

TABLE 51. 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: 2013  
(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Puerto Rico	Canada	Austria	Belgium	Czech Republic	Denmark
All industries	21-23, 31-33, 42-81	73,100	69	5,265	229	1,713	353	573
Manufacturing industries	31-33	51,104	69	3,318	151	1,482	132	444
Food	311	1,315	* i	99	0	6 i	*	171 i
Chemicals	325	12,733	40	712	52	1,137	42	103
Pharmaceuticals and medicines	3254	10,051	20	647	49	970	41	88
Other chemicals	other 325	2,682	20	65	2	167	2	15
Plastics and rubber products	326	931	13	27	1	17	1	4
Nonmetallic mineral products	327	249 i	0	33 i	0	0	*	*
Fabricated metal products	332	116	0	3	5	2	0	0
Machinery	333	2,852	*	53	9	36	4 i	3 i
Computer and electronic products	334	18,275	2	1,427	45	112	55	128
Electrical equipment, appliances, and components	335	1,605	0	130	13	38	7	4
Transportation equipment	336	9,219	*	626	17	74	22	1
Miscellaneous manufacturing	339	2,913	13	162 i	8	37	2	27
Other manufacturing	312-16, 321-24, 331, 337	896	0	46	*	24	0	4
Nonmanufacturing industries	21-23, 42-81	21,996	1	1,947	78	231	220	129
Wholesale trade	42	25 i	0	2	0	0	0	0
Information	51	13,650	* i	1,440	44	D	153	87
Telecommunications	517	63	0	4	0	0	0	0
Data processing, hosting, and related services	518	631	0	131	2	0	0	*
Other information	other 51	12,955	* i	1,305	42	D	153	87
Professional, scientific, and technical services	54	6,543	*	279	34	137	66	32
Architectural, engineering, and related services	5413	41	*	6	0	0	0	0
Scientific research and development services	5417	4,263	0	66	30	81	29	15
Biotechnology research and development	541711	1,400	0	13	0	31	4	6
Other scientific research and development	other 5417	2,863	0	53	30	49	25	9
Other professional, scientific, and technical services	other 54	2,239	*	207	4	56	37	18
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	1,778	0	225	0	D	1	9
All companies (number of domestic employees)	-	73,100	69	5,265	229	1,713	353	573
Small companies <sup>a</sup>								
5-499	-	4,170	1	376	7	37	105	12
5-99	-	1,522	0	69	1	4	105	*
5-49	-	1,177	0	47	*	3	105	0
5-9	-	52 i	0	*	0	*	0	0
10-24	-	685	0	14	*	*	5	0
25-49	-	440	0	33	*	3	100	0
50-99	-	344	0	22	*	2	*	*
100-249	-	1,275	1	75	2	17	*	7
250-499	-	1,373	*	232	5	15	*	5
Medium and large companies								
500-999	-	1,656	0	62	8	36	1	10
1,000-4,999	-	13,580	21	1,473	41	109	76	116

