

3 Related Industries

3.1 Industrial infrastructure

3.1.1 Vehicles (2020)

Hard data: motor vehicles per 1000 people

Rank	Region	Unit	Index
1	New Zealand	837	100.00
2	United States	821	98.08
3	Australia	789	94.24
4	Switzerland	716	85.47
5	Canada	685	81.75
6	Japan	649	77.43
7	Italy	645	76.95
8	Poland	617	73.59
9	Slovenia	582	69.39
10	Germany	569	67.83
11	Austria	564	67.23
12	Czech Republic	547	65.19
13	United Kingdom	526	62.67
14	Spain	516	61.46
15	Netherlands	511	60.86
16	Belgium	507	60.38
17	France	493	58.70
18	Finland	489	58.22
19	Kuwait	482	57.38
20	Greece	481	57.26
20	Sweden	481	57.26
22	Korea, Republic of	475	56.54
23	Denmark	449	53.42
24	Malaysia	439	52.22
25	Slovak Republic	427	50.78
26	Croatia	406	48.26
27	Israel	394	46.82
28	Russia	381	45.26
29	Hungary	372	44.18
30	Brazil	364	43.22
31	Turkey	358	42.50
32	Taiwan, China	333	39.50
33	Argentina	316	37.45
34	Mexico	294	34.81
35	Chile	248	29.29
36	U.A.E.	234	27.61
37	Thailand	228	26.89
38	Ukraine	219	25.81
39	Oman	218	25.69
40	Saudi Arabia	209	24.61
41	China	196	23.05
42	South Africa	176	20.65
43	Panama	172	20.17
44	Singapore	170	19.93
45	Dominican Republic	153	17.89
45	Morocco	153	17.89
47	Jordan	149	17.41
48	Colombia	126	14.65
49	Guatemala	114	13.21
50	Egypt	109	12.61
51	Indonesia	100	11.52
52	Hong Kong SAR	93	10.68
53	Peru	78	8.88
54	Kenya	70	7.92
55	Sri Lanka	68	7.68
56	Nigeria	64	7.20
57	India	41	4.44
58	Philippines	38	4.08
59	Vietnam	23	2.28
60	Cambodia	21	2.04
61	Pakistan	17	1.56
62	Bangladesh	4	0.00

Source: EIA International Energy Statistics (<http://www.eia.gov/>), CIA Factbook

3.1.2 Civil aviation (2019)

Hard data: passengers per 1000 people

Rank	Region	Unit	Index
1	U.A.E.	9,497.82	100.00
2	Singapore	7,548.03	79.47
3	Hong Kong SAR	6,189.87	65.17
4	Austria	5,235.58	55.12
5	Hungary	4,074.06	42.89
6	New Zealand	3,612.69	38.03
7	Switzerland	3,538.22	37.24
8	Australia	3,029.87	31.89
9	Panama	2,943.11	30.98
10	United States	2,825.42	29.74
11	Netherlands	2,674.60	28.15
12	Finland	2,646.69	27.86
13	Canada	2,483.48	26.14
14	Oman	2,259.30	23.78
15	United Kingdom	2,130.53	22.42
16	Malaysia	1,991.35	20.95
17	Spain	1,874.32	19.72
18	Korea, Republic of	1,787.58	18.81
19	Kuwait	1,755.44	18.47
20	Greece	1,504.69	15.83
21	Turkey	1,330.81	14.00
22	Germany	1,318.78	13.87
23	Belgium	1,243.39	13.08
24	Saudi Arabia	1,148.29	12.08
25	Thailand	1,123.54	11.82
26	Chile	1,118.49	11.76
27	France	1,063.07	11.18
28	Japan	1,033.60	10.87
29	Russia	801.96	8.43
30	Colombia	735.64	7.73
31	Israel	735.63	7.73
32	Peru	578.91	6.08
33	Vietnam	551.79	5.80
34	Mexico	546.39	5.74
35	Croatia	518.40	5.44
36	Czech Republic	510.43	5.36
37	Brazil	487.76	5.12
38	China	471.16	4.95
39	Italy	460.39	4.83
40	Philippines	442.38	4.64
41	South Africa	438.03	4.60
42	Argentina	433.06	4.54
43	Slovenia	416.51	4.37
44	Jordan	344.34	3.61
45	Indonesia	336.99	3.53
46	Poland	269.30	2.82
47	Morocco	257.21	2.69
48	Sri Lanka	256.04	2.68
49	Ukraine	171.33	1.79
50	Egypt	129.60	1.35
51	India	122.26	1.27
52	Kenya	122.07	1.27
53	Cambodia	86.71	0.90
54	Bangladesh	36.56	0.37
55	Pakistan	34.20	0.34
56	Nigeria	32.53	0.33
57	Dominican Republic	21.18	0.21
58	Guatemala	6.47	0.05
59	Taiwan, China	3.06	0.02
60	Slovak Republic	1.46	0.00
-	Denmark	-	-
-	Sweden	-	-

