

TABLE 42. 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: 2012  
(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	71,984	110	5,359	292	1,798	197	517
Manufacturing industries	31-33	52,866	72	3,524	195	1,612	128	407
Food	311	1,076	*	45	0	11	*	143
Chemicals	325	13,367	40	814	59	1,285	41	56
Pharmaceuticals and medicines	3254	10,993	23	757	55	1,094	40	44
Other chemicals	other 325	2,374	17	57	3	190	1	12
Plastics and rubber products	326	828	9	41	1	15	1	3
Nonmetallic mineral products	327	261	0	28		2		
Fabricated metal products	332	123	0	3	5	2	2	*
Machinery	333	4,169	*	101	49	35	5 i	22
Computer and electronic products	334	20,537	6	1,599	73	170	53	148
Electrical equipment, appliances, and components	335	1,063	0	100	0	1	8	9
Transportation equipment	336	8,073	9	511	2	26	17	0
Miscellaneous manufacturing	339	D	8	141 i	6	26	1	21
Other manufacturing	312-16, 321-24, 331, 337	D	0	141	*	40	*	6
Nonmanufacturing industries	21-23, 42-81	19,118	38	1,835	97	186	70	109
Wholesale trade	42	113 i	0	1 i	0	0	0	0
Information	51	9,906	*	1,283	37	40	14	82
Telecommunications	517	59	0	3	0	0	0	0
Data processing, hosting, and related services	518	661	0	86	1	0	2	*
Other information	other 51	9,186	*	1,194	36	40	12	82
Professional, scientific, and technical services	54	6,840	38	388	49	121	55	D
Architectural, engineering, and related services	5413	57	0	*	0	*	0	0
Scientific research and development services	5417	3,927	9	69	40	62	30	9
Biotechnology research and development	541711	977	*	9	0	22	3	*
Other scientific research and development	other 5417	2,950	9	60	40	39	27	9
Other professional, scientific, and technical services	other 54	2,856 i	29	318 i	9	59	25	D
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	2,259	0	163	11	25	1 i	D
All companies (number of domestic employees)	-	71,984	110	5,359	292	1,798	197	517
Small companies <sup>a</sup>								
5-499	-	3,650	1	390	1	62	7	15
5-99	-	1,138	*	55	*	9	*	7
5-49	-	472 i	*	23	*	1	0	*
5-9	-	99 i	0	0	0	0	0	0
10-24	-	111	0	8	*	1	0	0
25-49	-	261 i	*	14	0	*	0	*
50-99	-	666	*	32	0	8	*	7
100-249	-	1,215	*	92	0	16	*	1
250-499	-	1,297	1	242	1	38	7	7

TABLE 42. R&amp;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: 2012

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Puerto Rico	Canada	Austria	Belgium	Czech Republic	Denmark
Medium and large companies								
500-999	-	1,438	8	65	28	22	3	6
1,000-4,999	-	12,463	22	1,541	65	122	64	71
5,000-9,999	-	10,157	2	488	56	166	45	86
10,000-24,999	-	10,220	31	955	39	193	16	41
25,000 or more	-	34,056	46	1,920	104	1,232	63	298
Industry and company size	NAICS code	Finland	France	Germany	Ireland	Italy	Netherlands	Poland
All industries	21-23, 31-33, 42-81	440	2,935	9,158	1,359	1,377	1,427	529
Manufacturing industries	31-33	382	2,337	8,302	772	1,205	1,145	324
Food	311	*	56	130	0	8	33	4
Chemicals	325	50	588	1,219	216	287	329	95
Pharmaceuticals and medicines	3254	42	449	782	214	240	207	89
Other chemicals	other 325	8	140	437	2	47	122	6
Plastics and rubber products	326	*	50	86	1	36	58	1
Nonmetallic mineral products	327		101 i	75 i	2 i	*	1	
Fabricated metal products	332	0	3	19	*	1	1	2
Machinery	333	107	303	692	8	131	67	46
Computer and electronic products	334	223	854	2,240 i	417	544	451	104 i
Electrical equipment, appliances, and components	335	*	13	124	*	46	4	16
Transportation equipment	336	0	212	3,195	1	122	152	50
Miscellaneous manufacturing	339	*	131	459 i	128	13	43	1
Other manufacturing	312-16, 321-24, 331, 337	*	26	64	*	18	5	5
Nonmanufacturing industries	21-23, 42-81	58	597	855	587	172	283	205
Wholesale trade	42	0	1 i	9 i	0	1 i	8 i	1 i
Information	51	40	218	457	380	56	66	148
Telecommunications	517	0	0	6	1	0	2	0
Data processing, hosting, and related services	518	0	5	45	18	0	*	104
Other information	other 51	40	214	406	361	56	64	45
Professional, scientific, and technical services	54	18	350	323	201 i	112	169	51
Architectural, engineering, and related services	5413	6	7	1	0	2	0	*
Scientific research and development services	5417	8	201	255	39	86	144	47
Biotechnology research and development	541711	*	73	121	2	13	5	11
Other scientific research and development	other 5417	8	128	134	37	73	140	35
Other professional, scientific, and technical services	other 54	4	142 i	68	162 i	24	25	4
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	0	28	66	6	3	39	5
All companies (number of domestic employees)	-	440	2,935	9,158	1,359	1,377	1,427	529
Small companies <sup>a</sup>								
5-499	-	7	62	221	31	77	42	111
5-99	-	3	29	75	2 i	7	34	105
5-49	-	*	4	7	2 i	3	1	*
5-9	-	0	0	4	0	0	0	0

