

TABLE 42
Domestic R&D performance by performer and source of funds, by industry and company size: 2020

(Millions of U.S. dollars)

Industry and company size	NAICS code	Performed by the company			Performed by others		
		Total	Paid for by the company	Paid for by others	Total	Paid for by the company	Paid for by others
All industries	21–23, 31–33, 42–81	537,619	466,162	71,457	48,075	38,631	9,444
Manufacturing industries	31–33	308,445	264,596	43,848	41,831	34,602	7,228
Food	311	5,239	4,985	254	257	255	1
Beverage and tobacco products	312	1,177	1,056	121	174	170	4
Textile, apparel, and leather products	313–16	822	812	9	10	10	*
Wood products	321	187	183	3	10	10	0
Paper	322	928	927	1	6 - 8	7	0 - 1
Printing and related support activities	323	283	282	1	4	4	0
Petroleum and coal products	324	1,311 - 1,324	1,222	89 - 103	194 - 207	195	0 - 12
Chemicals	325	101,079	89,403	11,675	29,761	25,548	4,213
Basic chemicals	3251	2,694	2,523	171	66	65	1
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	1,234	1,161	73	56	27	28
Pesticide, fertilizer, and other agricultural chemicals	3253	1,060 - 1,066	775	284 - 291	81 - 88	68 - 85	0 - 13
Pharmaceuticals and medicines	3254	91,776	80,858	10,918	29,251	25,086	4,165
Soap, cleaning compound, and toilet preparation	3256	2,665	2,476	189	260	253	7
Paint, coating, adhesive, and other chemicals	3255, 3259	1,643 - 1,649	1,610	32 - 39	42 - 49	33 - 49	0 - 13
Plastics and rubber products	326	2,634	2,607	26	23	21	2
Nonmetallic mineral products	327	1,717	1,619	98	92	92	1
Primary metals	331	815	795	20	21	20	1
Fabricated metal products	332	3,396	3,336	60	89	86	3
Machinery	333	16,223	15,071	1,152	440	379	61
Agricultural implement	33311	1,769 - 1,811	1,760	10 - 52	176 - 186	177	0 - 10
Semiconductor machinery	333242	4,807	4,121	686	49	6	43
Engine, turbine, and power transmission equipment	3336	1,645	1,523	122	22	12	9
Other machinery	other 333	7,959 - 8,001	7,667	292 - 334	184 - 194	185	0 - 10
Computer and electronic products	334	99,535	88,505	11,030	3,734	3,175	559
Communications equipment	3342	12,103	11,107	996	1,081	1,035	46
Semiconductor and other electronic components	3344	43,181	40,801	2,380	305	221	83
Navigational, measuring, electromedical, and control instruments	3345	18,505	11,012	7,493	710	290	420
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	2,858	2,606	251	106	101	4
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	10,586	3,561	7,025	444 - 604	30 - 189	415

