

TABLE 51-A

R&D paid for by the company and others and performed by the company outside of the United States, by selected location, industry, and company size: 2017 (part A)

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total outside the United States	Puerto Rico ^a	Canada	Austria	Belgium	Czechia	Denmark	Finland	France	Germany	Hungary	Ireland	Italy	Luxembourg	Netherlands	Norway	Poland	Russia	Spain	Sweden	Switzerland	Turkey	United Kingdom	Other European locations																					
All industries	21-23, 31-33, 42-81	87,528	437	5,375	724	2,230	378	636	549	3,227	8,511	216	3,302	1,291	205	1,775	447	767	380	864	1,312	3,703	98	10,487	1,933																					
Manufacturing industries	31-33	57,270	418	2,962	641	1,915	158	484	341	2,246	6,948	81	1,617	1,013	190	1,205	362	467	202	549	684	2,494	58	5,544	973																					
Food	311	865	0	33	2	2	1	0	0	43	45	*	1	6	0	21	21	11	2	3	2	11	1	73	51																					
Chemicals	325	14,450	75	522	409	1,588	35	104	41	558	958	27	829	214	164	511	38	84	73	213	170	1,275	42	2,059	440																					
Pharmaceuticals and medicines	3254	11,976	33	456	405	1,444	32	93	35	429	565	24	827	196	3	316	34	76	65	194	166	1,208	37	1,808	394																					
Other chemicals	other 325	2,474	41	67	4	144	3	11	6	129	394	3	2	18	161	194	3	9	7	19	4	67	5	251	46																					
Plastics and rubber products	326	902	0-34	41	1	25	1	2	2	53	142	4	2	30	2	38	0	4	2	23	2	49	0	27	6																					
Nonmetallic mineral products	327	181	0	6	0	2	*	1	i	0	12	i	22	i	0	0	0	3	i	3	i	6	0	0	1	2																				
Fabricated metal products	332	166	0	7	2	2	*	0	0	2	23	0	0	3	0	3	0	*	*	2	*	10	0	43	*																					
Machinery	333	3,266	0	100	53	33	8	24	73	208	630	1	12	77	0	68	109	i	15	2	22	91	112	*	286	40																				
Computer and electronic products	334	22,648	263-344	1,546	102	115	81	259	183	600	1,969	14	571	213	15	209	162	208	72	166	234	392	1	1,497	237																					
Electrical equipment, appliances, and components	335	1,867	0	262	i	30	i	11	1	0	4	i	55	263	3	i	0	106	0	23	i	11	26	5	5	*	68	3	126	i	62	i														
Transportation equipment	336	8,822	0-81	i	283	21	64	i	0-35	0-58	0-41	538	2,443	31	7	296	0-11	179	i	0-24	104	4	94	124	71	0-8	1,108	55																		
Miscellaneous manufacturing	339	2,787	0-81	47-159	19	45	0-35	i	40	0-41	128	410	*	188	34	0-11	i	146	0-24	8	i	31	14	56	182	6	204	19																		
Other manufacturing	312-16, 321-24, 331, 337	1,315	0	0-110	4	27	0-35	0-58	0-41	48	42	*	7	31	0-11	7	*	4	8	1	5	323	0-8	119	61																					
Nonmanufacturing industries	21-23, 42-81	30,258	18	2,413	83	314	219	152	209	981	1,563	136	1,685	i	278	i	15	i	570	85	300	178	315	i	628	1,209	41	4,944	960	i																
Wholesale trade	42	37	i	0	0	0	0	0	0	1	i	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0																		
Information	51	14,646	0-18	1,356	36	119	106	111	163	371	468	60	632	56	9	218	70	139	61	122	557	692	3	2,271	498																					
Telecommunications	517	94	0	0-46	0	0	0	2	0	*	3	0	4	0	1	0-46	*	i	0	0	1	1	i	*	0	17	0-46																			
Data processing, hosting, and related services	518	2,272	0-18	164	17	3	2	10	5	i	46	79	35	253	21	*	56	*	68	21	17	12	19	0	369	163	i																			
Other information	other 51	12,281	0-18	1,145-1,193	19	i	116	104	99	158	325	385	25	375	35	8	115-163	69	71	40	104	544	672	3	1,885	288-336																				
Professional, scientific, and technical services	54	11,064	0-18	i	793	44	i	170	i	110	29	i	44	556	760	67	i	241	198	i	0	266	i	12	149	i	113	i	165	i	52	i	497	28	i	2,201	i	413	i							
Architectural, engineering, and related services	5413	53	0	10	0	0	0	*	0	*	7	0	0	*	0	13	0	0	0	*	0	0	5	*	*																					
Scientific research and development services	5417	7,124	1	i	372	39	i	167	i	47	i	27	i	38	418	i	396	55	i	72	i	159	i	0	220	i	7	121	i	108	i	152	i	43	i	418	22	i	1,823	i	369	i				
Biotechnology research and development	541711	1,996	0	56	3	45	15	8	5	68	135	17	5	45	0	30	5	44	24	55	11	390	6	512	73																					
Data processing, hosting, and related services	other 5417	5,128	1	i	317	35	i	121	i	32	i	19	i	33	i	350	i	261	i	38	i	67	i	113	i	0	190	i	2	i	77	i	83	i	97	i	32	i	28	i	16	i	1,311	i	296	i
Other professional, scientific, and technical services	other 54	3,888	0-18	411	6	3	63	1	6	137	357	12	169	39	0	34	6	28	6	13	9	79	2	378	44																					
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	4,511	0-18	264	i	3	i	25	4	13	1	i	53	i	329	i	8	812	i	25	i	6	i	85	i	3	i	12	i	4	i	28	i	19	20	9	472	i	49							
All companies (number of domestic employees)	-	87,528	437	5,375	724	2,230	378	636	549	3,227	8,511	216	3,302	1,291	205	1,775	447	767	380	864	1,312	3,703	98	10,487	1,933																					

