

TABLE 10. Domestic R&D paid for by the company and 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 ^a
All industries	21-23, 31-33, 42-81	294,093	174,490	10,173	11,490	3,284	22,301	4,401	10,845	6,884	50,224
Manufacturing industries	31-33	201,361	114,606	5,091	6,646	2,139	19,305	2,576	7,848	5,858	37,292
Food	311	4,399	3,365 i	55	56	6 i	232	34	120	66	467
Beverage and tobacco products	312	D	D	D	27	13	68	6	39	6	D
Textile, apparel, and leather products	313-316	634	D	*	17	3 i	58 i	7 i	25 i	13	D
Wood products	321	211	150	*	5	1	34	3 i	3	1	14
Paper	322	1,346	937	26	34	9	61	3	63	33	179
Printing and related support activities	323	175	139	*	4	1 i	8 i	4 i	7 i	2 i	10 i
Petroleum and coal products	324	D	D	*	27	2	42	D	28	D	D
Chemicals	325	55,324	28,227	1,222	2,885	278	4,473	1,042	2,899	2,834	11,464
Basic chemicals	3251	D	D	54	D	38	322	57	D	107	D
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	798	D	* i	23	3	40	14	D	23	D
Pesticide, fertilizer, and other agricultural chemical	3253	D	D	1	D	* i	75	90	146	D	D
Pharmaceuticals and medicines	3254	45,949	22,492	1,147	2,610	207	3,846	846	2,323	2,486	9,993
Soap, cleaning compound, and toilet preparation	3256	2,477	1,511	12	D	2	129	19	103	30	D
Paint, coating, adhesive, and other chemicals	3255, 3259	1,281	D	8	D	27	62	16	61	D	204
Plastics and rubber products	326	2,280	1,399	17	22	24 i	241 i	21	54 i	57	445 i
Nonmetallic mineral products	327	1,179	720 i	D	107 i	23 i	87 i	D	68 i	D	D
Primary metals	331	655	375	8	14	2	117	1	23	3	112
Fabricated metal products	332	1,853	1,406	6 i	15	14 i	168 i	8 i	48 i	23 i	165 i
Machinery	333	14,709	8,275	116	822	215	2,165	145	658	336	1,979
Agricultural implement	33311	1,277	668	* i	63	12	210	6	86	* i	232
Semiconductor machinery	333295	2,359	1,033	86	89	11	347	36	172	89	496
Engine, turbine, and power transmission equipment	3336	4,292	D	7	252	157	599	58	187	177	D
Other machinery	other 333	6,781	D	22 i	418	35 i	1,008	45	212	69 i	D
Computer and electronic products	334	62,704	37,725	3,352	1,475	789	5,152	733	2,855	664	9,958
Communications equipment	3342	12,655	7,566	682	224	198	707	83	D	D	2,287
Semiconductor and other electronic components	3344	24,100	14,048	1,820	445	243	1,722	362	1,396	153	3,911
Navigational, measuring, electromedical, and control instruments	3345	16,094	9,859	181	428	128	2,040	220 i	399	214	2,626
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	4,379	2,555	D	177	28	296	D	231	44	907
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	7,935	4,951	D	145	51	1,384	122 i	88	109	D
Other measuring and controlling device	other 3345	3,781	2,353	62	106	48	360 i	D	80	60	D
Other computer and electronic products	other 334	9,855	6,252	669	377	220	683	69	D	D	1,134

