

IMD WORLD DIGITAL COMPETITIVENESS RANKINGS **2017**

Appendices & Sources

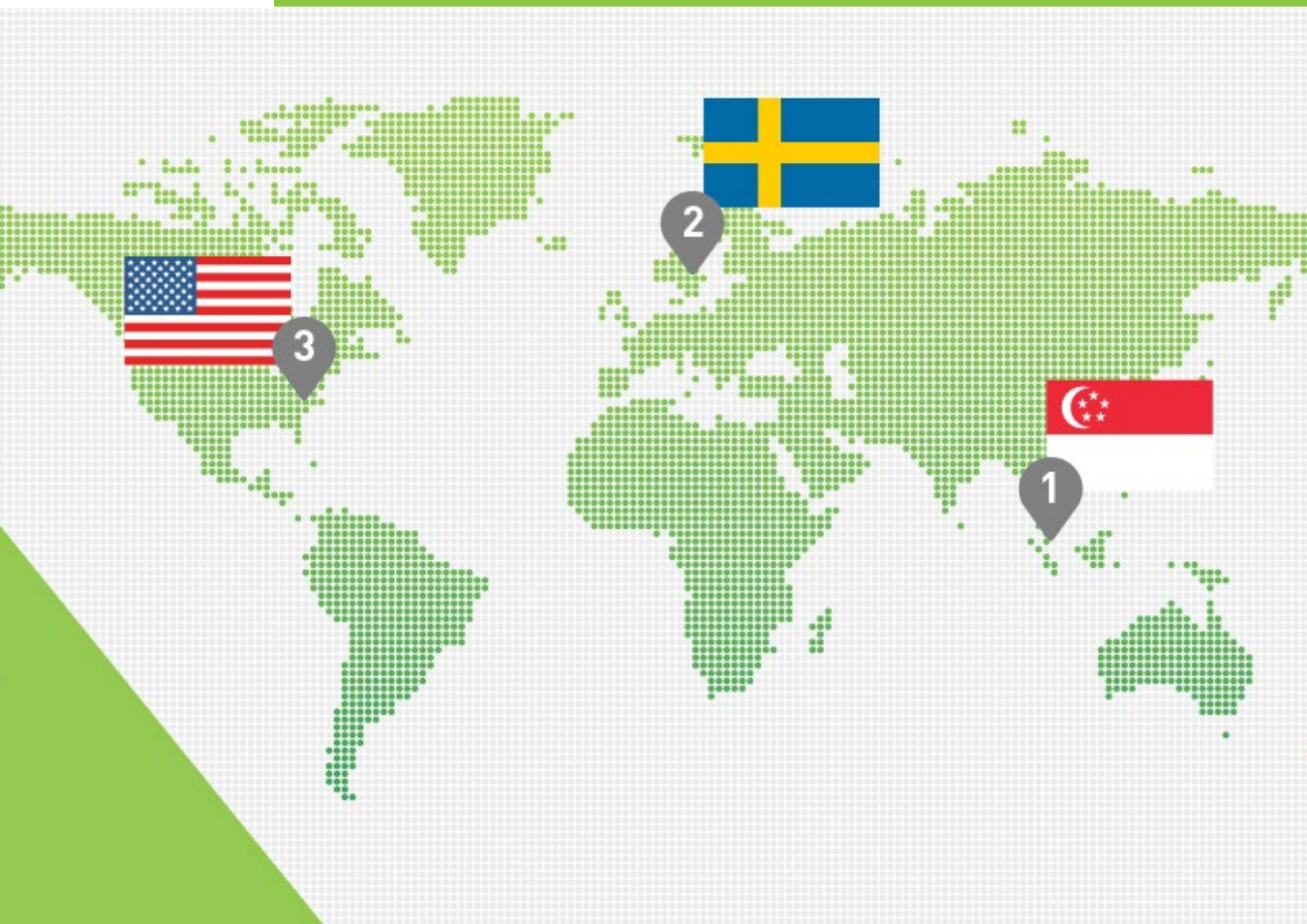


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User's Guide

World Digital Competitiveness Ranking

Overall Ranking and Digital Competitiveness Factors

This section presents the overall rankings and the 5-year trends for each of the three Digital Competitiveness Factors: Knowledge, Technology and Future Readiness. Thus, the reader is able to analyze the digital evolution of an economy over the past few years relative to the others on a global basis.

The image displays two side-by-side tables. The left table, titled 'OVERALL', shows the overall ranking of 63 economies for 2017, with columns for the year (2017) and the ranking (1 to 63). The right table, titled 'Digital Competitiveness Factors', shows the rankings for three factors: Knowledge, Technology, and Future readiness, with columns for each factor and the ranking (1 to 63).

Digital Sub-factor Rankings

A summary of the rankings for all nine sub-factors is presented for the 63 economies for 2017. It is possible, at a glance, to determine in what areas of digital competitiveness an economy excels or has particular weaknesses and to make comparisons between countries. These rankings provide a more detailed examination of specific aspects of the digital transformation and can be used to, for example, evaluate the technological framework of a country or support international investment decisions.

We view the rankings as a tool for managers or policy makers to use when they analyze the above questions. Of course, each company must take into consideration the logic of its own economic sector, economic forecasts and its own traditions as well as governments should consider the national identity and value system of their economy.

The image displays a detailed table showing the digital sub-factor rankings for 63 economies in 2017. The table is organized into three main sections: Knowledge, Technology, and Future readiness. Each section contains a list of sub-factors and their corresponding rankings for each of the 63 economies. The sub-factors are: Talent, Training & education, Scientific concentrations, Regulatory framework, Capital, Technological framework, Adaptive attitudes, Business agility, and Innovation.

Statistical Tables

This section presents the data for all criteria and economies that are included in the IMD World Digital Competitiveness Ranking. The economies are ranked on a global basis from the most to the least competitive. A low ranking number indicates a strong competitive position and vice-versa. However, with some criteria the inverse may be true; where the lowest value is the most digital competitive, for example, Software Piracy. In these cases, an inverse ranking is used.

Economies are ranked by individual criterion and all criteria are grouped by Digital Competitiveness Factor. The statistical tables present **Hard data (A)** drawn from international, national and regional organizations. Collaboration with 57 Partner Institutes worldwide helps us gather complete, up-to-date and reliable statistics.

When statistical data is not available or is too out-dated to be relevant for a particular economy, the name appears at the bottom of the statistical table and a dash is shown. When the data is older than the reference year, the year of the data is shown next to the criterion value.

The tables also consist of **Survey responses (B)** from our annual Executive Opinion Survey. Additional information is provided as background data.

The Survey icon indicates that the data is drawn from our Executive Opinion Survey.



All background data are shown by the Background icon at the top of the table.



Only Hard data and Survey responses are used in the consolidation to determine the rankings. Background data is not included but provided for information only. The statistical tables which display a "Ranking" column indicate that the criterion is used when consolidating the data for the Overall Scoreboard. The ranking shows the economy's performance in that particular criterion. When data is not available or is too old to be relevant, a dash is shown.

Hard data (A)

POPULATION - MARKET SIZE

2016

Estimates in millions



Ranking		millions
1	CHINA MAINLAND	1,382.71
2	INDIA	1,308.76
3	USA	324.22
4	INDONESIA	258.71
5	BRAZIL	210.75
6	RUSSIA	146.50
7	JAPAN	126.92
8	MEXICO	122.75
9	PHILIPPINES	103.24
10	GERMANY	82.24
11	TURKEY	79.81
12	FRANCE	66.73
13	THAILAND	65.32
14	UNITED KINGDOM	65.21
15	ITALY	60.67
16	SOUTH AFRICA	55.91
17	KOREA REP.	51.25
18	COLOMBIA	48.75
19	SPAIN	46.47
20	ARGENTINA	43.59
21	UKRAINE	42.67
22	POLAND	38.43
23	CANADA	36.20
24	SAUDI ARABIA	31.74

Survey Responses (B)

Regulatory framework

2.1.3

IMMIGRATION LAWS

2017

Immigration laws

prevent your company from
employing foreign labor



do not prevent your
company from employing
foreign labor

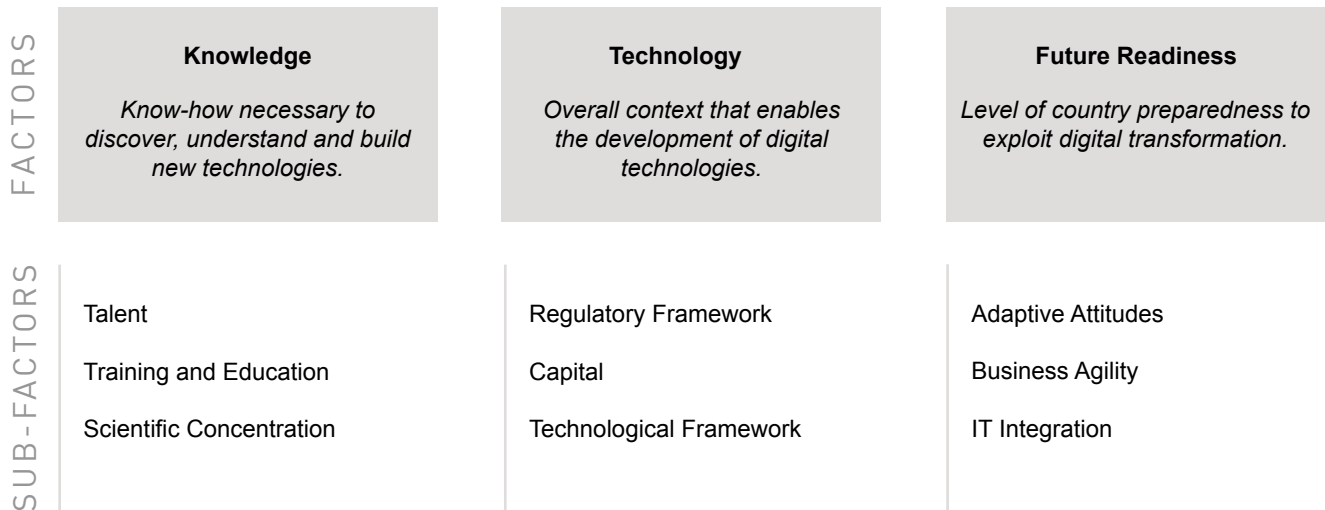
Ranking		Survey [0..10]
1	UAE	8.00
2	ARGENTINA	7.84
3	PORTUGAL	7.68
4	IRELAND	7.61
5	NETHERLANDS	7.43
6	FINLAND	7.37
7	NEW ZEALAND	7.25
8	BELGIUM	7.19
9	LUXEMBOURG	7.05
10	CHILE	6.97
11	SWEDEN	6.96
12	NORWAY	6.90
13	CANADA	6.88
14	GERMANY	6.80
15	HONG KONG SAR	6.74
16	ITALY	6.70
17	SPAIN	6.58
18	PERU	6.52
19	MEXICO	6.48
20	KAZAKHSTAN	6.46
21	FRANCE	6.42
22	ICELAND	6.41
23	INDIA	6.39
24	THAILAND	6.36
25	UNITED KINGDOM	6.27
26	GREECE	6.25
26	QATAR	6.25
28	HUNGARY	6.22

Methodology in a Nutshell

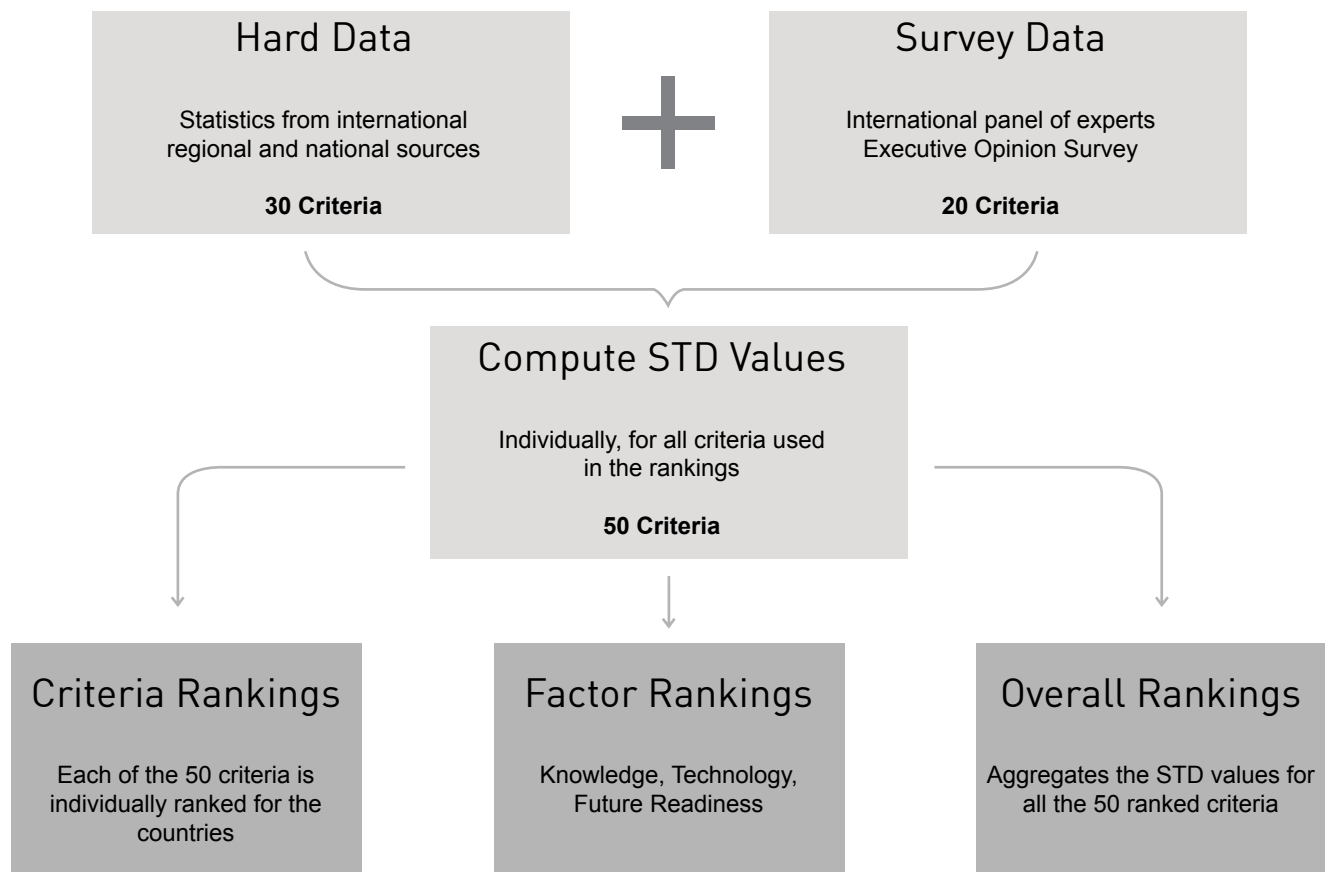
1. The IMD World Digital Competitiveness (WDC) ranking analyzes and ranks countries' ability to adopt and explore digital technologies leading to transformation in government practices, business models and society in general.
2. As in the case of the IMD World Competitiveness ranking, we assume that digital transformation takes place primarily at enterprise level (whether private or state-owned) but it also occurs at the government and society levels.
3. Based on our research, the methodology of the WDC ranking defines digital competitiveness into three main factors:
 - Knowledge
 - Technology
 - Future readiness
4. In turn, each of these factors is divided into 3 sub-factors which highlight every facet of the areas analyzed. Altogether, the WDC features 9 such sub-factors.
5. These 9 sub-factors comprise 50 criteria, although each sub-factor does not necessarily have the same number of criteria (for example, it takes more criteria to assess Training and Education than to evaluate IT integration).
6. Each sub-factor, independently of the number of criteria it contains, has the same weight in the overall consolidation of results, that is approximately 11.1% ($9 \times 11.1 \sim 100$).
7. Criteria can be hard data, which analyze digital competitiveness as it can be measured (e.g. Internet bandwidth speed) or soft data, which analyze competitiveness as it can be perceived (e.g. Agility of companies). Hard criteria represent a weight of 2/3 in the overall ranking whereas the survey data represent a weight of 1/3.
8. The 50 criteria include 19 new indicators which are only used in the assessment of the WDC ranking. The rest of the indicators are shared with the IMD World Competitiveness Ranking.
9. In addition, some criteria are for background information only, which means that they are not used in calculating the overall competitiveness ranking (i.e., Population and GDP).
10. Finally, aggregating the results of the 9 sub-factors makes the total consolidation, which leads to the overall ranking of the WDC.

What is the IMD World Digital Competitiveness ranking?

Digital Competitiveness Factors and Sub-factors

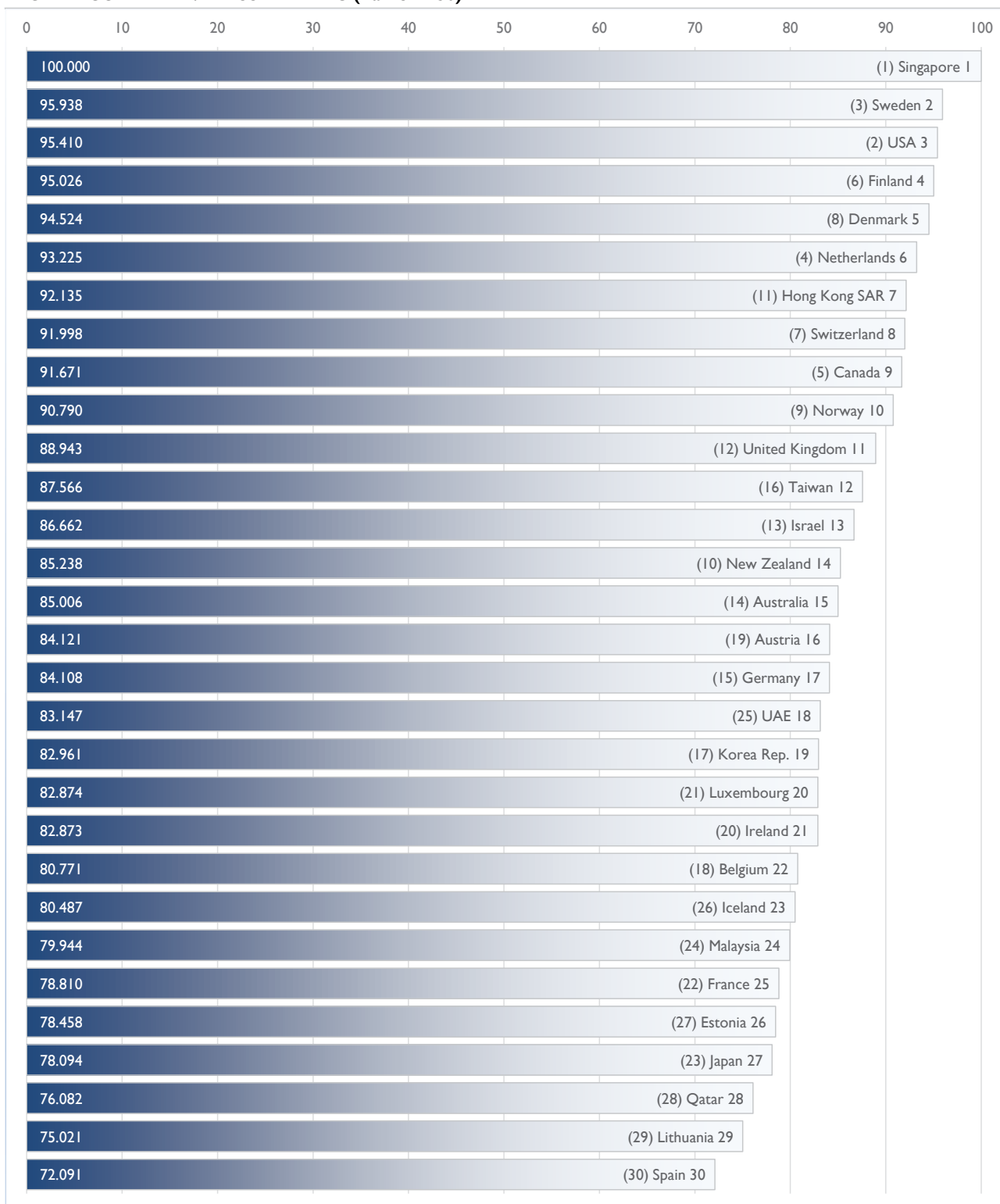


Computing the Rankings



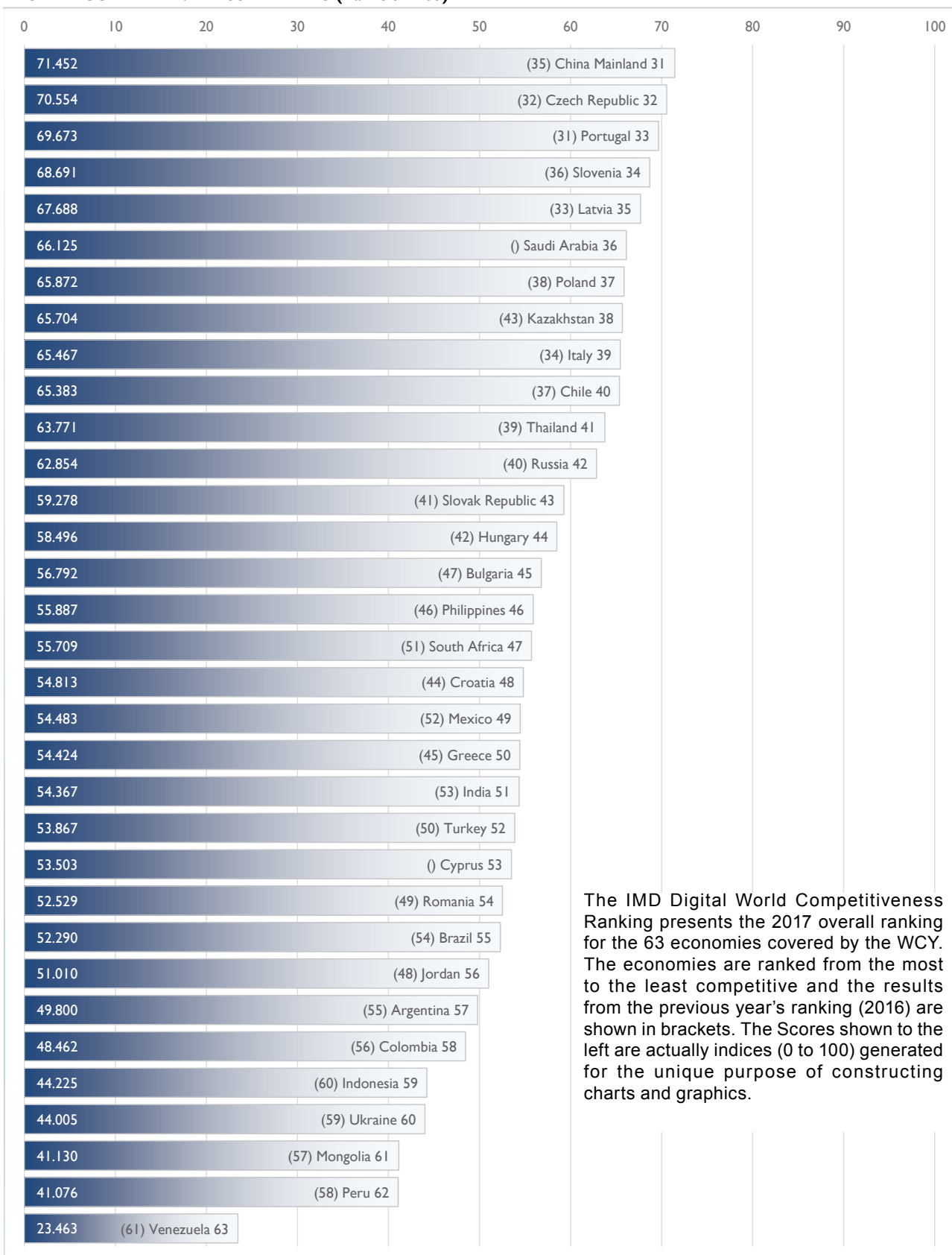
The 2017 IMD World Digital Competitiveness Ranking

