

TABLE 142. R&D costs paid for by the company and paid for by others projected for 2011, by industry and company size: 2010
(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 company	Paid for by others	Paid for by company			Paid for by others			
				Total	Purchased and collaborative R&D	R&D performed by the company in United States	R&D performed by the company in United States	U.S. government	Non-U.S. government sources	
All industries	21-23, 31-33, 42-81	337,441	74,777	271,529	34,777	236,752	64,547	36,272 i	28,275	65,912
Manufacturing industries	31-33	244,549	47,498	191,182	26,714	164,468	42,705 i	27,129 i	15,576	53,368
Food	311	5,856	176	4,259	566	3,693	162	23	139	1,597
Beverage and tobacco products	312	D	D	D	D	D	D	* i	D	852
Textiles, apparel, and leather products	313-316	589	12	540	15	525	12	10	2	49
Wood products	321	244	13	239	19	220	11	* i	D	5
Paper	322	1,818 i	28	1,636 i	25 i	1,611 i	25	D	D	183 i
Printing and related support activities	323	239	26	205	12	193	25	1	24	34
Petroleum and coal products	324	D	D	D	D	D	D	*	D	163
Chemicals	325	91,509	7,606	72,799	18,398	54,401	5,573	344	5,229	18,711
Basic chemicals	3251	2,795	118	1,732	127	1,605	89	32	57	1,062
Resin, synthetic rubber, fibers, and filaments	3252	1,264	30	979	60	919	30	18	12	285
Pesticide, fertilizer, and other agricultural chemical	3253	D	D	D	110 i	D	D	1	D	D
Pharmaceuticals and medicines	3254	77,200	6,991	62,483	17,440	45,043	5,005	D	D	14,717
Soap, cleaning compound, and toilet preparation	3256	4,348	6	3,187	133 i	3,054 i	6	1	5	1,161
Paint, coating, adhesive, and other chemical	3255, 3259	D	D	D	528	D	D	D	D	D
Plastics and rubber products	326	2,473	212 i	2,050	82	1,968	196 i	7 i	189	423
Nonmetallic mineral products	327	1,836 i	33	1,548 i	288 i	1,260 i	32	24	8	288 i
Primary metals	331	902	80	676	213 i	463 i	78	30	48	226
Fabricated metal products	332	1,741	393	1,612	91	1,521	384	104	280	129
Machinery	333	12,961	656	10,683	756	9,927	621	122	499	2,278
Agricultural implement	33311	2,119	30	1,575	237	1,338	26	10	16	543
Semiconductor machinery	333295	2,263	148	1,967	21	1,946	148	5	143	296
Engine, turbine, and power transmission equipment	3336	1,188	150	1,072	180	892	136	38	98	116
Other machinery	other 333	7,391	328	6,069	317	5,752	310	69	241	1,322
Computer and electronic products	334	70,668	9,342	56,105	2,011 i	54,094	8,208	5,228	2,980	14,563
Communications equipment	3342	14,043	1,675	11,067	538 i	10,529	1,606	D	D	2,976
Semiconductor and other electronic components	3344	30,398	751	23,097	562	22,535	593	200	393	7,301
Navigational, measuring, electromedical, and control instruments	3345	13,219	6,231	11,074	422	10,652	5,384	4,055	1,329	2,145
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	4,432	146	3,958	177	3,781	135	47	88	474
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	3,291	5,930	2,947	76	2,871	5,105	3,910	1,195	344
Other measuring and controlling instruments	other 3345	5,495 i	155	4,169 i	169 i	4,000 i	144	98	46	1,327
Other computer and electronic products	other 334	13,009	685	10,868	489 i	10,379	624	D	D	2,141
Electrical equipment, appliances, and components	335	5,129	286	3,532	269 i	3,263	261	146	115	1,597
Transportation equipment	336	33,739	28,096 i	23,071	2,883	20,188	26,603 i	21,002 i	5,601	10,668
Automobiles, bodies, trailers, and parts	3361-3363	D	D	D	1,836	D	D	D	D	D
Aerospace products and parts	3364	12,390	24,905 i	10,071	974	9,097	24,037 i	20,089 i	3,948	2,318

