TABLE 65. Companies that performed or funded R&D and introduced new or significantly improved products and sales from products, by industry, industry proportions, and company size: 2012–14 (Number and percent)

		New or significantly improved				Sales of products			
		produc	ts (number)	•	New to comp	oany's market	New only t	to company	unchanged or marginally modified
	•				Companies	Sales	Companies	Sales	
Industry and company size	NAICS code	Companies ^a	Yes ^b	No^{c}	(number) ^d	(US\$millions)	(number) ^d	(US\$millions)	(US\$millions)
All industries	21–23, 31–33, 42–81	53,048	30,891	22,157	21,338	777,638	21,324	825,655	11,764,192
Manufacturing industries	31–33	24,589	15,110	9,478	10,664	514,982	10,634	688,489	7,029,286
Food	311	1,424	792	632	551	25,976	557	82,156	778,186
Beverages and tobacco products	312	120	68	52	53	316	22	635	D
Textiles, apparel, and leather products	313–16	560	281	280	210	6,356	192	4,931	59,102
Wood products	321	282	138	144	88	3,943 i	86	1,676 i	48,295
Paper	322	271	167	105	140	5,939	117	11,131	88,783
Printing and related support activities	323	317	190	127	115	1,122	164	2,430	25,641
Petroleum and coal products	324	109	47	62	36	125	39	285	273,209
Chemicals	325	2,804	1,554	1,250	1,116	176,598	1,044	93,504	1,583,086
Basic chemicals	3251	312	208	104	168	12,836	149	14,352	570,191
Resins, synthetic rubber, and artificial									
synthetic fibers and filaments	3252	258	139	118	98	12,897	92	14,405	198,081
Pesticides, fertilizers, and other agricultural chemicals	3253	148	55	94	43	1,601	49	7,196	49,647
Pharmaceuticals and medicines	3254	1,111	502	609	322	55,780	332	43,828	519,463
Soaps, cleaning compounds, and toilet preparations	3256	391	309	82	255	86,110	190	7,039	164,140
Paints, coatings, adhesives, and other chemicals	3255, 3259	584	342	242	230	7,375	232	6,685	81,564
Plastics and rubber products	326	1,519	889	630	624	24,653	589	18,632	207,034
Nonmetallic mineral products	327	509	335	174	231	1,075	241	2,662	58,475
Primary metals	331	279	145	133	105	2,128	99	9,725	118,852
Fabricated metal products	332	3,244	1,906	1,338	1,297	10,906	1,459	13,932	177,228
Machinery	333	3,827	2,565	1,263	1,700	27,844	1,829	51,102	D
Agricultural implements	33311	216	157	59	116	9,004	130	16,668	52,291
Semiconductor machinery	333295	88	79	9	20	3,157	26	384	22,988
Engine, turbine, and power transmission equipment	3336	104	63	41	39	913	51	17,419	D
Other machinery	other 333	3,419	2,266	1,153	1,525	14,771	1,621	16,632	298,472
Computer and electronic products	334	3,008	2,057	952	1,450	86,981	1,497	167,160	1,021,229
Communications equipment	3342	516	345	171	240	8,371	243	12,301	325,182
Semiconductors and other electronic components	3344	678	449	228	319	35,684	350	25,035	323,298
Navigational, measuring, electromedical, and control						52,551			5-5,-10
instruments	3345	1,383	923	460	627	34,523	655	7,424	234,784
Electromedical, electrotherapeutic, and irradiation									
apparatus	334510, 334517	299	117	182	80	5,702	70	366	50,599
Search, detection, navigation, guidance, aeronautical,									·
and nautical systems and instruments	334511	85	45	40	22	24,770	27	2,034	78,228
Other measuring and controlling device	other 3345	1,000	761	239	525	4,052	558	5,024	105,957
Other computer and electronic products	other 334	431	339	92	265	8,403	249	122,400	137,965
Electrical equipment, appliances, and components	335	1,476	1,145	331	933	10,629	847	16,802	216,017
Transportation equipment	336	1,585	895	691	664	106,616	606	182,202	1,257,752
Automobiles, bodies, trailers, and parts	3361–63	934	516	418	348	55,785	369	149,836	808,006
Aerospace products and parts	3364	346	166	179	128	46,024	136	30,239	383,138
Aircraft, aircraft engines, and aircraft parts	336411-13	325	154	170	D	D	128	29,732	D

