

TABLE 68

**Companies that introduced new or significantly improved products new to the company's market or new only to the company, by industry, industry proportions, and company size: 2014–16**

(Number and percent)

Industry and company size	NAICS code	New or significantly improved products			New or significantly improved products						
		Companies (number)	Yes <sup>a</sup>	No <sup>b</sup>	New to company's market			New only to company			
					Companies (number) <sup>c</sup>	Yes	No	Companies <sup>c</sup> (number)	Yes	No	
Industry (number)											
All industries	21–23, 31–33, 42–81	1,138,671	108,376	1,030,296	108,376	105,980	2,395		108,376	87,249	21,127
Manufacturing industries	31–33	113,066	24,937	88,129	24,937	23,805	1,132		24,937	19,997	4,940
Food	311	9,763	1,791	7,972	1,791	1,716	75		1,791	1,514	277
Beverages and tobacco products	312	2,863	644	2,220	644	634	10		644	568	75
Textiles, apparel, and leather products	313–16	4,689	942	3,747	942	930	12		942	609	333
Wood products	321	5,526	487	5,039	487	478	9	i	487	416	71
Paper	322	1,447	265	1,182	265	219	46	i	265	237	27
Printing and related support activities	323	8,604	1,378	7,226	1,378	1,372	6		1,378	1,101	277
Petroleum and coal products	324	412	81	331	81	D	D		81	77	5
Chemicals	325	5,259	1,881	3,378	1,881	1,718	163		1,881	1,581	300
Basic chemicals	3251	692	268	424	268	246	22		268	231	37
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	633	162	471	162	156	6		162	147	15
Pesticides, fertilizers, and other agricultural chemicals	3253	261	76	186	76	D	D		76	65	11
Pharmaceuticals and medicines	3254	1,384	460	924	460	372	88		460	311	149
Soaps, cleaning compounds, and toilet preparations	3256	929	359	570	359	343	16		359	323	37
Paints, coatings, adhesives, and other chemicals	3255, 3259	1,360	557	803	557	D	D		557	504	52
Plastics and rubber products	326	5,555	1,419	4,136	1,419	1,358	61		1,419	1,254	164
Nonmetallic mineral products	327	4,758	842	3,916	842	833	9		842	609	233
Primary metals	331	2,033	280	1,752	280	267	13		280	231	50
Fabricated metal products	332	24,182	4,173	20,009	4,173	4,095	78		4,173	3,491	683
Machinery	333	10,843	3,132	7,710	3,132	3,014	119		3,132	2,500	632
Agricultural implements	33311	530	196	335	196	177	19		196	143	53
Semiconductor machinery	333242	78	37	41	37	32	5		37	28	9
Engines, turbines, and power transmission equipment	3336	446	136	310	136	120	16	i	136	121	15

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		Companies (number)	Yes <sup>a</sup>	No <sup>b</sup>	New to company's market			New only to company		
					Companies (number) <sup>c</sup>	Yes	No	Companies <sup>c</sup> (number)	Yes	No
Other machinery	other 333	9,788	2,764	7,025	2,764	2,685	78	2,764	2,208	555
Computer and electronic products	334	5,477	2,528	2,949	2,528	2,352	176	2,528	1,946	582
Communications equipment	3342	736	416	321	416	396	20	416	265	150
Semiconductors and other electronic components	3344	2,008	708	1,299	708	637	72	708	601	108
Navigational, measuring, electromedical, and control instruments	3345	1,932	1,048	885	1,048	985	63	1,048	804	244
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	335	169	166	169	156	13	169	135	34
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	270	142	128	142	130	12	142	130	12
Other measuring and controlling devices	other 3345	1,328	737	591	737	699	38	737	539	198
Other computer and electronic products	other 334	800	356	444	356	335	21	356	275	81
Electrical equipment, appliances, and components	335	2,364	859	1,505	859	787	72	859	594	264
Transportation equipment	336	5,058	1,448	3,610	1,448	1,311	137	1,448	1,160	288
Automobiles, bodies, trailers, and parts	3361–63	3,134	884	2,249	884	777	107	884	769	116
Aerospace products and parts	3364	861	239	622	239	226	13	239	165	74
Aircraft, aircraft engines, and aircraft parts	336411–13	828	225	603	225	D	D	225	154	71
Guided missiles, space vehicles, and related parts	336414–15, 336419	33	14	20	14	D	D	14	10	3
Military armored vehicles, tanks, and tank components	336992	23	6	17	6	D	D	6	3	3
Other transportation	other 336	1,041	319	722	319	D	D	319	224	95
Furniture and related products	337	5,660	588	5,072	588	577	10	588	484	104
Miscellaneous manufacturing	339	8,573	2,199	6,374	2,199	D	D	2,199	1,626	573
Medical equipment and supplies	3391	3,057	942	2,115	942	843	100	942	665	277