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5,000–9,999	–	10,836	4	540	49	200	74	82
10,000–24,999	–	9,782	30	1,014	40	210	21	36
25,000 or more	–	33,076	14	1,800	84	1,120	76	317 i
Industry and company size	NAICS code	Finland	France	Germany	Hungary	Ireland	Italy	Luxembourg
All industries	21–23, 31–33, 42–81	556	3,082	8,637	121	1,674	1,148	41
Manufacturing industries	31–33	412	2,223	7,380	91	1,169	971	19
Food	311	0	37	116	3	0	8	0
Chemicals	325	61	632	965	26	616	256	8
Pharmaceuticals and medicines	3254	50	486	467	19	612	216	8
Other chemicals	other 325	11	146	499	7	5	40	*
Plastics and rubber products	326	D	59	116	3	D	41	4
Nonmetallic mineral products	327	0	9	73 i	0	0	0	0
Fabricated metal products	332	0	1	29	0	D	1	0
Machinery	333	29	96	672	4	5 i	59	1
Computer and electronic products	334	269	803	1,785	23	321	324	6
Electrical equipment, appliances, and components	335	D	54	232	2	5	53	0
Transportation equipment	336	D	336	2,803	D	D	198	0
Miscellaneous manufacturing	339	0	161	539 i	0	216	18	0
Other manufacturing	312–16, 321–24, 331, 337	11	35	49	D	D	13	0
Nonmanufacturing industries	21–23, 42–81	144	859	1,258	31	505	177	21
Wholesale trade	42	0	0	3	0	0	0	0
Information	51	40	508	737	2	436	77	18
Telecommunications	517	0	*	7	0	2	0	4
Data processing, hosting, and related services	518	0	22	5	0	28	* i	0
Other information	other 51	40	485	725	2	406	77	13
Professional, scientific, and technical services	54	105	338	406	29	59	97	0
Architectural, engineering, and related services	5413	17	0	6	0	*	0	0
Scientific research and development services	5417	14	187	304 i	29	46	76	0
Biotechnology research and development	541711	5	57	87	5	3	17	0
Other scientific research and development	other 5417	9	130	217 i	24	43	59	0
Other professional, scientific, and technical services	other 54	73	151	96	0	13	21	0
Other nonmanufacturing	21–23, 44–45, 48–49, 52–53, 55–56, 621–24, 71–72, 81	0	13	112	0	10	3	4
All companies (number of domestic employees)	–	556	3,082	8,637	121	1,674	1,148	41
Small companies <sup>a</sup>								
5–499	–	D	84	217	15	48	78	1
5–99	–	13	20	23	D	4	4	0
5–49	–	10	10	12	D	1	1	0
5–9	–	0	0	5	0	0	*	0
10–24	–	0	1	4	0	1	1	0
25–49	–	10	10	2	D	1	*	0
50–99	–	3	9	11	D	3	3	0
100–249	–	D	30	71	6	25	14	D
250–499	–	17	35	123	D	18	60	D

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Industry and company size	NAICS code	Finland	France	Germany	Hungary	Ireland	Italy	Luxembourg
Medium and large companies								
500-999	-	D	58	102	4	11	15	4
1,000-4,999	-	94	790	1,774	18	597	112	13
5,000-9,999	-	94	373	853	33	179	329	*
10,000-24,999	-	55	549	968	23	232	122	5
25,000 or more	-	226	1,228	4,724	28	607	492	17
Industry and company size	NAICS code	Netherlands	Norway	Poland	Russia	Spain	Sweden	Switzerland
All industries	21-23, 31-33, 42-81	1,052	421	430	462	560	734	2,495
Manufacturing industries	31-33	810	365	314	263	473	576	1,649
Food	311	15	0	2	2	2	6 i	71 i
Chemicals	325	337	22	85	98	203	160	726
Pharmaceuticals and medicines	3254	191	18	79	95	178	147	665
Other chemicals	other 325	147	4	6	2	25	13	62
Plastics and rubber products	326	56	0	1	2	25	5	83
Nonmetallic mineral products	327	*	0	0	0	*	0	*
Fabricated metal products	332	0	0	*	0	0	0	6
Machinery	333	40	D	4	1	31	99	114
Computer and electronic products	334	137	284	109	114	43	97	168
Electrical equipment, appliances, and components	335	19	6	10	*	18	14	49
Transportation equipment	336	144	D	96	16	143 i	122	9
Miscellaneous manufacturing	339	53	D	3	20	4	68	158
Other manufacturing	312-16, 321-24, 331, 337	8	*	3	10	5	5	266
Nonmanufacturing industries	21-23, 42-81	242	55	116	199	87	159	846
Wholesale trade	42	0	0	0	0	0	0	0
Information	51	83	33	41	98	19	102	425
Telecommunications	517	0	0	0	0	*	0	0
Data processing, hosting, and related services	518	5	2	0	12	*	7	*
Other information	other 51	77	32	41	86	19	95	425
Professional, scientific, and technical services	54	109	15	71	96	64	47 i	400
Architectural, engineering, and related services	5413	0	0	*	*	*	0	0
Scientific research and development services	5417	66	5	57	83	52	31	370
Biotechnology research and development	541711	8	5	17	15	0	8	349
Other scientific research and development	other 5417	58	0	40	68	52	24	21
Other professional, scientific, and technical services	other 54	43	11	14	12	12	15 i	30 i
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	51	7	4	6	3	10	22
All companies (number of domestic employees)	-	1,052	421	430	462	560	734	2,495
Small companies <sup>a</sup>								
5-499	-	9	8	13	42	7	33	353
5-99	-	3	0	11	15	2	1	13
5-49	-	2	0	5	7	*	*	9
5-9	-	*	0	*	0	0	0	9
10-24	-	*	0	5	*	0	*	0
25-49	-	1	0	0	7	*	*	*
50-99	-	2	0	5	8	2	1	4