DIGITAL COMPETITIVENESS RANKING (Ranks 1 - 30)



(2016 rankings are in parentheses)

DIGITAL COMPETITIVENESS RANKING (Ranks 31 - 63)

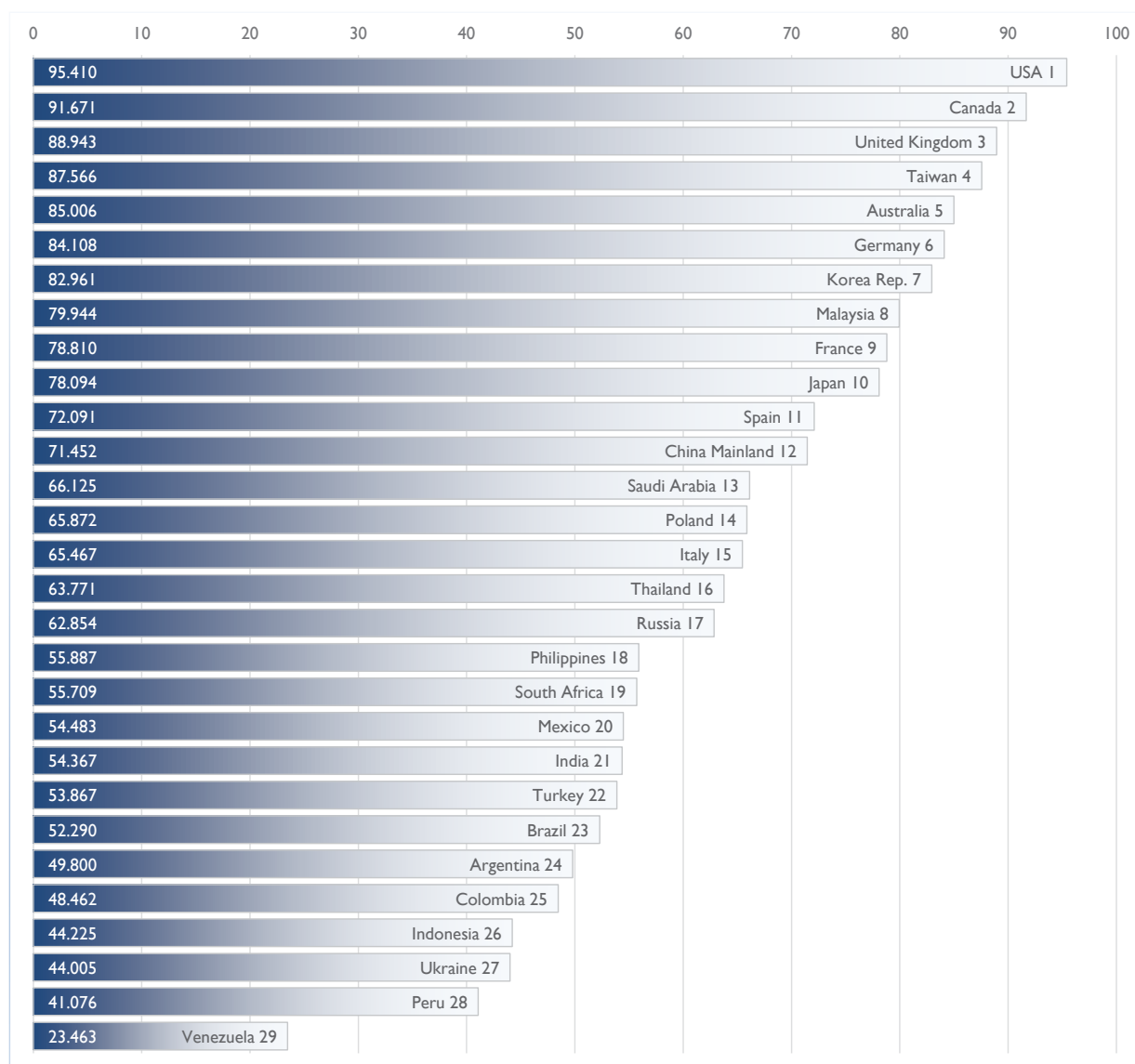


The IMD Digital World Competitiveness Ranking presents the 2017 overall ranking for the 63 economies covered by the WCY. The economies are ranked from the most to the least competitive and the results from the previous year's ranking (2016) are shown in brackets. The Scores shown to the left are actually indices (0 to 100) generated for the unique purpose of constructing charts and graphics.

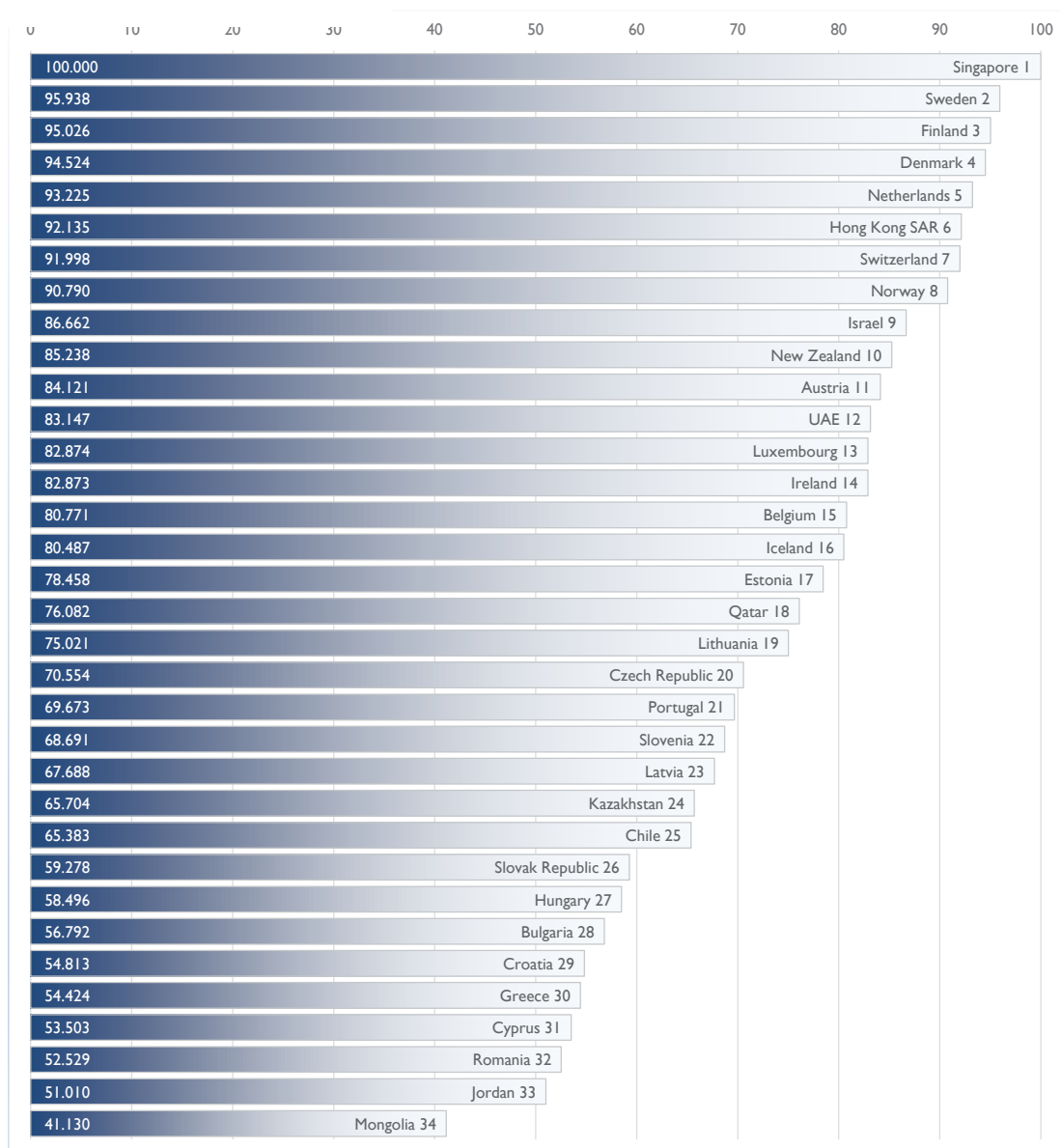
(2016 rankings are in parentheses)