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Other measuring and controlling device	other 3345	5,061	4,844	217	0 - 160	0 - 158	1
Other computer and electronic products	other 334	25,747	25,585	161	1,639	1,629	9
Electrical equipment, appliances, and components	335	4,998	4,492	506	97	96	1
Transportation equipment	336	48,796	30,232	18,564	5,939	3,573	2,366
Motor vehicles, bodies, trailers, and parts	3361-63	23,121	19,522	3,599	3,278 - 3,291	3,112	166 - 178
Aerospace products and parts	3364	22,914	9,111	13,803	2,577	388	2,189
Aircraft, aircraft engine, and aircraft parts	336411-13	21,291	8,281	13,011	2,444	260	2,185
Guided missile, space vehicle, and related parts	336414-15, 336419	1,623	831	793	133	129	4
Military armored vehicle, tank, and tank component	336992	11	4	6	*	*	0
Other transportation	other 336	2,750	1,594	1,155	72 - 83	73	0 - 10
Furniture and related products	337	496	492	3	21	20	*
Miscellaneous	339	18,791 - 18,809	18,576	215 - 233	950 - 963	941	9 - 22
Medical equipment and supplies	3391	16,116	15,944	173	881	871	10
Other miscellaneous manufacturing	3399	2,674 - 2,692	2,632	42 - 60	69 - 82	70	0 - 12
Nonmanufacturing industries	21-23, 42-81	229,174	201,566	27,608	6,244	4,029	2,215
Mining, quarrying, oil and gas extraction, and support activities	21	1,165	1,121	45	79	79	0
Utilities	22	264	224	40	198	190	8
Wholesale trade	42	1,058	1,001	58	203	154	49
Electronic shopping and electronic auctions	454111-12	3,840 - 19,390	3,837 - 19,343	2 - 50	0 - 106	0 - 106	0
Transportation and warehousing	48-49	4,957	4,954	3	203	203	0
Information	51	129,463	128,350	1,113	2,247	2,136	111
Publishing	511	35,025	34,516	509	1,298	1,246	52
Newspaper, periodical, book, and directory publishers	5111	60	60	0	4	4	0
Software publishers	5112	34,965	34,456	509	1,295	1,242	52
Telecommunications	517	3,425 - 3,437	3,371	54 - 66	453 - 456	453	0 - 3
Data processing, hosting, and related services	518	41,551	41,105	446	342	285	57
Other information	other 51	49,449 - 49,463	49,358	91 - 105	152 - 155	153	0 - 3
Finance and insurance	52	12,296	12,204	92	291	290	1
Real estate and rental and leasing	53	3,249	3,249	*	*	*	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	7	7	*	0	0	0

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Other real estate and rental and leasing	other 53	3,242	3,242	0	*	*	0
Professional, scientific, and technical services	54	54,367	28,322	26,045	2,865	844	2,022
Architectural, engineering, and related services	5413	4,214	2,214	2,001	515	65	450
Computer systems design and related services	5415	17,935	14,293	3,643	258	239	19
Scientific research and development services	5417	25,600	6,246	19,354	1,961	493	1,468
Research and development in nanotechnology	541713	179	126	53	4 - 8	0 - 3	5
Research and development in biotechnology (except nanobiotechnology)	541714	6,191	1,176	5,014	280	182	98
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	18,539	4,906	13,632	319 - 1,678	307 - 312	11 - 1,367
Research and development in the social sciences and humanities	541720	691	38	654	0 - 1,354	0	0 - 1,354
Other professional, scientific, and technical services	other 54	6,618	5,570	1,048	131	47	84
Health care services	621-23	1,477	1,374	103	34	31 - 34	0 - 2
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	1,491 - 17,041	1,429 - 16,934	62 - 109	21 - 128	0 - 106	21 - 27
All companies (number of domestic employees)	-	537,619	466,162	71,457	48,075	38,631	9,444
Small companies							
10-19 ^a	-	5,047	4,019	1,029	691	560	131
20-49	-	12,994	10,970	2,025	2,075	1,733	342
Medium companies							
50-99	-	12,993	11,177	1,816	1,872	1,490	382
100-249	-	25,411	22,132	3,280	3,496	2,938	558
Large companies							
250-499	-	20,878	18,067	2,811	1,926	1,626	300
500-999	-	21,264	18,458	2,807	2,610	2,164	446
1,000-4,999	-	88,238	75,917	12,322	5,836	4,193	1,643
5,000-9,999	-	48,397	42,451	5,945	6,201	5,599	602
10,000-24,999	-	88,567	72,827	15,739	10,574	8,530	2,044
25,000 or more	-	213,829	190,145	23,684	12,794	9,798	2,996

* = amount < \$500,000; i = more than 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2017 North American Industry Classification System.

^a The Business Enterprise Research and Development Survey does not include companies with fewer than 10 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 \$50,000 or more of R&D and are not comparable with estimates published for years prior to 2018. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2020.