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100-249	-	4	*	2	13	*	20	312
250-499	-	1	8	*	15	5	12	28
Medium and large companies								
500-999	-	50	8	12	13	18	36	5
1,000-4,999	-	295	15	55	63	78	211	479
5,000-9,999	-	253	11	126	82	133	82	554
10,000-24,999	-	140	26	43	32	117	120	299
25,000 or more	-	306	353	181	231	207	254	805
Industry and company size	NAICS code	Turkey	United Kingdom	Other European locations	Argentina	Brazil	Chile	Mexico
All industries	21-23, 31-33, 42-81	93	8,949	2,076	327	1,584	46	803
Manufacturing industries	31-33	70	4,489	1,476	235	1,388	22	732
Food	311	0	117	76	5	82 i	1 i	33
Chemicals	325	32	1,825	394	147	268	14	153
Pharmaceuticals and medicines	3254	30	1,540	199	118	159	11	104
Other chemicals	other 325	2	285	195	29 i	110 i	3 i	49 i
Plastics and rubber products	326	1	37	15	28	48	2	19
Nonmetallic mineral products	327	0	18 i	0	0	0	0	2
Fabricated metal products	332	0	42	3	0	*	*	1
Machinery	333	*	315	40	2	54	*	17
Computer and electronic products	334	5	676	355	31	46	*	116
Electrical equipment, appliances, and components	335	*	99	166	*	162	0	15
Transportation equipment	336	D	1,033	242 i	11	683	*	333
Miscellaneous manufacturing	339	D	238 i	134	7	26	3	8
Other manufacturing	312-16, 321-24, 331, 337	3	89	51	4	19	1	35
Nonmanufacturing industries	21-23, 42-81	23	4,460 i	600	92	196	24	71
Wholesale trade	42	0	*	0	0	0	0	0
Information	51	2	2,805 i	356	5	70	5	13
Telecommunications	517	0	11	4	0	0	0	0
Data processing, hosting, and related services	518	*	67	19	2	0	*	*
Other information	other 51	2	2,727 i	333	3	70	5	13
Professional, scientific, and technical services	54	14	1,245	219	76	100	15	28
Architectural, engineering, and related services	5413	*	0	*	0	0	*	*
Scientific research and development services	5417	13	1,023 i	188 i	67	67	15	25
Biotechnology research and development	541711	2	266	20	6	8	5	7
Other scientific research and development	other 5417	11	756 i	168 i	61	59	10	18
Other professional, scientific, and technical services	other 54	1	222	31	9	32	0	4
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	7	410	25	12	26	4	29
All companies (number of domestic employees)	-	93	8,949	2,076	327	1,584	46	803
Small companies <sup>a</sup>								
5-499	-	4	221	72	20	16	*	16
5-99	-	*	51	21	5	1	*	6
5-49	-	0	12	17	0	0	*	3
5-9	-	0	*	9	0	0	0	0

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Industry and company size	NAICS code	Other European locations						
		Turkey	United Kingdom	Other European locations	Argentina	Brazil	Chile	Mexico
10-24	-	0	3	2	0	0	*	1
25-49	-	0	9	6	0	0	0	1
50-99	-	*	39	4	5	1	0	3
100-249	-	*	63	26	12	9	0	7
250-499	-	4	107	26	2	7	*	3
Medium and large companies								
500-999	-	*	153	29	6	13	*	11
1,000-4,999	-	5	1,610	474	20	95	5	70
5,000-9,999	-	17	1,240	262	74	153	15	106
10,000-24,999	-	20	925	548	142	355	10	153
25,000 or more	-	46	4,800	691	65	952	15	447

  