The 2017 IMD World Digital Competitiveness Rankings : Selected Breakdowns

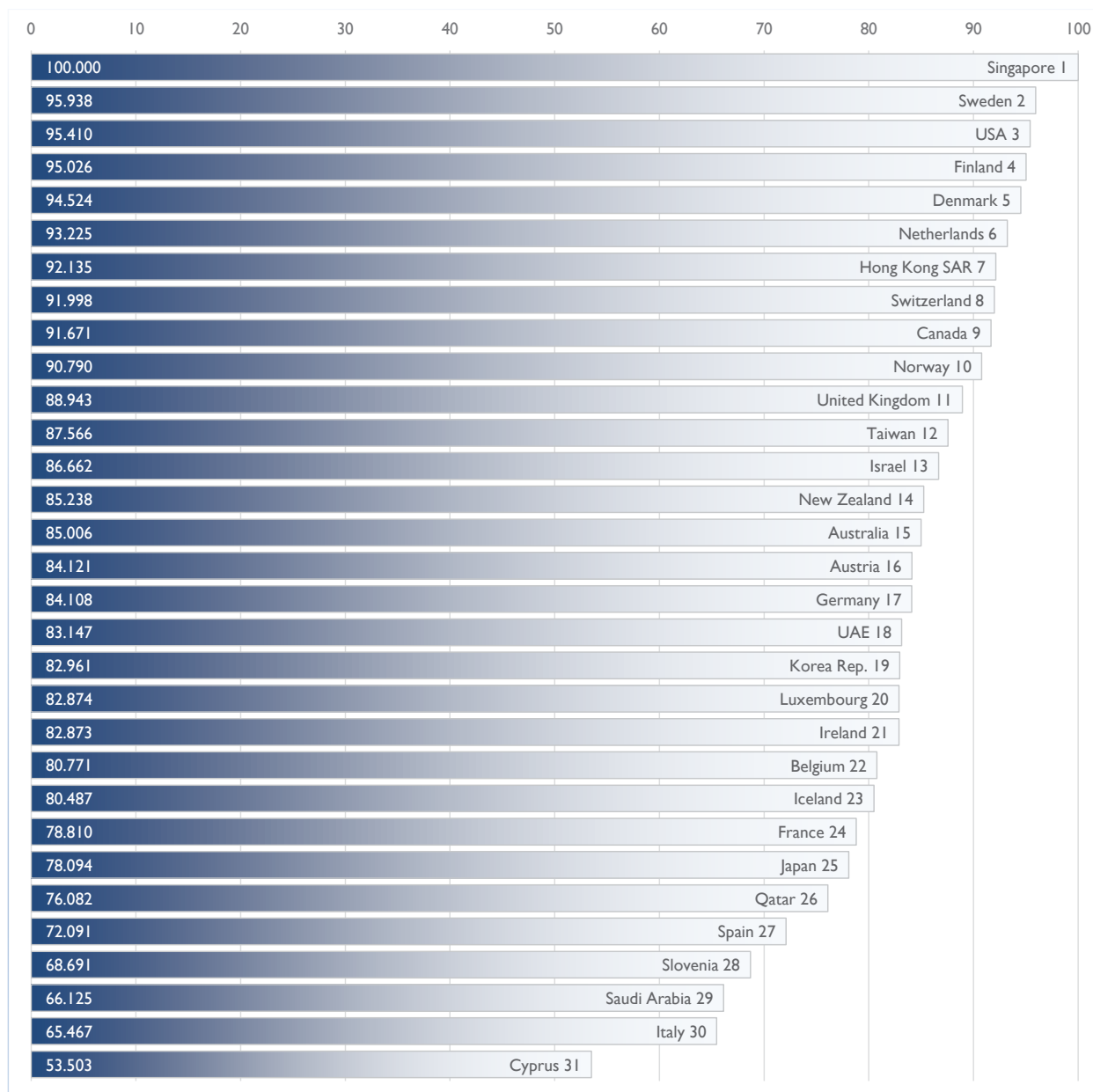
Populations greater than 20 million

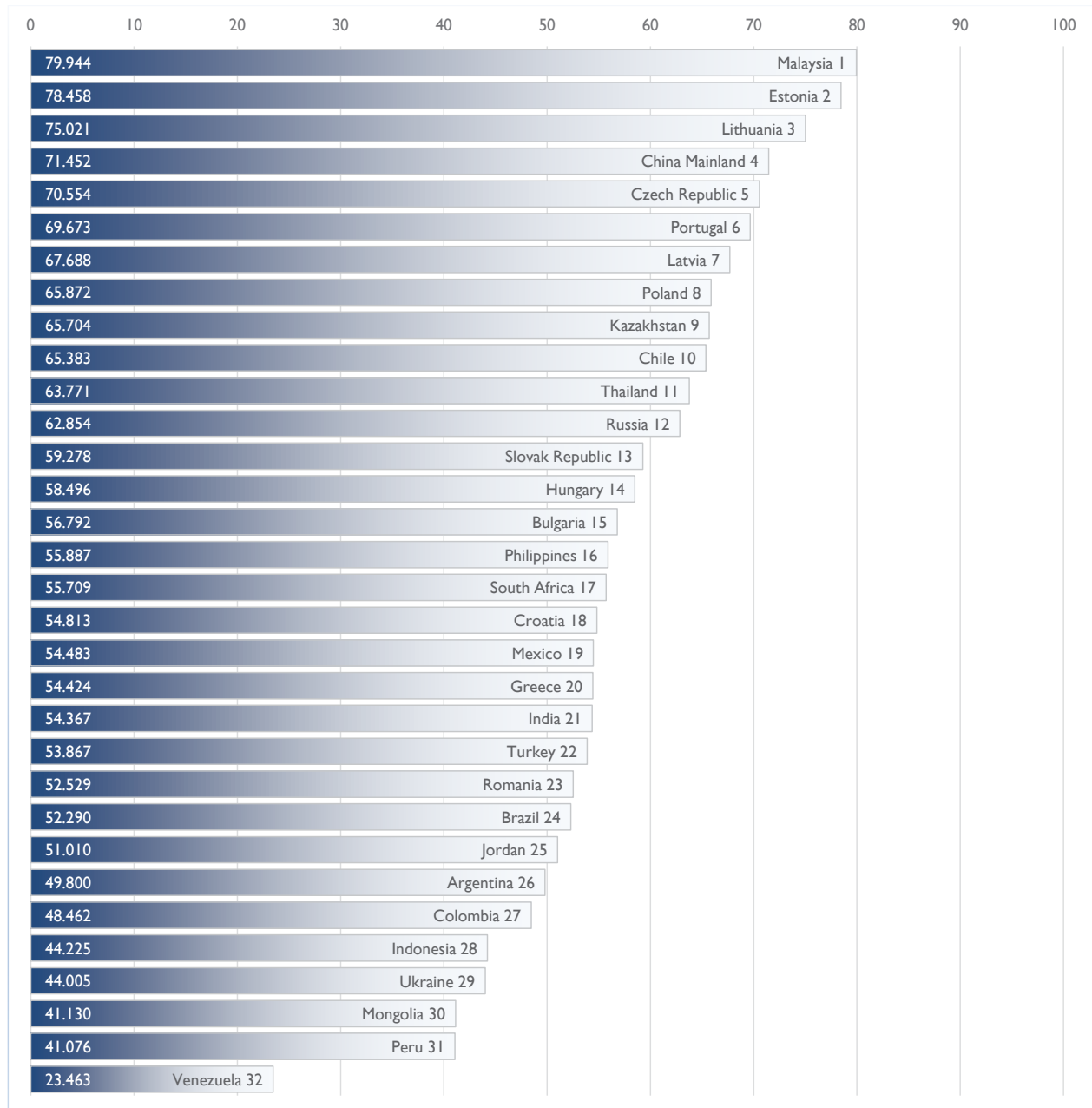


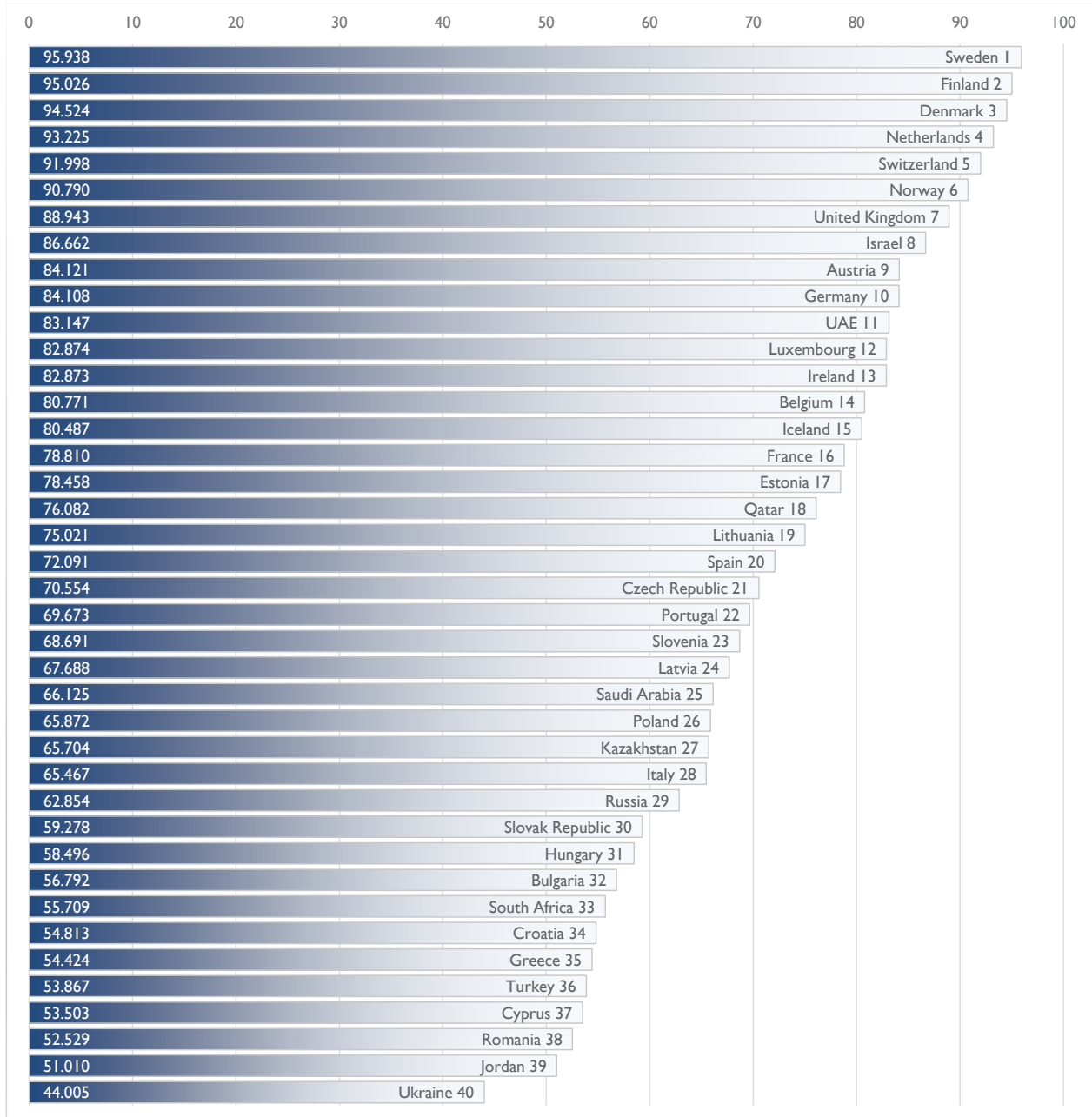
Populations less than 20 million

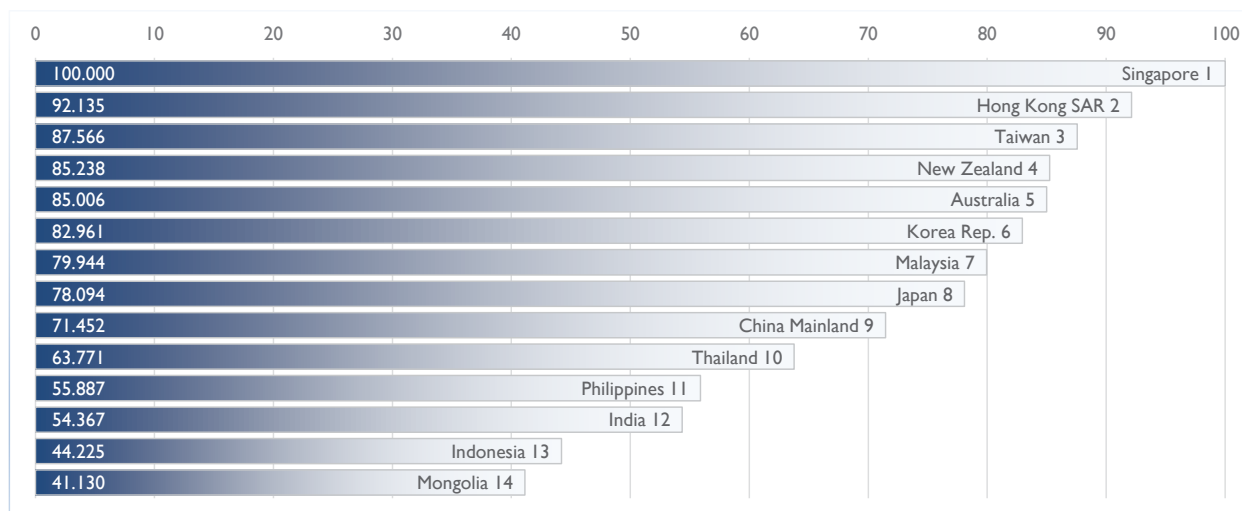


GDP per capita greater than \$20,000

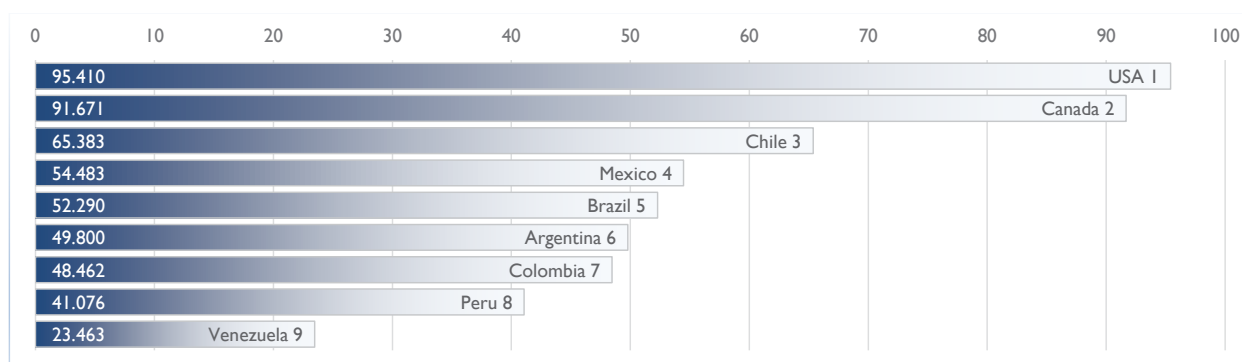




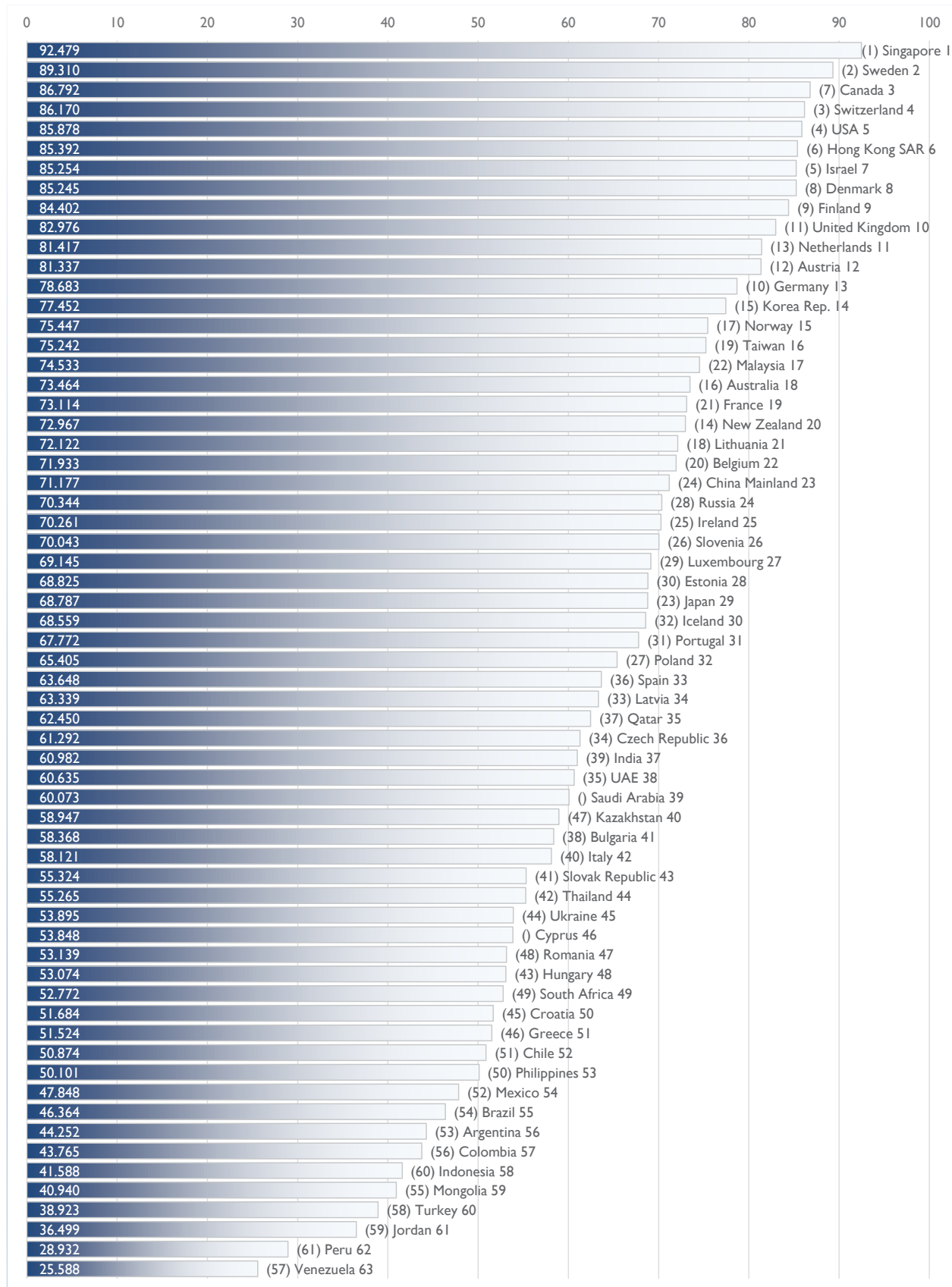




The Americas

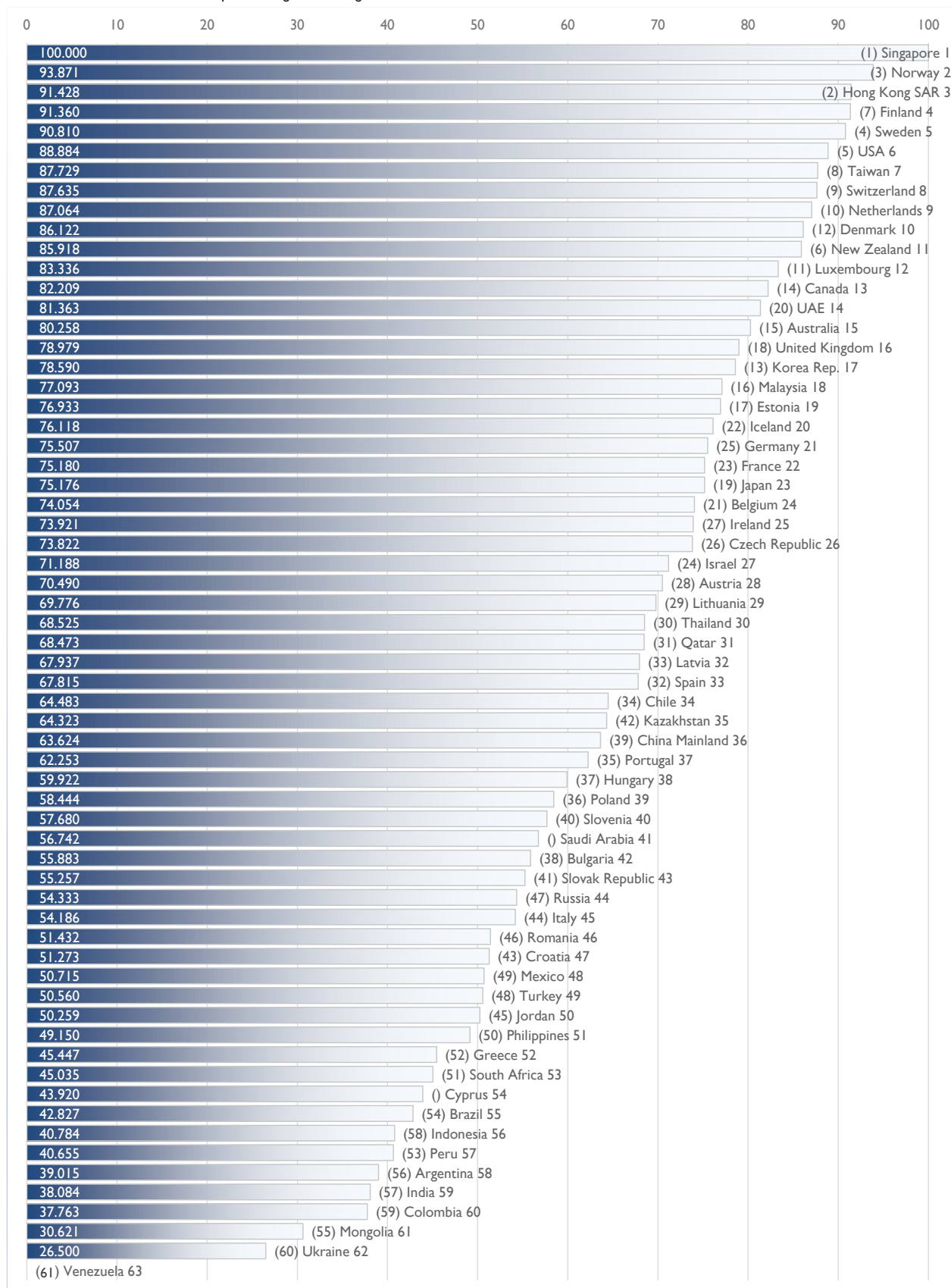


Know-how necessary to discover, understand and build new technologies



(2016 rankings are in parentheses)

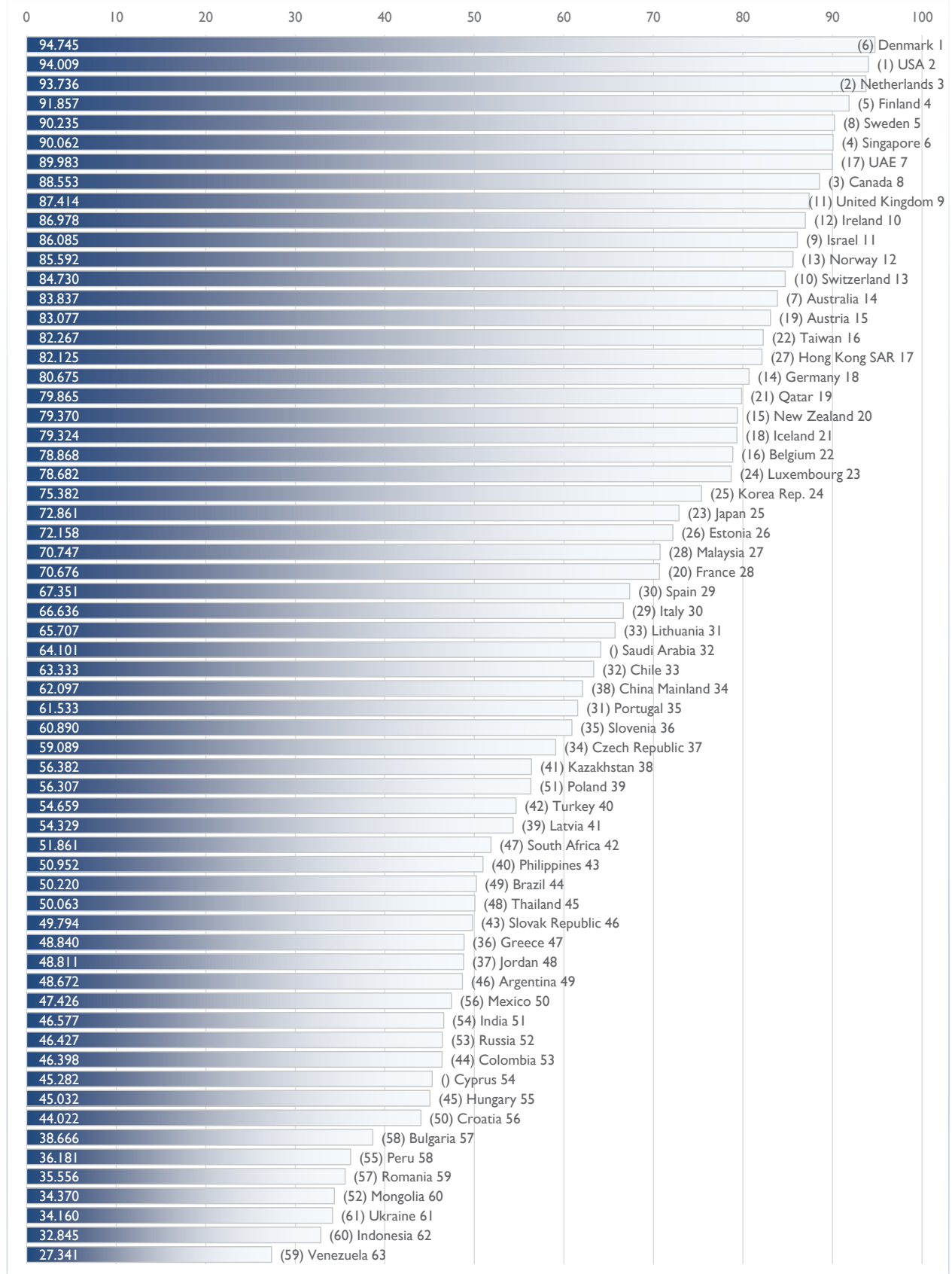
Overall context that enables the development of digital technologies



(2016 rankings are in parentheses)

Future Readiness

Level of country preparedness to exploit digital transformation



(2016 rankings are in parentheses)

Factor Rankings - 5 years overview

	OVERALL					Knowledge				
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
Argentina	56	58	58	55	57	49	54	57	53	56
Australia	11	10	9	14	15	9	9	11	16	18
Austria	25	24	26	19	16	18	14	16	12	12
Belgium	23	25	19	18	22	24	26	21	20	22
Brazil	52	55	56	54	55	52	52	55	54	55
Bulgaria	55	53	54	47	45	55	47	45	38	41
Canada	10	8	4	5	9	4	3	3	7	3
Chile	34	34	37	37	40	53	55	53	51	52
China Mainland	38	38	33	35	31	28	27	22	24	23
Colombia	47	49	53	56	58	47	51	52	56	57
Croatia	49	45	46	44	48	50	49	46	45	50
Cyprus	-	-	-	-	53	-	-	-	-	46
Czech Republic	31	31	31	32	32	37	38	36	34	36
Denmark	7	7	8	8	5	8	8	9	8	8
Estonia	27	23	27	27	26	25	23	30	30	28
Finland	4	4	3	6	4	5	5	7	9	9
France	19	22	20	22	25	16	15	20	21	19
Germany	16	14	17	15	17	19	16	10	10	13
Greece	44	48	40	45	50	41	44	34	46	51
Hong Kong SAR	9	13	14	11	7	11	10	8	6	6
Hungary	35	36	44	42	44	42	42	44	43	48
Iceland	26	27	24	26	23	20	24	33	32	30
India	51	56	50	53	51	40	39	37	39	37
Indonesia	58	57	60	60	59	58	57	60	60	58
Ireland	22	17	25	20	21	26	21	26	25	25
Israel	12	11	10	13	13	7	7	4	5	7
Italy	40	41	36	34	39	44	46	42	40	42
Japan	20	20	23	23	27	23	20	24	23	29
Jordan	53	46	49	48	56	60	60	61	59	61
Kazakhstan	42	35	35	43	38	48	43	41	47	40
Korea Rep.	14	21	18	17	19	14	12	13	15	14
Latvia	33	33	34	33	35	36	33	32	33	34
Lithuania	30	32	28	29	29	22	25	18	18	21
Luxembourg	18	19	16	21	20	27	28	23	29	27
Malaysia	17	15	21	24	24	15	19	25	22	17
Mexico	43	51	48	52	49	45	53	51	52	54
Mongolia	-	-	55	57	61	-	-	56	55	59
Netherlands	5	6	6	4	6	13	11	14	13	11
New Zealand	21	18	13	10	14	17	18	15	14	20
Norway	8	9	11	9	10	12	17	17	17	15
Peru	57	59	57	58	62	57	58	58	61	62
Philippines	39	43	45	46	46	39	41	49	50	53
Poland	36	39	38	38	37	30	36	31	27	32
Portugal	29	30	29	31	33	29	31	29	31	31
Qatar	28	28	32	28	28	31	34	39	37	35
Romania	59	54	51	49	54	56	56	50	48	47
Russia	46	42	41	40	42	32	30	27	28	24
Saudi Arabia	-	-	-	-	36	-	-	-	-	39
Singapore	1	1	1	1	1	2	1	1	1	1
Slovak Republic	41	40	43	41	43	43	40	43	41	43
Slovenia	37	37	39	36	34	34	32	28	26	26
South Africa	50	47	47	51	47	46	45	47	49	49
Spain	32	29	30	30	30	33	35	35	36	33
Sweden	2	3	5	3	2	1	2	2	2	2
Switzerland	6	5	7	7	8	6	6	5	3	4
Taiwan	13	16	15	16	12	21	22	19	19	16
Thailand	45	44	42	39	41	54	50	48	42	44
Turkey	48	52	52	50	52	59	59	59	58	60
UAE	24	26	22	25	18	38	37	38	35	38
Ukraine	54	50	59	59	60	35	29	40	44	45
United Kingdom	15	12	12	12	11	10	13	12	11	10
USA	3	2	2	2	3	3	4	6	4	5
Venezuela	60	60	61	61	63	51	48	54	57	63