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Small companies																									
10-19 ^b		- 136	2	26	7	0	2	0	0	3	11	*	0	* i	0	*	1	2	*	0	2	7	0	5 i	5
20-49		- 577	0	29	1	4	*	1	0	6	10	1	3	4	0	2	0	4	3	1	1	2	0	26	7
Medium companies																									
50-99		- 482	0 - 18	30	3	*	4	1	*	40	21	4	9 i	7	0	11	0	*	3	3	2	18	*	76	12
100-249		- 1,380	2	72	1	11	3	10	*	45	65	*	29	39	*	30	1	9	5	4	4	342	2	141	26
Large companies																									
Puerto Rico ^a		- 2,272	*	151	14	6	5	5	5 i	62	91	2	26 i	15	*	58	5	3	11	19	4	91	5	421	95
500-999		- 2,516	0	216	3	7	6	38	10	95	168	17	89	19	3	39	17	36	48	14	100	45	1	348	106
1,000-4,999		- 15,143	6 - 31	1,818 i	36	233	54	247	146	638	1,407	80	319	187	19	355	46	163	48	177	443	635	8	1,352	449 i
5,000-9,999		- 14,230	14	740	112	157 i	141 i	89	57 i	599	912	55 i	690	228	5 i	256 i	15	203 i	81 i	227	300	214	29 i	1,823 i	388 i
10,000-24,999		- 14,505	321	533	390	416	25	34	37	614	1,657	15	255	288	157	379	138	87	51	247	136	328	26	2,135	349
25,000 or more		- 36,287	70	1,761	156	1,395	136	210	294	1,126	4,170	41	1,882	502	21	645	225	260	130	173	319	2,021	27	4,161	496

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

NAICS = 2012 North American Industry Classification System.

^a Puerto Rico is not included in the U.S. total due to its classification as a U.S. territory.

^b Business 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. Country detail was not collected from companies reporting less than \$1 million of R&D paid for by the company or reporting less than \$1 million of R&D paid for by others. 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 R&D. 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 U.S. Census Bureau, Business Research and Development Survey, 2017.