

TABLE 46

Domestic R&D performance by source of funds and performer, by industry and company size: 2015

(Millions of U.S. dollars)

Industry and company size	NAICS code	Paid for by the company			Paid for by others						
		Total	R&D performed by others (purchased and collaborative R&D)	R&D performed by the company	Total	R&D performed by the company					
						R&D performed by others (subcontracted/ passed-through R&D costs)		Total	Paid for by the U.S. government	Paid for by non-U.S. government sources	
All industries	21-23, 31-33, 42-81	335,360	38,683	296,677	69,233	10,089					59,144
Manufacturing industries	31-33	230,368	34,576	195,792	48,415	8,075		40,340	21,552	i	18,788
Food	311	4,792	147	4,644	203	9		194	*		194
Beverages and tobacco products	312	1,102	217	885	117	* i		117	*	i	116
Textiles, apparel, and leather products	313-16	739	24	715	35	3		32	25		8
Wood products	321	197	10	188	9	i	1 i	8 i	*	i	7 i
Paper	322	775	13	763	4	i	1 i	3 i	*	i	3 i
Printing and related support activities	323	195	6	189	10	i	3 i	7 i	1	i	6 i
Petroleum and coal products	324	232	32	200	15	*		14	D		D
Chemicals	325	85,730	26,962	58,769	13,639	4,211		9,427	410		9,018
Basic chemicals	3251	2,731	156	2,574	480	13		467	D		D
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,234	61	1,172	30	i	2 i	29 i	*		29 i
Pesticides, fertilizers, and other agricultural chemicals	3253	D	D	2,157	D	D		D	D		D
Pharmaceuticals and medicines	3254	76,715	26,473	50,242	12,593	4,161		8,432	138		8,294
Soaps, cleaning compounds, and toilet preparations	3256	1,413	130	1,283	142	27		115	1		114
Paints, coatings, adhesives, and other chemicals	3255, 3259	D	D	1,339	D	D		D	D		D
Plastics and rubber products	326	2,437	47	2,390	153	i	2	152	1		151
Nonmetallic mineral products	327	1,381	142	1,239	21	1		20	8	i	12
Primary metals	331	641	62	579	49	1		49	14		35
Fabricated metal products	332	2,083	45	2,039	256	i	34 i	223 i	10	i	212 i
Machinery	333	13,021	477	12,544	944	i	62 i	881 i	222		659 i
Agricultural implements	33311	1,685	169	1,516	15	i	* i	15 i	3	i	12 i
Semiconductor machinery	333242	2,923	7	2,917	338	i	41 i	297 i	71	i	226 i
Engines, turbines, and power transmission equipment	3336	2,405	23	2,381	157	3		154	33		120
Other machinery	other 333	6,008	278	5,731	434	18		416	114		301
Computer and electronic products	334	65,430	1,666	63,765	8,606	261		8,345	4,213		4,132

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Communications equipment	3342	18,856	858	17,999	1,463	38	1,426	776	650			
Semiconductors and other electronic components	3344	28,948	351	28,597	1,884	30	1,855	45	1,810			
Navigational, measuring, electromedical, and control instruments	3345	9,510	292	9,218	5,099	189	4,910	3,365	1,545			
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	2,577	52	2,525	238	5	233	15	218			
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	3,000	119	2,881	4,661	182	4,480	3,301	1,179			
Other measuring and controlling devices	other 3345	3,934	121	3,813	200	3	197	49	148			
Other computer and electronic products	other 334	8,116	165	7,951	159	4	154	28	127			
Electrical equipment, appliances, and components	335	4,029	177	3,852	494	11	483	50	433			
Transportation equipment	336	33,034	3,810	29,224	23,500	3,450	20,050	16,515	3,535			
Automobiles, bodies, trailers, and parts	3361-63	18,968	2,331	16,636	2,569	128	2,441	200	2,242			
Aerospace products and parts	3364	12,575	1,437	11,138	19,644	3,318	16,326	15,064	1,261			
Aircraft, aircraft engines, and aircraft parts	336411-13	12,083	1,329	10,754	18,380	3,317	15,063	13,830	1,233			
Guided missiles, space vehicles, and related parts	336414-15, 336419	493	108	385	1,264	1	1,263	1,235	28			
Military armored vehicles, tanks, and tank components	336992	5	*	5	12	0	12	2	9			
Other transportation	other 336	1,486	41	1,445	1,275	4	1,271	1,249	23			
Furniture and related products	337	476	33	443	10	1	9	7	2			
Miscellaneous manufacturing	339	14,072	707	13,365	349	23	326	D	D			
Medical equipment and supplies	3391	11,819	609	11,211	180	10	171	37	134			
Other miscellaneous manufacturing	3399	2,252	99	2,154	168	13	155	D	D			

