

TABLE 69

Companies that introduced new or significantly improved products and sales from products, by industry, industry proportions, and company size: 2014–16

(Number and percent)

Industry and company size	NAICS code	New or significantly improved products ^a			New or significantly improved products				Sales of products unchanged or marginally modified (US\$millions)
		Companies (number)	Yes ^b	No ^c	New to company's market		New only to company		
					Companies (number) ^d	Sales (US\$millions)	Companies (number) ^d	Sales (US\$millions)	
Industry (number)									
All industries	21–23, 31–33, 42–81	1,138,671	108,376	1,030,296	69,538	810,268	76,347	791,444	35,476,169
Manufacturing industries	31–33	113,066	24,937	88,129	16,464	526,449	17,871	488,074	8,042,701
Food	311	9,763	1,791	7,972	901	38,767	1,470	47,293	883,323
Beverages and tobacco products	312	2,863	644	2,220	435	1,371	554	1,029	259,770
Textiles, apparel, and leather products	313–16	4,689	942	3,747	646	11,000	484	6,481	136,099
Wood products	321	5,526	487	5,039	288	856	354	2,534	155,538
Paper	322	1,447	265	1,182	140	9,632	220	13,342	121,599
Printing and related support activities	323	8,604	1,378	7,226	982	2,362	998	3,350	90,488
Petroleum and coal products	324	412	81	331	35	2,823	71	2,795	397,661
Chemicals	325	5,259	1,881	3,378	1,267	148,523	1,327	88,292	1,273,566
Basic chemicals	3251	692	268	424	186	5,932	198	4,878	280,327
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	633	162	471	106	9,278	141	8,433	56,838
Pesticides, fertilizers, and other agricultural chemicals	3253	261	76	186	63	4,654	60	11,459	47,534
Pharmaceuticals and medicines	3254	1,384	460	924	331	54,433	272	46,524	674,352
Soaps, cleaning compounds, and toilet preparations	3256	929	359	570	245	68,312	272	10,294	117,556
Paints, coatings, adhesives, and other chemicals	3255, 3259	1,360	557	803	336	5,913	384	6,704	96,960
Plastics and rubber products	326	5,555	1,419	4,136	954	26,577	1,110	15,134	283,497
Nonmetallic mineral products	327	4,758	842	3,916	598	1,091	598	3,130	150,275
Primary metals	331	2,033	280	1,752	164	4,484	219	11,445	216,386
Fabricated metal products	332	24,182	4,173	20,009	2,657	11,056	3,068	15,080	268,250
Machinery	333	10,843	3,132	7,710	2,087	27,392	2,195	56,319	444,939
Agricultural implements	33311	530	196	335	151	7,919	138	17,394	42,279
Semiconductor machinery	333242	78	37	41	24	1,062	D	D	D
Engines, turbines, and power transmission equipment	3336	446	136	310	97	1,520	D	D	D

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Other machinery	other 333	9,788	2,764	7,025	1,816	16,891	D	D	334,405
Computer and electronic products	334	5,477	2,528	2,949	1,841	109,678	1,724	107,979	1,085,715
Communications equipment	3342	736	416	321	342	24,252	230	24,304	100,959
Semiconductors and other electronic components	3344	2,008	708	1,299	531	30,324	551	10,957	390,145
Navigational, measuring, electromedical, and control instruments	3345	1,932	1,048	885	770	37,131	709	11,062	216,847
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	335	169	166	150	5,480	129	492	33,320
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	270	142	128	73	25,666	120	2,585	75,598
Other measuring and controlling devices	other 3345	1,328	737	591	547	5,985	460	7,985	107,929
Other computer and electronic products	other 334	800	356	444	198	17,971	234	61,655	377,764
Electrical equipment, appliances, and components	335	2,364	859	1,505	549	15,119	515	26,864	228,422
Transportation equipment	336	5,058	1,448	3,610	942	90,677	1,086	60,317	1,610,418
Automobiles, bodies, trailers, and parts	3361–63	3,134	884	2,249	586	42,971	734	33,161	1,158,128
Aerospace products and parts	3364	861	239	622	154	42,522	158	23,299	363,751
Aircraft, aircraft engines, and aircraft parts	336411–13	828	225	603	143	40,094	149	20,925	346,486
Guided missiles, space vehicles, and related parts	336414–15, 336419	33	14	20	11	2,428	9	2,375	17,265
Military armored vehicles, tanks, and tank components	336992	23	6	17	5	10	3	9	502
Other transportation	other 336	1,041	319	722	196	5,173	191	3,848	88,037
Furniture and related products	337	5,660	588	5,072	431	3,573	411	4,512	72,328
Miscellaneous manufacturing	339	8,573	2,199	6,374	1,547	21,468	1,467	22,178	364,428
Medical equipment and supplies	3391	3,057	942	2,115	531	15,360	556	14,589	237,355