TABLE 65. Companies that performed or funded R&D and introduced new or significantly improved products and sales from products, by industry, industry proportions, and company size: 2012–14 (Number and percent)

		New or sign	ificantly imp	roved		Sales of products			
			cts (number)		New to comp	any's market	New only to company		unchanged or
	•	· · · · · · · · · · · · · · · · · · ·			Companies	Sales	Companies	Sales	marginally modified
Industry and company size	NAICS code	Companies ^a	Yes ^b	No ^c	(number) ^d	(US\$millions)	(number) ^d	(US\$millions)	(US\$millions)
Guided missiles, space vehicles, and related parts	336414–15, 336419	21	12	9	D	D	8	507	D
Military armored vehicles, tanks, and tank components	336992	12	6	6	5	32	D	13	D
Other transportation	other 336	293	206	87	183	4,775	D	2,114	D
Furniture and related products	337	691	354	337	198	3,755	201	3,402	D
Miscellaneous manufacturing	339	2,562	1,583	979	1,153	20,019	1,045	26,122	395,519
Medical equipment and supplies	3391	863	537	327	416	14,790	269	21,014	269,633
Other miscellaneous manufacturing	3399	1,699	1,046	652	737	5,229	776	5,109	125,886
Nonmanufacturing industries	21-23, 42-81	28,459	15,781	12,679	10,674	262,655	10,690	137,167	4,734,906
Mining, extraction, and support activities	21	360	167	194	93	14,432	155	7,464	D
Utilities	22	97	45	52	39	1,555	5	364	322,966
Wholesale trade	42	2,711	1,570	1,140	1,104	7,009	839	2,826	201,508
Electronic shopping and electronic auctions	454111-12	172	92	80	63	55	50	1,460	D
Transportation and warehousing	48-49	291	14	277	13	765	8	354	185,990
Information	51	4,166	2,605	1,561	1,802	157,318	1,638	59,659	1,186,585
Publishing	511	1,987	1,285	702	1,000	84,366	845	25,575	476,618
Newspaper, periodical, book, and directory publishers	5111	169	23	146	16	13	15	126	6,763
Software publishers	5112	1,818	1,262	556	984	84,353	830	25,449	469,855
Telecommunications	517	294	199	95	94	66,518	150	22,904	419,298
Data processing, hosting, and related services	518	1,260	848	413	571	5,113	505	7,982	D
Other information	other 51	625	274	351	136	1,322	139	3,197	D
Finance and insurance	52	821	539	282	18	45,456	518	11,050	628,958
Real estate and rental and leasing	53	46	16	30	10	352	12	220	1,996
Lessors of nonfinancial intangible assets (except									
copyrighted works)	533	13	6	7	3	42	5	10	268
Other real estate and rental and leasing	other 53	33	10	23	7	310	7	210	1,727
Professional, scientific, and technical services	54	14,112	7,901	6,211	5,338	24,287	5,506	26,673	519,312
Architectural, engineering, and related services	5413	2,341	1,517	824	1,199	3,842	862	3,086	166,851
Computer systems design and related services	5415	6,209	3,886	2,322	2,483	10,386	2,801	10,632	125,221
Scientific R&D services	5417	1,875	844	1,031	534	6,799	486	6,835	51,833
Biotechnology R&D	541711	523	263	261	151	223	161	374	17,578
Physical, engineering, and life sciences (except									,
biotechnology) R&D	541712	1,303	558	745	363	6,558	314	6,457	33,306
Social sciences and humanities R&D	541720	49	24	25	19	18	12	4	949
Other professional, scientific, and technical services	other 54	3,686	1,653	2,033	1,123	3,260	1,356	6,120	175,406
Health care services	621-23	1,167	304	863	36	328	291	717	53,594
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56,	.,							
	624, 71–72, 81	4,517	2,527	1,989	2,157	11,097	1,668	26,378	D
All companies (number of domestic employees)	-	53,048	30,891	22,157	21,338	777,638	21,324	825,655	11,764,192
Small companies ^e 5–499	-	50,783	29,582	21,201	20,513	78,926	20,438	81,006	1,078,468

TABLE 65. Companies that performed or funded R&D and introduced new or significantly improved products and sales from products, by industry, industry proportions, and company size: 2012–14 (Number and percent)

