

TABLE 59. R&D costs paid for by the company and others projected for 2015, by industry and company size: 2014

(Millions of U.S. dollars)

Industry and company size	NAICS code	Projected worldwide R&D cost		Projected domestic R&D cost						Projected foreign R&D cost paid for by the company
		Paid for by the company	Paid for by others	Paid for by the company			Paid for by others			
				Total	Purchased and collaborative R&D	R&D performed by the company	Total	U.S. government	Non-U.S. government sources	
All industries	21-23, 31-33, 42-81	424,439	63,796	344,818	31,644	313,174	53,534	23,091 i	30,443	79,621
Manufacturing industries	31-33	295,629	41,487	235,364	27,190	208,174	36,785	16,657 i	20,127	60,265
Food	311	7,083 i	237	5,834 i	569 i	5,265 i	237	*	236	1,250
Beverages and tobacco products	312	1,688	D	1,028	181	846	D	* i	D	660
Textiles, apparel, and leather products	313-16	766	16 i	680	20	660	16 i	12 i	4 i	85
Wood products	321	394 i	9 i	385 i	9 i	376 i	8 i	* i	8 i	9 i
Paper	322	1,358 i	10	1,179 i	9 i	1,170 i	9	6	3 i	179
Printing and related support activities	323	262	3 i	257	8 i	249 i	2 i	* i	2 i	5
Petroleum and coal products	324	352	5	250	42	208	4	1 i	4	102
Chemicals	325	103,330	13,516	83,373	18,844	64,529	11,014	726 i	10,289 i	19,956
Basic chemicals	3251	3,709	356 i	2,754	238	2,516	348 i	79 i	269 i	955
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	2,106	27	1,339	112	1,227	19 i	15 i	5	766
Pesticides, fertilizers, and other agricultural chemicals	3253	1,807 i	466	1,518 i	29 i	1,489 i	461	8 i	453	289 i
Pharmaceuticals and medicines	3254	89,790	12,597	73,311	18,135	55,177	10,121	583	9,538 i	16,478
Soaps, cleaning compounds, and toilet preparations	3256	4,135	20 i	2,998	313	2,685	20 i	15 i	5 i	1,137
Paints, coatings, adhesives, and other chemicals	3255, 3259	1,783 i	50	1,452 i	17	1,435 i	45	26	19 i	331 i
Plastics and rubber products	326	4,848	175	3,786	151	3,635	154 i	3 i	151 i	1,062
Nonmetallic mineral products	327	921	26	878	150 i	728	25	8 i	18	43
Primary metals	331	761 i	123 i	702 i	59 i	643 i	72 i	32 i	40 i	59
Fabricated metal products	332	2,208	118 i	1,986 i	155 i	1,831 i	89 i	24 i	65 i	222
Machinery	333	15,775	794 i	13,012	536	12,477	719 i	82 i	637 i	2,763
Agricultural implements	33311	2,368	52	1,913	276	1,637	38	* i	37	455
Semiconductor machinery	333295	3,467	127 i	2,940	1 i	2,939	113 i	5 i	108 i	527
Engines, turbines, and power transmission equipment	3336	3,392	69	2,800	25	2,775	55 i	37 i	18	592
Other machinery	other 333	6,548	547 i	5,359	234 i	5,125	513 i	40 i	474 i	1,189
Computer and electronic products	334	92,190 i	9,931	72,574 i	2,306 i	70,268 i	9,410	4,812	4,597	19,615
Communications equipment	3342	23,790 i	1,170 i	19,825 i	943 i	18,882 i	1,132 i	786 i	345 i	3,965
Semiconductors and other electronic components	3344	42,309	2,730	31,363	565	30,798 i	2,625	219	2,406	10,946

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Navigational, measuring, electromedical, and control instruments	3345	13,955	5,698	11,445	602	10,843	5,408	3,683	1,725	2,510
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	4,996 i	243	4,215 i	303	3,912 i	221	65	156	781 i
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	3,713	5,088	3,219	221	2,998	4,891	3,563	1,328	494
Other measuring and controlling devices	other 3345	5,246 i	367	4,011 i	77 i	3,933 i	296	55 i	241	1,235 i
Other computer and electronic products	other 334	12,136 i	333 i	9,941 i	196	9,745 i	245 i	124 i	121 i	2,195 i
Electrical equipment, appliances, and components	335	6,294	215 i	4,763	184	4,579	194 i	68 i	126 i	1,531
Transportation equipment	336	41,096	15,877 i	30,484	3,304	27,180	14,432 i	10,805 i	3,628	10,612
Automobiles, bodies, trailers, and parts	3361-63	26,878	3,127	17,943	2,515	15,428	2,494	159 i	2,335	8,934
Aerospace products and parts	3364	12,925	11,562 i	11,335	762	10,573	10,939 i	9,941 i	998	1,589
Aircraft, aircraft engines, and aircraft	336411-13	12,508	D	10,920	693	10,228	D	D	D	1,587
Guided missiles, space vehicles, and related parts	336414-15, 336419	417	D	415	70	345	D	D	D	2 i
Military armored vehicles, tanks, and tank components	336992	17	11	11	*	11	11	6	5	6
Other transportation	other 336	1,277	1,177 i	1,195	27	1,168	988 i	699 i	289 i	83
Furniture and related products	337	460	4 i	415	11	404	4 i	2 i	2 i	45
Miscellaneous manufacturing	339	15,843	D	13,778	652	13,126	D	78 i	D	2,065
Medical equipment and supplies	3391	12,469	259	10,839	414	10,425	237	57 i	180 i	1,630
Other miscellaneous manufacturing	3399	3,374	D	2,939	238	2,701	D	21 i	D	435
Nonmanufacturing industries	21-23, 42-81	128,810	22,309	109,454	4,454	105,000 i	16,749	6,433	10,316	19,356
Mining, extraction, and support activities	21	3,873	825	3,492	305	3,187	677	1	675	381
Utilities	22	524	52	522	169	353	42	37	5	3
Wholesale trade	42	465 i	23 i	431 i	56 i	374 i	14 i	*	13 i	35 i
Electronic shopping and electronic auctions	454111-12	D	0	D	0	D	0	0	0	D
Transportation and warehousing	48-49	422 i	1	404 i	21 i	383 i	1	0	1	18
Information	51	81,482	1,518	67,163	1,840	65,324	1,434	174	1,260	14,319
Publishing	511	45,832	1,341	34,897	1,355	33,542	1,267	111	1,156	10,935
Newspaper, periodical, book, and directory publishers	5111	110 i	0	105 i	8 i	97 i	0	0	0	5 i
Software publishers	5112	45,722	1,341	34,792	1,347	33,445	1,267	111	1,156	10,930
Telecommunications	517	4,386	12	4,338	300 i	4,037	11	8	4 i	49