TABLE 42. 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: 2012

(Millions of U.S. dollars)

Industry and company size	NAICS code	Finland	France	Germany	Ireland	Italy	Netherlands	Poland
10–24	–	*	*	1	2 i	2	*	*
25–49	–	*	4	2 i	*	*	1	0
50–99	–	3	25	67	*	5	33	105
100–249	–	1	8	63	9	12	3 i	1
250–499	–	2	24	84	21	57	5	5
Medium and large companies								
500–999	–	0	61	136	21	11	35	2
1,000–4,999	–	160	655	1,685	266	307 i	320	65
5,000–9,999	–	64	387	806	135	339	288	108
10,000–24,999	–	86	572	916	195	125	128	56
25,000 or more	–	123	1,197	5,394	710	517	615	188

  

Industry and company size	NAICS code	Russia	Spain	Sweden	Switzerland	United Kingdom	Other European locations	Argentina
All industries	21–23, 31–33, 42–81	486	568	739	2,990	8,970	2,001	287
Manufacturing industries	31–33	247	474	547	1,816	5,444	1,432	208
Food	311	1	4	6	69	121	85	2
Chemicals	325	103	250	186	899	2,351	593	134
Pharmaceuticals and medicines	3254	103	227	178	844	2,062	442	107
Other chemicals	other 325	1	23	8	55	289	151	27
Plastics and rubber products	326	2	21	2 i	57	27	21	23
Nonmetallic mineral products	327	0	*	0	*	19 i	*	
Fabricated metal products	332	0	0	8	6	41	7	0
Machinery	333	8	44	136	175	493	133	3
Computer and electronic products	334	108 i	38	87	194	975	255	24 i
Electrical equipment, appliances, and components	335	*	4	0	26	73	138	0
Transportation equipment	336	12	103	58	11	1,031	99 i	12
Miscellaneous manufacturing	339	7 i	3	58	111	225 i	40	4
Other manufacturing	312–16, 321–24, 331, 337	6	5	7	269	87	61	7
Nonmanufacturing industries	21–23, 42–81	240	95	191	1,173	3,526 i	569	79
Wholesale trade	42	0	0	0	1 i	4 i	2 i	0
Information	51	89	14	109	487	2,174 i	282	12
Telecommunications	517	0	1	6 i	0	6	1	*
Data processing, hosting, and related services	518	13	*	6	68	22	28	2
Other information	other 51	77	13	97	419	2,146 i	253	9
Professional, scientific, and technical services	54	140	77	64	296	971	229	64
Architectural, engineering, and related services	5413	0	*	8	0	* i	0	0
Scientific research and development services	5417	54	64	32	260	675	136	56
Biotechnology research and development	541711	9	2 i	8	242	279	25	5
Other scientific research and development	other 5417	45	62	24	18	396	112	52
Other professional, scientific, and technical services	other 54	86 i	13	24 i	36	296	93	7
Other nonmanufacturing	21–23, 44–45, 48–49, 52–53, 55–56, 621–24, 71–72, 81	10 i	4	18	390	377	56	4