	•	New or sign	ificantly imp	roved		0.1			
Industry and company size		products (number)			New to company's market		New only to company		Sales of products unchanged or
	NAICS code	Companies ^a	Yes ^b	No ^c	Companies (number) ^d	Sales (US\$millions)	Companies (number) ^d	Sales (US\$millions)	marginally modified (US\$millions)
5–99	-	44,594	26,133	18,461	18,155	37,878	17,948	31,995	D
5–49	-	38,289	22,111	16,178	15,803	23,337	15,168	18,931	228,279
5–9	-	13,169	7,210	5,958	5,323	3,580	4,789	2,067	33,914
10–24	-	15,556	9,343	6,213	6,982	10,074	6,753	7,202	66,308
25–49	-	9,564	5,557	4,007	3,498	9,682	3,626	9,662	128,058
50–99	-	6,305	4,022	2,283	2,352	14,541	2,780	13,064	D
100–249	-	4,694	2,502	2,192	1,737	20,567	1,806	26,041	D
250-499	-	1,495	947	548	621	20,482	684	22,970	303,685
Medium and large companies									
500–999	-	905	472	433	307	23,839	319	26,387	D
1,000-4,999	-	901	525	376	360	89,333	397	109,681	1,546,223
5,000-9,999	-	168	108	60	65	50,769	70	52,029	1,179,397
10,000–24,999	_	188	148	40	57	150,866	68	153,953	D
25,000 or more	-	102	56	46	36	383,904	31	402,599	5,146,393
						Industry pro	portions		

New or significantly improved New or significantly improved products productsf New to company's market New only to company Sales of products unchanged or Companies Companies Companies Yes No marginally modified Industry and company size NAICS code (number)^a (percent) (percent) (number)d Sales (percent) (number)d Sales (percent) (percent) All industries 21-23, 31-33, 42-81 53,048 58.2 41.8 21,338 5.8 21,324 6.2 0.88 31-33 Manufacturing industries 24,589 61.5 38.5 10,664 6.3 10,634 8.4 85.4 311 557 Food 1.424 55.6 44.4 551 2.9 9.3 87.8 312 53 D 22 D D Beverages and tobacco products 120 56.7 43.3 313-16 560 210 9.0 192 84.0 Textiles, apparel, and leather products 50.1 49.9 7.0 Wood products 321 49.0 51.0 88 7.3 86 3.1 89.6 282 322 271 61.4 38.6 140 5.6 117 10.5 83.9 Paper 323 3.8 Printing and related support activities 317 60.0 40.0 115 164 8.3 87.8 324 109 43.3 56.7 36 0.0 39 0.1 99.9 Petroleum and coal products 325 Chemicals 2,804 55.4 44.6 1,116 9.5 1,044 5.0 85.4 Basic chemicals 3251 33.4 168 2.1 95.4 312 66.6 149 2.4 Resins, synthetic rubber, and artificial 3252 synthetic fibers and filaments 258 54.1 45.9 98 5.7 92 6.4 87.9 3253 Pesticides, fertilizers, and other agricultural chemicals 148 36.8 63.2 43 2.7 49 12.3 84.9 3254 9.0 Pharmaceuticals and medicines 1,111 45.2 54.8 322 332 7.1 83.9 3256 Soaps, cleaning compounds, and toilet preparations 391 79.0 21.0 255 33.5 190 2.7 63.8 3255, 3259 584 58.6 41.4 230 7.7 232 7.0 Paints, coatings, adhesives, and other chemicals 85.3 326 Plastics and rubber products 9.8 1,519 58.5 41.5 624 589 7.4 82.7 Nonmetallic mineral products 327 509 65.8 34.2 231 1.7 241 4.3 94.0 331 Primary metals 279 52.1 47.9 105 1.6 99 7.4 90.9 332 Fabricated metal products 3,244 58.8 41.2 1,297 5.4 1,459 6.9 87.7 333 Machinery 3,827 67.0 33.0 1,700 D 1,829 D D

TABLE 65. Companies that performed or funded R&D and introduced new or significantly improved products and sales from products, by industry, industry proportions, and company size: 2012–14 (Number and percent)