Industry and company size	NAICS code	Other Latin American locations						
		Australia	China	Hong Kong	India	Indonesia	Japan	
All industries	21-23, 31-33, 42-81	560	1,545	5,774	173	5,860	29	2,761
Manufacturing industries	31-33	337	1,149	4,091	139	3,579	26	2,066
Food	311	29	86	60	8 i	13	5	48 i
Chemicals	325	115	279	617	26	245	3	1,139
Pharmaceuticals and medicines	3254	64	266	391	17	206	1	946
Other chemicals	other 325	51	13	225	10	39 i	2	193
Plastics and rubber products	326	10	9	109	7	8	1	66
Nonmetallic mineral products	327	0	*	21 i	0	*	0	*
Fabricated metal products	332	0	1	14	0	3	*	0
Machinery	333	*	76	292	3	131	*	93
Computer and electronic products	334	98	93	2,115	63	2,655	2	331
Electrical equipment, appliances, and components	335	15	42	240	3	23	*	76
Transportation equipment	336	29	417	334	14 i	383	D	123
Miscellaneous manufacturing	339	19	142	253	10	112 i	D	155
Other manufacturing	312-16, 321-24, 331, 337	23	4	37	5	7	11	36
Nonmanufacturing industries	21-23, 42-81	223	396	1,682	33	2,281	3	695
Wholesale trade	42	0	0	0	0	0	0	0
Information	51	185	189	1,229	19	1,826	1	339
Telecommunications	517	*	1	6	1	6	0	0
Data processing, hosting, and related services	518	17	12	24	5	149	0	4
Other information	other 51	168	176	1,199	13	1,670	1	335
Professional, scientific, and technical services	54	34	156	247	10	267	2	310
Architectural, engineering, and related services	5413	*	4	3	0	*	0	*
Scientific research and development services	5417	29	96	128	8	96	2	272
Biotechnology research and development	541711	7	49	47	2	2	0	8
Other scientific research and development	other 5417	21	47	80	6	95	2	264
Other professional, scientific, and technical services	other 54	5	56	116	2	171	*	38
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	4	51	206 i	4	187	*	46

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Industry and company size	NAICS code	Other Latin American locations	Australia	China	Hong Kong	India	Indonesia	Japan
All companies (number of domestic employees)	–	560	1,545	5,774	173	5,860	29	2,761
Small companies <sup>a</sup>								
5–499	–	D	50	359	36	289	11	50
5–99	–	*	28	85	D	135	*	1
5–49	–	0	26	56	D	98	0	1
5–9	–	0	*	6	0	0	0	*
10–24	–	0	26	6	*	79	0	1
25–49	–	0	1	45	D	19	0	*
50–99	–	*	1	30	13	37	*	*
100–249	–	D	14	131	D	75	11	30
250–499	–	5	9	143	13	80	0	19
Medium and large companies								
500–999	–	D	181	199	7	65	*	19
1,000–4,999	–	236	128	1,013	30	838	3	252
5,000–9,999	–	71	280	703	19	1,176	4	564
10,000–24,999	–	60	210	531	18	338	3	509
25,000 or more	–	181	696	2,969	63	3,154	7	1,366
Industry and company size	NAICS code	Malaysia	New Zealand	Singapore	South Korea	Taiwan	Thailand	Other Asian or Pacific locations
All industries	21–23, 31–33, 42–81	803	140	2,115	1,195	682	193	665
Manufacturing industries	31–33	782	72	1,614	1,111	504	172	489
Food	311	2	7	32	3	7 i	5	17
Chemicals	325	6	4	191	85	67	11	68
Pharmaceuticals and medicines	3254	5	4	96	55	61	5	36
Other chemicals	other 325	1	*	95	30	6	6	31
Plastics and rubber products	326	5	5	4	55	13	4	14
Nonmetallic mineral products	327	0	0	0	0	0	0	0
Fabricated metal products	332	*	0	1	0	1	0	0
Machinery	333	*	7	12	37	21	3	2
Computer and electronic products	334	755	42	1,235	247	354	132 i	317
Electrical equipment, appliances, and components	335	*	1	50	35	9	1	3
Transportation equipment	336	1 i	*	4	608	13	15	24
Miscellaneous manufacturing	339	12	6	58	24	20	2	16
Other manufacturing	312–16, 321–24, 331, 337	1	0	28	16	*	1	29
Nonmanufacturing industries	21–23, 42–81	21	67	501	84	178	21	176
Wholesale trade	42	0	0	0	0	*	0	0
Information	51	5	46	190 i	30	127	7	158
Telecommunications	517	0	0	*	2	2	0	0
Data processing, hosting, and related services	518	1	11	2	2	0	0	2
Other information	other 51	4	35	188 i	26	125	7	156
Professional, scientific, and technical services	54	6	21	121	52	50	10	16
Architectural, engineering, and related services	5413	0	*	0	0	0	0	*
Scientific research and development services	5417	6	7	116	37	33	10	10
Biotechnology research and development	541711	1	2	7	8	15	1	0