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					Companies (number) <sup>c</sup>	Yes	No	Companies <sup>c</sup> (number)	Yes	No
Other miscellaneous manufacturing	3399	5,516	1,257	4,259	1,257	1,224	32	1,257	961	296
Nonmanufacturing industries	21–23, 42–81	1,025,605	83,439	942,166	83,439	82,175	1,263	83,439	67,251	16,187
Mining, extraction, and support activities	21	6,761	389	6,372	389	373	16	389	129	260
Utilities	22	1,200	58	1,143	58	D	D	58	D	D
Wholesale trade	42	91,941	13,596	78,344	13,596	13,570	26	13,596	11,006	2,590
Electronic shopping and electronic auctions	454111–12	4,147	955	3,191	955	955	0	955	768	188
Transportation and warehousing	48–49	39,906	2,132	37,775	2,132	2,063	69	2,132	2,122	10
Information	51	17,113	4,062	13,051	4,062	3,780	282	4,062	3,230	832
Publishing	511	5,801	1,570	4,231	1,570	1,520	50	1,570	1,285	285
Newspaper, periodical, book, and directory publishers	5111	3,407	257	3,151	257	257	0	257	221	36
Software publishers	5112	2,393	1,313	1,080	1,313	1,263	50	1,313	1,064	249
Telecommunications	517	2,568	384	2,184	384	316	68	384	298	86
Data processing, hosting, and related services	518	3,105	1,335	1,770	1,335	1,211	124	1,335	1,027	308
Other information	other 51	5,640	773	4,867	773	733	40	773	620	153
Finance and insurance	52	45,282	2,532	42,750	2,532	2,285	248	2,532	1,489	1,043
Real estate and rental and leasing	53	36,032	1,959	34,073	1,959	D	D	1,959	1,942	17
Lessors of nonfinancial intangible assets (except copyrighted works)	533	110	8	102	8	D	D	8	D	D
Other real estate and rental and leasing	other 53	35,922	1,951	33,971	1,951	D	D	1,951	D	D
Professional, scientific, and technical services	54	154,446	18,841	135,605	18,841	18,260	581	18,841	15,985	2,855
Architectural, engineering, and related services	5413	25,214	3,262	21,952	3,262	3,125	138	3,262	2,831	431
Computer systems design and related services	5415	19,695	7,179	12,515	7,179	7,084	96	7,179	6,006	1,173
Scientific research and development services	5417	2,790	1,002	1,789	1,002	941	60	1,002	659	343
Biotechnology research and development	541711	543	183	360	183	169	14	183	127	56