Technology					Future readiness					
2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	
59	59	59	56	58	47	46	45	46	49	Argentina
15	12	12	15	15	10	13	8	7	14	Australia
30	27	29	28	28	22	16	19	19	15	Austria
24	29	24	21	24	21	17	15	16	22	Belgium
57	56	55	54	55	43	49	51	49	44	Brazil
43	45	42	38	42	60	59	59	58	57	Bulgaria
14	15	17	14	13	12	12	2	3	8	Canada
31	31	31	34	34	32	32	32	32	33	Chile
39	42	37	39	36	50	48	39	38	34	China Mainland
56	55	56	59	60	35	38	43	44	53	Colombia
48	44	41	43	47	49	47	52	50	56	Croatia
-	-	-	-	54	-	-	-	-	54	Cyprus
28	26	26	26	26	33	33	33	34	37	Czech Republic
12	14	13	12	10	4	4	6	6	1	Denmark
25	20	19	17	19	24	22	26	26	26	Estonia
5	2	7	7	4	11	6	4	5	4	Finland
16	19	23	23	22	25	26	21	20	28	France
22	24	25	25	21	8	8	13	14	18	Germany
50	52	51	52	52	40	42	36	36	47	Greece
3	6	5	2	3	13	27	25	27	17	Hong Kong SAR
33	34	39	37	38	42	36	47	45	55	Hungary
21	21	20	22	20	28	29	17	18	21	Iceland
54	57	58	57	59	55	57	53	54	51	India
55	53	57	58	56	54	53	58	60	62	Indonesia
27	22	27	27	25	15	11	12	12	10	Ireland
23	23	22	24	27	5	9	7	9	11	Israel
47	50	46	44	45	31	31	30	29	30	Italy
19	16	21	19	23	20	19	22	23	25	Japan
46	40	49	45	50	46	35	38	37	48	Jordan
40	39	34	42	35	34	34	35	41	38	Kazakhstan
13	18	16	13	17	19	25	24	25	24	Korea Rep.
26	28	32	33	32	44	40	37	39	41	Latvia
32	32	28	29	29	36	37	34	33	31	Lithuania
7	3	2	11	12	23	21	23	24	23	Luxembourg
9	8	14	16	18	27	23	27	28	27	Malaysia
45	46	47	49	48	38	54	54	56	50	Mexico
-	-	54	55	61	-	-	46	52	60	Mongolia
10	13	15	10	9	3	2	1	2	3	Netherlands
17	11	8	6	11	26	24	16	15	20	New Zealand
6	7	3	3	2	7	10	14	13	12	Norway
52	54	52	53	57	53	55	56	55	58	Peru
38	48	50	50	51	39	41	40	40	43	Philippines
34	37	36	36	39	52	50	49	51	39	Poland
35	33	30	35	37	30	30	31	31	35	Portugal
29	30	38	31	31	17	18	28	21	19	Qatar
53	51	45	46	46	58	56	57	57	59	Romania
49	41	44	47	44	56	52	55	53	52	Russia
-	-	-	-	41	-	-	-	-	32	Saudi Arabia
1	1	1	1	1	6	5	5	4	6	Singapore
36	35	40	41	43	45	43	44	43	46	Slovak Republic
44	43	43	40	40	37	39	41	35	36	Slovenia
51	49	53	51	53	51	51	48	47	42	South Africa
41	36	35	32	33	29	28	29	30	29	Spain
2	4	9	4	5	2	3	9	8	5	Sweden
11	9	11	9	8	9	7	10	10	13	Switzerland
8	10	4	8	7	18	20	20	22	16	Taiwan
37	38	33	30	30	48	45	50	48	45	Thailand
42	47	48	48	49	41	44	42	42	40	Turkey
20	25	10	20	14	14	15	18	17	7	UAE
58	58	60	60	62	57	58	61	61	61	Ukraine
18	17	18	18	16	16	14	11	11	9	United Kingdom
4	5	6	5	6	1	1	3	1	2	USA
60	60	61	61	63	59	60	60	59	63	Venezuela

	Knowledge				Technology				Future readiness			
	Talent	Training & education	Scientific concentration		Regulatory framework	Capital	Technological framework		Adaptive attitudes	Business agility	IT integration	
Argentina	54	61	42		46	59	56		49	36	54	Argentina
Australia	8	51	14		11	16	21		4	42	10	Australia
Austria	12	4	21		25	38	22		25	8	9	Austria
Belgium	17	29	27		16	23	31		21	21	19	Belgium
Brazil	60	48	44		60	56	48		45	46	49	Brazil
Bulgaria	51	39	30		50	46	34		47	61	55	Bulgaria
Canada	9	10	4		21	1	27		13	5	15	Canada
Chile	34	50	59		33	20	46		30	31	40	Chile
China Mainland	23	53	3		32	22	47		32	24	44	China Mainland
Colombia	58	45	58		58	55	55		53	54	45	Colombia
Croatia	59	41	35		52	52	40		43	62	46	Croatia
Cyprus	56	22	51		45	54	54		56	51	47	Cyprus
Czech Republic	26	49	34		43	15	15		42	33	33	Czech Republic
Denmark	6	5	19		8	25	5		1	11	11	Denmark
Estonia	40	2	38		23	18	18		31	19	25	Estonia
Finland	10	8	12		2	10	8		3	17	2	Finland
France	24	35	10		15	26	25		26	44	20	France
Germany	16	15	15		20	19	26		22	18	16	Germany
Greece	47	55	33		49	58	49		41	53	48	Greece
Hong Kong SAR	4	27	7		6	6	9		9	25	21	Hong Kong SAR
Hungary	46	43	46		29	44	45		57	58	38	Hungary
Iceland	38	7	37		22	43	11		16	10	28	Iceland
India	43	57	6		59	28	63		59	29	56	India
Indonesia	48	59	54		61	37	58		63	35	61	Indonesia
Ireland	15	34	31		14	49	13		12	2	24	Ireland
Israel	21	11	2		26	27	28		18	9	7	Israel
Italy	44	46	32		42	53	42		27	30	35	Italy
Japan	41	31	16		37	33	6		14	57	18	Japan
Jordan	55	58	62		53	30	53		55	34	50	Jordan
Kazakhstan	36	21	56		18	51	35		48	27	39	Kazakhstan
Korea Rep.	25	13	9		28	41	2		10	48	23	Korea Rep.
Latvia	29	20	47		34	31	24		46	41	36	Latvia
Lithuania	33	6	28		27	42	17		35	28	29	Lithuania
Luxembourg	31	30	23		10	3	32		33	16	5	Luxembourg
Malaysia	27	3	26		30	9	19		28	12	34	Malaysia
Mexico	53	44	57		39	45	52		40	55	52	Mexico
Mongolia	62	38	60		57	61	59		39	63	62	Mongolia
Netherlands	3	32	18		9	5	14		5	7	3	Netherlands
New Zealand	14	36	20		7	4	20		20	26	17	New Zealand
Norway	20	12	22		3	7	3		8	20	14	Norway
Peru	61	60	63		51	48	61		61	50	59	Peru
Philippines	39	54	53		62	29	50		50	23	57	Philippines
Poland	28	23	40		47	32	39		38	45	41	Poland
Portugal	30	18	36		19	50	43		34	40	32	Portugal
Qatar	19	24	55		31	17	36		15	15	27	Qatar
Romania	45	52	41		41	60	33		60	60	58	Romania
Russia	35	14	25		36	57	37		44	59	43	Russia
Saudi Arabia	22	16	61		48	36	41		29	38	31	Saudi Arabia
Singapore	1	9	8		1	14	1		11	14	1	Singapore
Slovak Republic	50	40	39		55	39	38		52	52	37	Slovak Republic
Slovenia	37	17	24		44	40	44		37	43	30	Slovenia
South Africa	52	37	49		54	35	57		54	37	42	South Africa
Spain	32	42	29		35	34	23		24	47	26	Spain
Sweden	11	1	5		4	13	7		7	13	4	Sweden
Switzerland	2	25	13		13	11	10		23	4	13	Switzerland
Taiwan	18	28	17		24	8	4		19	6	22	Taiwan
Thailand	42	47	43		38	21	30		51	32	53	Thailand
Turkey	49	63	48		40	47	51		36	39	51	Turkey
UAE	5	56	52		5	12	29		17	1	8	UAE
Ukraine	57	26	45		56	62	60		58	56	60	Ukraine
United Kingdom	7	19	11		12	24	16		6	22	6	United Kingdom
USA	13	33	1		17	2	12		2	3	12	USA
Venezuela	63	62	50		63	63	62		62	49	63	Venezuela

FACTOR I

Knowledge



Factor I : Knowledge

1.1 Talent

1.1.1 Educational assessment PISA - Math	PISA survey of 15-year olds	27
1.1.2 International experience	International experience of senior managers is generally significant	27
1.1.3 Foreign highly-skilled personnel	Foreign highly-skilled personnel are attracted to your country's business environment	28
1.1.4 Management of cities	Management of cities supports business development	28
1.1.5 Digital/Technological skills	Digital/Technological skills are readily available	29
1.1.6 Net flow of international students	Tertiary-level international students inbound minus students outbound (per 1000 people)	29

1.2 Training & education

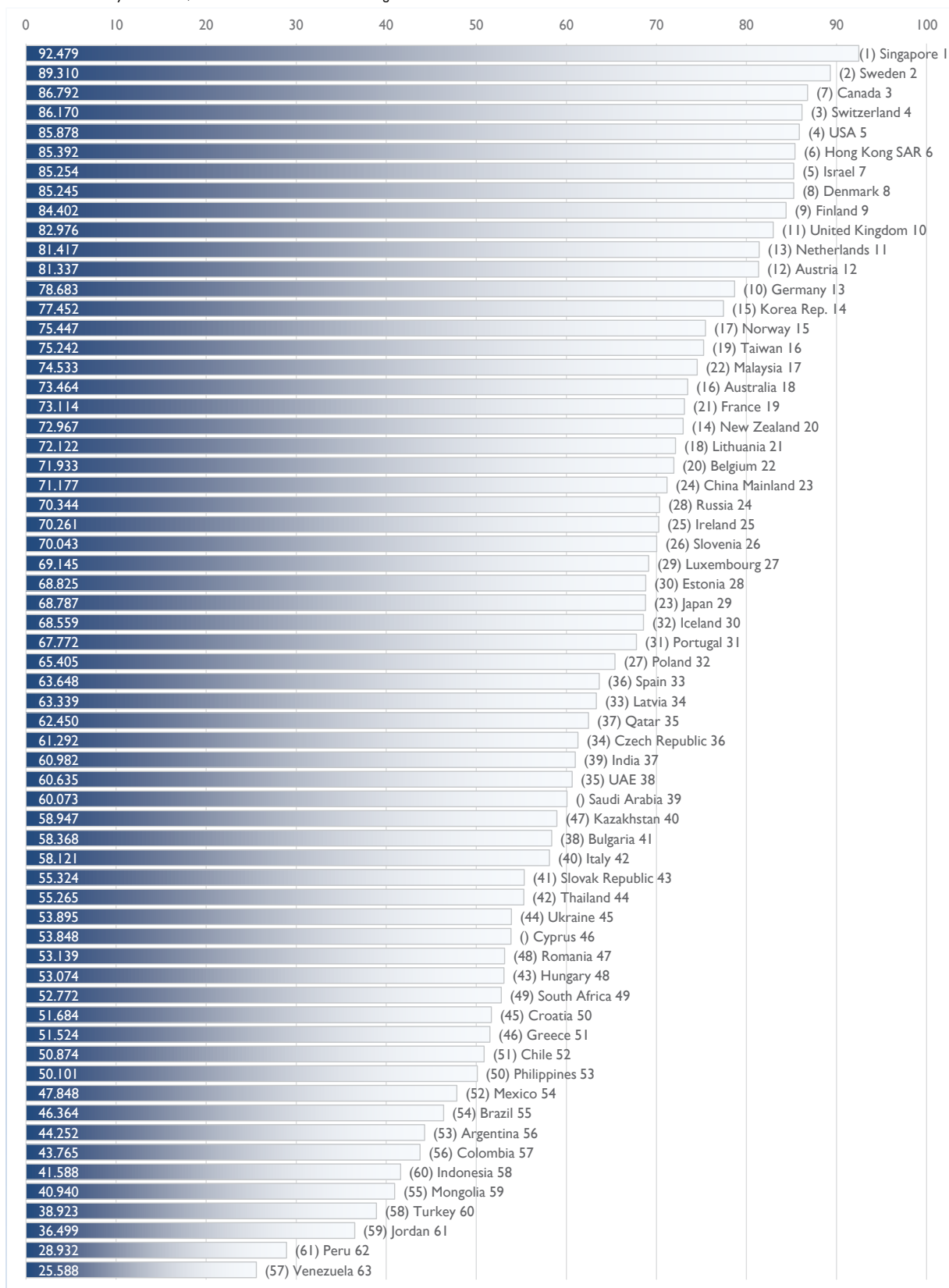
1.2.1 Employee training	Employee training is a high priority in companies	30
1.2.2 Total public expenditure on education	Percentage of GDP	30
1.2.3 Higher education achievement	Percentage of population that has attained at least tertiary education for persons 25-34	31
1.2.4 Pupil-teacher ratio (tertiary education)	Number of pupils per teacher	31
1.2.5 Graduates in Sciences	% of graduates in ICT, Engineering, Math & Natural Sciences	32
1.2.6 Women with degrees	Percentage of female graduates in tertiary education	32

1.3 Scientific concentration

1.3.1 Total expenditure on R&D (%)	Percentage of GDP	33
1.3.2 Total R&D personnel per capita	Full-time work equivalent (FTE) per 1000 people	33
1.3.3 Female researchers	% of total (headcount FT&PT)	34
1.3.4 R&D productivity by publication	No. of scientific articles over R&D expenditure (as % GDP)	34
1.3.5 Scientific and technical employment	% of total employment	35
1.3.6 High-tech patent grants	% of all patents granted by applicant's origin (average 2013-2015)	35

KNOWLEDGE

Know-how necessary to discover, understand and build new technologies



(2016 rankings are in parentheses)

EDUCATIONAL ASSESSMENT PISA - MATH

2015

PISA survey of 15-year olds

Ranking		average
1	SINGAPORE	564
2	HONG KONG SAR	548
3	TAIWAN	542
4	JAPAN	532
5	CHINA MAINLAND	531
6	KOREA REP.	524
7	SWITZERLAND	521
8	ESTONIA	520
9	CANADA	516
10	NETHERLANDS	512
11	DENMARK	511
12	FINLAND	511
13	SLOVENIA	510
14	BELGIUM	507
15	GERMANY	506
16	POLAND	504
17	IRELAND	504
18	NORWAY	502
19	AUSTRIA	497
20	NEW ZEALAND	495
21	RUSSIA	494
22	SWEDEN	494
23	AUSTRALIA	494
24	FRANCE	493
25	UNITED KINGDOM	492
26	CZECH REPUBLIC	492
27	PORTUGAL	492
28	ITALY	490
29	ICELAND	488
30	SPAIN	486
31	LUXEMBOURG	486
32	LATVIA	482
33	LITHUANIA	478
34	HUNGARY	477
35	SLOVAK REPUBLIC	475
36	ISRAEL	470
37	USA	470
38	CROATIA	464
39	KAZAKHSTAN	460
40	GREECE	454
41	MALAYSIA	446
42	ROMANIA	444
43	BULGARIA	441
44	CYPRUS	437
45	UAE	427
46	CHILE	423
47	TURKEY	420
48	THAILAND	415
49	ARGENTINA	409
50	MEXICO	408
51	QATAR	402
52	COLOMBIA	390
53	PERU	387
54	INDONESIA	386
55	JORDAN	380
56	BRAZIL	377
-	INDIA	-
-	MONGOLIA	-
-	PHILIPPINES	-
-	SAUDI ARABIA	-
-	SOUTH AFRICA	-
-	UKRAINE	-
-	VENEZUELA	-

INTERNATIONAL EXPERIENCE

2017

International experience of senior managers is generally

low



significant

Ranking		Survey [0..10]
1	HONG KONG SAR	8.10
2	SWITZERLAND	8.04
3	UAE	7.98
4	NETHERLANDS	7.42
5	LUXEMBOURG	7.32
6	SINGAPORE	7.30
7	QATAR	7.25
8	IRELAND	6.85
9	SWEDEN	6.71
10	BELGIUM	6.66
11	GERMANY	6.62
12	UNITED KINGDOM	6.38
13	DENMARK	6.36
14	SAUDI ARABIA	6.34
15	KAZAKHSTAN	6.23
16	AUSTRIA	6.14
17	CHILE	6.14
18	MALAYSIA	6.13
19	CANADA	6.09
20	FINLAND	6.08
21	ISRAEL	6.00
22	THAILAND	5.99
23	PHILIPPINES	5.84
24	ARGENTINA	5.74
25	NEW ZEALAND	5.57
26	CYPRUS	5.56
27	USA	5.54
28	POLAND	5.51
29	INDONESIA	5.49
30	MEXICO	5.46
31	TAIWAN	5.36
32	LATVIA	5.28
33	LITHUANIA	5.24
34	JORDAN	5.19
35	GREECE	5.13
36	PERU	5.08
37	AUSTRALIA	5.08
38	ROMANIA	5.06
39	CZECH REPUBLIC	5.02
40	HUNGARY	5.02
41	INDIA	5.01
42	TURKEY	4.98
43	NORWAY	4.92
43	SLOVAK REPUBLIC	4.92
45	SLOVENIA	4.86
46	SPAIN	4.82
47	ITALY	4.72
48	SOUTH AFRICA	4.67
49	RUSSIA	4.66
50	ESTONIA	4.66
51	KOREA REP.	4.65
52	CHINA MAINLAND	4.64
53	BRAZIL	4.64
54	FRANCE	4.50
55	ICELAND	4.49
56	PORTUGAL	4.34
57	COLOMBIA	4.19
58	BULGARIA	4.11
59	VENEZUELA	3.92
60	UKRAINE	3.67
61	MONGOLIA	3.46
62	CROATIA	3.23
63	JAPAN	3.10

FOREIGN HIGHLY-SKILLED PERSONNEL

2017

Foreign highly-skilled personnel

are not attracted to your country's business environment



are attracted to your country's business environment

Ranking		Survey [0..10]
1	SWITZERLAND	8.84
2	UAE	8.42
3	SINGAPORE	8.22
4	USA	8.16
5	HONG KONG SAR	7.80
6	LUXEMBOURG	7.80
7	NETHERLANDS	7.63
8	AUSTRALIA	7.57
9	CHILE	7.56
10	IRELAND	7.53
11	CANADA	7.49
12	UNITED KINGDOM	7.40
13	QATAR	7.30
14	NEW ZEALAND	7.25
15	SAUDI ARABIA	6.60
16	GERMANY	6.53
17	KAZAKHSTAN	6.51
18	INDONESIA	6.40
19	NORWAY	6.07
20	PERU	6.00
21	CYPRUS	5.94
22	SPAIN	5.94
23	MALAYSIA	5.93
24	THAILAND	5.83
25	DENMARK	5.80
26	AUSTRIA	5.78
27	SWEDEN	5.78
28	BELGIUM	5.76
29	MEXICO	5.56
30	PHILIPPINES	5.45
31	ISRAEL	5.33
32	LATVIA	5.18
33	FRANCE	4.98
34	CHINA MAINLAND	4.91
35	PORTUGAL	4.80
36	INDIA	4.79
37	COLOMBIA	4.64
38	JORDAN	4.62
39	CZECH REPUBLIC	4.60
40	RUSSIA	4.47
41	POLAND	4.42
42	ICELAND	4.36
43	FINLAND	4.35
44	TAIWAN	4.33
45	ESTONIA	4.26
46	ARGENTINA	4.21
47	ROMANIA	4.19
48	KOREA REP.	4.19
49	LITHUANIA	4.07
50	SLOVAK REPUBLIC	3.90
51	JAPAN	3.83
52	SOUTH AFRICA	3.72
53	ITALY	3.56
54	BRAZIL	3.54
55	BULGARIA	3.49
56	HUNGARY	3.35
57	TURKEY	3.33
58	MONGOLIA	3.27
59	SLOVENIA	2.92
60	UKRAINE	2.45
61	GREECE	2.35
62	CROATIA	1.80
63	VENEZUELA	0.88

MANAGEMENT OF CITIES

2017

Management of cities

does not support business development



supports business development

Ranking		Survey [0..10]
1	SINGAPORE	9.01
2	DENMARK	8.70
3	UAE	8.67
4	NETHERLANDS	8.59
5	SWITZERLAND	8.56
6	HONG KONG SAR	8.54
7	NORWAY	8.52
8	FINLAND	8.47
9	JAPAN	8.12
10	LUXEMBOURG	8.10
11	GERMANY	7.95
12	SWEDEN	7.84
13	CANADA	7.67
14	UNITED KINGDOM	7.64
15	FRANCE	7.55
16	KOREA REP.	7.52
17	QATAR	7.52
18	AUSTRIA	7.49
19	ICELAND	7.43
20	TAIWAN	7.22
21	MALAYSIA	7.19
22	USA	7.15
23	CHINA MAINLAND	7.08
24	PORTUGAL	7.06
25	AUSTRALIA	6.95
26	CYPRUS	6.94
27	SPAIN	6.94
28	ISRAEL	6.93
29	LATVIA	6.87
30	SAUDI ARABIA	6.82
31	LITHUANIA	6.66
32	POLAND	6.63
33	KAZAKHSTAN	6.61
34	CZECH REPUBLIC	6.60
35	IRELAND	6.55
36	BELGIUM	6.44
37	SLOVAK REPUBLIC	6.40
38	THAILAND	6.40
39	CHILE	6.20
40	ESTONIA	6.20
41	TURKEY	6.14
42	SLOVENIA	6.09
43	BULGARIA	5.78
44	ITALY	5.70
45	INDONESIA	5.69
46	NEW ZEALAND	5.65
47	HUNGARY	5.58
48	RUSSIA	5.51
49	SOUTH AFRICA	5.21
50	PHILIPPINES	5.17
51	ARGENTINA	5.17
52	JORDAN	5.15
53	COLOMBIA	5.15
54	MEXICO	5.08
55	GREECE	4.98
56	ROMANIA	4.43
57	INDIA	4.40
58	CROATIA	4.40
59	UKRAINE	4.35
60	BRAZIL	4.16
61	MONGOLIA	3.61
62	PERU	3.52
63	VENEZUELA	1.85