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Electrical equipment, appliances, and components	335	3,595	2,669	15	118	24	178	33	93	79	385
Transportation equipment	336	40,880	21,856	37 i	676	575	5,527	407 i	537	1,318	9,948
Motor vehicles, bodies, trailers, and parts	3361, 3362, 3363	D	D	1 i	545	D	D	D	D	D	1,409
Aerospace products and parts	3364	26,054 i	13,604 i	30 i	105	42 i	3,630	29	83	279	8,252
Aircraft, aircraft engine, and aircraft parts	336411-13	24,808 i	13,179 i	30 i	88	40 i	3,090 i	27	78	D	D
Guided missile, space vehicle, and related parts	336414-15, 336419	1,246	425	0	18	2	540	1	5	D	D
Military armored vehicle, tank, and tank component	336992	30	14	2	*	1	10	* i	1	1	1
Other transportation equipment	other 336	D	D	4 i	26	D	D	D	D	D	285 i
Furniture and related products	337	319	218	*	6	5 i	45	2 i	4 i	1 i	37 i
Miscellaneous manufacturing	339	D	5,698	221	336	152	648	101	323	181	D
Medical equipment and supplies	3391	6,686	3,995	186	294	130	474	79	257	155	1,116
Other miscellaneous manufacturing	3399	D	1,704	34 i	42	22 i	174 i	22	66	27	D
Nonmanufacturing industries	21-23, 42-81	92,731	59,885	5,083	4,843	1,144 i	2,996	1,824 i	2,998	1,026 i	12,932
Mining, extraction, and support activities	21	2,733	D	26	176	112 i	D	71	77	17	503
Utilities	22	386	195	2	39	4	40	D	32	2	D
Wholesale trade	42	1,668 i	1,137 i	8 i	133 i	26 i	62 i	43 i	38 i	24 i	197 i
Electronic shopping and electronic auctions	454111-12	949 i	D	D	129 i	6 i	1	D	D	D	D
Transportation and warehousing	48-49	81	54	0	16	1	4 i	* i	2	*	5 i
Information	51	41,865	27,654	3,211	1,942	545	503	730	1,402	230	5,648
Publishing	511	28,435	18,604	1,711	1,254	186	D	393 i	767	177	D
Newspaper, periodical, book, and directory publishers	5111	470	273	0	21	D	9 i	1 i	*	3 i	D
Software publishers	5112	27,965	18,332	1,711	1,233	D	D	391 i	767	174	D
Telecommunications	517	2,157	1,506	26 i	105 i	87 i	D	7 i	63	18 i	D
Data processing, hosting, and related services	518	4,285	3,513	126	165	D	8	53	151	9	D
Other information	other 51	6,988	4,030	1,348	418	D	44	278	420	25	D
Finance and insurance	52	3,457	2,217	52	697	20 i	14	44 i	47 i	4 i	362
Real estate and rental and leasing	53	395	212	35	22	1	11	3	19	D	D
Lessors of nonfinancial intangible assets (except copyrighted works)	533	324	172	35	21	1	10	2	17	D	D
Other real estate and rental and leasing	other 53	71	40	*	1	*	*	2	2	*	25
Professional, scientific, and technical services	54	38,219	24,269	1,635 i	1,591	410 i	2,007 i	877 i	1,251 i	631 i	5,547 i
Architectural, engineering, and related services	5413	3,774	2,857	28 i	164	51 i	217 i	68 i	27 i	29 i	333 i
Computer systems design and related services	5415	13,259	8,553	1,238 i	456	246 i	186 i	321 i	565 i	221 i	1,473 i
Scientific research and development services	5417	15,301	8,396	317	636	81 i	1,338 i	380 i	577 i	372	3,203
Biotechnology research and development	541711	6,017	2,873	250	205	32	598	171	275	88	1,525

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Physical, engineering, and life sciences (except biotechnology) research and development	541712	8,667	5,079	56 i	420	43 i	739 i	197 i	298 i	284 i	1,551 i
Social sciences and humanities research and development	541720	616	444	11	11	6	1 i	12	4	1 i	127
Other professional, scientific, and technical services	other 54	5,885	4,464	52 i	335	32 i	266	109 i	81	8	539
Health care services	621-23	741	432	16 i	40	17	62 i	15 i	59	27	72
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	2,239	D	D	60	2 i	D	D	D	D	D
All companies (number of domestic employees)	-	294,093	174,490	10,173	11,490	3,284	22,301	4,401	10,845	6,884	50,224
Small companies ^b											
5-499	-	56,793	37,728	1,516 i	2,234	684 i	3,335 i	1,194 i	1,731 i	879 i	7,493 i
5-99	-	31,310	20,703	914 i	1,287	442 i	1,598 i	653 i	978 i	519 i	4,217 i
5-49	-	21,842	14,359	744 i	837	295 i	1,019 i	469 i	713 i	375 i	3,032 i
5-9	-	4,202	2,902	80 i	189	41 i	189 i	92 i	95 i	63 i	551 i
10-24	-	6,779	4,735	105 i	287	54 i	354 i	106 i	185 i	120 i	834 i
25-49	-	10,861	6,721	559 i	360	200 i	477 i	271 i	434 i	192 i	1,647 i
50-99	-	9,468	6,344	169 i	451	147 i	579 i	184	265 i	144 i	1,185 i
100-249	-	12,528	8,204	301	506	120 i	896 i	259	407	165 i	1,670 i
250-499	-	12,955	8,821	301	441	122	841 i	282 i	345	195 i	1,606
Medium and large companies											
500-999	-	10,027	6,185	340	504	131	721	167	418	292	1,270
1,000-4,999	-	50,485	29,186	2,420	1,538	764	3,434	802	2,092	1,339	8,910
5,000-9,999	-	24,951	14,204	1,006	940	300	1,700	351	1,094	540	4,816
10,000-24,999	-	49,214	28,830	2,187	1,709	511	3,769	1,058	2,351	1,902	6,897
25,000 or more	-	102,623	58,358	2,705	4,565	893	9,342	830 i	3,160	1,932	20,837

* = 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 Includes R&D costs allocated to subsidiaries by parent companies.

^b 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.