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		Companies (number)	Yes <sup>a</sup>	No <sup>b</sup>	New to company's market			New only to company		
					Companies (number) <sup>c</sup>	Yes	No	Companies <sup>c</sup> (number)	Yes	No
Physical, engineering, and life sciences (except biotechnology) research and development	541712	2,055	784	1,270	784	738	46	784	507	277
Social sciences and humanities research and development	541720	192	35	158	35	35	0	35	24	11
Other professional, scientific, and technical services	other 54	106,747	7,397	99,350	7,397	7,110	287	7,397	6,489	908
Health care services	621–23	167,465	15,018	152,447	15,018	15,006	12	15,018	11,708	3,310
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	461,312	23,897	437,415	23,897	23,876	22	23,897	D	D
All companies (number of domestic employees)	–	1,138,671	108,376	1,030,296	108,376	105,980	2,395	108,376	87,249	21,127
Micro companies <sup>d</sup>										
5–9	–	307,934	28,229	279,705	28,229	27,880	348	28,229	23,292	4,937
Small companies										
10–19	–	387,796	36,273	351,522	36,273	36,193	81	36,273	27,272	9,001
20–49	–	290,964	26,191	264,773	26,191	25,923	268	26,191	21,926	4,265
Medium companies										
50–99	–	83,527	9,520	74,008	9,520	8,968	551	9,520	8,043	1,477
100–249	–	43,846	4,791	39,055	4,791	4,318	474	4,791	3,930	862
Large companies										
250–499	–	11,925	1,360	10,565	1,360	1,064	297	1,360	1,069	291
500–999	–	5,669	929	4,739	929	786	144	929	816	113
1,000–4,999	–	5,125	731	4,394	731	569	162	731	603	128
5,000–9,999	–	721	170	551	170	136	34	170	144	26
10,000–24,999	–	838	118	720	118	95	23	118	106	12
25,000 or more	–	326	64	262	64	49	15	64	50	14
Industry proportions (percent)										
All industries	21–23, 31–33, 42–81	1,138,671	9.5	90.5	108,376	97.8	2.2	108,376	80.5	19.5
Manufacturing industries	31–33	113,066	22.1	77.9	24,937	95.5	4.5	24,937	80.2	19.8
Food	311	9,763	18.3	81.7	1,791	95.8	4.2	1,791	84.5	15.5
Beverages and tobacco products	312	2,863	22.5	77.5	644	98.5	1.5	644	88.3	11.7
Textiles, apparel, and leather products	313–16	4,689	20.1	79.9	942	98.7	1.3	942	64.6	35.4
Wood products	321	5,526	8.8	91.2	487	98.2	1.8	487	85.4	14.6
Paper	322	1,447	18.3	81.7	265	82.8	17.2	265	89.6	10.4

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					Companies (number) <sup>c</sup>	Yes	No	Companies <sup>c</sup> (number)	Yes	No
Printing and related support activities	323	8,604	16.0	84.0	1,378	99.5	0.5	1,378	79.9	20.1
Petroleum and coal products	324	412	19.7	80.3	81	D	D	81	94.5	5.5
Chemicals	325	5,259	35.8	64.2	1,881	91.3	8.7	1,881	84.0	16.0
Basic chemicals	3251	692	38.7	61.3	268	91.9	8.1	268	86.2	13.8
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	633	25.6	74.4	162	96.3	3.7	162	90.9	9.1
Pesticides, fertilizers, and other agricultural chemicals	3253	261	28.9	71.1	76	D	D	76	85.9	14.1
Pharmaceuticals and medicines	3254	1,384	33.2	66.8	460	80.8	19.2	460	67.6	32.4
Soaps, cleaning compounds, and toilet preparations	3256	929	38.7	61.3	359	95.5	4.5	359	89.8	10.2
Paints, coatings, adhesives, and other chemicals	3255, 3259	1,360	40.9	59.1	557	D	D	557	90.6	9.4
Plastics and rubber products	326	5,555	25.5	74.5	1,419	95.7	4.3	1,419	88.4	11.6
Nonmetallic mineral products	327	4,758	17.7	82.3	842	99.0	1.0	842	72.3	27.7
Primary metals	331	2,033	13.8	86.2	280	95.3	4.7	280	82.3	17.7
Fabricated metal products	332	24,182	17.3	82.7	4,173	98.1	1.9	4,173	83.6	16.4
Machinery	333	10,843	28.9	71.1	3,132	96.2	3.8	3,132	79.8	20.2
Agricultural implements	33311	530	36.9	63.1	196	90.2	9.8	196	73.1	26.9
Semiconductor machinery	333242	78	47.6	52.4	37	86.6	13.4	37	74.7	25.3
Engines, turbines, and power transmission equipment	3336	446	30.5	69.5	136	87.9	12.1	136	89.1	10.9
Other machinery	other 333	9,788	28.2	71.8	2,764	97.2	2.8	2,764	79.9	20.1
Computer and electronic products	334	5,477	46.2	53.8	2,528	93.1	6.9	2,528	77.0	23.0
Communications equipment	3342	736	56.5	43.5	416	95.2	4.8	416	63.8	36.2
Semiconductors and other electronic components	3344	2,008	35.3	64.7	708	89.9	10.1	708	84.8	15.2
Navigational, measuring, electromedical, and control instruments	3345	1,932	54.2	45.8	1,048	94.0	6.0	1,048	76.7	23.3
Electromedical, electrotherapeutic,	334510, 334517	335	50.6	49.4	169	92.4	7.6	169	80.0	20.0