DIGITAL/TECHNOLOGICAL SKILLS

2017

Digital/Technological skills

are not readily available



are readily available

Ranking		Survey [0..10]
1	ISRAEL	8.88
2	LITHUANIA	8.81
3	SWEDEN	8.63
4	FINLAND	8.55
5	ICELAND	8.47
6	NETHERLANDS	8.40
7	UAE	8.33
8	USA	8.25
9	NORWAY	8.23
10	DENMARK	8.19
11	SWITZERLAND	7.94
12	SINGAPORE	7.90
13	HONG KONG SAR	7.84
14	PORTUGAL	7.80
15	RUSSIA	7.75
16	BULGARIA	7.67
17	QATAR	7.66
18	LATVIA	7.64
19	LUXEMBOURG	7.62
20	GREECE	7.59
21	CANADA	7.58
22	KOREA REP.	7.52
23	MALAYSIA	7.50
24	SLOVENIA	7.50
25	IRELAND	7.45
26	ROMANIA	7.45
27	CHINA MAINLAND	7.41
28	INDIA	7.27
29	UNITED KINGDOM	7.24
30	TAIWAN	7.22
31	FRANCE	7.03
32	BELGIUM	7.03
33	CZECH REPUBLIC	7.02
34	POLAND	7.02
35	CHILE	7.00
36	AUSTRIA	6.99
37	KAZAKHSTAN	6.95
38	CYPRUS	6.94
39	TURKEY	6.88
40	PHILIPPINES	6.83
41	SAUDI ARABIA	6.81
42	SPAIN	6.73
43	GERMANY	6.65
44	JORDAN	6.60
45	AUSTRALIA	6.52
46	ESTONIA	6.43
47	UKRAINE	6.28
48	INDONESIA	6.18
49	SLOVAK REPUBLIC	6.13
50	THAILAND	6.12
51	CROATIA	6.00
52	ITALY	5.97
53	NEW ZEALAND	5.92
54	SOUTH AFRICA	5.90
55	MEXICO	5.79
56	ARGENTINA	5.78
57	MONGOLIA	5.77
58	BRAZIL	5.44
59	JAPAN	5.43
60	COLOMBIA	5.41
61	HUNGARY	5.30
62	PERU	4.89
63	VENEZUELA	3.96

NET FLOW OF INTERNATIONAL STUDENTS

2014

Tertiary-level international students inbound minus students outbound (per 1000 people)

Ranking		number
1	AUSTRALIA	11
2	NEW ZEALAND	10
3	UNITED KINGDOM	6
4	UAE	6
5	AUSTRIA	6
6	SINGAPORE	5
7	SWITZERLAND	5
8	DENMARK	4
9	BELGIUM	4
10	NETHERLANDS	3
11	CZECH REPUBLIC	3
12	CANADA	3
13	FINLAND	3
14	TAIWAN	3
15	QATAR	2
16	USA	2
17	FRANCE	2
18	JORDAN	2
19	HUNGARY	1
20	GERMANY	1
21	RUSSIA	1
22	SWEDEN	1
23	JAPAN	1
24	ARGENTINA	1
25	SOUTH AFRICA	1
26	SPAIN	1
27	ITALY	1
28	UKRAINE	0
29	PORTUGAL	0
30	POLAND	0
31	TURKEY	0
32	COLOMBIA	0
33	SLOVENIA	0
34	BRAZIL	0
35	INDONESIA	0
36	INDIA	0
37	MEXICO	0
38	THAILAND	0
39	IRELAND	0
40	CHILE	0
41	SAUDI ARABIA	0
42	ISRAEL	0
43	CHINA MAINLAND	0
44	ROMANIA	0
45	HONG KONG SAR	-1
46	GREECE	-1
47	LATVIA	-1
48	MALAYSIA	-1
49	KOREA REP.	-1
50	ESTONIA	-1
51	NORWAY	-2
52	BULGARIA	-2
53	CROATIA	-2
54	LITHUANIA	-3
55	MONGOLIA	-3
56	KAZAKHSTAN	-3
57	SLOVAK REPUBLIC	-4
58	ICELAND	-5
59	LUXEMBOURG	-12
60	CYPRUS	-13
-	PERU	-
-	PHILIPPINES	-
-	VENEZUELA	-

EMPLOYEE TRAINING

2017

Employee training

is not a high priority in companies



is a high priority in companies

Ranking		Survey [0..10]
1	AUSTRIA	7.69
2	DENMARK	7.59
3	SWITZERLAND	7.46
4	GERMANY	7.44
5	JAPAN	7.10
6	NETHERLANDS	7.04
7	LUXEMBOURG	7.02
8	ESTONIA	6.92
9	NORWAY	6.87
10	TAIWAN	6.80
11	UAE	6.77
12	SWEDEN	6.75
13	MALAYSIA	6.71
14	KAZAKHSTAN	6.63
15	FINLAND	6.63
16	HONG KONG SAR	6.52
17	IRELAND	6.43
18	THAILAND	6.40
19	INDONESIA	6.24
20	CANADA	6.23
21	MONGOLIA	6.17
22	SLOVENIA	6.16
23	CHINA MAINLAND	6.05
24	QATAR	6.05
25	SINGAPORE	6.00
26	CZECH REPUBLIC	5.96
27	LITHUANIA	5.93
28	POLAND	5.93
29	PHILIPPINES	5.86
30	BELGIUM	5.85
31	SOUTH AFRICA	5.79
32	ICELAND	5.62
33	ISRAEL	5.59
34	COLOMBIA	5.53
35	UNITED KINGDOM	5.53
36	MEXICO	5.46
37	LATVIA	5.44
38	FRANCE	5.39
39	NEW ZEALAND	5.37
40	CHILE	5.37
41	USA	5.35
42	BULGARIA	5.33
43	AUSTRALIA	5.27
44	ROMANIA	5.23
45	RUSSIA	5.21
46	KOREA REP.	5.19
47	SAUDI ARABIA	5.17
48	SLOVAK REPUBLIC	5.10
49	BRAZIL	5.04
50	UKRAINE	5.01
51	INDIA	4.98
52	ITALY	4.88
53	TURKEY	4.88
54	PORTUGAL	4.85
55	JORDAN	4.84
56	HUNGARY	4.60
57	ARGENTINA	4.47
58	SPAIN	4.46
59	CYPRUS	4.33
60	VENEZUELA	4.32
61	PERU	4.22
62	GREECE	3.97
63	CROATIA	3.66

TOTAL PUBLIC EXPENDITURE ON EDUCATION

2015

Percentage of GDP

Ranking		%
1	SAUDI ARABIA	8.8
2	ICELAND	7.6
3	SWEDEN	7.1
4	SOUTH AFRICA	7.1
5	DENMARK	7.0
6	FINLAND	6.8
7	ISRAEL	6.8
8	BRAZIL	6.6
9	BELGIUM	6.5
10	PORTUGAL	6.2
11	CYPRUS	6.1
12	USA	6.1
13	UKRAINE	5.7
14	UNITED KINGDOM	5.6
15	ESTONIA	5.6
16	FRANCE	5.5
17	NORWAY	5.5
18	NETHERLANDS	5.4
19	CANADA	5.4
20	LITHUANIA	5.4
21	AUSTRIA	5.4
22	NEW ZEALAND	5.4
23	LATVIA	5.3
24	POLAND	5.3
25	AUSTRALIA	5.2
26	KOREA REP.	5.1
27	SWITZERLAND	5.0
28	SLOVENIA	4.9
29	MALAYSIA	4.9
30	CHILE	4.7
31	COLOMBIA	4.5
32	CROATIA	4.4
33	HUNGARY	4.4
34	GREECE	4.3
35	MONGOLIA	4.3
36	BULGARIA	4.2
37	GERMANY	4.2
38	SLOVAK REPUBLIC	4.1
39	SPAIN	4.1
40	LUXEMBOURG	4.0
41	ITALY	4.0
42	JORDAN	3.9
43	THAILAND	3.9
44	CHINA MAINLAND	3.8
45	RUSSIA	3.8
46	TAIWAN	3.8
47	KAZAKHSTAN	3.7
48	PERU	3.7
49	MEXICO	3.7
50	CZECH REPUBLIC	3.6
51	INDONESIA	3.5
52	IRELAND	3.5
53	TURKEY	3.5
54	QATAR	3.3
55	HONG KONG SAR	3.3
56	JAPAN	3.3
57	ROMANIA	3.1
58	INDIA	3.0
59	SINGAPORE	2.9
60	PHILIPPINES	2.7
61	ARGENTINA	1.7
62	UAE	1.3
-	VENEZUELA	-

HIGHER EDUCATION

ACHIEVEMENT

2015

Percentage of population that has attained at least tertiary education for persons 25-34

Ranking		%	
1	SINGAPORE	76.6	
2	KOREA REP.	69.0	
3	TAIWAN	67.0	
4	KAZAKHSTAN	60.0	2014
5	JAPAN	59.6	
6	CANADA	59.2	
7	RUSSIA	58.2	2013
8	LITHUANIA	54.8	
9	CYPRUS	54.7	
10	HONG KONG SAR	52.3	
11	IRELAND	52.0	
12	LUXEMBOURG	49.9	
13	UNITED KINGDOM	49.2	
14	SWITZERLAND	48.6	
15	AUSTRALIA	48.5	
16	NORWAY	48.1	
17	USA	46.5	
18	SWEDEN	46.4	
19	ISRAEL	45.9	
20	NETHERLANDS	45.1	
21	FRANCE	44.7	2014
22	DENMARK	44.5	
23	POLAND	43.2	
24	BELGIUM	43.1	
25	SPAIN	41.0	
26	SLOVENIA	40.8	
27	FINLAND	40.5	
28	ESTONIA	40.5	
29	GREECE	40.1	
30	ICELAND	40.1	
31	LATVIA	39.9	
32	NEW ZEALAND	39.1	
33	AUSTRIA	38.6	
34	CHINA MAINLAND	37.5	2014
35	MALAYSIA	35.5	
36	PORTUGAL	33.1	
37	THAILAND	32.7	2014
38	HUNGARY	32.1	
39	MONGOLIA	32.0	2013
40	BULGARIA	31.8	
41	SLOVAK REPUBLIC	31.3	
42	CZECH REPUBLIC	31.0	
43	CROATIA	30.8	
44	GERMANY	29.6	
45	TURKEY	27.5	
46	COLOMBIA	27.4	
47	UAE	27.4	2013
48	CHILE	27.3	2013
49	SAUDI ARABIA	25.8	2014
50	ROMANIA	25.5	
51	ITALY	25.1	
52	PHILIPPINES	25.1	2013
53	INDIA	22.6	2013
54	MEXICO	21.0	
55	QATAR	19.3	
56	ARGENTINA	17.3	2013
57	BRAZIL	16.3	2014
58	SOUTH AFRICA	14.2	2014
59	INDONESIA	10.6	2013
-	JORDAN	-	
-	PERU	-	
-	UKRAINE	-	
-	VENEZUELA	-	

PUPIL-TEACHER RATIO (TERTIARY

EDUCATION)

2014

Number of pupils per teacher

Ranking		number	
1	LUXEMBOURG	3.8	2012
2	JAPAN	7.1	
3	AUSTRIA	7.2	
4	GERMANY	7.6	
5	ICELAND	8.7	2012
6	SWITZERLAND	8.9	
7	MEXICO	9.8	
8	CROATIA	9.9	
9	NORWAY	10.3	
10	PORTUGAL	10.5	2013
11	LITHUANIA	10.5	
12	DENMARK	10.7	
13	MALAYSIA	10.7	
14	UKRAINE	11.0	
15	RUSSIA	11.0	2013
16	BULGARIA	12.3	
17	USA	12.5	
18	CYPRUS	12.7	
19	QATAR	12.7	
20	SPAIN	12.9	
21	LATVIA	13.0	
22	NETHERLANDS	13.4	2012
23	SWEDEN	13.4	2013
24	SINGAPORE	13.5	2013
25	SLOVENIA	13.6	2013
26	KAZAKHSTAN	14.7	2013
27	KOREA REP.	14.7	2013
28	CHILE	15.0	2013
29	HUNGARY	15.1	
30	IRELAND	15.4	2010
31	SLOVAK REPUBLIC	15.5	
32	COLOMBIA	15.5	
33	UNITED KINGDOM	15.5	
34	BELGIUM	17.3	
35	NEW ZEALAND	17.4	
36	UAE	17.5	
37	POLAND	18.5	2013
38	ITALY	18.9	
39	BRAZIL	19.0	
40	FINLAND	19.3	
41	CHINA MAINLAND	19.5	2011
42	MONGOLIA	19.7	
43	SAUDI ARABIA	20.3	
44	ROMANIA	20.5	
45	FRANCE	21.3	2013
46	TAIWAN	22.6	
47	THAILAND	23.5	
48	INDIA	24.5	
49	JORDAN	24.6	2010
50	INDONESIA	25.0	
51	CZECH REPUBLIC	26.0	2013
52	AUSTRALIA	27.5	2013
53	TURKEY	38.4	
54	GREECE	44.5	
-	ARGENTINA	-	
-	CANADA	-	
-	ESTONIA	-	
-	HONG KONG SAR	-	
-	ISRAEL	-	
-	PERU	-	
-	PHILIPPINES	-	
-	SOUTH AFRICA	-	
-	VENEZUELA	-	

GRADUATES IN SCIENCES

2015

% of graduates in ICT, Engineering, Math & Natural Sciences

Ranking		%	
1	SAUDI ARABIA	38.30	2013
2	MALAYSIA	37.20	
3	GERMANY	34.80	2014
4	QATAR	33.57	2012
5	KOREA REP.	31.00	2014
6	AUSTRIA	30.20	2014
7	GREECE	29.60	2014
8	TAIWAN	29.50	
9	INDIA	29.20	2013
10	MEXICO	28.10	2014
11	ROMANIA	27.99	2014
12	FINLAND	27.70	2014
13	THAILAND	26.77	
14	UKRAINE	26.73	
15	PORTUGAL	26.50	2014
16	JORDAN	26.36	
17	SLOVENIA	26.00	2014
18	RUSSIA	25.80	2014
18	UNITED KINGDOM	25.80	2014
20	SWEDEN	25.50	2014
21	FRANCE	24.70	2014
22	ESTONIA	24.20	2014
23	SPAIN	24.00	2014
24	CROATIA	23.71	2014
25	CZECH REPUBLIC	23.60	2014
25	IRELAND	23.60	2014
27	ITALY	23.50	2014
28	COLOMBIA	22.70	2014
29	SWITZERLAND	22.50	2014
30	LITHUANIA	22.40	2014
31	UAE	21.82	
32	JAPAN	21.10	2014
33	BULGARIA	21.05	2014
34	CANADA	20.70	2013
35	DENMARK	20.60	2014
36	INDONESIA	20.50	2014
37	LATVIA	20.30	2014
37	SLOVAK REPUBLIC	20.30	2014
39	CHILE	20.11	
40	TURKEY	20.10	2014
41	NEW ZEALAND	19.90	2014
42	NORWAY	19.60	2014
43	HUNGARY	19.30	2014
44	POLAND	19.10	2014
45	SOUTH AFRICA	19.00	2013
46	MONGOLIA	18.88	2011
47	BELGIUM	17.60	2013
48	CYPRUS	17.02	2014
49	ICELAND	16.80	2013
50	AUSTRALIA	16.70	2014
51	BRAZIL	16.15	2014
52	USA	15.30	2014
53	NETHERLANDS	14.70	2014
54	ARGENTINA	14.10	2013
55	LUXEMBOURG	13.90	2014
-	CHINA MAINLAND	-	
-	HONG KONG SAR	-	
-	ISRAEL	-	
-	KAZAKHSTAN	-	
-	PERU	-	
-	PHILIPPINES	-	
-	SINGAPORE	-	
-	VENEZUELA	-	

WOMEN WITH DEGREES

2014

Percentage of female graduates in tertiary education

Ranking		%	
1	ESTONIA	66.4	
2	POLAND	66.0	
3	ARGENTINA	65.4	2013
4	LATVIA	65.2	
5	ICELAND	64.5	2012
6	MONGOLIA	64.0	
7	SLOVAK REPUBLIC	63.6	2013
8	LITHUANIA	63.3	2013
9	CYPRUS	62.9	
10	QATAR	62.8	
11	HUNGARY	62.6	
12	ITALY	62.3	2012
13	SWEDEN	61.7	2013
14	BRAZIL	60.6	
15	RUSSIA	60.6	2012
16	SOUTH AFRICA	60.5	2013
17	FINLAND	60.4	
18	SLOVENIA	60.4	
19	CZECH REPUBLIC	60.1	
20	BULGARIA	60.0	
21	CROATIA	59.8	
22	NEW ZEALAND	59.4	2012
23	PORTUGAL	59.3	
24	BELGIUM	59.1	2013
25	GREECE	59.1	2012
26	MALAYSIA	59.1	
27	ROMANIA	58.7	
28	NORWAY	58.6	
29	USA	58.4	
30	DENMARK	58.3	
31	AUSTRALIA	58.0	
32	PHILIPPINES	57.5	
33	UNITED KINGDOM	57.1	
34	ISRAEL	56.7	
35	NETHERLANDS	56.5	2012
36	SPAIN	56.1	
37	FRANCE	55.9	
38	KAZAKHSTAN	55.8	
39	CHILE	55.7	
40	COLOMBIA	55.5	
41	AUSTRIA	55.5	
42	LUXEMBOURG	54.9	
43	IRELAND	54.5	2012
44	THAILAND	54.4	
45	UKRAINE	54.3	
46	MEXICO	53.5	2012
47	INDONESIA	52.1	
48	UAE	51.5	
49	CHINA MAINLAND	51.1	
50	KOREA REP.	50.5	2013
51	GERMANY	50.5	
52	TAIWAN	50.3	
53	SAUDI ARABIA	49.5	
54	TURKEY	49.2	
55	INDIA	49.1	2013
56	JAPAN	48.9	
57	SWITZERLAND	48.3	
58	JORDAN	46.8	2012
-	CANADA	-	
-	HONG KONG SAR	-	
-	PERU	-	
-	SINGAPORE	-	
-	VENEZUELA	-	

TOTAL EXPENDITURE ON R&D (%)

2015

Percentage of GDP

Ranking		%
1	ISRAEL	4.25
2	KOREA REP.	4.22
3	JAPAN	3.29
4	SWEDEN	3.26
5	AUSTRIA	3.07
6	TAIWAN	3.05
7	SWITZERLAND	2.97
8	DENMARK	2.96
9	FINLAND	2.90
10	GERMANY	2.87
11	USA	2.79
12	BELGIUM	2.45
13	SINGAPORE	2.34
14	FRANCE	2.23
15	SLOVENIA	2.21
16	ICELAND	2.19
17	AUSTRALIA	2.15
18	CHINA MAINLAND	2.07
19	NETHERLANDS	2.01
20	CZECH REPUBLIC	1.95
21	NORWAY	1.93
22	UNITED KINGDOM	1.70
23	BRAZIL	1.61
24	CANADA	1.60
25	IRELAND	1.51
26	ESTONIA	1.49
27	HUNGARY	1.39
28	ITALY	1.33
29	MALAYSIA	1.30
30	PORTUGAL	1.28
31	LUXEMBOURG	1.23
32	SPAIN	1.22
33	NEW ZEALAND	1.18
34	SLOVAK REPUBLIC	1.18
35	RUSSIA	1.13
36	LITHUANIA	1.04
37	POLAND	1.01
38	BULGARIA	0.96
39	GREECE	0.96
40	INDIA	0.90
41	UAE	0.90
42	TURKEY	0.86
43	CROATIA	0.85
44	HONG KONG SAR	0.76
45	SOUTH AFRICA	0.73
46	UKRAINE	0.65
47	THAILAND	0.62
48	LATVIA	0.62
49	ARGENTINA	0.59
50	MEXICO	0.55
51	QATAR	0.51
52	ROMANIA	0.49
53	CYPRUS	0.47
54	CHILE	0.38
55	COLOMBIA	0.24
56	INDONESIA	0.20
57	KAZAKHSTAN	0.17
58	MONGOLIA	0.15
59	PHILIPPINES	0.14
-	JORDAN	-
-	PERU	-
-	SAUDI ARABIA	-
-	VENEZUELA	-