Source: EIA International Energy Statistics (<http://www.eia.gov/>), CIA Factbook

3.1.3 Maritime transport (2019)

Hard data: Container port traffic per 1000 people (TEU: 20-foot equivalent units)

Rank	Region	Unit	Index
1	Singapore	6,659.51	100.00
2	Hong Kong SAR	2,445.59	36.65
3	U.A.E.	1,962.13	29.39
4	Panama	1,732.06	25.93
5	Belgium	1,181.71	17.65
6	Oman	972.61	14.51
7	Netherlands	864.65	12.89
8	Malaysia	820.51	12.22
9	New Zealand	700.50	10.42
10	Greece	569.11	8.44
11	Korea, Republic of	559.97	8.31
12	Slovenia	447.43	6.62
13	Spain	369.03	5.44
14	Sri Lanka	331.61	4.87
15	Australia	326.53	4.80
16	Israel	322.20	4.73
17	Finland	292.96	4.29
18	Saudi Arabia	259.87	3.80
19	Chile	245.79	3.58
20	Germany	235.72	3.43
21	Kuwait	228.09	3.32
22	Canada	186.33	2.69
23	China	172.88	2.49
24	Japan	172.29	2.48
25	United States	169.26	2.43
26	Italy	166.08	2.39
27	Morocco	165.62	2.38
28	Sweden	158.56	2.27
29	Thailand	154.48	2.21
30	United Kingdom	153.76	2.20
31	Denmark	150.36	2.15
32	Vietnam	141.60	2.02
33	Turkey	139.99	1.99
34	Dominican Republic	124.63	1.76
35	Guatemala	92.09	1.27
36	France	87.55	1.21
37	Colombia	84.52	1.16
38	Philippines	83.18	1.14
39	South Africa	81.45	1.11
40	Croatia	81.45	1.11
41	Poland	80.23	1.10
42	Jordan	79.02	1.08
43	Peru	71.68	0.97
44	Egypt	63.07	0.84
45	Mexico	55.40	0.72
46	Indonesia	54.48	0.71
47	Brazil	52.05	0.67
48	Cambodia	47.26	0.60
49	Argentina	44.48	0.56
50	Russia	36.89	0.44
51	Austria	32.50	0.38
52	Ukraine	30.20	0.34
53	Kenya	27.10	0.30
54	Bangladesh	16.32	0.13
55	Pakistan	15.52	0.12
56	India	12.45	0.08
57	Switzerland	12.06	0.07
58	Nigeria	7.38	0.00
-	Czech Republic	-	-
-	Hungary	-	-
-	Slovak Republic	-	-
-	Taiwan, China	-	-

Source: EIA International Energy Statistics (<http://www.eia.gov/>), CIA Factbook