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Other miscellaneous manufacturing	3399	5,516	1,257	4,259	1,016	6,108	912	7,589	127,074
Nonmanufacturing industries	21–23, 42–81	1,025,605	83,439	942,166	53,074	283,820	58,476	303,370	27,433,467
Mining, extraction, and support activities	21	6,761	389	6,372	359	4,533	128	9,959	713,759
Utilities	22	1,200	58	1,143	9	242	11	361	495,723
Wholesale trade	42	91,941	13,596	78,344	10,074	34,087	9,951	36,783	3,608,834
Electronic shopping and electronic auctions	454111–12	4,147	955	3,191	717	2,785	752	4,136	240,754
Transportation and warehousing	48–49	39,906	2,132	37,775	1,061	1,584	1,682	7,588	1,160,488
Information	51	17,113	4,062	13,051	2,486	89,613	2,959	111,538	1,587,311
Publishing	511	5,801	1,570	4,231	1,066	12,812	1,176	17,878	637,366
Newspaper, periodical, book, and directory publishers	5111	3,407	257	3,151	167	125	217	198	106,532
Software publishers	5112	2,393	1,313	1,080	899	12,687	959	17,680	530,834
Telecommunications	517	2,568	384	2,184	114	63,265	273	80,092	479,248
Data processing, hosting, and related services	518	3,105	1,335	1,770	960	12,141	959	9,438	160,846
Other information	other 51	5,640	773	4,867	346	1,395	551	4,129	309,851
Finance and insurance	52	45,282	2,532	42,750	1,400	53,457	950	31,102	3,657,659
Real estate and rental and leasing	53	36,032	1,959	34,073	777	1,026	1,481	4,578	419,313
Lessors of nonfinancial intangible assets (except copyrighted works)	533	110	8	102	4	4	4	80	11,940
Other real estate and rental and leasing	other 53	35,922	1,951	33,971	773	1,021	1,477	4,498	407,373
Professional, scientific, and technical services	54	154,446	18,841	135,605	11,442	44,593	13,321	41,201	1,681,549
Architectural, engineering, and related services	5413	25,214	3,262	21,952	1,947	4,986	2,578	6,448	312,064
Computer systems design and related services	5415	19,695	7,179	12,515	4,614	25,863	5,233	20,382	440,000
Scientific research and development services	5417	2,790	1,002	1,789	785	4,809	543	3,772	77,355
Biotechnology research and development	541711	543	183	360	131	323	99	770	30,217

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Industry and company size	NAICS code	New or significantly improved products ^a			New or significantly improved products				Sales of products unchanged or marginally modified (US\$millions)
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Physical, engineering, and life sciences (except biotechnology) research and development	541712	2,055	784	1,270	627	4,423	421	2,980	43,433
Social sciences and humanities research and development	541720	192	35	158	26	63	22	22	3,705
Other professional, scientific, and technical services	other 54	106,747	7,397	99,350	4,096	8,936	4,968	10,598	852,129
Health care services	621–23	167,465	15,018	152,447	8,231	3,952	10,113	8,255	805,648
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	461,312	23,897	437,415	16,518	47,948	17,126	47,869	13,062,429
All companies (number of domestic employees)	–	1,138,671	108,376	1,030,296	69,538	810,268	76,347	791,444	35,476,169
Micro companies ^e									
5–9	–	307,934	28,229	279,705	17,889	11,562	20,407	9,492	743,073
Small companies									
10–19	–	387,796	36,273	351,522	22,873	21,877	23,812	23,786	1,560,263
20–49	–	290,964	26,191	264,773	18,161	36,956	18,987	41,743	2,701,107
Medium companies									
50–99	–	83,527	9,520	74,008	5,905	28,092	7,319	42,987	1,637,880
100–249	–	43,846	4,791	39,055	2,873	34,008	3,567	32,479	2,089,976
Large companies									
250–499	–	11,925	1,360	10,565	740	20,744	971	32,500	1,285,651
500–999	–	5,669	929	4,739	407	26,825	513	29,365	1,653,502
1,000–4,999	–	5,125	731	4,394	461	105,378	523	113,006	4,044,506
5,000–9,999	–	721	170	551	123	60,041	132	84,908	2,362,899
10,000–24,999	–	838	118	720	73	216,909	85	175,042	4,380,061
25,000 or more	–	326	64	262	32	247,875	30	206,135	13,017,252
Industry proportions (percent)									
All industries	21–23, 31–33, 42–81	1,138,671	9.5	90.5	69,538	2.2	76,347	2.1	95.7
Manufacturing industries	31–33	113,066	22.1	77.9	16,464	5.8	17,871	5.4	88.8
Food	311	9,763	18.3	81.7	901	4.0	1,470	4.9	91.1
Beverages and tobacco products	312	2,863	22.5	77.5	435	0.5	554	0.4	99.1
Textiles, apparel, and leather products	313–16	4,689	20.1	79.9	646	7.2	484	4.2	88.6
Wood products	321	5,526	8.8	91.2	288	0.5	354	1.6	97.9