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					Companies (number) <sup>c</sup>	Yes	No	Companies <sup>c</sup> (number)	Yes	No			
and irradiation apparatuses													
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	270	52.6	47.4	142	91.4	8.6	142	91.5	8.5			
Other measuring and controlling devices	other 3345	1,328	55.5	44.5	737	94.8	5.2	737	73.1	26.9			
Other computer and electronic products	other 334	800	44.5	55.5	356	94.2	5.8	356	77.4	22.6			
Electrical equipment, appliances, and components	335	2,364	36.3	63.7	859	91.6	8.4	859	69.2	30.8			
Transportation equipment	336	5,058	28.6	71.4	1,448	90.6	9.4	1,448	80.1	19.9			
Automobiles, bodies, trailers, and parts	3361–63	3,134	28.2	71.8	884	87.8	12.2	884	86.9	13.1			
Aerospace products and parts	3364	861	27.7	72.3	239	94.6	5.4	239	69.0	31.0			
Aircraft, aircraft engines, and aircraft parts	336411–13	828	27.2	72.8	225	D	D	225	68.6	31.4			
Guided missiles, space vehicles, and related parts	336414–15, 336419	33	40.9	59.1	14	D	D	14	75.9	24.1			
Military armored vehicles, tanks, and tank components	336992	23	26.1	73.9	6	D	D	6	50.0	50.0			
Other transportation	other 336	1,041	30.7	69.3	319	D	D	319	70.2	29.8			
Furniture and related products	337	5,660	10.4	89.6	588	98.2	1.8	588	82.3	17.7			
Miscellaneous manufacturing	339	8,573	25.6	74.4	2,199	D	D	2,199	73.9	26.1			
Medical equipment and supplies	3391	3,057	30.8	69.2	942	89.4	10.6	942	70.6	29.4			
Other miscellaneous manufacturing	3399	5,516	22.8	77.2	1,257	97.4	2.6	1,257	76.5	23.5			
Nonmanufacturing industries	21–23, 42–81	1,025,605	8.1	91.9	83,439	98.5	1.5	83,439	80.6	19.4			
Mining, extraction, and support activities	21	6,761	5.8	94.2	389	95.8	4.2	389	33.1	66.9			
Utilities	22	1,200	4.8	95.2	58	D	D	58	D	D			
Wholesale trade	42	91,941	14.8	85.2	13,596	99.8	0.2	13,596	80.9	19.1			
Electronic shopping and electronic auctions	454111–12	4,147	23.0	77.0	955	100.0	0.0	955	80.4	19.6			
Transportation and warehousing	48–49	39,906	5.3	94.7	2,132	96.8	3.2	2,132	99.5	0.5			
Information	51	17,113	23.7	76.3	4,062	93.1	6.9	4,062	79.5	20.5			