TOTAL R&D PERSONNEL PER
CAPITA

2015

Full-time work equivalent (FTE) per 1000 people

Ranking		FTE
1	DENMARK	10.52
2	TAIWAN	10.47
3	LUXEMBOURG	9.93
4	ISRAEL	9.69
5	SWITZERLAND	9.49
6	FINLAND	9.18
7	ICELAND	8.85
8	KOREA REP.	8.66
9	SWEDEN	8.60
10	SINGAPORE	8.22
11	NORWAY	8.19
12	AUSTRIA	8.03
13	NETHERLANDS	7.58
14	GERMANY	7.55
15	LITHUANIA	7.48
16	BELGIUM	6.91
17	JAPAN	6.90
18	SLOVENIA	6.90
19	CANADA	6.46
20	UNITED KINGDOM	6.44
21	IRELAND	6.35
22	FRANCE	6.31
23	CZECH REPUBLIC	6.30
24	RUSSIA	5.70
25	NEW ZEALAND	5.59
26	PORTUGAL	4.69
27	GREECE	4.65
28	SPAIN	4.33
29	ESTONIA	4.30
30	ITALY	4.08
31	HONG KONG SAR	3.86
32	HUNGARY	3.74
33	SLOVAK REPUBLIC	3.24
34	BULGARIA	3.14
35	POLAND	2.84
36	LATVIA	2.80
37	CHINA MAINLAND	2.73
38	MALAYSIA	2.64
39	UKRAINE	2.37
40	CROATIA	2.16
41	UAE	1.97
42	ARGENTINA	1.80
43	ROMANIA	1.58
44	CYPRUS	1.54
45	TURKEY	1.49
46	KAZAKHSTAN	1.40
47	THAILAND	1.38
48	MONGOLIA	1.35
49	QATAR	1.24
50	INDONESIA	0.98
51	BRAZIL	0.89
52	CHILE	0.85
53	SOUTH AFRICA	0.71
54	MEXICO	0.50
55	PHILIPPINES	0.37
56	COLOMBIA	0.24
-	AUSTRALIA	-
-	INDIA	-
-	JORDAN	-
-	PERU	-
-	SAUDI ARABIA	-
-	USA	-
-	VENEZUELA	-

FEMALE RESEARCHERS

2014

% of total (headcount FT&PT)

Ranking		%	
1	VENEZUELA	56.29	2012
2	THAILAND	53.28	
3	ARGENTINA	52.96	
4	LATVIA	51.97	2013
5	KAZAKHSTAN	51.46	2013
6	LITHUANIA	51.22	2013
7	BULGARIA	49.70	2013
8	PHILIPPINES	49.46	2013
9	MONGOLIA	48.92	
10	MALAYSIA	48.78	
11	CROATIA	47.75	2013
12	ROMANIA	46.01	
13	UKRAINE	45.81	
14	PORTUGAL	45.42	2013
15	ICELAND	44.42	2013
16	ESTONIA	44.42	2013
17	SOUTH AFRICA	43.72	2012
18	SLOVAK REPUBLIC	42.49	
19	RUSSIA	40.52	
20	GREECE	39.38	2013
21	SPAIN	39.34	2013
22	CYPRUS	38.30	2013
23	UNITED KINGDOM	38.10	2013
24	COLOMBIA	37.82	2013
25	NORWAY	37.43	
26	POLAND	37.23	
27	TURKEY	36.89	
28	SLOVENIA	36.09	
29	ITALY	35.70	2013
30	DENMARK	34.52	2013
31	BELGIUM	33.40	2013
32	SWEDEN	33.27	2013
33	SWITZERLAND	32.41	2012
34	IRELAND	32.33	2013
35	FINLAND	32.10	
36	CHILE	31.54	
37	HUNGARY	30.36	
38	SINGAPORE	30.08	
39	AUSTRIA	29.59	2013
40	GERMANY	27.95	2013
41	LUXEMBOURG	27.28	2013
42	CZECH REPUBLIC	27.19	
43	FRANCE	25.46	2013
44	NETHERLANDS	23.61	2013
45	TAIWAN	22.12	
46	QATAR	21.86	2012
47	KOREA REP.	18.49	
48	JAPAN	14.70	
49	SAUDI ARABIA	1.42	2009
-	AUSTRALIA	-	
-	BRAZIL	-	
-	CANADA	-	
-	CHINA MAINLAND	-	
-	HONG KONG SAR	-	
-	INDIA	-	
-	INDONESIA	-	
-	ISRAEL	-	
-	JORDAN	-	
-	MEXICO	-	
-	NEW ZEALAND	-	
-	PERU	-	
-	UAE	-	
-	USA	-	

R&D PRODUCTIVITY BY PUBLICATION

2013

No. of scientific articles over R&D expenditure (as % GDP)

Ranking		number	
1	CHINA MAINLAND	201,705	
2	USA	150,475	
3	INDIA	96,510	2012
4	UNITED KINGDOM	58,638	
5	ITALY	50,708	
6	SPAIN	42,046	
7	SAUDI ARABIA	39,453	2009
8	TURKEY	37,157	
9	GERMANY	35,828	
10	INDONESIA	34,567	
11	CANADA	34,302	
12	RUSSIA	33,664	
13	POLAND	33,019	
14	FRANCE	32,408	
15	JAPAN	31,185	
16	BRAZIL	30,179	
17	ROMANIA	28,872	
18	MEXICO	26,044	
19	AUSTRALIA	22,276	
20	HONG KONG SAR	20,016	
21	THAILAND	19,552	
22	COLOMBIA	17,454	
23	MALAYSIA	17,007	
24	NETHERLANDS	15,575	
25	KOREA REP.	14,184	
26	GREECE	14,015	
27	SOUTH AFRICA	13,331	
28	CHILE	13,269	
29	ARGENTINA	12,990	
30	TAIWAN	11,426	
31	PORTUGAL	10,220	
32	UKRAINE	9,475	
33	CZECH REPUBLIC	7,379	
34	SWITZERLAND	6,945	2012
35	BELGIUM	6,776	
36	PHILIPPINES	6,642	
37	NEW ZEALAND	6,143	
38	NORWAY	5,963	
39	SWEDEN	5,856	
40	SLOVAK REPUBLIC	5,743	
41	CROATIA	5,344	
42	SINGAPORE	5,333	
43	KAZAKHSTAN	5,131	
44	HUNGARY	4,472	
45	IRELAND	4,403	
46	BULGARIA	4,217	
47	DENMARK	4,202	
48	AUSTRIA	4,054	
49	UAE	3,171	2012
50	FINLAND	3,090	
51	ISRAEL	2,726	
52	LITHUANIA	2,299	
53	CYPRUS	1,921	
54	JORDAN	1,491	2010
55	LATVIA	1,381	
56	SLOVENIA	1,350	
57	QATAR	1,287	2012
58	ESTONIA	826	
59	MONGOLIA	705	
60	VENEZUELA	698	2009
61	LUXEMBOURG	563	
62	ICELAND	327	
-	PERU	-	

SCIENTIFIC AND TECHNICAL EMPLOYMENT

2014

% of total employment

Ranking		%
1	LUXEMBOURG	13.39
2	NEW ZEALAND	11.54
3	FRANCE	11.14
4	HONG KONG SAR	8.91
5	SWEDEN	8.36
6	SWITZERLAND	7.87
7	NETHERLANDS	7.81
8	UNITED KINGDOM	7.72
9	AUSTRALIA	7.69
10	CANADA	7.49
11	ISRAEL	7.09
12	CYPRUS	6.89
13	FINLAND	6.75
14	IRELAND	5.88
15	NORWAY	5.86
16	GREECE	5.77
17	ITALY	5.76
18	AUSTRIA	5.73
19	USA	5.71
20	DENMARK	5.24
21	ICELAND	5.23
22	BELGIUM	5.09
23	GERMANY	5.07
24	SLOVENIA	5.02
25	SPAIN	4.69
26	CZECH REPUBLIC	4.46
27	CROATIA	4.41
28	ESTONIA	4.16
29	LATVIA	4.07
30	KOREA REP.	4.00
31	PORTUGAL	4.00
32	LITHUANIA	3.71
33	HUNGARY	3.65
34	SLOVAK REPUBLIC	3.42
35	JAPAN	3.33
36	POLAND	3.30
37	BULGARIA	3.29
38	TAIWAN	3.20
39	UKRAINE	2.73
40	TURKEY	2.64
41	MALAYSIA	2.40
42	QATAR	1.97
43	ROMANIA	1.95
44	KAZAKHSTAN	1.90
45	JORDAN	1.90
46	MONGOLIA	1.25
47	THAILAND	0.83
48	PHILIPPINES	0.60
49	CHINA MAINLAND	0.53
-	ARGENTINA	-
-	BRAZIL	-
-	CHILE	-
-	COLOMBIA	-
-	INDIA	-
-	INDONESIA	-
-	MEXICO	-
-	PERU	-
-	RUSSIA	-
-	SAUDI ARABIA	-
-	SINGAPORE	-
-	SOUTH AFRICA	-
-	UAE	-
-	VENEZUELA	-

HIGH-TECH PATENT GRANTS

2015

% of all patents granted by applicant's origin (average 2013-2015)

Ranking		%
1	HONG KONG SAR	57.38
2	SINGAPORE	56.60
3	JAPAN	49.54
4	QATAR	49.40
5	KOREA REP.	46.52
6	CANADA	45.74
7	USA	45.19
8	SLOVENIA	42.33
9	FINLAND	41.93
10	ISRAEL	41.34
11	INDIA	41.31
12	BULGARIA	40.98
13	SWEDEN	40.20
14	TAIWAN	36.31
15	CROATIA	34.94
16	MALAYSIA	34.76
17	NETHERLANDS	33.39
18	CHINA MAINLAND	32.21
19	UNITED KINGDOM	29.57
20	FRANCE	29.01
21	ESTONIA	28.35
22	IRELAND	26.96
23	PHILIPPINES	26.50
24	UAE	26.31
25	GERMANY	24.88
26	LITHUANIA	24.61
27	CZECH REPUBLIC	24.22
28	AUSTRIA	22.69
29	ROMANIA	22.63
30	SLOVAK REPUBLIC	21.38
31	THAILAND	20.51
32	LUXEMBOURG	20.33
33	NORWAY	20.08
34	UKRAINE	18.56
35	HUNGARY	18.36
36	SWITZERLAND	18.03
37	AUSTRALIA	17.95
38	RUSSIA	17.94
39	DENMARK	17.60
40	SPAIN	16.90
41	GREECE	16.73
42	NEW ZEALAND	16.47
43	SAUDI ARABIA	16.27
44	PORTUGAL	15.03
45	POLAND	14.82
46	BELGIUM	14.14
47	CYPRUS	13.73
48	JORDAN	12.71
49	LATVIA	12.14
50	BRAZIL	11.50
51	ITALY	11.09
52	ICELAND	9.98
53	INDONESIA	9.37
54	PERU	7.47
55	SOUTH AFRICA	7.34
56	ARGENTINA	6.27
57	MEXICO	6.26
58	TURKEY	5.93
59	VENEZUELA	4.77
60	COLOMBIA	3.10
61	CHILE	2.52
62	KAZAKHSTAN	0.95
-	MONGOLIA	-

FACTOR II

Technology



Factor II : Technology

2.1 Regulatory framework

2.1.1 Starting a business	Distance to Frontier	39
2.1.2 Enforcing contracts	Distance to Frontier	39
2.1.3 Immigration laws	Immigration laws do not prevent your company from employing foreign labor	40
2.1.4 Technological regulation	Technological regulation supports business development and innovation	40
2.1.5 Scientific research legislation	Laws relating to scientific research do encourage innovation	41
2.1.6 Intellectual property rights	Intellectual property rights are adequately enforced	41

2.2 Capital

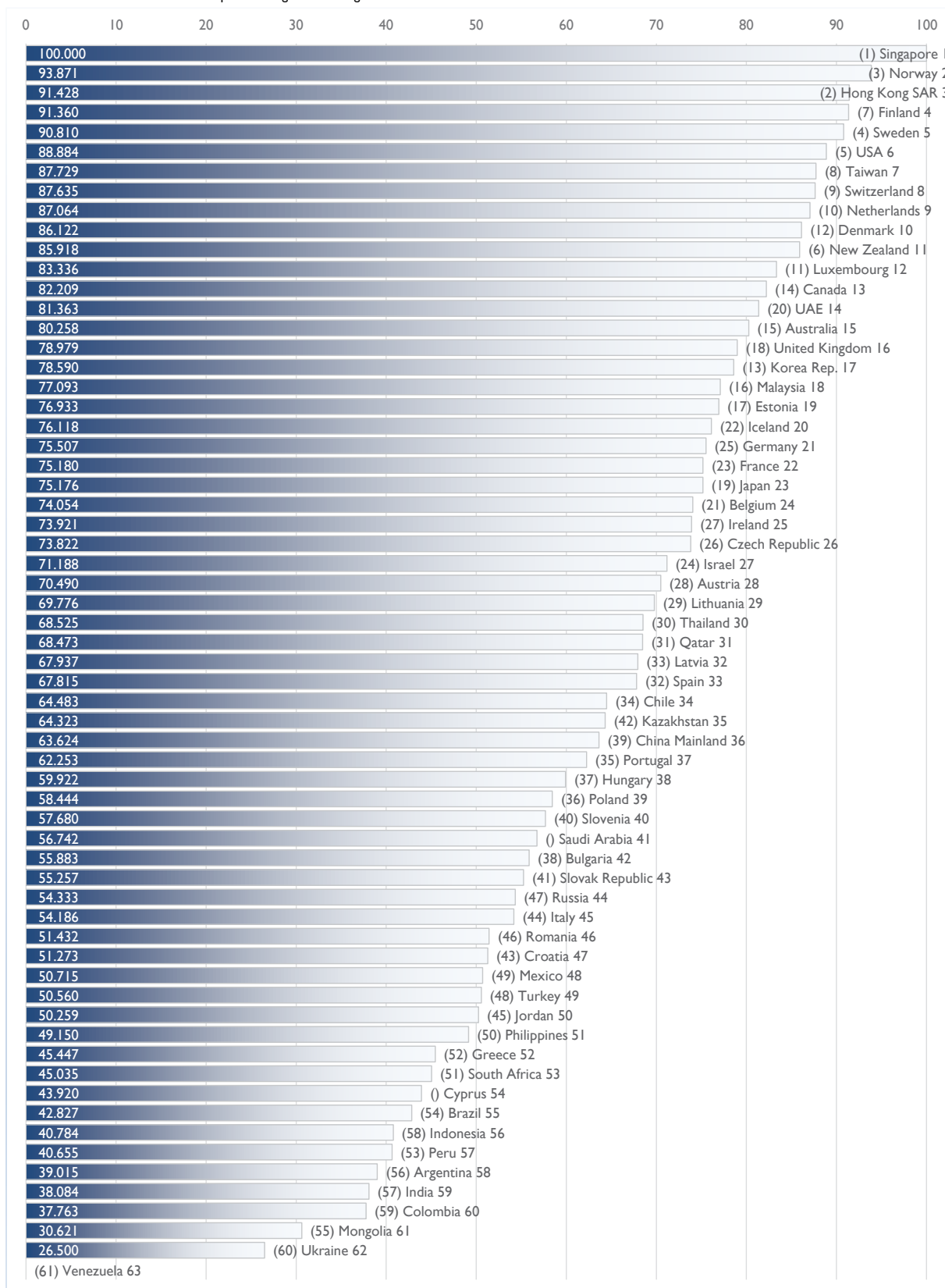
2.2.1 IT & media stock market capitalization	% of total stock market capitalization	42
2.2.2 Funding for technological development	Funding for technological development is readily available	42
2.2.3 Banking and financial services	Banking and financial services do support business activities efficiently	43
2.2.4 Investment risk	Euromoney country risk overall (scale from 0-100)	43
2.2.5 Venture capital	Venture capital is easily available for business	44
2.2.6 Investment in Telecommunications	Percentage of GDP	44

2.3 Technological framework

2.3.1 Communications technology	Communications technology (voice and data) meets business requirements	45
2.3.2 Mobile Broadband subscribers	3G & 4G market, % of mobile market	45
2.3.3 Wireless broadband	Penetration rate (per 100 people)	46
2.3.4 Internet users	Number of internet users per 1000 people/ Source: Computer Industry Almanac	46
2.3.5 Internet bandwidth speed	Average speed	47
2.3.6 High-tech exports (%)	Percentage of manufactured exports	47

TECHNOLOGY

Overall context that enables the development of digital technologies



(2016 rankings are in parentheses)

STARTING A BUSINESS

2016

Distance to Frontier

Ranking		DTF
1	NEW ZEALAND	100.0
2	CANADA	98.2
3	HONG KONG SAR	98.2
4	SINGAPORE	96.5
5	AUSTRALIA	96.5
6	IRELAND	95.9
7	KOREA REP.	95.8
8	ESTONIA	95.1
9	SWEDEN	94.6
10	UNITED KINGDOM	94.6
11	BELGIUM	94.5
12	TAIWAN	94.4
13	UKRAINE	94.4
14	NORWAY	94.3
15	LATVIA	94.2
15	NETHERLANDS	94.2
17	DENMARK	94.1
18	RUSSIA	93.6
19	FRANCE	93.3
20	FINLAND	93.1
21	LITHUANIA	93.0
22	PORTUGAL	92.9
23	ICELAND	92.6
24	MONGOLIA	92.6
25	ISRAEL	92.3
26	KAZAKHSTAN	91.9
27	SLOVENIA	91.4
28	USA	91.2
29	CYPRUS	91.2
29	UAE	91.2
31	GREECE	90.7
32	CHILE	89.8
33	COLOMBIA	89.6
34	ROMANIA	89.5
35	ITALY	89.4
36	LUXEMBOURG	88.7
37	SLOVAK REPUBLIC	88.6
38	SWITZERLAND	88.4
39	HUNGARY	87.3
40	THAILAND	87.0
41	TURKEY	87.0
42	CZECH REPUBLIC	86.9
43	BULGARIA	86.8
44	SPAIN	86.6
45	JAPAN	86.1
46	QATAR	86.1
47	MEXICO	85.7
48	CROATIA	85.6
49	PERU	85.0
50	JORDAN	84.6
51	POLAND	84.2
52	AUSTRIA	83.7
53	MALAYSIA	83.7
54	GERMANY	83.4
55	CHINA MAINLAND	81.0
56	SOUTH AFRICA	80.5
57	SAUDI ARABIA	77.1
58	INDONESIA	76.4
59	INDIA	74.3
60	ARGENTINA	73.6
61	PHILIPPINES	68.9
62	BRAZIL	65.0
63	VENEZUELA	32.9

ENFORCING CONTRACTS

2016

Distance to Frontier

Ranking		DTF
1	KOREA REP.	84.15
2	SINGAPORE	83.61
3	AUSTRALIA	79.72
4	NORWAY	78.99
5	CHINA MAINLAND	77.98
6	LITHUANIA	77.88
7	CROATIA	75.87
8	HUNGARY	75.79
9	KAZAKHSTAN	75.70
10	AUSTRIA	75.49
11	ESTONIA	75.16
12	RUSSIA	74.96
13	NEW ZEALAND	74.25
14	TAIWAN	73.49
15	LUXEMBOURG	73.32
16	GERMANY	73.17
17	FRANCE	73.04
18	PORTUGAL	73.01
19	USA	72.61
20	HONG KONG SAR	72.57
21	SWEDEN	72.04
22	LATVIA	71.66
23	DENMARK	71.23
24	UAE	71.14
25	ROMANIA	71.08
26	SPAIN	69.48
27	FINLAND	69.40
28	UNITED KINGDOM	69.36
29	ICELAND	69.10
30	TURKEY	68.87
31	BRAZIL	67.41
32	SWITZERLAND	67.10
33	MEXICO	67.01
34	MALAYSIA	66.61
35	JAPAN	65.26
36	BULGARIA	65.09
37	ARGENTINA	64.81
38	THAILAND	64.54
39	BELGIUM	64.25
40	POLAND	63.44
41	CHILE	62.81
42	PERU	60.70
43	CZECH REPUBLIC	60.36
44	NETHERLANDS	59.94
45	UKRAINE	58.96
46	SLOVAK REPUBLIC	58.92
47	MONGOLIA	58.48
48	ISRAEL	57.93
49	IRELAND	57.88
50	SAUDI ARABIA	55.07
51	ITALY	54.79
52	CANADA	54.35
53	SOUTH AFRICA	54.10
54	SLOVENIA	52.97
55	QATAR	52.79
56	JORDAN	52.42
57	GREECE	50.19
58	PHILIPPINES	49.24
59	VENEZUELA	48.97
60	CYPRUS	48.59
61	INDONESIA	38.15
62	INDIA	35.19
63	COLOMBIA	34.29

IMMIGRATION LAWS

2017

Immigration laws

prevent your company from
employing foreign labordo not prevent your
company from employing
foreign labor

Ranking		Survey [0..10]
1	UAE	8.00
2	ARGENTINA	7.84
3	PORTUGAL	7.68
4	IRELAND	7.61
5	NETHERLANDS	7.43
6	FINLAND	7.37
7	NEW ZEALAND	7.25
8	BELGIUM	7.19
9	LUXEMBOURG	7.05
10	CHILE	6.97
11	SWEDEN	6.96
12	NORWAY	6.90
13	CANADA	6.88
14	GERMANY	6.80
15	HONG KONG SAR	6.74
16	ITALY	6.70
17	SPAIN	6.58
18	PERU	6.52
19	MEXICO	6.48
20	KAZAKHSTAN	6.46
21	FRANCE	6.42
22	ICELAND	6.41
23	INDIA	6.39
24	THAILAND	6.36
25	UNITED KINGDOM	6.27
26	GREECE	6.25
26	QATAR	6.25
28	HUNGARY	6.22
29	PHILIPPINES	6.18
30	CYPRUS	6.11
31	AUSTRIA	6.10
32	AUSTRALIA	6.02
33	DENMARK	5.82
34	SWITZERLAND	5.74
35	UKRAINE	5.69
36	INDONESIA	5.69
37	MALAYSIA	5.68
38	BRAZIL	5.66
39	TURKEY	5.64
40	ROMANIA	5.63
41	SAUDI ARABIA	5.60
42	SINGAPORE	5.59
43	COLOMBIA	5.56
44	RUSSIA	5.51
45	CHINA MAINLAND	5.47
46	SLOVENIA	5.47
47	TAIWAN	5.29
48	BULGARIA	5.22
49	ESTONIA	5.22
50	MONGOLIA	5.07
51	POLAND	4.98
52	CZECH REPUBLIC	4.88
53	ISRAEL	4.74
54	JAPAN	4.69
55	JORDAN	4.52
56	USA	4.50
57	KOREA REP.	4.48
58	LITHUANIA	4.39
59	LATVIA	4.26
60	CROATIA	4.14
61	VENEZUELA	4.12
62	SOUTH AFRICA	3.55
63	SLOVAK REPUBLIC	3.44