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					Companies (number) ^d	Sales (US\$millions)	Companies (number) ^d	Sales (US\$millions)	
Paper	322	1,447	18.3	81.7	140	6.7	220	9.2	84.1
Printing and related support activities	323	8,604	16.0	84.0	982	2.5	998	3.5	94.1
Petroleum and coal products	324	412	19.7	80.3	35	0.7	71	0.7	98.6
Chemicals	325	5,259	35.8	64.2	1,267	9.8	1,327	5.8	84.3
Basic chemicals	3251	692	38.7	61.3	186	2.0	198	1.7	96.3
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	633	25.6	74.4	106	12.4	141	11.3	76.2
Pesticides, fertilizers, and other agricultural chemicals	3253	261	28.9	71.1	63	7.3	60	18.0	74.7
Pharmaceuticals and medicines	3254	1,384	33.2	66.8	331	7.0	272	6.0	87.0
Soaps, cleaning compounds, and toilet preparations	3256	929	38.7	61.3	245	34.8	272	5.2	59.9
Paints, coatings, adhesives, and other chemicals	3255, 3259	1,360	40.9	59.1	336	5.4	384	6.1	88.5
Plastics and rubber products	326	5,555	25.5	74.5	954	8.2	1,110	4.7	87.2
Nonmetallic mineral products	327	4,758	17.7	82.3	598	0.7	598	2.0	97.3
Primary metals	331	2,033	13.8	86.2	164	1.9	219	4.9	93.1
Fabricated metal products	332	24,182	17.3	82.7	2,657	3.8	3,068	5.1	91.1
Machinery	333	10,843	28.9	71.1	2,087	5.2	2,195	10.7	84.2
Agricultural implements	33311	530	36.9	63.1	151	11.7	138	25.7	62.6
Semiconductor machinery	333242	78	47.6	52.4	24	3.4	D	D	D
Engines, turbines, and power transmission equipment	3336	446	30.5	69.5	97	2.7	D	D	D
Other machinery	other 333	9,788	28.2	71.8	1,816	4.5	D	D	89.6
Computer and electronic products	334	5,477	46.2	53.8	1,841	8.4	1,724	8.3	83.3
Communications equipment	3342	736	56.5	43.5	342	16.2	230	16.3	67.5
Semiconductors and other electronic components	3344	2,008	35.3	64.7	531	7.0	551	2.5	90.4
Navigational, measuring, electromedical, and control instruments	3345	1,932	54.2	45.8	770	14.0	709	4.2	81.8

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					Companies (number) ^d	Sales (US\$millions)	Companies (number) ^d	Sales (US\$millions)	
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	335	50.6	49.4	150	13.9	129	1.3	84.8
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	270	52.6	47.4	73	24.7	120	2.5	72.8
Other measuring and controlling devices	other 3345	1,328	55.5	44.5	547	4.9	460	6.6	88.5
Other computer and electronic products	other 334	800	44.5	55.5	198	3.9	234	13.5	82.6
Electrical equipment, appliances, and components	335	2,364	36.3	63.7	549	5.6	515	9.9	84.5
Transportation equipment	336	5,058	28.6	71.4	942	5.1	1,086	3.4	91.4
Automobiles, bodies, trailers, and parts	3361–63	3,134	28.2	71.8	586	3.5	734	2.7	93.8
Aerospace products and parts	3364	861	27.7	72.3	154	9.9	158	5.4	84.7
Aircraft, aircraft engines, and aircraft parts	336411–13	828	27.2	72.8	143	9.8	149	5.1	85.0
Guided missiles, space vehicles, and related parts	336414–15, 336419	33	40.9	59.1	11	11.0	9	10.8	78.2
Military armored vehicles, tanks, and tank components	336992	23	26.1	73.9	5	1.9	3	1.7	96.4
Other transportation	other 336	1,041	30.7	69.3	196	5.3	191	4.0	90.7
Furniture and related products	337	5,660	10.4	89.6	431	4.4	411	5.6	89.9
Miscellaneous manufacturing	339	8,573	25.6	74.4	1,547	5.3	1,467	5.4	89.3
Medical equipment and supplies	3391	3,057	30.8	69.2	531	5.7	556	5.5	88.8
Other miscellaneous manufacturing	3399	5,516	22.8	77.2	1,016	4.3	912	5.4	90.3
Nonmanufacturing industries	21–23, 42–81	1,025,605	8.1	91.9	53,074	1.0	58,476	1.1	97.9
Mining, extraction, and support activities	21	6,761	5.8	94.2	359	0.6	128	1.4	98.0
Utilities	22	1,200	4.8	95.2	9	*	11	0.1	99.9
Wholesale trade	42	91,941	14.8	85.2	10,074	0.9	9,951	1.0	98.1
Electronic shopping and electronic auctions	454111–12	4,147	23.0	77.0	717	1.1	752	1.7	97.2