TABLE 42. R&amp;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: 2012

(Millions of U.S. dollars)

Industry and company size	NAICS code	Russia	Spain	Sweden	Switzerland	United Kingdom	Other European locations	Argentina
All companies (number of domestic employees)	-	486	568	739	2,990	8,970	2,001	287
Small companies <sup>a</sup>								
5-499	-	68	9	19	339	287	124	21
5-99	-	11	2	9 i	13	85	43	15
5-49	-	3	*	2	9	27 i	29	*
5-9	-	0	0	0	6	12 i	1	0
10-24	-	1	0	1	2	5	7	0
25-49	-	2	*	1	2	10	21	*
50-99	-	8	2	7 i	4	58	14	14
100-249	-	49	3	6	297	122	30	6
250-499	-	8	4	4	29	79	50	*
Medium and large companies								
500-999	-	2	3	21	100	153	30	6
1,000-4,999	-	56	132	213	608	1,311	500	11
5,000-9,999	-	61	71	85	367	1,121	222	62
10,000-24,999	-	35	128	142	853	1,003	478	116
25,000 or more	-	264	225	259	723	5,095	646	72
Industry and company size	NAICS code	Brazil	Chile	Mexico	Other Latin American locations	Australia	China	Hong Kong
All industries	21-23, 31-33, 42-81	1,750	133	733	709	1,336	5,217	133
Manufacturing industries	31-33	1,568	114	678	375	926	3,814	105
Food	311	71	1	29	15	88	43	6
Chemicals	325	283	17	146	129	324	582	21
Pharmaceuticals and medicines	3254	177	14	100	88	309	396	15
Other chemicals	other 325	106	3	46	41	15	186	6
Plastics and rubber products	326	62	1	15	11	7	79	6
Nonmetallic mineral products	327			2		*	27 i	
Fabricated metal products	332	*	0	1	0	1	14	*
Machinery	333	107	*	81	2	14	426	*
Computer and electronic products	334	49	91	109 i	120	98	2,134	44
Electrical equipment, appliances, and components	335	151	0	51	26	9	129	6
Transportation equipment	336	810	0	211	34	223	181	6
Miscellaneous manufacturing	339	22	2	6	21	150	162	9
Other manufacturing	312-16, 321-24, 331, 337	13	1	29	18	11	38	7
Nonmanufacturing industries	21-23, 42-81	182	19	55	334	410	1,403	28
Wholesale trade	42	0	2 i	1 i	2 i	0	11 i	1
Information	51	63	3	14	262	195	913	13
Telecommunications	517	*	0	0	0	0	21	1
Data processing, hosting, and related services	518	1	0	*	18	14	21	*
Other information	other 51	62	3	14	245	180	872	13
Professional, scientific, and technical services	54	95	11	29	67	160	357 i	8
Architectural, engineering, and related services	5413	0	0	0	0	8	4	0
Scientific research and development services	5417	61	11	21	28	109	100	6

TABLE 42. R&amp;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: 2012

(Millions of U.S. dollars)