3.1.4 International travel

Hard data: Travelers per 1,000 people

Rank	Region	Unit	Index
1	Hong Kong SAR	16,303.45	100.00
2	Austria	4,829.92	29.60
3	Croatia	4,575.27	28.03
4	Singapore	4,355.99	26.69
5	U.A.E.	4,173.00	25.57
6	Slovenia	3,670.87	22.49
7	Greece	3,548.35	21.73
8	Denmark	3,490.73	21.38
9	Switzerland	3,012.22	18.44
10	Hungary	2,680.25	16.41
11	Netherlands	2,373.25	14.52
12	Finland	2,297.88	14.06
13	Spain	2,177.22	13.32
14	Kuwait	2,056.41	12.58
15	Oman	1,976.19	12.09
16	Belgium	1,944.25	11.89
17	Germany	1,778.20	10.87
18	France	1,735.75	10.61
19	Czech Republic	1,693.43	10.35
20	United Kingdom	1,605.50	9.81
21	Italy	1,570.86	9.60
22	Israel	1,417.80	8.66
23	New Zealand	1,388.97	8.48
24	Canada	1,272.80	7.77
25	Saudi Arabia	1,103.86	6.73
26	Ukraine	939.32	5.72
27	Poland	853.78	5.20
28	Korea, Republic of	853.44	5.20
29	Australia	826.53	5.03
30	Malaysia	819.32	4.99
31	Sweden	731.19	4.45
32	Taiwan, China	705.61	4.29
33	Thailand	693.43	4.22
34	Dominican Republic	666.50	4.05
35	Turkey	657.81	4.00
36	Panama	590.39	3.58
37	Jordan	567.60	3.44
38	United States	527.45	3.20
39	Chile	509.79	3.09
40	Cambodia	504.38	3.06
41	Mexico	483.88	2.93
42	Russia	460.38	2.79
43	Slovak Republic	414.19	2.50
44	Argentina	406.16	2.45
45	Japan	396.32	2.39
46	Morocco	394.46	2.38
47	Peru	234.36	1.40
48	Guatemala	184.01	1.09
49	South Africa	181.24	1.07
50	Sri Lanka	175.82	1.04
51	Colombia	166.61	0.98
52	Vietnam	162.21	0.96
53	China	152.66	0.90
54	Egypt	113.75	0.66
55	Indonesia	94.44	0.54
56	Brazil	82.35	0.47
57	Philippines	67.21	0.37
58	India	32.32	0.16
59	Nigeria	28.31	0.13
60	Kenya	26.54	0.12
61	Bangladesh	6.43	0.00
-	Pakistan	-	-

Source: EIA International Energy Statistics (<http://www.eia.gov/>), CIA Factbook

3.1.5 Mobile phone subscribers (2019)

Hard data: per 100 people

Rank	Region	Unit	Index
1	Hong Kong SAR	288.53	100.00
2	U.A.E.	200.63	58.57
3	Thailand	186.16	51.75
4	Kuwait	174.16	46.09
5	South Africa	165.60	42.06
6	Russia	164.39	41.48
7	Singapore	156.38	37.71
8	Philippines	154.76	36.95
9	Vietnam	141.23	30.57
10	Malaysia	139.60	29.80
11	Japan	139.20	29.61
12	Oman	138.23	29.16
13	Poland	137.96	29.02
14	Slovak Republic	135.60	27.91
15	New Zealand	134.93	27.60
16	Korea, Republic of	134.49	27.39
17	Italy	133.08	26.73
18	Chile	132.19	26.31
19	Panama	131.85	26.15
20	Colombia	131.67	26.06
21	Argentina	130.87	25.69
22	Ukraine	130.63	25.57
23	Cambodia	129.92	25.24
24	Finland	129.24	24.92
25	Germany	128.36	24.50
26	Morocco	127.95	24.31
27	Indonesia	127.49	24.09
28	Netherlands	127.29	24.00
29	Switzerland	127.19	23.95
30	Israel	126.77	23.75
31	Sweden	126.32	23.54
32	Denmark	125.50	23.15
33	Taiwan, China	123.80	22.35
34	Peru	123.76	22.33
35	United States	123.69	22.30
36	Czech Republic	123.54	22.23
37	Slovenia	120.85	20.96
38	Saudi Arabia	120.52	20.80
39	China	120.36	20.73
40	Austria	119.78	20.46
41	Guatemala	118.73	19.96
42	Spain	118.25	19.74
43	United Kingdom	117.55	19.41
44	Sri Lanka	115.06	18.23
45	Greece	113.45	17.47
46	Australia	110.62	16.14
47	France	110.62	16.14
48	Croatia	106.64	14.27
49	Hungary	106.07	14.00
50	Kenya	103.77	12.91
51	Bangladesh	101.55	11.86
52	Belgium	99.74	11.01
53	Brazil	98.84	10.59
54	Turkey	96.84	9.64
55	Mexico	95.13	8.84
56	Egypt	94.97	8.76
57	Canada	92.53	7.61
58	Nigeria	88.18	5.57
59	India	84.27	3.72
60	Dominican Republic	83.32	3.27
61	Jordan	77.00	0.30
62	Pakistan	76.38	0.00

Source: EIA International Energy Statistics (<http://www.eia.gov/>), CIA Factbook

3.1.6 Internet users (broad band) (2019)

Hard data: Individuals using the Internet (% of population)