	-					Industry pro	portions		
		New or significantly improved New or significantly improved products							Sales of products
		p	oroducts ^f	'	New to com	npany's market	New only	to company	unchanged of
	•	Companies	Yes	No	Companies		Companies		marginally modified
Industry and company size	NAICS code	(number) ^a	(percent)	(percent)	(number) ^d	Sales (percent)	(number) ^d	Sales (percent)	(percent
Agricultural implements	33311	216	72.8	27.2	116	11.5	130	21.4	67.1
Semiconductor machinery	333295	88	89.8	10.2	20	11.9	26	1.4	86.7
Engines, turbines, and power transmission equipment	3336	104	60.2	39.8	39	D	51	D	[
Other machinery	other 333	3,419	66.3	33.7	1,525	4.5	1,621	5.0	90.5
Computer and electronic products	334	3,008	68.4	31.6	1,450	6.8	1,497	13.1	80.1
Communications equipment	3342	516	66.8	33.2	240	2.4	243	3.6	94.0
Semiconductors and other electronic components	3344	678	66.3	33.7	319	9.3	350	6.5	84.2
Navigational, measuring, electromedical, and control									
instruments	3345	1,383	66.8	33.2	627	12.5	655	2.7	84.8
Electromedical, electrotherapeutic, and irradiation									
apparatus	334510, 334517	299	39.2	60.8	80	10.1	70	0.6	89.3
Search, detection, navigation, guidance, aeronautical,									
and nautical systems and instruments	334511	85	53.2	46.8	22	23.6	27	1.9	74.5
Other measuring and controlling devices	other 3345	1,000	76.1	23.9	525	3.5	558	4.4	92.
Other computer and electronic products	other 334	431	78.7	21.3	265	3.1	249	45.5	51.3
Electrical equipment, appliances, and components	335	1,476	77.6	22.4	933	4.4	847	6.9	88.
Transportation equipment	336	1,585	56.4	43.6	664	6.9	606	11.8	81.3
Automobiles, bodies, trailers, and parts	3361-63	934	55.3	44.7	348	5.5	369	14.8	79.
Aerospace products and parts	3364	346	48.1	51.9	128	10.0	136	6.6	83.4
Aircraft, aircraft engines, and aircraft parts	336411-13	325	47.5	52.5	D	D	128	6.8]
Guided missiles, space vehicles, and related parts	336414-15, 336419	21	57.1	42.9	D	D	8	2.2	[
Military armored vehicles, tanks, and tank components	336992	12	49.3	50.7	5	D	D	D	
Other transportation	other 336	293	70.3	29.7	183	D	D	D]
Furniture and related products	337	691	51.2	48.8	198	D	201	D	
Miscellaneous manufacturing	339	2,562	61.8	38.2	1,153	4.5	1,045	5.9	89.6
Medical equipment and supplies	3391	863	62.2	37.8	416	4.8	269	6.9	88.3
Other miscellaneous manufacturing	3399	1,699	61.6	38.4	737	3.8	776	3.8	92.
Nonmanufacturing industries	21-23, 42-81	28,459	55.5	44.5	10,674	5.1	10,690	2.7	92.2
Mining, extraction, and support activities	21	360	46.3	53.7	93	D	155	D]
Utilities	22	97	46.5	53.5	39	0.5	5	0.1	99.4
Wholesale trade	42	2,711	57.9	42.1	1,104	3.3	839	1.3	95.3
Electronic shopping and electronic auctions	454111-12	172	53.8	46.2	63	D	50	D]
Transportation and warehousing	48-49	291	4.8	95.2	13	0.4	8	0.2	99.4
Information	51	4,166	62.5	37.5	1,802	11.2	1,638	4.3	84.5
Publishing	511	1,987	64.7	35.3	1,000	14.4	845	4.4	81.3
Newspaper, periodical, book, and directory publishers	5111	169	13.8	86.2	16	0.2	15	1.8	98.0
Software publishers	5112	1,818	69.4	30.6	984	14.6	830	4.4	81.
Telecommunications	517	294	67.6	32.4	94	13.1	150	4.5	82.
Data processing, hosting, and related services	518	1,260	67.2	32.8	571	D	505	D]
Other information	other 51	625	43.8	56.2	136	D	139	D	[
Finance and insurance	52	821	65.7	34.3	18	6.6	518	1.6	91.8

TABLE 65. Companies that performed or funded R&D and introduced new or significantly improved products and sales from products, by industry, industry proportions, and company size: 2012–14 (Number and percent)