Industry and company size	NAICS code	Other Latin						
		Brazil	Chile	Mexico	American locations	Australia	China	Hong Kong
Biotechnology research and development	541711	6	4	6	5	60	24	1
Other scientific research and development	other 5417	55	8	15	22	49	76	5
Other professional, scientific, and technical services	other 54	34	0	8	40	44	254 i	2
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	24	2	11 i	2 i	55	121	6
All companies (number of domestic employees)	-	1,750	133	733	709	1,336	5,217	133
Small companies <sup>a</sup>								
5-499	-	22	4	17	13 i	71	242	25
5-99	-	7	3 i	5	8 i	34	76	5
5-49	-	1	*	1	2	29	40	5
5-9	-	0	0	0	0	*	8	3
10-24	-	0	0	1	1	2	9	*
25-49	-	1	*	*	*	27	23	2
50-99	-	6	3 i	3	7 i	5	36	1 i
100-249	-	3	0	8	4	7	60	5
250-499	-	12	1	3	1	30	106	15
Medium and large companies								
500-999	-	12	*	14	7	109	155	7
1,000-4,999	-	96	3	66	282	160	877	19
5,000-9,999	-	153	11	56	135 i	256	665	20
10,000-24,999	-	402	8	138	72	251	609	20
25,000 or more	-	1,065	107	442	200	490	2,670	44
Industry and company size	NAICS code	India	Indonesia	Japan	Malaysia	New Zealand	Singapore	South Korea
All industries	21-23, 31-33, 42-81	5,985	30	3,280	704 i	64	1,980	1,224
Manufacturing industries	31-33	4,293	28	2,571	694 i	50	1,267	1,063
Food	311	7	3	35	1	2	19	1
Chemicals	325	237	4	1,342	7	8	212	108
Pharmaceuticals and medicines	3254	197	2	1,186	6	7	152	88
Other chemicals	other 325	40	2	157	1	1	59	20
Plastics and rubber products	326	9	*	57	5	3	6	48
Nonmetallic mineral products	327	*		*			0	*
Fabricated metal products	332	2	0	0	0	*	1	*
Machinery	333	376	*	190	*	6	36	27
Computer and electronic products	334	3,298	1	665	666 i	25	856	237
Electrical equipment, appliances, and components	335	19	*	2	0	0	45	4
Transportation equipment	336	161	4	107	1	*	*	607
Miscellaneous manufacturing	339	171 i	1	158	14	6	55	17
Other manufacturing	312-16, 321-24, 331, 337	12	14	13	*	0	38	15
Nonmanufacturing industries	21-23, 42-81	1,692	2	709	10	14	713	161
Wholesale trade	42	1 i	0	0	0	0	0	0
Information	51	1,010	*	351	4	7	D	81

TABLE 42. R&amp;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: 2012

(Millions of U.S. dollars)

Industry and company size	NAICS code	India	Indonesia	Japan	Malaysia	New Zealand	Singapore	South Korea
Telecommunications	517	3	0	0	0	0	0	0
Data processing, hosting, and related services	518	87	0	12 i	1	6	2	50
Other information	other 51	920	*	339	3	1	D	31
Professional, scientific, and technical services	54	511 i	1	304	5	7	173	47
Architectural, engineering, and related services	5413	6	0	8	0	0	0	0
Scientific research and development services	5417	87	1	239	5	5	89	39
Biotechnology research and development	541711	3 i	0	7	1	*	8	6
Other scientific research and development	other 5417	84	1	232	4	5	81	32
Other professional, scientific, and technical services	other 54	418 i	*	56	*	2	84	8
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	170	* i	55 i	1	0	D	33
All companies (number of domestic employees)	-	5,985	30	3,280	704 i	64	1,980	1,224
Small companies <sup>a</sup>								
5-499	-	203	14	38	17	1	78	87
5-99	-	76	0	3	*	*	10	80
5-49	-	22	0	1	*	*	9	22
5-9	-	*	0	0	0	0	1	1
10-24	-	13	0	1	*	0	7	*
25-49	-	8	0	*	0	*	*	21
50-99	-	54	0	3	0	0	2	58
100-249	-	55	14	8	1	1	43	1
250-499	-	72	0	27	16	*	25	6
Medium and large companies								
500-999	-	54	*	31	93 i	1	25	7
1,000-4,999	-	826	3	472	84	24 i	360	169 i
5,000-9,999	-	1,030	3	492	176	12	347	126
10,000-24,999	-	639	1	716	17	10	648	131
25,000 or more	-	3,233	8	1,531	317 i	16	523 i	705
Industry and company size	NAICS code	Taiwan	Thailand	Other Asian or Pacific locations	Israel	Other Middle Eastern locations	South Africa	Other African locations
All industries	21-23, 31-33, 42-81	622	169	695	3,774 i	145	188	56
Manufacturing industries	31-33	466	147	551	3,027 i	76	98	40
Food	311	6	3	22	*	1	3	*
Chemicals	325	54	18	77	80	19	62	19
Pharmaceuticals and medicines	3254	52	12	44	51	17	47	16
Other chemicals	other 325	2	6	33	30	2	15	3
Plastics and rubber products	326	12	3	8	*	2	1	2
Nonmetallic mineral products	327	0			0			
Fabricated metal products	332	1	0	1	*	0	*	0
Machinery	333	13	3	19	284 i	4	6	*
Computer and electronic products	334	348	86	351	2,601 i	24 i	4	18 i
Electrical equipment, appliances, and components	335	5	0	19	*	1 i	5	0

TABLE 42. R&amp;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: 2012

(Millions of U.S. dollars)