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				Total	Purchased and collaborative R&D	R&D performed by the company in United States	R&D performed by the company in United States	U.S. government	Non-U.S. government sources	
Aircraft, aircraft engine, and aircraft parts	336411-336413	11,569	D	9,276	901	8,375	18,613 i	D	D	2,293
Guided missile, space vehicle, and related parts	336414, 336415, 336419	821	D	795	73	722	5,424	D	D	25
Military armored vehicle, tank, and tank components	336992	30	1	30	* i	D	1	0	1	*
Other transportation	other 336	D	D	D	73 i	D	D	D	D	D
Furniture and related products	337	463	4	429	13	416	4	0	4	35
Miscellaneous manufacturing	339	D	D	D	D	D	D	D	D	1,568
Medical equipment and supplies	3391	8,782	347	7,586	780	6,806	332	32	300	1,196
Other miscellaneous manufacturing	3399	D	D	D	D	D	D	D	D	372
Nonmanufacturing industries	21-23, 42-81	92,892	27,279	80,347	8,064	72,283	21,842	9,143	12,699	12,544
Mining, extraction, and support activities	21	2,632	310	2,411	316	2,095	290	D	D	222
Utilities	22	670	150	648	252	396	111	94	17	22
Construction	23	1,031	368	1,023	366	657	368	367	1	9
Wholesale trade	42	1,750	243	1,642 i	184 i	1,458 i	230	48	182	108 i
Retail trade	44, 45	D	*	1,103	52	1,051	*	0	D	D
Electronic shopping and electronic auctions	454111, 454112	D	0	940	11	929	0	0	0	D
Other retail trade	other 44, 45	D	*	163	41	122	*	0	*	D
Transportation and warehousing	48, 49	129	4 i	109	8	101	3 i	2 i	1	20 i
Information	51	51,865	734	43,764	2,177 i	41,587	694	139	555	8,101
Publishing	511	37,484	616	30,691	1,387	29,304	582	122	460	6,794
Newspaper, periodical, book, and directory publishers	5111	1,026 i	*	922 i	97 i	825 i	*	0	*	104 i
Software publishers	5112	36,459	616	29,769	1,291	28,478	582	122	460	6,690
Telecommunications	517	3,079 i	46	2,931 i	225 i	2,706 i	46	2	44	148 i
Data processing, hosting, and related services	518	2,504	40	2,337	126	2,211	35	3	32	168
Other information	other 51	8,798 i	32	7,806 i	439 i	7,367 i	31 i	12 i	19	992 i
Finance and insurance	52	2,674	2	2,152	79	2,073	2 i	1	1	522
Real estate and rental and leasing	53	530	17	463	11	452	2	0	2	67
Professional, scientific, and technical services	54	26,285	25,261	23,483	3,013	20,470	19,998	8,437	11,561	2,802
Architectural, engineering, and related services	5413	2,038	3,603	1,887	364	1,523	3,445	1,862 i	1,583	151
Computer systems design and related services	5415	16,227	1,767	14,408 i	1,199 i	13,209 i	1,716	834	882	1,820
Scientific R&D services	5417	5,545	17,813	5,068	1,203	3,865	12,846	4,347	8,499	477
Biotechnology R&D	541711	3,472	5,855	3,238	904	2,334	4,241	669	3,572	234
Physical, engineering, and life sciences (except biotechnology) R&D	541712	2,052	11,236	1,811	294	1,517	8,006	3,154	4,852	241
Social sciences and humanities R&D	541720	21	722	19	4 i	15	598	525	73	2
Other professional, scientific, and technical services	other 54	2,474	2,078	2,121	247	1,874	1,991	1,394	597	354
Health care services	621-623	1,202	131	1,196	638	558	115	34	81	5
Other nonmanufacturing	55, 56, 624, 71, 72, 81	D	59	2,354	968	1,386	30 i	D	D	D

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All companies (number of employees)	-	337,441	74,777	271,529	34,777	236,752	64,547	36,272 i	28,275	65,912
Small companies (number of employees) ^a										
5-499	-	60,114	13,962	53,907	8,917	44,990	12,502	5,832	6,670	6,207
5-99	-	34,728	8,951	31,766	6,281	25,485	8,206	4,071	4,135	2,962
5-49	-	25,573	6,138	23,640	5,083	18,557	5,614	2,961	2,653	1,933
5-9	-	4,580	1,222	4,304	1,655	2,649	1,035	592	443	276
10-24	-	11,564	2,709	10,455	1,823	8,632	2,573	1,237	1,336	1,109
25-49	-	9,429	2,207	8,881	1,605	7,276	2,006	1,132	874	548
50-99	-	9,155	2,813	8,125	1,199	6,926	2,592	1,109	1,483	1,030
100-249	-	13,471	2,753	11,789	1,627	10,162	2,449	1,083	1,366	1,682
250-499	-	11,915	2,258	10,352	1,009	9,343	1,847	678	1,169	1,562
Medium and large companies (number of employees)										
500-999	-	12,770	1,608	10,582	941	9,641	1,472	669	803	2,188
1,000-4,999	-	61,357	12,678	47,219	4,420	42,799	9,947	2,729	7,218	14,138
5,000-9,999	-	32,881	8,870	26,096	2,303 i	23,793	5,706	771 i	4,935	6,785
10,000-24,999	-	53,845	6,360	44,036	6,246	37,790	5,138	2,541	2,597	9,810
25,000 or more	-	116,473	31,298 i	89,688	11,951	77,737	29,782 i	23,729 i	6,053	26,785

* = amount < \$500,000; D = data withheld to avoid disclosing operations of individual companies; i = value > 50% of 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 small business; Business R&D and Innovation Survey (BRDIS) 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 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, 2010.