

TABLE 7

Worldwide R&D paid for by others and performed by the company and others, by industry and company size: 2020

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Performed by the company	Performed by others
All industries	21-23, 31-33, 42-81	93,463	82,975	10,489
Manufacturing industries	31-33	53,459	45,263	8,196
Food	311	260	253 - 260	1 - 7
Beverage and tobacco products	312	125	121	4
Textile, apparel, and leather products	313-16	9	9	*
Wood products	321	3	3	0
Paper	322	1	1	* i
Printing and related support activities	323	1	1	0
Petroleum and coal products	324	102	89 - 103	0 - 13
Chemicals	325	17,016	11,919	5,097
Basic chemicals	3251	176	175	1
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	113	81	33
Pesticide, fertilizer, and other agricultural chemicals	3253	305	291 - 306	0 - 13
Pharmaceuticals and medicines	3254	16,177	11,131	5,045
Soap, cleaning compound, and toilet preparation	3256	199	192	7
Paint, coating, adhesive, and other chemicals	3255, 3259	46	32 - 47	0 - 13
Plastics and rubber products	326	29	26	2
Nonmetallic mineral products	327	102	102	1
Primary metals	331	21	20	1
Fabricated metal products	332	68	65	3
Machinery	333	1,315	1,254	61
Agricultural implement	33311	50 - 61	51	i 0 - 10
Semiconductor machinery	333242	743	700	43
Engine, turbine, and power transmission equipment	3336	180	171	9
Other machinery	other 333	332 - 343	333	0 - 10
Computer and electronic products	334	11,965	11,376	589 i
Communications equipment	3342	1,051	1,005	i 46 i
Semiconductor and other electronic components	3344	2,647	2,535	112
Navigational, measuring, electromedical, and control instruments	3345	8,076	7,655	421 i
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	266	262	4
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	7,567 i	7,151 i	416 i
Other measuring and controlling device	other 3345	244	243	1
Other computer and electronic products	other 334	190	180	11
Electrical equipment, appliances, and components	335	549	549	1
Transportation equipment	336	21,592	19,177	2,415
Motor vehicles, bodies, trailers, and parts	3361-63	4,298	4,089 - 4,101	197 - 209
Aerospace products and parts	3364	16,104	13,897	i 2,207
Aircraft, aircraft engine, and aircraft parts	336411-13	15,307	13,105	i 2,203
Guided missile, space vehicle, and related parts	336414-15, 336419	797	793	4
Military armored vehicle, tank, and tank component	336992	6	6	0
Other transportation	other 336	1,183	1,173 - 1,184	0 - 10
Furniture and related products	337	4	3	*
Miscellaneous	339	296	274 - 287	9 - 23
Medical equipment and supplies	3391	231	221	10
Other miscellaneous manufacturing	3399	66	53 - 66	0 - 12
Nonmanufacturing industries	21-23, 42-81	40,005	37,712	2,293
Mining, quarrying, oil and gas extraction, and support activities	21	46 - 53	46 - 53	i 0

TABLE 7

Worldwide R&D paid for by others and performed by the company and others, by industry and company size: 2020

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Performed by the company	Performed by others
Utilities	22	48	40	8
Wholesale trade	42	108	59	49
Electronic shopping and electronic auctions	454111-12	2 - 50	2 - 50	0
Transportation and warehousing	48-49	3	3	0
Information	51	1,257	1,144	113
Publishing	511	592	539	54
Newspaper, periodical, book, and directory publishers	5111	0	0	0
Software publishers	5112	592	539	54
Telecommunications	517	54 - 69	54 - 66	0 - 3
Data processing, hosting, and related services	518	505	447	57
Other information	other 51	91 - 107	91 - 105	0 - 3
Finance and insurance	52	144	142	1
Real estate and rental and leasing	53	*	*	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	*	*	0
Other real estate and rental and leasing	other 53	0	0	0
Professional, scientific, and technical services	54	38,155	36,059	2,096
Architectural, engineering, and related services	5413	2,461	2,009	452
Computer systems design and related services	5415	3,777	3,758	19
Scientific research and development services	5417	30,768	29,227	1,541
Research and development in nanotechnology	541713	58	53	5
Research and development in biotechnology (except nanobiotechnology)	541714	7,938	7,836	102
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	20,757 - 22,120	20,678 - 20,685	79 - 1,436
Research and development in the social sciences and humanities	541720	653 - 2,014	653 - 661	0 - 1,354
Other professional, scientific, and technical services	other 54	1,148	1,065	84
Health care services	621-23	104	102 - 105	0 - 2
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	85 - 138	63 - 111	21 - 27
All companies (number of domestic employees)	-	93,463	82,975	10,489
Small companies				
10-19 ^a	-	1,192	1,056	136
20-49	-	2,416	2,063	353
Medium companies				
50-99	-	2,254	1,857	398
100-249	-	3,994	3,361	633
Large companies				
250-499	-	3,274	2,971	303
500-999	-	3,434	2,973	461
1,000-4,999	-	14,622	12,730	1,891
5,000-9,999	-	9,281	8,275	1,006
10,000-24,999	-	24,205	21,961	2,244
25,000 or more	-	28,791	25,728	3,063

* = 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.