Industry and company size	NAICS code	Taiwan	Thailand	Other Asian or Pacific locations	Israel	Other Middle Eastern locations	South Africa	Other African locations
Transportation equipment	336	13	23	30	8	*	14	*
Miscellaneous manufacturing	339	14	3	13	53	1	1	*
Other manufacturing	312-16, 321-24, 331, 337	0	8	13	0	23	2	*
Nonmanufacturing industries	21-23, 42-81	156	22	144	747	68	90	16
Wholesale trade	42	0	0	1 i	3 i	0	0	0
Information	51	123	11	57 i	405	25	22	9
Telecommunications	517	3	0	0	0	0	0	0
Data processing, hosting, and related services	518	4	0	2	8	1	18	0
Other information	other 51	116	11	55 i	397	25	4	9
Professional, scientific, and technical services	54	33	9	86	310 i	20	68	7
Architectural, engineering, and related services	5413	0	0	1	0	0	*	0
Scientific research and development	5417	15	9	73	29	16	67	5
Biotechnology research and development	541711	4	1	* i	4	0	2	0
Other scientific research and development	other 5417	12	8	73	24	16	65	5
Other professional, scientific, and technical services	other 54	18	*	12	282 i	3	1	2
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	*	1	* i	28	23	* i	* i
All companies (number of domestic employees)	-	622	169	695	3,774 i	145	188	56
Small companies <sup>a</sup>								
5-499	-	112	8	38	105	1	3	1
5-99	-	37	3	3	35	1	1	0
5-49	-	10	3	2	31	1	0	0
5-9	-	1 i	0	0	0	0	0	0
10-24	-	4	3	*	16	*	0	0
25-49	-	6	0	2	15 i	*	0	0
50-99	-	26	*	1	4	1	1	0
100-249	-	32	4	12	10	*	*	*
250-499	-	43	1	24	59	0	2	1
Medium and large companies								
500-999	-	9	3	4	67 i	1	1	0
1,000-4,999	-	105	14	186	414	23	29	4
5,000-9,999	-	75	90	178	630	23	78	5
10,000-24,999	-	146	7	20	201	17	29	12
25,000 or more	-	177	48	268	2,358 i	80	47	34 i
Industry and company size	NAICS code	Undistributed						
All industries	21-23, 31-33, 42-81	1,519 i						
Manufacturing industries	31-33	341 i						
Food	311	3 i						
Chemicals	325	24 i						
Pharmaceuticals and medicines	3254	19 i						
Other chemicals	other 325	5 i						
Plastics and rubber products	326	38 i						

TABLE 42. R&amp;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: 2012

(Millions of U.S. dollars)

Industry and company size	NAICS code	Undistributed
Nonmetallic mineral products	327	2 i
Fabricated metal products	332	5 i
Machinery	333	15 i
Computer and electronic products	334	149 i
Electrical equipment, appliances, and components	335	28 i
Transportation equipment	336	20 i
Miscellaneous manufacturing	339	D
Other manufacturing	312-16, 321-24, 331, 337	D
Nonmanufacturing industries	21-23, 42-81	1,178 i
Wholesale trade	42	59 i
Information	51	D
Telecommunications	517	5 i
Data processing, hosting, and related services	518	20 i
Other information	other 51	D
Professional, scientific, and technical services	54	D
Architectural, engineering, and related services	5413	5 i
Scientific research and development services	5417	639 i
Biotechnology research and development	541711	7 i
Other scientific research and development	other 5417	632 i
Other professional, scientific, and technical services	other 54	D
Other nonmanufacturing	21-23, 44-45, 48-49, 52-53, 55-56, 621-24, 71-72, 81	D
All companies (number of domestic employees)	-	1,519 i
Small companies <sup>a</sup>		
5-499	-	660 i
5-99	-	243 i
5-49	-	183 i
5-9	-	62 i
10-24	-	26 i
25-49	-	95 i
50-99	-	60 i
100-249	-	230 i
250-499	-	187 i
Medium and large companies		
500-999	-	130 i
1,000-4,999	-	74 i

TABLE 42. 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: 2012

(Millions of U.S. dollars)

5,000–9,999	–	639 i
10,000–24,999	–	17 i
25,000 or more	–	0

\* = 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> The upper bound is based on the U.S. Small Business Administration's definition of a small business; the 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-1S. 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, 2012.