

## TECHNICAL TABLE A-2

## Companies in the target population and selected for the sample, by industry and company size: 2017

(Number of companies)

Industry and company size	NAICS code	Companies in target population <sup>a</sup>	Companies selected for the sample		
			All companies	Noncertainties	Certainties
All industries	21-23, 31-33, 42-81	1,097,510	44,978	24,400	20,578
Manufacturing industries	31-33	97,936	18,635	9,445	9,190
Food	311	9,037	1,073	708	365
Beverage and tobacco products	312	2,495	315	202	113
Textile, apparel, and leather products	313-16	4,110	644	412	232
Wood products	321	4,896	625	425	200
Paper	322	1,575	372	203	169
Printing and related support activities	323	6,338	1,197	809	388
Petroleum and coal products	324	355	152	20	132
Chemicals	325	4,871	1,968	456	1,512
Basic chemicals	3251	705	300	107	193
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	569	250	54	196
Pesticide, fertilizer, and other agricultural chemicals	3253	284	104	26	78
Pharmaceuticals and medicines	3254	1,337	712	63	649
Soap, cleaning compound, and toilet preparation	3256	780	235	67	168
Paint, coating, adhesive, and other chemicals	3255, 3259	1,196	367	139	228
Plastics and rubber products	326	5,017	1,015	559	456
Nonmetallic mineral products	327	4,044	558	351	207
Primary metals	331	1,859	518	241	277
Fabricated metal products	332	20,231	2,279	1,426	853
Machinery	333	9,648	2,114	1,023	1,091
Agricultural implement	33311	561	170	41	129
Semiconductor machinery	333242	83	73	0	73
Engine, turbine, and power transmission equipment	3336	400	162	46	116
Other machinery	other 333	8,604	1,709	936	773
Computer and electronic products	334	5,036	1,736	529	1,207
Communications equipment	3342	586	243	31	212
Semiconductor and other electronic components	3344	1,877	463	151	312
Navigational, measuring, electromedical, and control instruments	3345	1,870	787	279	508
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	320	184	42	142
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	248	123	19	104
Other measuring and controlling device	other 3345	1,302	480	218	262
Other computer and electronic products	other 334	703	243	68	175
Electrical equipment, appliances, and components	335	2,320	618	294	324
Transportation equipment	336	4,764	1,052	432	620
Automobiles, bodies, trailers, and parts	3361-63	2,991	537	235	302
Aerospace products and parts	3364	827	273	92	181
Aircraft, aircraft engine, and aircraft parts	336411-13	782	238	92	146
Guided missile, space vehicle, and related parts	336414, 336415, 336419	45	35	0	35
Military armored vehicle, tank, and tank component	336992	29	21	0	21
Other transportation	other 336	917	221	105	116

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			All companies	Noncertainties	Certainties
Furniture and related products	337	4,597	958	615	343
Miscellaneous	339	6,687	1,388	740	648
Medical equipment and supplies	3391	2,435	652	281	371
Other miscellaneous manufacturing	3399	4,252	736	459	277
Unclassified	–	56	53	0	53
Nonmanufacturing industries	21–23, 42–81	999,574	26,343	14,955	11,388
Mining, extraction, and support activities <sup>b</sup>	21	4,941	647	398	249
Utilities	22	751	203	60	143
Wholesale trade	42	70,421	5,628	4,422	1,206
Electronic shopping and electronic auctions	454111–12	3,410	398	300	98
Transportation and warehousing	48–49	33,166	522	186	336
Information	51	15,294	3,075	1,505	1,570
Publishing	511	5,211	1,225	580	645
Newspaper, periodical, book, and directory publishers	5111	2,928	527	331	196
Software publishers	5112	2,283	698	249	449
Telecommunications	517	2,177	520	297	223
Data processing, hosting, and related services	518	2,935	824	292	532
Other information	other 51	4,971	506	336	170
Finance and insurance	52	26,589	915	205	710
Real estate and rental and leasing	53	24,795	424	127	297
Lessors of nonfinancial intangible assets (except copyrighted works)	533	469	94	2	92
Other real estate and rental and leasing	other 53	24,326	330	125	205
Professional, scientific, and technical services	54	100,975	9,560	4,341	5,219
Architectural, engineering, and related services	5413	17,229	2,709	1,846	863
Computer systems design and related services	5415	16,226	2,987	1,901	1,086
Scientific research and development services	5417	2,405	2,405	0	2,405
Biotechnology research and development	541711	645	645	0	645
Physical, engineering, and life sciences (except biotechnology) research and development	541712	1,604	1,604	0	1,604
Social sciences and humanities research and development	541720	156	156	0	156
Other professional, scientific, and technical services	other 54	65,115	1,459	594	865
Health care services	621–23	109,101	1,223	532	691
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	609,834	3,636	2,875	761
Unclassified	–	297	112	4	108
Company size (number of domestic employees)					
All companies	–	1,097,510	44,978	24,400	20,578
< 10 <sup>c</sup>	–	6,318	359	154	205
10–19	–	544,096	10,310	8,245	2,065
20–49	–	353,076	10,344	7,594	2,750
50–99	–	106,388	6,676	4,066	2,610
100–249	–	56,061	7,441	2,997	4,444
250–499	–	16,301	3,681	771	2,910
500–999	–	7,511	2,425	305	2,120
1,000–4,999	–	6,048	2,622	213	2,409

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			All companies	Noncertainties	Certainties
5,000–9,999	–	841	490	11	479
10,000–24,999	–	534	366	21	345
25,000 or more	–	336	264	23	241

NAICS = 2012 North American Industry Classification System.

<sup>a</sup> Estimates of the number of companies in the target population are based on the original sampling frame that was created to select the 2017 Business Research and Development Survey (BRDS) sample. These estimates do not include 93 R&D performers from the previous year's sample, which were not on the original sampling frame but were found during the survey's annual contact update procedures. These companies were added to the 2017 sample with certainty but are not reflected in the number of certainties selected for the sample.

<sup>b</sup> Because of the widespread practice of the larger petroleum extraction and refining companies vertically integrating their activities, petroleum refineries (NAICS 32411) and oil and gas extraction (NAICS 211) were combined during sampling.

<sup>c</sup> This category includes companies that are represented on the sampling frame as having missing data, but these companies are in scope to BRDS because they have at least \$500,000 in annual payroll.

**Note(s)**

Certainties are companies whose probability of selection is one based on prior year R&D expenditures equal to or greater than \$3 million as well as others included in the sample for analytical purposes (analytical certainties). Noncertainties are companies whose probability of selection is less than 1. Companies that were missing or had an incomplete NAICS code at the time of sampling were assigned to an "unclassified" industry category temporarily. If an unclassified company reported R&D expenditures, its primary industrial activity was investigated, and a NAICS code was assigned during statistical processing.

**Source(s)**

National Center for Science and Engineering Statistics and U.S. Census Bureau, Business Research and Development Survey, 2017.