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Transportation and warehousing	48–49	39,906	5.3	94.7	1,061	0.1	1,682	0.6	99.2
Information	51	17,113	23.7	76.3	2,486	5.0	2,959	6.2	88.8
Publishing	511	5,801	27.1	72.9	1,066	1.9	1,176	2.7	95.4
Newspaper, periodical, book, and directory publishers	5111	3,407	7.5	92.5	167	0.1	217	0.2	99.7
Software publishers	5112	2,393	54.9	45.1	899	2.3	959	3.2	94.6
Telecommunications	517	2,568	14.9	85.1	114	10.2	273	12.9	77.0
Data processing, hosting, and related services	518	3,105	43.0	57.0	960	6.7	959	5.2	88.2
Other information	other 51	5,640	13.7	86.3	346	0.4	551	1.3	98.2
Finance and insurance	52	45,282	5.6	94.4	1,400	1.4	950	0.8	97.7
Real estate and rental and leasing	53	36,032	5.4	94.6	777	0.2	1,481	1.1	98.7
Lessors of nonfinancial intangible assets (except copyrighted works)	533	110	7.3	92.7	4	*	4	0.7	99.3
Other real estate and rental and leasing	other 53	35,922	5.4	94.6	773	0.2	1,477	1.1	98.7
Professional, scientific, and technical services	54	154,446	12.2	87.8	11,442	2.5	13,321	2.3	95.1
Architectural, engineering, and related services	5413	25,214	12.9	87.1	1,947	1.5	2,578	2.0	96.5
Computer systems design and related services	5415	19,695	36.5	63.5	4,614	5.3	5,233	4.2	90.5
Scientific research and development services	5417	2,790	35.9	64.1	785	5.6	543	4.4	90.0
Biotechnology research and development	541711	543	33.7	66.3	131	1.0	99	2.5	96.5
Physical, engineering, and life sciences (except biotechnology) research and development	541712	2,055	38.2	61.8	627	8.7	421	5.9	85.4
Social sciences and humanities research and development	541720	192	18.0	82.0	26	1.7	22	0.6	97.7

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Other professional, scientific, and technical services	other 54	106,747	6.9	93.1	4,096	1.0	4,968	1.2	97.8
Health care services	621–23	167,465	9.0	91.0	8,231	0.5	10,113	1.0	98.5
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	461,312	5.2	94.8	16,518	0.4	17,126	0.4	99.3
All companies (number of domestic employees)	–	1,138,671	9.5	90.5	69,538	2.2	76,347	2.1	95.7
Micro companies ^e									
5–9	–	307,934	9.2	90.8	17,889	1.5	20,407	1.2	97.2
Small companies									
10–19	–	387,796	9.4	90.6	22,873	1.4	23,812	1.5	97.2
20–49	–	290,964	9.0	91.0	18,161	1.3	18,987	1.5	97.2
Medium companies									
50–99	–	83,527	11.4	88.6	5,905	1.6	7,319	2.5	95.8
100–249	–	43,846	10.9	89.1	2,873	1.6	3,567	1.5	96.9
Large companies									
250–499	–	11,925	11.4	88.6	740	1.5	971	2.4	96.0
500–999	–	5,669	16.4	83.6	407	1.6	513	1.7	96.7
1,000–4,999	–	5,125	14.3	85.7	461	2.5	523	2.7	94.9
5,000–9,999	–	721	23.6	76.4	123	2.4	132	3.4	94.2
10,000–24,999	–	838	14.1	85.9	73	4.5	85	3.7	91.8
25,000 or more	–	326	19.5	80.5	32	1.8	30	1.5	96.6

* = amount < 0.05%; D = data withheld to avoid disclosing operations of individual companies.

NAICS = 2012 North American Industry Classification System.

^a 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.^b Includes companies that responded "Yes" to at least one of the items on the survey relating to new or significantly improved products.^c Includes companies that responded "No" to both of the items on the survey relating to new or significantly improved products.^d Statistics for number of companies are based only on companies in the United States that reported data for this survey item, regardless of whether the company performed or funded R&D.^e 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. 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.