TECHNOLOGICAL REGULATION

2017

Technological regulation

hinders business development
and innovationsupports business
development and
innovation

Ranking		Survey [0..10]
1	SINGAPORE	7.83
2	SWEDEN	7.72
3	UAE	7.71
4	FINLAND	7.62
5	SWITZERLAND	7.59
6	NETHERLANDS	7.51
7	DENMARK	7.46
8	LUXEMBOURG	7.42
9	QATAR	7.28
10	USA	7.26
11	ISRAEL	7.18
12	HONG KONG SAR	7.14
13	NORWAY	7.13
14	IRELAND	7.09
15	MALAYSIA	6.88
16	CANADA	6.84
17	UNITED KINGDOM	6.81
18	ICELAND	6.78
19	KAZAKHSTAN	6.63
20	BELGIUM	6.62
21	FRANCE	6.59
22	ESTONIA	6.59
23	NEW ZEALAND	6.52
24	TAIWAN	6.40
25	CHINA MAINLAND	6.34
26	LITHUANIA	6.32
27	GERMANY	6.30
28	AUSTRALIA	6.26
29	INDIA	6.21
30	PORTUGAL	6.19
31	SAUDI ARABIA	6.10
32	LATVIA	6.00
33	CHILE	5.93
34	AUSTRIA	5.88
35	JAPAN	5.87
36	THAILAND	5.74
37	SPAIN	5.73
38	JORDAN	5.72
39	SLOVENIA	5.70
40	TURKEY	5.65
41	SOUTH AFRICA	5.62
42	INDONESIA	5.59
43	HUNGARY	5.56
44	KOREA REP.	5.45
45	CZECH REPUBLIC	5.42
45	MEXICO	5.42
47	CYPRUS	5.39
48	ITALY	5.30
49	COLOMBIA	5.26
50	POLAND	5.25
51	BULGARIA	5.22
52	ROMANIA	5.11
53	GREECE	5.00
54	PHILIPPINES	4.89
55	ARGENTINA	4.76
56	RUSSIA	4.72
57	PERU	4.48
58	BRAZIL	4.41
59	SLOVAK REPUBLIC	4.30
60	MONGOLIA	4.17
61	CROATIA	3.97
62	UKRAINE	3.40
63	VENEZUELA	2.78

SCIENTIFIC RESEARCH

LEGISLATION

2017

Laws relating to scientific research

do not encourage innovation



do encourage innovation

Ranking		Survey [0..10]
1	SWITZERLAND	8.43
2	USA	7.91
3	SINGAPORE	7.71
4	ISRAEL	7.69
5	NETHERLANDS	7.61
6	UNITED KINGDOM	7.58
7	DENMARK	7.52
8	FINLAND	7.50
9	IRELAND	7.32
10	SWEDEN	7.31
11	LUXEMBOURG	7.12
12	UAE	7.12
13	HONG KONG SAR	6.89
14	NORWAY	6.89
15	CANADA	6.83
16	BELGIUM	6.79
17	QATAR	6.72
18	KAZAKHSTAN	6.61
19	AUSTRALIA	6.50
20	GERMANY	6.46
21	AUSTRIA	6.32
22	MALAYSIA	6.22
23	FRANCE	6.14
24	NEW ZEALAND	6.04
25	TAIWAN	5.90
26	CHINA MAINLAND	5.87
27	ICELAND	5.72
28	ESTONIA	5.59
29	PORTUGAL	5.53
30	JAPAN	5.31
31	CZECH REPUBLIC	5.27
32	SAUDI ARABIA	5.22
33	HUNGARY	5.12
34	KOREA REP.	4.99
35	SOUTH AFRICA	4.97
36	LITHUANIA	4.95
37	SLOVENIA	4.93
38	THAILAND	4.90
39	CYPRUS	4.88
40	LATVIA	4.62
41	INDONESIA	4.50
42	INDIA	4.48
43	RUSSIA	4.38
44	SLOVAK REPUBLIC	4.27
45	TURKEY	4.22
46	ARGENTINA	4.21
47	JORDAN	4.17
48	POLAND	4.14
49	CHILE	4.10
50	ITALY	4.01
51	SPAIN	3.85
52	GREECE	3.77
53	MEXICO	3.73
54	PHILIPPINES	3.61
55	ROMANIA	3.27
56	BRAZIL	3.24
57	PERU	3.13
58	COLOMBIA	3.12
59	CROATIA	3.00
60	BULGARIA	2.89
61	UKRAINE	2.86
62	MONGOLIA	2.48
63	VENEZUELA	1.18

INTELLECTUAL PROPERTY RIGHTS

2017

Intellectual property rights

are not adequately enforced



are adequately enforced

Ranking		Survey [0..10]
1	SWITZERLAND	9.07
2	DENMARK	8.91
3	FINLAND	8.89
4	NETHERLANDS	8.54
5	GERMANY	8.53
6	USA	8.43
7	SWEDEN	8.33
8	SINGAPORE	8.27
9	UNITED KINGDOM	8.16
10	NORWAY	8.10
11	IRELAND	8.04
12	FRANCE	8.00
13	ISRAEL	7.96
14	AUSTRIA	7.95
15	AUSTRALIA	7.83
16	HONG KONG SAR	7.78
17	LUXEMBOURG	7.69
18	NEW ZEALAND	7.65
19	CANADA	7.63
20	BELGIUM	7.53
21	UAE	7.44
22	JAPAN	7.15
23	QATAR	7.11
24	ICELAND	6.99
25	SOUTH AFRICA	6.83
26	LITHUANIA	6.72
27	CZECH REPUBLIC	6.69
28	TAIWAN	6.55
29	KAZAKHSTAN	6.53
30	ESTONIA	6.52
31	MALAYSIA	6.49
32	PORTUGAL	6.45
33	LATVIA	6.31
34	SPAIN	6.25
35	HUNGARY	6.24
36	CHILE	6.20
37	ITALY	6.08
38	JORDAN	6.00
39	SAUDI ARABIA	5.79
40	CYPRUS	5.78
41	SLOVENIA	5.76
42	SLOVAK REPUBLIC	5.57
43	POLAND	5.50
44	KOREA REP.	5.30
45	GREECE	5.16
46	COLOMBIA	5.11
47	THAILAND	5.00
48	MEXICO	4.99
49	CHINA MAINLAND	4.95
50	ROMANIA	4.89
51	INDIA	4.83
52	ARGENTINA	4.74
53	PHILIPPINES	4.73
54	TURKEY	4.61
55	BRAZIL	4.49
56	INDONESIA	4.49
57	BULGARIA	4.44
58	CROATIA	4.40
59	RUSSIA	4.22
60	PERU	4.19
61	UKRAINE	2.76
62	MONGOLIA	2.51
63	VENEZUELA	1.62

IT & MEDIA STOCK MARKET CAPITALIZATION

2016

% of total stock market capitalization

Ranking		%
1	LUXEMBOURG	64.1
2	TAIWAN	44.6
3	HONG KONG SAR	27.8
4	SOUTH AFRICA	27.7
5	FINLAND	23.3
6	USA	22.3
7	NETHERLANDS	21.2
8	INDIA	18.9
9	NORWAY	17.6
10	GERMANY	17.4
11	CZECH REPUBLIC	14.1
12	JAPAN	14.0
13	MEXICO	13.9
14	SWEDEN	13.9
15	NEW ZEALAND	13.8
16	INDONESIA	13.8
17	THAILAND	13.7
18	MALAYSIA	13.6
19	GREECE	12.9
20	FRANCE	12.6
21	SINGAPORE	12.4
22	KOREA REP.	11.9
23	TURKEY	11.7
24	UNITED KINGDOM	11.1
25	SPAIN	11.1
26	CANADA	10.6
27	ISRAEL	9.7
28	SLOVENIA	9.6
29	PORTUGAL	9.1
30	HUNGARY	8.5
31	ARGENTINA	8.3
32	CHINA MAINLAND	7.9
33	PHILIPPINES	7.6
34	AUSTRALIA	7.0
35	POLAND	6.7
36	ITALY	6.6
37	BELGIUM	5.9
38	AUSTRIA	5.4
39	RUSSIA	4.9
40	BRAZIL	4.8
41	CYPRUS	3.9
42	PERU	3.5
43	SWITZERLAND	3.4
44	CHILE	2.1
45	DENMARK	1.9
46	BULGARIA	1.2
47	COLOMBIA	0.8
48	IRELAND	0.6
49	VENEZUELA	0.3
50	ROMANIA	0.0
-	CROATIA	-
-	ESTONIA	-
-	ICELAND	-
-	JORDAN	-
-	KAZAKHSTAN	-
-	LATVIA	-
-	LITHUANIA	-
-	MONGOLIA	-
-	QATAR	-
-	SAUDI ARABIA	-
-	SLOVAK REPUBLIC	-
-	UAE	-
-	UKRAINE	-

FUNDING FOR TECHNOLOGICAL DEVELOPMENT

2017

Funding for technological development

is not readily available



is readily available

Ranking		Survey [0..10]
1	USA	7.93
2	SINGAPORE	7.54
3	NETHERLANDS	7.51
4	SWITZERLAND	7.47
5	FINLAND	7.45
6	SWEDEN	7.44
7	ISRAEL	7.42
8	UAE	7.39
9	NORWAY	7.37
10	LUXEMBOURG	7.21
11	HONG KONG SAR	7.00
11	IRELAND	7.00
13	DENMARK	6.96
14	QATAR	6.90
15	MALAYSIA	6.83
16	BELGIUM	6.75
17	UNITED KINGDOM	6.73
18	FRANCE	6.71
19	AUSTRIA	6.69
20	CHINA MAINLAND	6.62
21	CANADA	6.60
22	GERMANY	6.58
23	TAIWAN	6.42
24	KAZAKHSTAN	6.35
25	CZECH REPUBLIC	6.15
25	LATVIA	6.15
27	ICELAND	6.11
28	LITHUANIA	6.10
29	ESTONIA	6.07
30	NEW ZEALAND	5.96
31	SAUDI ARABIA	5.94
32	JAPAN	5.88
33	THAILAND	5.85
34	INDIA	5.75
35	AUSTRALIA	5.59
36	TURKEY	5.51
37	PORTUGAL	5.43
38	POLAND	5.37
39	JORDAN	5.32
40	SPAIN	5.19
41	SLOVENIA	5.15
42	INDONESIA	5.13
43	CHILE	5.10
44	RUSSIA	4.99
45	HUNGARY	4.88
46	KOREA REP.	4.78
47	BULGARIA	4.78
48	ITALY	4.78
49	SLOVAK REPUBLIC	4.70
50	PHILIPPINES	4.46
51	SOUTH AFRICA	4.46
52	ROMANIA	4.39
53	MEXICO	4.29
54	COLOMBIA	4.18
55	CYPRUS	4.06
56	ARGENTINA	4.05
57	BRAZIL	3.86
58	CROATIA	3.71
59	PERU	3.59
60	GREECE	3.56
61	MONGOLIA	3.01
62	UKRAINE	2.88
63	VENEZUELA	1.58

BANKING AND FINANCIAL SERVICES

2017

Banking and financial services

do not support business activities efficiently



do support business activities efficiently

Ranking		Survey [0..10]
1	NORWAY	8.10
2	HONG KONG SAR	7.82
3	SINGAPORE	7.68
4	CANADA	7.67
5	FINLAND	7.64
6	UAE	7.54
7	NEW ZEALAND	7.49
8	QATAR	7.48
9	USA	7.46
10	THAILAND	7.42
11	SWITZERLAND	7.39
12	CHILE	7.32
13	MALAYSIA	7.26
14	CZECH REPUBLIC	7.19
15	PHILIPPINES	7.13
16	SWEDEN	7.08
17	TAIWAN	7.04
18	DENMARK	7.04
19	NETHERLANDS	7.01
20	ESTONIA	7.00
21	LUXEMBOURG	6.93
22	SOUTH AFRICA	6.74
23	AUSTRALIA	6.70
24	UNITED KINGDOM	6.69
25	INDONESIA	6.69
26	TURKEY	6.67
27	INDIA	6.61
28	GERMANY	6.60
29	BELGIUM	6.57
30	AUSTRIA	6.56
31	SAUDI ARABIA	6.43
32	ISRAEL	6.27
33	KAZAKHSTAN	6.26
34	JORDAN	6.22
35	LITHUANIA	6.18
35	POLAND	6.18
37	ICELAND	6.03
38	IRELAND	5.96
39	JAPAN	5.93
40	CHINA MAINLAND	5.79
41	LATVIA	5.74
42	FRANCE	5.74
43	CYPRUS	5.67
44	SLOVAK REPUBLIC	5.57
45	SPAIN	5.55
46	MEXICO	5.38
47	BULGARIA	5.22
48	SLOVENIA	5.19
49	PERU	5.05
50	BRAZIL	4.95
51	HUNGARY	4.86
52	ROMANIA	4.77
53	COLOMBIA	4.66
54	KOREA REP.	4.56
55	PORTUGAL	4.54
56	RUSSIA	4.53
57	ITALY	4.42
58	VENEZUELA	4.38
59	CROATIA	4.34
60	ARGENTINA	3.95
61	UKRAINE	3.81
62	MONGOLIA	3.44
63	GREECE	2.66

INVESTMENT RISK

2015

Euromoney country risk overall (scale from 0-100)

Ranking		number
1	NORWAY	90.12
2	SWITZERLAND	89.02
3	SINGAPORE	88.73
4	DENMARK	85.07
5	LUXEMBOURG	84.77
6	SWEDEN	84.53
7	FINLAND	83.62
8	NETHERLANDS	83.23
9	CANADA	80.91
10	GERMANY	80.86
11	AUSTRALIA	80.50
12	NEW ZEALAND	80.44
13	AUSTRIA	78.82
14	HONG KONG SAR	78.81
15	CHILE	77.37
16	USA	76.30
17	QATAR	74.29
18	TAIWAN	73.88
19	BELGIUM	72.35
20	UNITED KINGDOM	72.15
21	CZECH REPUBLIC	70.13
22	KOREA REP.	69.98
23	ESTONIA	69.53
24	FRANCE	69.22
25	UAE	68.28
26	SLOVAK REPUBLIC	67.85
27	POLAND	66.93
28	JAPAN	66.38
29	ISRAEL	66.07
30	IRELAND	64.67
31	SAUDI ARABIA	63.22
32	LITHUANIA	61.87
33	ICELAND	61.68
34	MALAYSIA	61.03
35	MEXICO	59.85
36	SLOVENIA	59.56
37	CHINA MAINLAND	59.10
38	LATVIA	58.45
39	COLOMBIA	58.00
40	PERU	57.98
41	SPAIN	57.63
42	ITALY	57.41
43	CYPRUS	57.22
44	BRAZIL	54.97
45	PORTUGAL	54.57
46	INDIA	54.47
47	TURKEY	54.05
48	PHILIPPINES	54.02
49	THAILAND	53.21
50	SOUTH AFRICA	53.12
51	ROMANIA	50.53
52	BULGARIA	50.48
53	HUNGARY	50.11
54	INDONESIA	49.42
55	CROATIA	48.93
56	KAZAKHSTAN	46.52
57	RUSSIA	45.76
58	JORDAN	44.17
59	MONGOLIA	34.85
60	GREECE	31.48
61	ARGENTINA	30.48
62	UKRAINE	27.72
63	VENEZUELA	24.60

VENTURE CAPITAL

2017

Venture capital

is not easily available for business



is easily available for business

Ranking		Survey [0..10]
1	USA	7.82
2	UNITED KINGDOM	7.00
3	SWEDEN	6.90
4	NETHERLANDS	6.88
5	SINGAPORE	6.71
6	UAE	6.67
7	HONG KONG SAR	6.64
8	FINLAND	6.48
9	ISRAEL	6.31
10	IRELAND	6.22
10	MALAYSIA	6.22
12	CANADA	6.14
13	SWITZERLAND	6.09
14	DENMARK	6.07
15	CZECH REPUBLIC	6.00
16	LITHUANIA	5.93
17	BELGIUM	5.91
18	TAIWAN	5.88
19	NORWAY	5.84
20	QATAR	5.83
21	FRANCE	5.82
22	INDIA	5.78
23	LUXEMBOURG	5.75
24	GERMANY	5.73
25	POLAND	5.57
26	ESTONIA	5.57
27	CHINA MAINLAND	5.43
28	NEW ZEALAND	5.37
29	THAILAND	5.30
30	LATVIA	5.26
31	INDONESIA	5.19
32	CHILE	5.03
33	AUSTRALIA	5.03
34	SPAIN	4.98
35	KAZAKHSTAN	4.93
36	PHILIPPINES	4.78
37	JAPAN	4.65
38	AUSTRIA	4.64
39	SAUDI ARABIA	4.63
40	SLOVAK REPUBLIC	4.59
41	JORDAN	4.57
42	ICELAND	4.41
43	BULGARIA	4.33
44	MEXICO	4.12
45	PERU	4.06
46	SLOVENIA	3.88
47	SOUTH AFRICA	3.86
48	HUNGARY	3.85
49	COLOMBIA	3.79
50	TURKEY	3.71
51	ROMANIA	3.69
52	PORTUGAL	3.64
53	KOREA REP.	3.55
54	BRAZIL	3.38
55	ARGENTINA	3.37
56	ITALY	3.32
57	CROATIA	2.89
58	CYPRUS	2.72
58	RUSSIA	2.72
60	UKRAINE	2.14
61	GREECE	2.09
62	VENEZUELA	2.04
63	MONGOLIA	1.80

INVESTMENT IN
TELECOMMUNICATIONS

2015

Percentage of GDP

Ranking		%
1	CANADA	0.73
2	NEW ZEALAND	0.69
3	BULGARIA	0.66
4	MALAYSIA	0.62
5	CHILE	0.61
6	JORDAN	0.61
7	CROATIA	0.57
8	PERU	0.56
9	AUSTRALIA	0.56
10	CHINA MAINLAND	0.55
11	PHILIPPINES	0.55
12	GREECE	0.52
13	MONGOLIA	0.50
14	CZECH REPUBLIC	0.50
15	HUNGARY	0.49
16	THAILAND	0.48
17	SLOVENIA	0.47
18	SWITZERLAND	0.46
19	USA	0.46
20	ESTONIA	0.45
21	SPAIN	0.45
22	COLOMBIA	0.43
23	LUXEMBOURG	0.42
24	KOREA REP.	0.42
25	NETHERLANDS	0.42
26	LATVIA	0.40
27	UAE	0.40
28	SLOVAK REPUBLIC	0.39
29	TAIWAN	0.39
30	ITALY	0.37
31	BELGIUM	0.37
32	HONG KONG SAR	0.36
33	POLAND	0.36
34	INDONESIA	0.35
35	SOUTH AFRICA	0.34
36	RUSSIA	0.34
37	PORTUGAL	0.33
38	SAUDI ARABIA	0.32
39	FRANCE	0.31
40	CYPRUS	0.31
41	DENMARK	0.31
42	INDIA	0.31
43	MEXICO	0.30
44	QATAR	0.30
45	ROMANIA	0.30
46	ICELAND	0.30
47	JAPAN	0.29
48	NORWAY	0.28
49	BRAZIL	0.26
50	SWEDEN	0.26
51	GERMANY	0.25
52	FINLAND	0.25
53	ARGENTINA	0.24
54	UKRAINE	0.24
55	ISRAEL	0.24
56	IRELAND	0.22
57	TURKEY	0.22
58	LITHUANIA	0.20
59	SINGAPORE	0.19
60	UNITED KINGDOM	0.19
61	KAZAKHSTAN	0.19
62	AUSTRIA	0.16
63	VENEZUELA	0.01

COMMUNICATIONS TECHNOLOGY

2017

Communications technology (voice and data)

does not meet business
requirementsmeets business
requirements

Ranking		Survey [0..10]
1	LITHUANIA	9.51
2	NORWAY	9.41
3	NETHERLANDS	9.36
4	FINLAND	9.35
5	SWEDEN	9.21
6	SWITZERLAND	9.09
7	DENMARK	9.07
8	LATVIA	9.00
9	HONG KONG SAR	8.96
10	PORTUGAL	8.96
11	SINGAPORE	8.90
12	ICELAND	8.74
13	LUXEMBOURG	8.61
14	USA	8.55
15	BULGARIA	8.50
16	KOREA REP.	8.41
17	QATAR	8.37
18	FRANCE	8.22
19	CHINA MAINLAND	8.13
20	BELGIUM	8.12
21	UAE	8.06
22	SPAIN	8.05
23	ISRAEL	8.05
24	JAPAN	8.04
25	CHILE	8.03
26	ESTONIA	8.03
27	CANADA	8.00
28	TAIWAN	7.92
29	AUSTRIA	7.90
30	SLOVENIA	7.90
31	CZECH REPUBLIC	7.74
32	ROMANIA	7.71
33	MALAYSIA	7.70
34	TURKEY	7.58
35	RUSSIA	7.56
36	THAILAND	7.53
37	POLAND	7.47
38	SAUDI ARABIA	7.44
39	GREECE	7.41
40	KAZAKHSTAN	7.29
40	NEW ZEALAND	7.29
42	UNITED KINGDOM	7.24
43	INDIA	7.10
44	GERMANY	7.05
45	JORDAN	7.05
46	SLOVAK REPUBLIC	7.00
47	HUNGARY	6.92
48	IRELAND	6.72
49	INDONESIA	6.63
50	CYPRUS	6.61
51	CROATIA	6.54
52	ITALY	6.42
53	MONGOLIA	6.35
54	AUSTRALIA	6.34
55	COLOMBIA	6.05
56	MEXICO	6.00
57	SOUTH AFRICA	5.76
58	UKRAINE	5.72
59	PERU	5.37
60	BRAZIL	4.85
61	PHILIPPINES	4.82
62	ARGENTINA	4.79
63	VENEZUELA	2.62