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Industry and company size	NAICS code	Malaysia	New Zealand	Singapore	South Korea	Taiwan	Thailand	Other Asian or Pacific locations
Other scientific research and development	other 5417	5	5	109	29	18	9	10
Other professional, scientific, and technical services	other 54	*	13	4	14	17	*	6
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	10	1	190	2	*	3	1
All companies (number of domestic employees)	-	803	140	2,115	1,195	682	193	665
Small companies <sup>a</sup>								
5-499	-	21 i	45	65	84	138	4	28
5-99	-	*	*	6	71	71	3	4
5-49	-	0	*	1	63	36	3	3
5-9	-	0	0	0	0	3	0	0
10-24	-	0	*	1	60	15	3	*
25-49	-	0	0	*	2	18	0	3
50-99	-	*	*	4	9	34	0	1
100-249	-	2	42	39	6	29	1	9
250-499	-	19 i	3	21	6	38	*	15
Medium and large companies								
500-999	-	84 i	14	31	8	12	3	5
1,000-4,999	-	111	26	463	120	118	24	233
5,000-9,999	-	226 i	37	402	175	113	129 i	213
10,000-24,999	-	15	7	697	107	77	11	69
25,000 or more	-	345	12	457 i	699	224	22	117
Industry and company size	NAICS code	Israel	Other Middle Eastern locations	South Africa	Other African locations	Undistributed		
All industries	21-23, 31-33, 42-81	4,086	106	156	73	2,692 i		
Manufacturing industries	31-33	2,357	50	69	38	1,733 i		
Food	311	*	2 i	2	1	136 i		
Chemicals	325	68	18	48	25	604 i		
Pharmaceuticals and medicines	3254	38	15	33	21	585 i		
Other chemicals	other 325	30	3	15 i	4 i	19 i		
Plastics and rubber products	326	*	2	1	*	D		
Nonmetallic mineral products	327	*	0	0	0	92 i		
Fabricated metal products	332	0	0	*	0	D		
Machinery	333	161 i	2	5	*	D		
Computer and electronic products	334	2,015	19	*	10	314 i		
Electrical equipment, appliances, and components	335	D	1	*	0	D		
Transportation equipment	336	D	4	9	1	D		
Miscellaneous manufacturing	339	61	3	1	0	D		
Other manufacturing	312-16, 321-24, 331, 337	0	*	2	0	D		
Nonmanufacturing industries	21-23, 42-81	1,730	56	87	35	960 i		
Wholesale trade	42	0	0	0	0	20 i		
Information	51	1,190 i	17	18	27	D		
Telecommunications	517	0	0	0	0	12 i		
Data processing, hosting, and related services	518	21	3	16	0	57 i		
Other information	other 51	1,169 i	14 i	1	27	D		

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Industry and company size	NAICS code	Israel	Other Middle Eastern locations	South Africa	Other African locations	Undistributed
Professional, scientific, and technical services	54	523	8	69	5	556 i
Architectural, engineering, and related services	5413	0	*	1	*	1 i
Scientific research and development services	5417	48	5	66	5	351 i
Biotechnology research and development	541711	7	0	3	*	299 i
Other scientific research and development	other 5417	41	5	64	5	53 i
Other professional, scientific, and technical services	other 54	475	4	1	*	203 i
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	17	30	*	3	D
All companies (number of domestic employees)	-	4,086	106	156	73	2,692 i
Small companies <sup>a</sup>						
5-499	-	484	8	D	1	650 i
5-99	-	408	D	1	*	318 i
5-49	-	407	D	0	0	237 i
5-9	-	0	0	0	0	19 i
10-24	-	385	0	0	0	73 i
25-49	-	22	D	0	0	145 i
50-99	-	1	D	1	*	81 i
100-249	-	29	D	*	*	118 i
250-499	-	47	D	D	1	215 i
Medium and large companies						
500-999	-	78 i	0	D	0	225 i
1,000-4,999	-	457	13 i	19	17 i	773 i
5,000-9,999	-	430	25	75	5	272
10,000-24,999	-	67	22	31	7	767 i
25,000 or more	-	2,571 i	38	26	43	4

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

NAICS = 2007 North American Industry Classification System.

<sup>a</sup> Upper bound based on U.S. Small Business Administration's definition of a small business; Business R&D and Innovation Survey does not include companies with fewer than five domestic employees.

NOTES: Detail may not add to total because of rounding. Country detail was not asked on Form BRD-1(S). Industry classification based on dominant business code for domestic R&D performance where available. For companies that did not report business codes, classification used for sampling was assigned. Statistics are representative of companies located in the United States that performed or funded R&D.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2013.