

TABLE 68. R&D costs paid for by the company and others projected for 2014, by industry and company size: 2013
(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	392,477	71,130	314,549	28,998	285,551	60,399	31,559 i	28,840	77,928	
Manufacturing industries	31-33	276,125	49,520	215,501	25,129	190,372	43,724	24,392 i	19,332	60,624	
Food	311	7,276 i	230	5,971 i	513 i	5,458 i	230	4 i	225	1,305 i	
Beverage and tobacco products	312	1,714	109 i	1,057	163	894	109 i	* i	109 i	657	
Textile, apparel, and leather products	313-16	816	18 i	707	34	674	18 i	7 i	11 i	108	
Wood products	321	225	10	219	10	209	9	1	8	6	
Paper	322	1,118	13 i	999	7	991	13 i	9 i	5	120	
Printing and related support activities	323	274 i	41 i	266 i	29	237 i	30 i	2 i	27 i	9	
Petroleum and coal products	324	613	7	535	299	235 i	6	0	6	78	
Chemicals	325	94,915	12,481	76,598	17,120	59,478	9,182	800	8,382	18,318	
Basic chemicals	3251	3,491	335	2,718	186	2,532	313	182 i	131	773	
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,605	213	1,072	32	1,041	127	1	126	533	
Pesticide, fertilizer, and other agricultural chemicals	3253	1,669 i	308	1,434 i	43 i	1,390 i	303	2	302	235 i	
Pharmaceuticals and medicines	3254	82,620	11,581	67,260	16,548	50,711	8,399	594	7,806	15,360	
Soap, cleaning compound, and toilet preparation	3256	3,945	7 i	2,829	288	2,541	7 i	2 i	5 i	1,115	
Paint, coating, adhesive, and other chemicals	3255, 3259	1,585	37	1,284	22	1,262	33	20	13	301	
Plastics and rubber products	326	4,869	155 i	3,838	200	3,638	144 i	12 i	133 i	1,030	
Nonmetallic mineral products	327	1,045	30 i	952 i	203 i	749 i	22 i	3 i	19 i	94 i	
Primary metals	331	769 i	13	731 i	54 i	677 i	12	5	7	39	
Fabricated metal products	332	2,126 i	390 i	2,005 i	70 i	1,935 i	277 i	106 i	171 i	121	
Machinery	333	16,430	641	13,390	416	12,974	574	136 i	439	3,040	
Agricultural implement	33311	2,520	53	2,010	203	1,806	38	0	38	510	
Semiconductor machinery	333295	3,742	107	3,268	4	3,264	105	4	101	474	
Engine, turbine, and power transmission equipment	3336	1,946	124	1,471	32 i	1,439	106	51 i	55	476 i	
Other machinery	other 333	8,222	358 i	6,642	177	6,465	325 i	80 i	245 i	1,580	
Computer and electronic products	334	83,192	9,976	61,670	1,897	59,773 i	9,509	4,849	4,660	21,522	
Communications equipment	3342	20,795	1,625 i	15,750	730 i	15,020 i	1,558 i	976 i	582	5,045	
Semiconductor and other electronic components	3344	42,479 i	2,415	29,695 i	594	29,101 i	2,273	58 i	2,215	12,783	
Navigational, measuring, electromedical, and control instruments	3345	11,569	5,634	9,438	398	9,039	5,462	3,763	1,699	2,132	
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	2,660	219	2,354	188	2,166	189	17	173	306 i	
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	3,583 i	5,112	3,105	89	3,016	5,016	3,673	1,343	478	
Other measuring and controlling device	other 3345	5,326	303	3,979	122 i	3,857	257	74	183	1,347	
Other computer and electronic products	other 334	8,349	303	6,787	174 i	6,613	216	52 i	164	1,562	
Electrical equipment, appliances, and components	335	5,708	479 i	3,957	125	3,831	478 i	173 i	305 i	1,751	
Transportation equipment	336	36,777	24,419 i	26,772	3,276	23,496	22,639 i	18,216 i	4,423	10,005	
Automobiles, bodies, trailers, and parts	3361, 3362, 3363	23,161	3,587	15,135	2,274	12,861	3,105	198 i	2,907	8,026	