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Data processing, hosting, and related services	518	11,211	103	9,878	165	9,713	96	55	42	1,333
Other information	other 51	20,052 i	63	18,050 i	20 i	18,031 i	60	1 i	59	2,002 i
Finance and insurance	52	4,676	49	4,061	441	3,620	1	0	1	615
Real estate and rental and leasing	53	429	0	424	1	423	0	0	0	5
Lessors of nonfinancial intangible assets (except copyrighted works)	533	8	0	8	* i	8 i	0	0	0	*
Other real estate and rental and leasing	other 53	421	0	416	1	416	0	0	0	4
Professional, scientific, and technical services	54	24,211 i	19,685	21,801 i	1,586 i	20,215 i	14,444	6,199	8,245	2,411 i
Architectural, engineering, and related services	5413	1,598 i	2,339	1,566 i	45 i	1,521 i	2,302	1,879	423	32
Computer systems design and related services	5415	12,137 i	2,441 i	10,455 i	186 i	10,269 i	2,282 i	580 i	1,702 i	1,682 i
Scientific R&D services	5417	6,591 i	14,277	6,332 i	1,299 i	5,033 i	9,265	3,396	5,869	259
Biotechnology R&D	541711	1,685	3,910	1,547 i	397 i	1,150 i	D	246 i	D	139
Physical, engineering, and life sciences (except biotechnology) R&D	541712	4,839 i	9,568	4,723 i	881 i	3,841 i	6,233	2,545	3,688	117
Social sciences and humanities R&D	541720	66	799	62	21	41	D	604	D	4 i
Other professional, scientific, and technical services	other 54	3,886 i	628	3,448 i	56	3,392 i	595	345	250	438 i
Health care services	621-23	549 i	77 i	546 i	16 i	530 i	77 i	5 i	72 i	2
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	D	80	D	19 i	D	60	17	42	D
All companies (number of domestic employees)	-	424,439	63,796	344,818	31,644	313,174	53,534	23,091 i	30,443	79,621
Small companies ^a										
5-499	-	69,426 i	13,890 i	64,213 i	6,728	57,485 i	12,250 i	4,212	8,038 i	5,213
5-99	-	39,319 i	8,630 i	37,345 i	4,420	32,924 i	7,584 i	2,400 i	5,183 i	1,975
5-49	-	26,365 i	5,546 i	25,302 i	2,794 i	22,508 i	4,888 i	1,760 i	3,128 i	1,064
5-9	-	6,256 i	956 i	6,081 i	637 i	5,443 i	787 i	369 i	419 i	175
10-24	-	9,668 i	1,876 i	9,239 i	1,149	8,090 i	1,694 i	742 i	952 i	429 i
25-49	-	10,442 i	2,713 i	9,982 i	1,007	8,975 i	2,406 i	649	1,757 i	459
50-99	-	12,954 i	3,085 i	12,043 i	1,627	10,416 i	2,696 i	640 i	2,055 i	911
100-249	-	16,304	2,964	14,517	1,325 i	13,192	2,637	1,177	1,459	1,786
250-499	-	13,803	2,296	12,350	982	11,368	2,029	634	1,395	1,452
Medium and large companies										
500-999	-	17,878	1,838	15,433	888	14,545	1,707	341 i	1,366	2,446
1,000-4,999	-	74,491	11,162	59,342	4,541	54,801	9,311	1,875	7,437	15,149

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5,000–9,999	–	44,571	12,921	34,099	2,444	31,654	8,249	1,332 i	6,917	10,472
10,000–24,999	–	66,080	7,705	53,329	6,689	46,640	7,309	3,794	3,514	12,751
25,000 or more	–	151,993	16,280 i	118,403	10,354	108,049 i	14,708 i	11,537 i	3,171	33,591

* = 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 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 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: National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2014.