Rank	Region	Unit	Index
1	Kuwait	99.54	100.00
2	U.A.E.	99.15	99.55
3	Denmark	98.05	98.27
4	Korea, Republic of	96.16	96.09
5	Saudi Arabia	95.72	95.59
6	Sweden	94.49	94.17
7	Netherlands	93.29	92.78
8	Switzerland	93.15	92.62
9	United Kingdom	92.52	91.89
10	Oman	92.41	91.77
11	Hong Kong SAR	91.74	91.00
12	Canada	91.00	90.14
13	New Zealand	90.81	89.92
14	Spain	90.72	89.82
15	Belgium	90.37	89.41
16	Finland	89.61	88.53
17	Singapore	88.95	87.77
18	Germany	88.13	86.83
19	Austria	87.75	86.39
20	United States	87.27	85.83
21	Israel	86.79	85.28
22	Australia	86.55	85.00
23	Taiwan, China	86.20	84.60
24	Japan	84.59	82.74
25	Poland	84.52	82.66
26	Malaysia	84.21	82.31
27	France	83.34	81.30
28	Slovenia	83.11	81.03
29	Slovak Republic	82.85	80.74
30	Russia	82.64	80.49
31	Chile	82.33	80.13
32	Czech Republic	80.87	78.45
33	Hungary	80.37	77.87
34	Croatia	79.08	76.38
35	Greece	75.67	72.45
36	Dominican Republic	74.82	71.47
37	Italy	74.39	70.97
38	Morocco	74.38	70.95
39	Argentina	74.29	70.86
40	Turkey	73.98	70.49
41	Mexico	70.07	65.98
42	Vietnam	68.70	64.40
43	Brazil	67.47	62.98
44	Jordan	66.79	62.20
45	Thailand	66.65	62.04
46	Colombia	65.01	60.14
47	Guatemala	65.00	60.13
48	Panama	63.63	58.55
49	Peru	59.95	54.30
50	Ukraine	58.89	53.08
51	Egypt	57.28	51.23
52	South Africa	56.17	49.94
53	China	54.30	47.78
54	Indonesia	47.69	40.15
55	Philippines	43.03	34.77
56	Nigeria	42.00	33.59
57	Cambodia	40.00	31.28
58	India	34.45	24.87
59	Sri Lanka	34.11	24.48
60	Kenya	22.57	11.16
61	Pakistan	17.07	4.81
62	Bangladesh	12.90	0.00

Source: EIA International Energy Statistics (<http://www.eia.gov/>), CIA Factbook

3.1.7 Capital value (2019)

Hard data: 1-inflation rate

Rank	Region	Unit	Index
1	Saudi Arabia	1.02	100.00
2	U.A.E.	1.02	99.71
3	Panama	1.00	96.88
4	Oman	1.00	96.00
5	Morocco	1.00	95.89
6	Greece	1.00	95.78
7	Switzerland	1.00	95.59
8	Korea, Republic of	1.00	95.55
9	Japan	1.00	95.38
10	Singapore	0.99	95.22
11	Italy	0.99	95.14
12	Malaysia	0.99	95.05
13	Spain	0.99	94.98
14	Thailand	0.99	94.97
15	Denmark	0.99	94.88
16	Jordan	0.99	94.87
17	Croatia	0.99	94.85
18	Israel	0.99	94.73
19	Finland	0.99	94.40
20	Kuwait	0.99	94.28
21	France	0.99	94.25
22	Taiwan, China	0.99	93.72
23	Belgium	0.99	93.66
24	Germany	0.99	93.64
25	Austria	0.98	93.49
26	Australia	0.98	93.34
27	New Zealand	0.98	93.33
28	Slovenia	0.98	93.31
29	United Kingdom	0.98	93.11
30	Sweden	0.98	93.03
31	Dominican Republic	0.98	92.98
32	United States	0.98	92.98
33	Canada	0.98	92.73
34	Peru	0.98	92.40
35	Poland	0.98	92.23
36	Cambodia	0.98	91.82
37	Philippines	0.98	91.78
38	Chile	0.97	91.64
39	Netherlands	0.97	91.50
40	Slovak Republic	0.97	91.45
41	Vietnam	0.97	91.21
42	Czech Republic	0.97	91.12
43	Hong Kong SAR	0.97	91.09
44	China	0.97	91.03
45	Indonesia	0.97	90.79
46	Hungary	0.97	90.24
47	Colombia	0.96	89.90
48	Sri Lanka	0.96	89.90
49	Mexico	0.96	89.70
50	Guatemala	0.96	89.59
51	Brazil	0.96	89.53
52	South Africa	0.96	88.83
53	Russia	0.96	88.20
54	Kenya	0.95	87.81
55	Bangladesh	0.94	86.19
56	India	0.92	82.47
57	Ukraine	0.92	82.06
58	Pakistan	0.89	77.23
59	Nigeria	0.89	75.76
60	Egypt	0.86	70.36
61	Turkey	0.85	68.96
62	Argentina	0.46	0.00