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Nonmanufacturing industries	21-23, 42-81	104,993	4,107	100,885	20,819	2,014	18,804	5,438		13,366
Mining, extraction, and support activities	21	3,754	361	3,393	729	111	619	1	i	618
Utilities	22	707	261	446	47	13	34	31		3
Wholesale trade	42	1,757	73	1,684	86	2	84	3		81
Electronic shopping and electronic auctions	454111-12	1,517	*	1,517	19	2	16	0		16
Transportation and warehousing	48-49	419	16	403	*	0	*	0		*
Information	51	66,361	1,783	64,578	1,011	77	935	51		884
Publishing	511	33,803	1,205	32,598	811	64	747	22		726
Newspaper, periodical, book, and directory publishers	5111	107	9	98	*	*	*	*		*
Software publishers	5112	33,696	1,196	32,500	811	64	747	22		726
Telecommunications	517	3,713	176	3,537	75	5	70	5		65
Data processing, hosting, and related services	518	9,523	209	9,314	110	8	102	24		78
Other information	other 51	19,322	193	19,129	16	0	16	0		16
Finance and insurance	52	5,413	85	5,329	38	*	38	0		38
Real estate and rental and leasing	53	308	7	301	1	0	1	0		1
Lessors of nonfinancial intangible assets (except copyrighted works)	533	71	3	68	0	0	0	0		0
Other real estate and rental and leasing	other 53	237	4	232	1	0	1	0		1
Professional, scientific, and technical services	54	23,303	1,388	21,915	18,441	1,730	16,710	5,323		11,387
Architectural, engineering, and related services	5413	2,355	108	2,247	2,140	260	1,881	1,550		331
Computer systems design and related services	5415	12,505	87	12,418	1,927	12	1,915	605		1,310
Scientific research and development services	5417	5,052	1,156	3,896	13,809	1,376	12,433	2,939		9,494
Biotechnology research and development	541711	2,129	593	1,536	4,271	114	4,157	264		3,892

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Physical, engineering, and life sciences (except biotechnology) research and development	541712	2,908	559	2,348	8,705	1,122	7,583	2,043	5,540	
Social sciences and humanities research and development	541720	15 i	4 i	12 i	834	141	693	632	61	
Other professional, scientific, and technical services	other 54	3,391	37	3,354	564	83	481	229	252	
Health care services	621-23	485	25 i	460	368 i	70 i	298 i	4 i	294 i	
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	968	108 i	861	79	10	69	25	44	
All companies (number of domestic employees)	-	335,360	38,683	296,677	69,233	10,089	59,144	26,990	32,154	
Micro companies ^a										
5-9	-	2,375 i	403 i	1,972 i	1,131 i	115 i	1,016 i	412 i	604 i	
Small companies										
10-19	-	5,306 i	872	4,434 i	1,463 i	216 i	1,246 i	317 i	929 i	
20-49	-	9,391 i	1,458	7,933 i	2,958	643	2,316 i	1,024	1,292 i	
Medium companies										
50-99	-	10,354	1,551	8,803	3,369	663	2,706	532	2,174	
100-249	-	12,772	1,735	11,037	2,938	373	2,566	1,006	1,559	
Large companies										
250-499	-	12,524	1,156	11,368	2,470	285	2,185	723	1,461	
500-999	-	14,064	869	13,194	2,281	259	2,023 i	183	1,839 i	
1,000-4,999	-	53,859	5,594	48,264	11,785	1,955	9,830	1,644 i	8,186	
5,000-9,999	-	39,161	4,501	34,660	5,474	1,296	4,178	891	3,287	
10,000-24,999	-	59,562	11,113	48,450	11,812	934	10,878	4,244	6,634	
25,000 or more	-	115,992	9,430	106,562	23,552	3,351 i	20,201	16,013 i	4,188	

* = 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 Business R&D and Innovation Survey does not include companies with fewer than five domestic employees.

Note(s)

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(s)

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National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2015.