	<u>-</u>					Industry pro			
		•	nificantly im	proved			Color of conductor		
	_	products ^t			New to company's market		New only to company		Sales of products unchanged or
		Companies	Yes	No	Companies		Companies		marginally modified
Industry and company size	NAICS code	(number) ^a	(percent)	(percent)	(number) ^d	Sales (percent)	(number) ^d	Sales (percent)	(percent)
Real estate and rental and leasing	53	46	34.2	65.8	10	13.7	12	8.6	77.7
Lessors of nonfinancial intangible assets (except									
copyrighted works)	533	13	46.2	53.8	3	13.1	5	3.2	83.7
Other real estate and rental and leasing	other 53	33	29.5	70.5	7	13.8	7	9.3	76.9
Professional, scientific, and technical services	54	14,112	56.0	44.0	5,338	4.3	5,506	4.7	91.1
Architectural, engineering, and related services	5413	2,341	64.8	35.2	1,199	2.2	862	1.8	96.0
Computer systems design and related services	5415	6,209	62.6	37.4	2,483	7.1	2,801	7.3	85.6
Scientific R&D services	5417	1,875	45.0	55.0	534	10.4	486	10.4	79.2
Biotechnology R&D	541711	523	50.2	49.8	151	1.2	161	2.1	96.7
Physical, engineering, and life sciences (except									
biotechnology) R&D	541712	1,303	42.8	57.2	363	14.2	314	13.9	71.9
Social sciences and humanities R&D	541720	49	48.6	51.4	19	1.8	12	0.4	97.8
Other professional, scientific, and technical services	other 54	3,686	44.9	55.1	1,123	1.8	1,356	3.3	94.9
Health care services	621–23	1,167	26.0	74.0	36	0.6	291	1.3	98.1
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56,								
	624, 71-72, 81	4,517	56.0	44.0	2,157	D	1,668	D	D
All companies (number of domestic employees)	-	53,048	58.2	41.8	21,338	5.8	21,324	6.2	88.0
Small companies ^e									
5–499	-	50,783	58.3	41.7	20,513	6.4	20,438	6.5	87.1
5–99	-	44,594	58.6	41.4	18,155	D	17,948	D	D
5–49	-	38,289	57.7	42.3	15,803	8.6	15,168	7.0	84.4
5–9	-	13,169	54.8	45.2	5,323	9.1	4,789	5.2	85.7
10–24	-	15,556	60.1	39.9	6,982	12.1	6,753	8.6	79.3
25–49	-	9,564	58.1	41.9	3,498	6.6	3,626	6.6	86.9
50–99	-	6,305	63.8	36.2	2,352	D	2,780	D	D
100–249	-	4,694	53.3	46.7	1,737	D	1,806	D	D
250–499	-	1,495	63.3	36.7	621	5.9	684	6.6	87.5
Medium and large companies									
500–999	-	905	52.1	47.9	307	D	319	D	D
1,000–4,999	_	901	58.2	41.8	360	5.1	397	6.3	88.6

TABLE 65. Companies that performed or funded R&D and introduced new or significantly improved products and sales from products, by industry, industry proportions, and company size: 2012–14 (Number and percent)

						Industry pro	portions		
	-	New or significantly improved products ^f				S			
	_				New to com	pany's market	New only to company		Sales of products
Industry and company size	NAICS code	Companies (number) ^a	Yes (percent)	No (percent)	Companies (number) ^d	Sales (percent)	Companies (number) ^d	Sales (percent)	unchanged or marginally modified (percent)
5,000-9,999		168	64.4	35.6	65	4.0	70	4.1	92.0
10,000–24,999	-	188	78.8	21.2	57	D	68	D	D
25,000 or more	-	102	55.0	45.0	36	6.5	31	6.8	86.7

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.

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. Sum of "Yes" and "No" responses may not add to the total number of companies or, for the percentages, to 100% due to item nonresponse to some items.

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

^a Statistics for the number of companies are based only on companies in the United States that performed or funded R&D and responded either "Yes" to at least one of the items or "No" to both of the items on the survey relating to new or significantly improved products. These statistics do not include an adjustment to the weight to account for unit nonresponse.

b Includes companies that performed or funded R&D and responded "Yes" to at least one of the items on the survey relating to new or significantly improved products.

c Includes companies that performed or funded R&D and responded "No" to both of the items on the survey relating to new or significantly improved products.

d Statistics for the number of companies are based only on companies in the United States that performed or funded R&D and reported data for this survey item. These statistics do not include an adjustment to the weight to account for unit nonresponse.

e 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.

Statistics used for the denominator in the calculation of these percentages include companies in the United States that performed or funded R&D and responded either "Yes" to at least one of the items or "No" to both of the items on the survey relating to new or significantly improved products. These statistics do not include an adjustment to the weight to account for unit nonresponse.