Source: EIA International Energy Statistics (<http://www.eia.gov/>), CIA Factbook

3.1.8 Capital accessibility (2019)

Hard data: 1- interest rate

Rank	Region	Unit	Index
1	Netherlands	0.99	100.00
2	Japan	0.99	99.72
3	France	0.99	99.62
4	Germany	0.99	99.16
5	Austria	0.99	99.07
6	Belgium	0.98	98.74
7	Finland	0.98	98.68
8	Hungary	0.98	98.52
9	Spain	0.98	98.43
10	Sweden	0.98	98.31
11	Poland	0.98	98.21
12	Slovenia	0.98	98.04
13	Slovak Republic	0.98	97.61
14	Italy	0.97	97.30
15	Taiwan, China	0.97	97.26
16	Switzerland	0.97	97.26
17	Croatia	0.97	97.17
18	Canada	0.97	97.16
19	Denmark	0.97	96.94
20	Korea, Republic of	0.97	96.03
21	Israel	0.96	95.90
22	Czech Republic	0.96	95.67
23	Thailand	0.96	95.07
24	Chile	0.96	94.93
25	China	0.96	94.67
26	United Kingdom	0.96	94.63
27	Greece	0.95	94.25
28	New Zealand	0.95	94.06
29	Kuwait	0.95	93.98
30	Malaysia	0.95	93.88
31	Australia	0.95	93.54
32	Hong Kong SAR	0.95	93.54
33	Oman	0.95	93.46
34	Singapore	0.95	93.32
35	United States	0.95	93.27
36	Morocco	0.94	92.79
37	U.A.E.	0.94	92.19
38	Panama	0.93	90.55
39	Philippines	0.93	90.54
40	Vietnam	0.92	89.62
41	Saudi Arabia	0.92	88.73
42	Mexico	0.92	88.46
43	Jordan	0.91	88.17
44	Russia	0.91	88.05
45	India	0.91	86.97
46	Bangladesh	0.90	86.84
47	South Africa	0.90	85.98
48	Indonesia	0.90	85.62
49	Cambodia	0.89	85.33
50	Sri Lanka	0.89	84.30
51	Colombia	0.88	83.51
52	Pakistan	0.88	82.81
53	Kenya	0.88	82.49
54	Guatemala	0.87	82.04
55	Peru	0.86	79.56
56	Nigeria	0.85	78.08
57	Dominican Republic	0.85	78.02
58	Egypt	0.84	76.96
59	Ukraine	0.80	71.39
60	Turkey	0.74	62.63
61	Brazil	0.63	44.82
62	Argentina	0.33	0.00

Source: EIA International Energy Statistics (<http://www.eia.gov/>), CIA Factbook

