

TABLE 35

Domestic R&D paid for by others and performed by the company, by type of R&D, industry, and company size: 2022

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Basic research	Applied research	Development			
All industries	21–23, 31–33, 42–81	83,489	7,040	19,821	56,629			
Manufacturing industries	31–33	45,461	4,792	6,865	33,804			
Food	311	D	D	69	208			
Beverage and tobacco products	312	107	22	26	59			
Textile, apparel, and leather products	313–16	D	D	4	9			
Wood products	321	5	0	1	4			
Paper	322	*	*	*	0			
Printing and related support activities	323	1	*	*	*			
Petroleum and coal products	324	4	1	2	1			
Chemicals	325	12,210	2,808	1,808	7,594			
Basic chemicals	3251	D	22	49	D			
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	80	i	D	47			
Pesticide, fertilizer, and other agricultural chemicals	3253	D	D	D	D			
Pharmaceuticals and medicines	3254	11,353	2,691	1,427	7,236			
Soap, cleaning compound, and toilet preparations	3256	D	D	D	D			
Paint, coating, adhesive, and other chemicals	3255, 3259	29	3	16	9			
Plastics and rubber products	326	219	13	48	159			
Nonmetallic mineral products	327	29	2	5	22			
Primary metals	331	20	r	3	r	3		
Fabricated metal products	332	222	i	18	i	90		
Machinery	333	1,218	27	129	1,062			
Agricultural implement	33311	D	D	2	D			
Semiconductor machinery	333242	48	1	*	47			
Engine, turbine, and power transmission equipment	3336	D	D	103	196			
Other machinery	other 333	725	D	24	D			
Computer and electronic products	334	5,483	272	i	608	4,603		
Communications equipment	3342	795	i	211	i	84	501	
Semiconductor and other electronic components	3344	1,950	30	124	1,795			
Navigational, measuring, electromedical, and control instruments	3345	2,671	9	374	2,288			
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	619	i	2	r	47	i	570
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	1,976	6	321	1,648			
Other measuring and controlling devices	other 3345	77	1	5	70			
Other computer and electronic products	other 334	67	22	26	19			
Electrical equipment, appliances, and components	335	429	i	1	207	i	221	
Transportation equipment	336	24,790	1,534	i	3,812	19,445		
Motor vehicles, bodies, trailers, and parts	3361–63	2,159	D	D	1,651			
Aerospace products and parts	3364	21,570	1,436	i	3,296	16,838		
Aircraft, aircraft engine, and aircraft parts	336411–13	15,268	i	1,249	i	2,103	i	11,916
Guided missile, space vehicle, and related parts	336414–15, 336419	6,302	188	1,193	4,922			
Military armored vehicle, tank, and tank components	336992	4	0	0	4			
Other transportation	other 336	1,057	D	D	952			
Furniture and related products	337	5	*	*	5			
Miscellaneous	339	350	12	41	297			
Medical equipment and supplies	3391	282	12	38	232			
Other miscellaneous manufacturing	3399	68	*	2	65			
Nonmanufacturing industries	21–23, 42–81	38,028	i	2,247	i	12,956	i	22,825
Mining, quarrying, oil and gas extraction, and support activities	21	D	0	5	i	D		
Utilities	22	D	1	6	D			
Wholesale trade	42	41	*	13	28			

TABLE 35

Domestic R&D paid for by others and performed by the company, by type of R&D, industry, and company size: 2022

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Basic research	Applied research	Development
Electronic shopping and electronic auctions	454111-12	0	0	0	0
Transportation and warehousing	48-49	D	0	D	D
Information	51	947	43	132	773
Publishing	511	693	13	87	593
Newspaper, periodical, book, and directory publishers	5111	1	0	0	1
Software publishers	5112	693	13	87	593
Telecommunications	517	76	16	25	35
Data processing, hosting, and related services	518	137	13	19	104
Other information	other 51	42	1	1	40
Finance and insurance	52	49	2	2	45
Real estate and rental and leasing	53	0	0	0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0
Other real estate and rental and leasing	other 53	0	0	0	0
Professional, scientific, and technical services	54	36,139	i 2,184	i 12,767	i 21,189
Architectural, engineering, and related services	5413	971	79	220	672
Computer systems design and related services	5415	3,656	391	1,230	2,035
Scientific research and development services	5417	30,328	i 1,642	i 11,263	i 17,423
Research and development in nanotechnology	541713	102	11	54	37
Research and development in biotechnology (except nanobiotechnology)	541714	7,310	139	455	6,716
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	22,244	i 863	i 10,743	i 10,638
Research and development in the social sciences and humanities	541720	672	628	10	33
Other professional, scientific, and technical services	other 54	1,184	73	53	1,058
Health care services	621-23	D	16	28	D
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	94	2	D	D
All companies (number of domestic employees)	-	83,489	7,040	19,821	i 56,629
Small companies					
10-19 ^a	-	1,269	89	325	854
20-49	-	1,907	160	304	1,443
Medium companies					
50-99	-	1,990	224	532	1,235
100-249	-	3,003	251	615	2,137
Large companies					
250-499	-	3,080	224	697	2,159
500-999	-	2,795	137	601	2,057
1,000-4,999	-	9,890	2,287	1,340	6,263
5,000-9,999	-	4,692	879	i 397	3,415
10,000-24,999	-	25,072	i 1,115	i 8,969	i 14,988
25,000 or more	-	29,792	1,674	i 6,041	i 22,077

* = amount < \$500,000; D = data withheld to avoid disclosing operations of individual companies; i = more than 50% of the estimate is a combination of imputation and reweighting to account for nonresponse; r = relative standard error is more than 50%.

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.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2022.