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				Total	Purchased and collaborative R&D	R&D performed by the company	Total	U.S. government	Non-U.S. government sources	
Aerospace products and parts	3364	12,428	19,647 i	10,480	974	9,506	18,542 i	17,316 i	1,225	1,947
Aircraft, aircraft engine, and aircraft parts	336411-13	12,147	D	10,205	937	9,268	D	D	D	1,942
Guided missile, space vehicle, and related parts	336414-15, 336419	281	D	275	38	238 i	D	D	D	5 i
Military armored vehicle, tank, and tank components	336992	6 i	1 i	6 i	1 i	6 i	1 i	1 i	0	0
Other transportation	other 336	1,182	1,184 i	1,151	27	1,124	992 i	701 i	291 i	32
Furniture and related products	337	433	1 i	405	12 i	393	1 i	* i	* i	28
Miscellaneous manufacturing	339	17,824 i	507	15,431 i	702	14,728 i	470	68	402	2,393
Medical equipment and supplies	3391	14,588 i	453	12,594 i	654	11,941 i	430	38	392	1,994 i
Other miscellaneous manufacturing	3399	3,236	54 i	2,836	49 i	2,787	41 i	30 i	11 i	400
Nonmanufacturing industries	21-23, 42-81	116,352 i	21,611	99,048 i	3,869	95,179 i	16,675	7,168	9,507	17,304
Mining, extraction, and support activities	21	4,268	684	3,801	259	3,541	630	8 i	622	467
Utilities	22	462	70	433	185	248	70	64	6	29
Wholesale trade	42	782 i	12	735 i	104 i	631 i	12	0	12	47 i
Electronic shopping and electronic auctions	454111-12	3,214	0	D	D	1,882 i	0	0	0	D
Transportation and warehousing	48-49	433 i	D	420 i	42 i	378 i	D	D	D	13
Information	51	79,086 i	1,424	67,138 i	1,940	65,198 i	1,234	185	1,049	11,948
Publishing	511	50,796	1,240	41,512	1,602	39,910	1,067	127	940	9,283
Newspaper, periodical, book, and directory publishers	5111	299 i	1 i	290 i	15 i	276 i	1 i	* i	1 i	9 i
Software publishers	5112	50,496	1,239	41,222	1,588	39,635	1,066	127	939	9,274
Telecommunications	517	3,287 i	4 i	3,217 i	217 i	3,000 i	4 i	* i	3 i	70
Data processing, hosting, and related services	518	7,838	156 i	7,156	73 i	7,083	141	58 i	83 i	683
Other information	other 51	17,165 i	24	15,253 i	48	15,205 i	23	* i	22	1,912 i
Finance and insurance	52	5,533	12	4,767	57	4,710	12	0	12	766
Real estate and rental and leasing	53	154	0	143	1 i	142	0	0	0	11
Lessors of nonfinancial intangible assets (except copyrighted works)	533	41	0	D	* i	D	0	0	0	D
Other real estate and rental and leasing	other 53	113	0	D	* i	D	0	0	0	D
Professional, scientific, and technical services	54	20,878 i	19,116	18,292 i	1,211 i	17,081 i	14,477	6,809	7,668	2,586
Architectural, engineering, and related services	5413	1,380	2,228	1,350 i	60 i	1,290 i	2,212	1,775	437 i	30
Computer systems design and related services	5415	10,636 i	1,417 i	9,247 i	273 i	8,974 i	1,349 i	956 i	393 i	1,389 i
Scientific research and development services	5417	4,008	14,433	3,850	788 i	3,063 i	9,941	3,431	6,510	157
Biotechnology research and development	541711	2,120	4,257	2,013	466	1,547	2,546	196	2,350	107
Physical, engineering, and life sciences (except biotechnology) research and development	541712	1,851 i	9,287	1,800 i	322 i	1,478 i	6,616	2,567	4,048	51
Social sciences and humanities research and development	541720	37 i	889	37 i	* i	37 i	779	668	111	0
Other professional, scientific, and technical services	other 54	4,855	1,038	3,845 i	90	3,755 i	975	647	328	1,010
Health care services	621-23	310 i	94 i	308 i	16 i	291 i	94 i	3 i	91	2

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Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	1,233 i	D	D	D	1,076 i	D	D	D	D
All companies (number of domestic employees)		392,477	71,130	314,549	28,998	285,551	60,399	31,559 i	28,840	77,928
Small companies ^a										
5-499		57,974	13,417	52,866 i	5,562	47,304 i	12,120	4,868 i	7,251 i	5,108
5-99		30,107 i	7,832 i	28,123 i	3,577	24,546 i	7,002 i	2,747 i	4,254 i	1,984
5-49		20,143 i	5,614 i	18,644 i	2,362	16,281 i	5,007 i	1,974 i	3,033 i	1,500
5-9		2,931 i	1,439 i	2,808 i	350 i	2,458 i	1,312 i	624 i	688 i	123
10-24		8,638 i	2,023 i	7,715 i	1,075	6,641 i	1,745 i	699 i	1,046 i	922
25-49		8,575 i	2,152	8,120 i	938	7,182 i	1,949	651	1,298	455
50-99		9,964	2,218	9,480	1,215	8,265 i	1,995	774 i	1,221	484
100-249		14,673	3,356	13,112	1,251 i	11,860	3,067	1,378	1,689 i	1,561
250-499		13,194	2,229	11,631	733	10,898	2,051	743	1,308	1,563
Medium and large companies										
500-999		13,984	2,160	12,191	849	11,342	1,968	469	1,499	1,794
1,000-4,999		65,885	11,864	52,074	3,940	48,134	9,662	2,340	7,322	13,810
5,000-9,999		37,265	10,885	26,734	1,084	25,650	6,625	849	5,776	10,531
10,000-24,999		65,870	7,951	52,823	8,043	44,780	6,923	3,484	3,439	13,047
25,000 or more		151,498	24,852 i	117,861	9,520	108,341 i	23,101 i	19,548 i	3,552	33,637

* = 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 = 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, 2013.