical equipment, appliances, and components	335	3,595	3,417	178	158	144	15
Transportation equipment	336	40,880	20,275	20,605 i	9,059 i	3,134	5,926 i
Motor vehicles, bodies, trailers, and parts	3361, 3362, 3363	D	11,737	D	D	D	180
Aerospace products and parts	3364	26,054 i	7,585	18,469 i	D	D	5,743 i
Aircraft, aircraft engine, and aircraft parts	336411-13	24,808 i	7,328	17,480 i	D	D	D
Guided missile, space vehicle, and related parts	336414-15, 336419	1,246	257	989	D	90	D

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Military armored vehicle, tank, and tank component	336992	30	28	2	D	D	*
Other transportation equipment	other 336	D	925	D	D	D	3
Furniture and related products	337	319	317	2	8	8	*
Miscellaneous manufacturing	339	D	8,442	D	D	D	25
Medical equipment and supplies	3391	6,686	6,279	406	574	558	16
Other miscellaneous manufacturing	3399	D	2,163	D	D	D	9
Nonmanufacturing industries	21-23, 42-81	92,731	75,428	17,303	8,409	6,019	2,389
Mining, extraction, and support activities	21	2,733	2,425	307	300	295	5
Utilities	22	386	302	84	313	277	35
Wholesale trade	42	1,668 i	1,419 i	248	359 i	294 i	66 i
Electronic shopping and electronic auctions	454111-12	949 i	949 i	0	D	D	1
Transportation and warehousing	48-49	81	81	*	9	9	*
Information	51	41,865	41,014	851	2,199 i	2,180 i	20
Publishing	511	28,435	27,748	687	1,013	1,004	9
Newspaper, periodical, book, and directory publishers	5111	470	468	1	12	12	0
Software publishers	5112	27,965	27,280	685	1,001	992	9
Telecommunications	517	2,157	2,040	117	1,007 i	1,007 i	*
Data processing, hosting, and related services	518	4,285	4,257	28	D	D	1
Other information	other 51	6,988	6,969	19	D	D	10
Finance and insurance	52	3,457	3,310	146	111	111	0
Real estate and rental and leasing	53	395	395	0	D	D	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	324	324	0	D	D	0
Other real estate and rental and leasing	other 53	71	71	0	D	D	0
Professional, scientific, and technical services	54	38,219	23,368	14,851	4,842	2,698	2,143
Architectural, engineering, and related services	5413	3,774	1,808	1,966	D	86	D
Computer systems design and related services	5415	13,259	11,706	1,553	392	198	193
Scientific research and development services	5417	15,301	6,170	9,131	3,652	2,188	1,464
Biotechnology research and development	541711	6,017	4,283	1,735	D	1,859	D
Physical, engineering, and life sciences (except biotechnology) research and development	541712	8,667	1,871	6,797	1,185	326	858
Social sciences and humanities research and development	541720	616	17 i	599	D	2 i	D
Other professional, scientific, and technical services	other 54	5,885	3,684	2,202	D	226	D
Health care services	621-23	741	558	183	D	25	D
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	2,239	1,607	632	D	D	D
All companies (number of domestic employees)	-	294,093	238,768	55,324	41,128	29,608	11,520 i
Small companies ^a							
5-499	-	56,793	46,509	10,283	7,065	5,308	1,757
5-99	-	31,310	24,928	6,382	4,009	3,033	976

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5-49	-	21,842	17,317	4,525	3,027	2,278 i	749
5-9	-	4,202	2,981	1,221	503	317	186
10-24	-	6,779	4,907	1,872	1,269	914 i	356
25-49	-	10,861	9,429	1,432	1,255	1,048	207
50-99	-	9,468	7,611	1,857	981	755	226
100-249	-	12,528	10,433	2,095	1,558	1,064	494
250-499	-	12,955	11,149	1,806	1,498	1,211	287
Medium and large companies							
500-999	-	10,027	8,739	1,288	707	621	86
1,000-4,999	-	50,485	42,905	7,579	6,621	4,772	1,849
5,000-9,999	-	24,951	18,659	6,292	2,288	1,329	959
10,000-24,999	-	49,214	42,585	6,630	8,595	7,998	597
25,000 or more	-	102,623	79,370	23,253 i	15,852	9,580	6,272 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.

^a 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.