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					Companies (number) <sup>c</sup>	Yes	No	Companies <sup>c</sup> (number)	Yes	No
Publishing	511	5,801	27.1	72.9	1,570	96.8	3.2	1,570	81.9	18.1
Newspaper, periodical, book, and directory publishers	5111	3,407	7.5	92.5	257	100.0	0.0	257	86.0	14.0
Software publishers	5112	2,393	54.9	45.1	1,313	96.2	3.8	1,313	81.1	18.9
Telecommunications	517	2,568	14.9	85.1	384	82.3	17.7	384	77.5	22.5
Data processing, hosting, and related services	518	3,105	43.0	57.0	1,335	90.7	9.3	1,335	76.9	23.1
Other information	other 51	5,640	13.7	86.3	773	94.9	5.1	773	80.2	19.8
Finance and insurance	52	45,282	5.6	94.4	2,532	90.2	9.8	2,532	58.8	41.2
Real estate and rental and leasing	53	36,032	5.4	94.6	1,959	D	D	1,959	99.2	0.8
Lessors of nonfinancial intangible assets (except copyrighted works)	533	110	7.3	92.7	8	D	D	8	D	D
Other real estate and rental and leasing	other 53	35,922	5.4	94.6	1,951	D	D	1,951	D	D
Professional, scientific, and technical services	54	154,446	12.2	87.8	18,841	96.9	3.1	18,841	84.8	15.2
Architectural, engineering, and related services	5413	25,214	12.9	87.1	3,262	95.8	4.2	3,262	86.8	13.2
Computer systems design and related services	5415	19,695	36.5	63.5	7,179	98.7	1.3	7,179	83.7	16.3
Scientific research and development services	5417	2,790	35.9	64.1	1,002	93.9	6.0	1,002	65.8	34.2
Biotechnology research and development	541711	543	33.7	66.3	183	92.2	7.8	183	69.6	30.4
Physical, engineering, and life sciences (except biotechnology) research and development	541712	2,055	38.2	61.8	784	94.1	5.9	784	64.7	35.3
Social sciences and humanities research and development	541720	192	18.0	82.0	35	100.0	0.0	35	69.4	30.6
Other professional, scientific, and technical services	other 54	106,747	6.9	93.1	7,397	96.1	3.9	7,397	87.7	12.3
Health care services	621–23	167,465	9.0	91.0	15,018	99.9	0.1	15,018	78.0	22.0

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					Companies (number) <sup>c</sup>	Yes	No	Companies <sup>c</sup> (number)	Yes	No
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	461,312	5.2	94.8	23,897	99.9	0.1	23,897	D	D
All companies (number of domestic employees)	–	1,138,671	9.5	90.5	108,376	97.8	2.2	108,376	80.5	19.5
Micro companies <sup>d</sup>										
5–9	–	307,934	9.2	90.8	28,229	98.8	1.2	28,229	82.5	17.5
Small companies										
10–19	–	387,796	9.4	90.6	36,273	99.8	0.2	36,273	75.2	24.8
20–49	–	290,964	9.0	91.0	26,191	99.0	1.0	26,191	83.7	16.3
Medium companies										
50–99	–	83,527	11.4	88.6	9,520	94.2	5.8	9,520	84.5	15.5
100–249	–	43,846	10.9	89.1	4,791	90.1	9.9	4,791	82.0	18.0
Large companies										
250–499	–	11,925	11.4	88.6	1,360	78.2	21.8	1,360	78.6	21.4
500–999	–	5,669	16.4	83.6	929	84.2	15.8	929	87.8	12.2
1,000–4,999	–	5,125	14.3	85.7	731	77.9	22.1	731	82.4	17.6
5,000–9,999	–	721	23.6	76.4	170	80.1	19.9	170	84.5	15.5
10,000–24,999	–	838	14.1	85.9	118	80.4	19.6	118	89.5	10.5
25,000 or more	–	326	19.5	80.5	64	77.2	22.8	64	78.0	22.0

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.

<sup>a</sup> Includes companies responding "Yes" to at least one of the items on the survey relating to new or significantly improved products.

<sup>b</sup> Includes companies responding "No" to both of the items on the survey relating to new or significantly improved products.

<sup>c</sup> Statistics for number of companies are not based on companies responding to this survey item. Rather, they are based on companies responding "Yes" to at least one of the items on the survey relating to new or significantly improved products.

<sup>d</sup> 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. These statistics include an adjustment to account for item nonresponse beginning in survey year 2016. This change has affected the comparability of these company count estimates with estimates published for years prior to 2016. These statistics do not include an adjustment to account for unit nonresponse. Statistics are representative of companies located in the United States, regardless of whether the company performed or funded R&D.

**Source(s)**

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