3.1.9 Scientists & engineers (2018)

Hard data: total R&D personnel per million inhabitants

Rank	Region	Unit	Index
1	Saudi Arabia	63.42	100.00
2	Denmark	30.61	48.06
3	Austria	28.63	44.91
4	Taiwan, China	27.17	42.60
5	Finland	26.80	42.02
6	Belgium	25.50	39.95
7	Switzerland	25.40	39.79
8	Sweden	25.08	39.29
9	Korea, Republic of	24.65	38.61
10	New Zealand	24.20	37.90
11	Germany	22.44	35.11
12	Slovenia	21.27	33.25
13	France	21.11	33.00
14	Netherlands	21.09	32.98
15	Czech Republic	20.72	32.39
16	United Kingdom	20.38	31.85
17	Greece	19.98	31.21
18	Italy	18.53	28.92
19	Japan	17.60	27.44
20	Spain	15.35	23.89
21	Singapore	13.86	21.52
22	Hungary	13.00	20.16
23	Poland	12.98	20.13
24	Slovak Republic	12.97	20.12
25	U.A.E.	11.02	17.03
26	Croatia	10.62	16.39
27	Hong Kong SAR	10.10	15.56
28	Malaysia	9.81	15.11
29	Russia	9.17	14.09
30	Turkey	8.34	12.78
31	China	8.18	12.53
32	Egypt	8.05	12.33
33	Thailand	5.64	8.51
34	Argentina	5.48	8.25
35	Ukraine	4.54	6.77
36	Morocco	4.50	6.70
37	Jordan	4.23	6.27
38	South Africa	3.71	5.45
39	Vietnam	3.05	4.41
40	Chile	2.71	3.86
41	Pakistan	2.68	3.83
42	Kuwait	2.66	3.79
43	Oman	2.29	3.20
44	Mexico	1.65	2.19
45	Indonesia	1.47	1.90
46	Sri Lanka	1.45	1.87
47	Philippines	0.89	0.98
48	Panama	0.73	0.73
49	Peru	0.31	0.07
50	Guatemala	0.27	0.00
-	Australia	-	-
-	Bangladesh	-	-
-	Brazil	-	-
-	Cambodia	-	-
-	Canada	-	-
-	Colombia	-	-
-	Dominican Republic	-	-
-	India	-	-
-	Israel	-	-
-	Kenya	-	-
-	Nigeria	-	-
-	United States	-	-

Source: EIA International Energy Statistics (<http://www.eia.gov/>), CIA Factbook

3.1.10 Scientific research institutions

Survey: scientific research institutions are good by global standard.

Rank	Region	Unit	Index
1	Finland	8.64	100.00
2	Austria	8.53	97.03
3	Australia	8.26	89.87
4	Belgium	8.13	86.57
5	Sweden	8.11	86.06
6	Hungary	8.06	84.79
7	United States	7.95	81.96
8	Singapore	7.94	81.69
9	Netherlands	7.77	77.19
10	Switzerland	7.74	76.25
11	Denmark	7.65	74.08
12	France	7.65	73.85
13	Germany	7.64	73.62
14	Korea, Republic of	7.60	72.77
15	Canada	7.59	72.32
16	China	7.46	68.95
17	Greece	7.38	66.92
18	Taiwan, China	7.38	66.88
19	Nigeria	7.37	66.62
20	Czech Republic	7.34	65.95
21	Brazil	7.31	65.00
22	Hong Kong SAR	7.28	64.28
23	Slovenia	7.27	64.04
24	Italy	7.24	63.15
25	United Kingdom	7.20	62.18
26	India	7.17	61.46
27	New Zealand	7.11	59.77
28	Jordan	7.09	59.25
29	Spain	7.08	59.12
30	Croatia	7.04	58.03
31	Japan	6.96	55.80
32	Bangladesh	6.94	55.46
33	Philippines	6.93	54.98
34	Saudi Arabia	6.90	54.32
35	Panama	6.87	53.45
36	Chile	6.83	52.38
37	Malaysia	6.81	52.03
38	Indonesia	6.81	51.85
39	Mexico	6.77	51.01
40	Russia	6.67	48.20
41	Turkey	6.65	47.80
42	Peru	6.65	47.73
43	Argentina	6.64	47.41
44	Vietnam	6.61	46.75
45	South Africa	6.59	46.07
46	Sri Lanka	6.55	45.03
47	Egypt	6.45	42.46
48	Thailand	6.45	42.44
49	Colombia	6.44	42.26
50	Poland	6.38	40.75
51	Pakistan	6.29	38.22
52	U.A.E.	6.04	31.74
53	Kenya	6.03	31.58
54	Kuwait	5.97	30.04
55	Slovak Republic	5.96	29.59
56	Dominican Republic	5.91	28.35
56	Morocco	5.91	28.35
58	Oman	5.85	26.85
59	Israel	5.81	25.69
60	Cambodia	5.58	19.69
61	Ukraine	5.29	12.16
62	Guatemala	4.83	0.00

Source: EIA International Energy Statistics (<http://www.eia.gov/>), CIA Factbook

3.1.11 Total expenditure on R&D

Hard data: % of GDP

Rank	Region	Unit	Index
1	Israel	4.95	100.00
2	Korea, Republic of	4.81	97.10
3	Switzerland	3.37	67.92
4	Taiwan, China	3.36	67.66
5	Sweden	3.34	67.24
6	Japan	3.26	65.72
7	Austria	3.17	63.84
8	Germany	3.09	62.26
9	Denmark	3.06	61.65
10	United States	2.84	57.05
11	Belgium	2.82	56.72
12	Finland	2.77	55.75
13	France	2.20	44.10
14	China	2.19	43.81
15	Netherlands	2.16	43.37
16	Singapore	1.94	38.91
17	Slovenia	1.94	38.87
18	Czech Republic	1.93	38.59
19	Australia	1.87	37.48
20	United Kingdom	1.72	34.44
21	Canada	1.57	31.23
22	Hungary	1.55	31.00
23	Malaysia	1.44	28.60
24	Italy	1.40	27.84
25	New Zealand	1.37	27.16
26	U.A.E.	1.30	25.89
27	Brazil	1.26	25.08
28	Spain	1.24	24.55
29	Poland	1.21	24.05
30	Greece	1.18	23.34
31	Thailand	1.00	19.82
32	Russia	0.99	19.53
33	Croatia	0.97	19.23
34	Turkey	0.96	18.95
35	Hong Kong SAR	0.86	16.91
36	Slovak Republic	0.83	16.34
37	South Africa	0.83	16.33
38	Egypt	0.72	14.13
39	Jordan	0.71	13.80
40	India	0.65	12.63
41	Argentina	0.54	10.43
42	Vietnam	0.53	10.13
43	Ukraine	0.47	9.00
44	Chile	0.36	6.64
45	Mexico	0.31	5.77
46	Colombia	0.24	4.24
47	Pakistan	0.24	4.22
48	Indonesia	0.23	4.03
49	Oman	0.22	3.89
50	Panama	0.15	2.42
51	Peru	0.13	2.01
52	Kuwait	0.06	0.69
53	Guatemala	0.03	0.00
-	Bangladesh	-	-
-	Cambodia	-	-
-	Dominican Republic	-	-
-	Kenya	-	-
-	Morocco	-	-
-	Nigeria	-	-
-	Philippines	-	-
-	Saudi Arabia	-	-
-	Sri Lanka	-	-

Source: EIA International Energy Statistics (<http://www.eia.gov/>), CIA Factbook

3.1.12 International patents granted (2019)

Hard data: patent issued by USPTO (number)

Rank	Region	Unit	Index
1	United States	177,053	100.00
2	Japan	53,176	30.03
3	Korea, Republic of	22,427	12.67
4	Germany	18,761	10.60
5	Taiwan, China	11,857	6.70
6	United Kingdom	8,493	4.80
7	Canada	7,793	4.40
8	France	7,532	4.25
9	India	5,075	2.87
10	Israel	4,630	2.61
11	Italy	3,718	2.10
12	Netherlands	3,340	1.89
13	Sweden	3,321	1.88
14	Switzerland	3,198	1.81
15	Australia	2,136	1.21
16	Austria	1,618	0.91
17	Finland	1,545	0.87
18	Belgium	1,447	0.82
19	Denmark	1,320	0.74
20	Singapore	1,102	0.62
21	Hong Kong SAR	1,073	0.61
22	Spain	1,058	0.60
23	Saudi Arabia	871	0.49
24	Russia	615	0.35
25	New Zealand	435	0.25
26	Brazil	432	0.24
27	Mexico	411	0.23
28	Czech Republic	383	0.22
29	Poland	337	0.19
30	Malaysia	296	0.17
31	Turkey	252	0.14
32	South Africa	202	0.11
33	Hungary	145	0.08
34	Greece	133	0.07
35	Thailand	128	0.07
36	Argentina	115	0.06
37	U.A.E.	98	0.05
38	Philippines	88	0.05
39	Slovenia	79	0.04
40	Ukraine	71	0.04
41	Slovak Republic	58	0.03
42	Vietnam	57	0.03
43	Colombia	46	0.03
44	Egypt	45	0.02
45	Kuwait	44	0.02
46	Chile	41	0.02
47	China	27	0.01
48	Pakistan	26	0.01
49	Croatia	22	0.01
50	Jordan	19	0.01
51	Indonesia	13	0.01
52	Kenya	12	0.01
53	Bangladesh	10	0.01
53	Peru	10	0.01
53	Sri Lanka	10	0.01
56	Morocco	7	0.00
57	Panama	6	0.00
58	Guatemala	5	0.00
59	Dominican Republic	4	0.00
60	Oman	3	0.00
61	Cambodia	1	0.00
61	Nigeria	1	0.00

Source: EIA International Energy Statistics (<http://www.eia.gov/>), CIA Factbook