MOBILE BROADBAND SUBSCRIBERS

2015

3G & 4G market, % of mobile market

Ranking		%
1	JAPAN	100.0
2	SINGAPORE	97.2
3	TAIWAN	96.5
4	NORWAY	95.9
5	DENMARK	95.1
6	THAILAND	93.8
7	ICELAND	87.9
8	AUSTRALIA	86.7
9	CZECH REPUBLIC	85.8
10	AUSTRIA	84.9
11	HONG KONG SAR	84.3
12	KOREA REP.	83.2
13	LITHUANIA	82.7
14	IRELAND	79.4
15	SWEDEN	78.8
16	FINLAND	78.4
17	SPAIN	77.3
18	UNITED KINGDOM	75.8
19	ESTONIA	74.7
20	NEW ZEALAND	73.6
21	CANADA	72.3
22	ISRAEL	72.2
23	USA	71.3
24	SWITZERLAND	70.6
25	ROMANIA	68.4
26	BRAZIL	67.7
27	RUSSIA	67.5
28	UAE	67.2
29	JORDAN	66.5
30	GERMANY	65.3
31	NETHERLANDS	65.0
32	LUXEMBOURG	64.7
33	SAUDI ARABIA	63.3
34	FRANCE	60.4
35	CHILE	60.1
35	CHINA MAINLAND	60.1
37	CROATIA	59.5
38	MEXICO	59.3
39	QATAR	58.1
40	POLAND	56.6
41	MALAYSIA	56.4
42	BELGIUM	55.3
43	TURKEY	51.2
44	ITALY	50.8
45	LATVIA	49.3
46	KAZAKHSTAN	49.0
47	BULGARIA	45.4
48	SLOVAK REPUBLIC	45.2
49	HUNGARY	44.2
50	COLOMBIA	43.6
51	ARGENTINA	43.3
51	SLOVENIA	43.3
53	MONGOLIA	39.9
54	VENEZUELA	38.1
55	PHILIPPINES	37.5
56	PORTUGAL	34.8
57	SOUTH AFRICA	34.5
58	INDONESIA	33.8
59	GREECE	33.2
60	CYPRUS	29.6
61	PERU	22.1
62	INDIA	17.2
63	UKRAINE	9.1

WIRELESS BROADBAND

2016

Penetration rate (per 100 people)

Ranking		%
1	SINGAPORE	147.60
2	FINLAND	145.40
3	SAUDI ARABIA	134.50
4	JAPAN	132.00
5	SWEDEN	129.00
6	ESTONIA	126.10
7	DENMARK	125.60
8	HONG KONG SAR	125.20
9	AUSTRALIA	122.90
10	NEW ZEALAND	122.50
11	UAE	122.10
12	USA	120.70
13	KOREA REP.	116.90
14	SWITZERLAND	109.90
15	ICELAND	107.30
15	IRELAND	107.30
17	NORWAY	104.30
18	MALAYSIA	102.40
19	TAIWAN	100.20
20	BRAZIL	99.50
21	UNITED KINGDOM	98.90
22	ITALY	95.40
23	SPAIN	95.30
24	BULGARIA	92.90
25	CZECH REPUBLIC	91.80
26	LUXEMBOURG	91.60
27	LITHUANIA	89.70
28	GERMANY	89.20
29	QATAR	88.30
30	CROATIA	88.20
31	THAILAND	87.40
32	FRANCE	87.30
33	SLOVAK REPUBLIC	84.80
34	RUSSIA	83.60
35	NETHERLANDS	83.00
36	ROMANIA	81.50
37	LATVIA	80.80
38	AUSTRIA	80.40
39	BELGIUM	78.90
40	ARGENTINA	75.00
41	POLAND	73.50
42	KAZAKHSTAN	72.80
43	SOUTH AFRICA	72.50
44	CHILE	69.20
45	CHINA MAINLAND	68.60
46	CANADA	67.80
47	PORTUGAL	65.90
48	CYPRUS	65.80
49	SLOVENIA	63.90
50	ISRAEL	63.10
51	PHILIPPINES	61.10
52	TURKEY	61.00
53	MEXICO	59.90
54	JORDAN	58.70
55	GREECE	58.20
56	COLOMBIA	53.30
56	VENEZUELA	53.30
58	INDONESIA	52.90
59	HUNGARY	52.40
60	PERU	46.90
61	INDIA	14.30
62	UKRAINE	11.40
-	MONGOLIA	-

INTERNET USERS

2016

Number of internet users per 1000 people/ Source: Computer Industry Almanac

Ranking		number
1	SINGAPORE	897
2	USA	893
3	NORWAY	891
4	NETHERLANDS	891
5	JAPAN	881
6	DENMARK	881
7	SWEDEN	879
8	ICELAND	879
9	CANADA	876
10	HONG KONG SAR	875
11	FINLAND	875
12	LUXEMBOURG	874
13	IRELAND	870
14	LATVIA	868
15	PORTUGAL	865
16	NEW ZEALAND	862
17	KOREA REP.	860
18	GERMANY	860
19	GREECE	859
20	BELGIUM	847
21	AUSTRALIA	846
22	TAIWAN	844
23	UNITED KINGDOM	842
24	AUSTRIA	839
25	FRANCE	839
26	ITALY	838
27	SWITZERLAND	837
28	CZECH REPUBLIC	834
29	SLOVAK REPUBLIC	829
30	ESTONIA	828
31	ISRAEL	826
32	SPAIN	826
33	CROATIA	818
34	SLOVENIA	811
35	HUNGARY	795
36	UAE	781
37	POLAND	770
38	LITHUANIA	765
39	QATAR	760
40	CHILE	750
41	MALAYSIA	744
42	ROMANIA	720
43	BULGARIA	702
44	RUSSIA	615
45	SAUDI ARABIA	595
46	BRAZIL	584
47	KAZAKHSTAN	579
48	VENEZUELA	566
49	COLOMBIA	562
50	UKRAINE	553
51	TURKEY	550
52	JORDAN	530
53	THAILAND	520
54	ARGENTINA	499
55	PERU	494
56	CHINA MAINLAND	478
57	MEXICO	414
58	PHILIPPINES	397
59	SOUTH AFRICA	370
60	INDONESIA	338
61	INDIA	249
62	MONGOLIA	244
-	CYPRUS	-

INTERNET BANDWIDTH SPEED

2016

Average speed

Ranking		Mbps
1	KOREA REP.	26.1
2	NORWAY	23.6
3	SWEDEN	22.8
4	HONG KONG SAR	21.9
5	SWITZERLAND	21.2
6	DENMARK	20.7
7	FINLAND	20.6
8	SINGAPORE	20.2
9	JAPAN	19.6
10	NETHERLANDS	17.6
11	ICELAND	17.4
12	CZECH REPUBLIC	17.3
13	LATVIA	17.2
13	USA	17.2
15	UNITED KINGDOM	16.3
16	ROMANIA	16.1
17	BELGIUM	15.9
18	BULGARIA	15.6
18	TAIWAN	15.6
20	SPAIN	15.4
21	IRELAND	15.3
22	CANADA	14.9
23	GERMANY	14.6
23	LITHUANIA	14.6
25	ISRAEL	14.4
26	HUNGARY	14.3
27	SLOVENIA	14.0
28	AUSTRIA	13.9
29	THAILAND	13.3
30	SLOVAK REPUBLIC	13.0
31	NEW ZEALAND	12.9
32	PORTUGAL	12.6
33	POLAND	12.4
33	UKRAINE	12.4
35	QATAR	11.9
36	RUSSIA	11.6
37	ESTONIA	11.4
38	LUXEMBOURG	11.1
39	UAE	10.7
40	AUSTRALIA	10.1
41	FRANCE	10.0
42	KAZAKHSTAN	9.0
43	ITALY	8.7
44	CHILE	8.6
45	CROATIA	8.2
45	MALAYSIA	8.2
47	TURKEY	7.6
48	GREECE	7.5
49	MEXICO	7.2
50	CYPRUS	7.1
51	MONGOLIA	6.8
52	INDONESIA	6.7
53	SOUTH AFRICA	6.6
54	BRAZIL	6.4
55	CHINA MAINLAND	6.3
55	SAUDI ARABIA	6.3
57	ARGENTINA	6.1
58	INDIA	5.6
58	PERU	5.6
60	COLOMBIA	5.4
60	JORDAN	5.4
62	PHILIPPINES	4.5
63	VENEZUELA	1.9

HIGH-TECH EXPORTS (%)

2015

Percentage of manufactured exports

Ranking		%
1	PHILIPPINES	53.06
2	SINGAPORE	49.28
3	TAIWAN	46.26
4	MALAYSIA	42.80
5	KAZAKHSTAN	41.19
6	FRANCE	26.85
7	KOREA REP.	26.84
8	SWITZERLAND	26.84
9	IRELAND	26.76
10	CHINA MAINLAND	25.75
11	THAILAND	21.44
12	UNITED KINGDOM	20.81
13	NORWAY	20.52
14	NETHERLANDS	19.90
15	ICELAND	19.90
16	ISRAEL	19.66
17	USA	19.01
18	JAPAN	16.78
19	GERMANY	16.66
20	DENMARK	15.96
21	LATVIA	15.05
22	CZECH REPUBLIC	14.90
23	MEXICO	14.69
24	SWEDEN	14.26
25	CANADA	13.83
26	RUSSIA	13.76
27	HUNGARY	13.74
28	AUSTRALIA	13.51
29	AUSTRIA	13.35
30	BELGIUM	13.02
31	BRAZIL	12.31
32	LITHUANIA	11.85
33	ESTONIA	11.40
34	GREECE	10.99
35	HONG KONG SAR	10.71
36	SLOVAK REPUBLIC	10.29
37	NEW ZEALAND	9.62
38	COLOMBIA	9.49
39	ARGENTINA	9.01
40	CROATIA	8.98
41	POLAND	8.78
42	FINLAND	8.73
43	UAE	8.46
44	BULGARIA	7.65
45	INDIA	7.52
46	ROMANIA	7.50
47	ITALY	7.34
48	UKRAINE	7.27
49	SPAIN	7.15
50	INDONESIA	6.97
51	LUXEMBOURG	6.82
52	SLOVENIA	6.42
53	CYPRUS	6.15
54	CHILE	5.90
55	SOUTH AFRICA	5.88
56	PERU	4.74
57	PORTUGAL	4.59
58	MONGOLIA	4.03
59	QATAR	3.41
60	TURKEY	2.16
61	JORDAN	1.82
62	VENEZUELA	1.13
63	SAUDI ARABIA	0.77

FACTOR III

Future Readiness



Factor III : Future Readiness

3.1 Adaptive attitudes

3.1.1 E-Participation	Use of online services that facilitate public's interaction with government	51
3.1.2 Internet retailing	US\$ Per '000 People	51
3.1.3 Tablet possession	% households	52
3.1.4 Smartphone possession	% households	52
3.1.5 Attitudes toward globalization	Attitudes toward globalization are generally positive in your society	53

3.2 Business agility

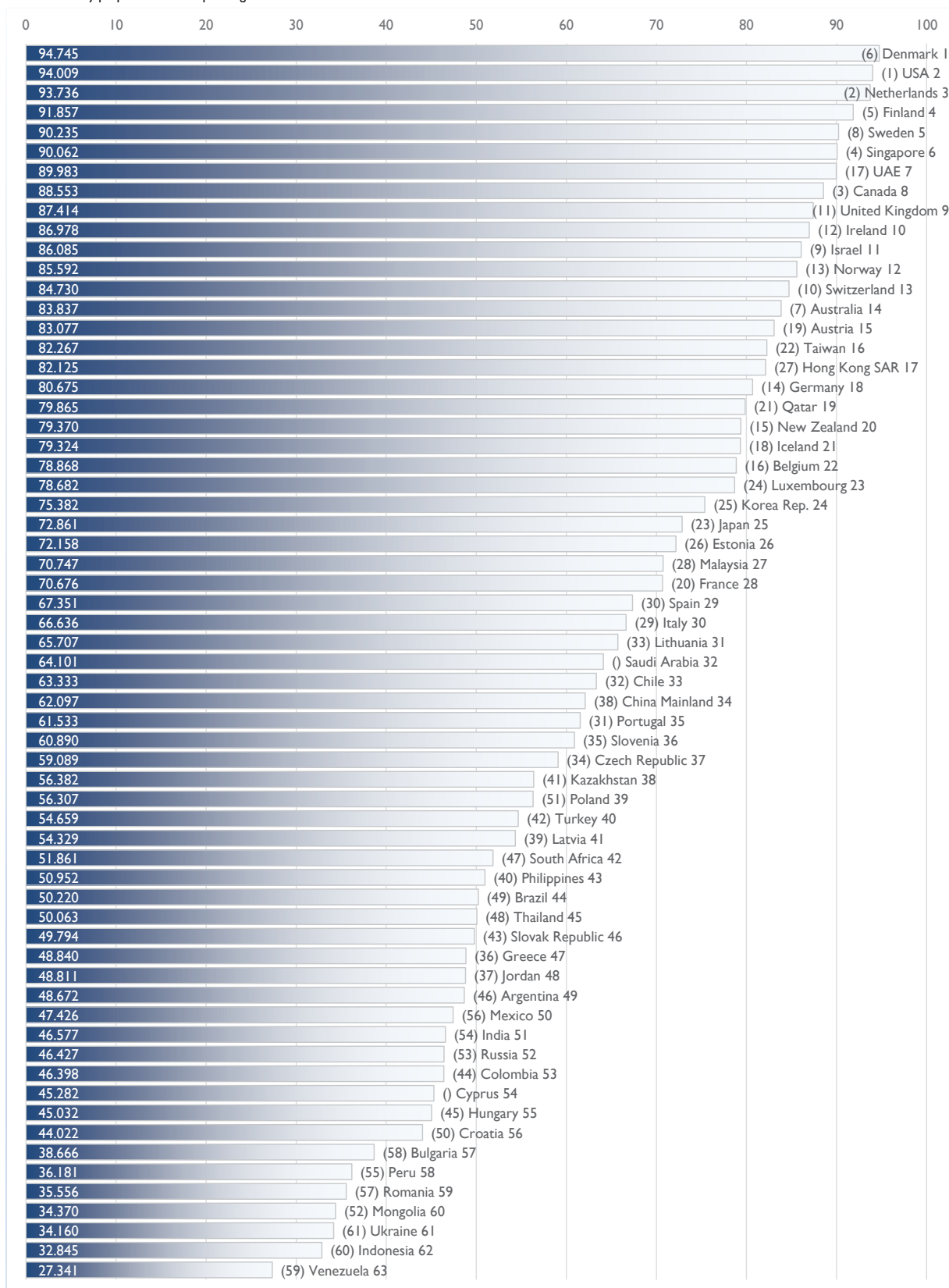
3.2.1 Opportunities and threats	Companies are very good at responding quickly to opportunities and threats	53
3.2.2 Innovative firms	Percentage of all medium manufacturing firms	54
3.2.3 Agility of companies	Companies are agile	54
3.2.4 Use of big data and analytics	Companies are very good at using big data and analytics to support decision-making	55
3.2.5 Knowledge transfer	Knowledge transfer is highly developed between companies and universities	55

3.3 IT integration

3.3.1 E-Government	Provision of online government services to promote access and inclusion of citizens	56
3.3.2 Public-private partnerships	Public and private sector ventures are supporting technological development	56
3.3.3 Cyber security	Cyber security is being adequately addressed by corporations	57
3.3.4 Software piracy	% of unlicensed software installation	57

FUTURE READINESS

Level of country preparedness to exploit digital transformation



(2016 rankings are in parentheses)

E-PARTICIPATION

2016

Use of online services that facilitate public's interaction with government

Ranking		index (0-1)
1	UNITED KINGDOM	1.00
2	AUSTRALIA	0.98
2	JAPAN	0.98
4	KOREA REP.	0.97
5	NETHERLANDS	0.95
5	NEW ZEALAND	0.95
7	SPAIN	0.93
8	CANADA	0.92
8	FINLAND	0.92
8	ITALY	0.92
8	SINGAPORE	0.92
12	FRANCE	0.90
12	USA	0.90
14	AUSTRIA	0.88
14	MEXICO	0.88
14	POLAND	0.88
17	ISRAEL	0.83
17	LITHUANIA	0.83
19	CHINA MAINLAND	0.81
19	DENMARK	0.81
19	ESTONIA	0.81
22	CROATIA	0.78
23	COLOMBIA	0.76
23	GERMANY	0.76
23	INDIA	0.76
23	NORWAY	0.76
23	SWEDEN	0.76
28	CHILE	0.75
28	RUSSIA	0.75
28	UAE	0.75
28	UKRAINE	0.75
32	BRAZIL	0.73
32	SLOVENIA	0.73
34	IRELAND	0.71
34	MONGOLIA	0.71
34	SAUDI ARABIA	0.71
37	BULGARIA	0.69
37	LUXEMBOURG	0.69
39	MALAYSIA	0.68
40	ICELAND	0.66
40	PORTUGAL	0.66
42	BELGIUM	0.64
42	QATAR	0.64
44	ARGENTINA	0.63
44	ROMANIA	0.63
44	TURKEY	0.63
47	GREECE	0.61
48	KAZAKHSTAN	0.59
48	PHILIPPINES	0.59
48	THAILAND	0.59
51	SWITZERLAND	0.58
52	CZECH REPUBLIC	0.56
52	SOUTH AFRICA	0.56
54	PERU	0.54
54	SLOVAK REPUBLIC	0.54
56	CYPRUS	0.53
56	LATVIA	0.53
58	HUNGARY	0.49
59	JORDAN	0.46
60	VENEZUELA	0.41
61	INDONESIA	0.37
-	HONG KONG SAR	-
-	TAIWAN	-

INTERNET RETAILING

2016

US\$ Per '000 People

Ranking		US\$
1	UNITED KINGDOM	1,123,481.90
2	DENMARK	972,211.00
3	USA	962,473.70
4	KOREA REP.	870,694.90
5	FINLAND	781,010.40
6	IRELAND	727,616.30
7	SWITZERLAND	713,151.00
8	SWEDEN	689,473.70
9	NORWAY	685,254.10
10	AUSTRALIA	616,801.80
11	JAPAN	573,932.50
12	NETHERLANDS	573,453.80
13	BELGIUM	565,774.60
14	FRANCE	554,589.20
15	GERMANY	536,743.70
16	CANADA	495,298.80
17	AUSTRIA	467,936.20
18	TAIWAN	374,714.40
19	NEW ZEALAND	357,412.10
20	ISRAEL	307,340.60
21	ESTONIA	275,873.70
22	CHINA MAINLAND	266,191.30
23	CZECH REPUBLIC	265,094.60
24	HONG KONG SAR	239,346.90
25	SINGAPORE	196,978.30
26	POLAND	170,938.10
27	SPAIN	166,605.30
28	GREECE	164,813.50
29	SLOVAK REPUBLIC	163,101.90
30	ITALY	157,394.10
31	LITHUANIA	151,872.70
32	UAE	150,028.30
33	PORTUGAL	142,571.50
34	LATVIA	117,798.30
35	HUNGARY	113,500.70
36	SLOVENIA	113,458.50
37	ARGENTINA	102,741.40
38	RUSSIA	86,747.20
39	TURKEY	72,298.80
40	CHILE	68,931.40
41	ROMANIA	56,651.30
42	BRAZIL	49,476.90
43	CROATIA	47,640.70
44	SAUDI ARABIA	43,116.60
45	BULGARIA	37,525.80
46	MEXICO	35,472.70
47	UKRAINE	23,164.60
48	THAILAND	22,089.70
49	COLOMBIA	21,444.70
50	MALAYSIA	18,652.00
51	VENEZUELA	18,286.00
52	INDIA	16,674.70
53	KAZAKHSTAN	15,516.40
54	INDONESIA	10,177.60
55	PERU	9,958.40
56	SOUTH AFRICA	9,874.40
57	PHILIPPINES	5,873.30
-	CYPRUS	-
-	ICELAND	-
-	JORDAN	-
-	LUXEMBOURG	-
-	MONGOLIA	-
-	QATAR	-

TABLET POSSESSION

2016

% households

Ranking		%
1	USA	67.80
2	QATAR	67.30
3	AUSTRALIA	63.40
4	HONG KONG SAR	61.90
5	DENMARK	61.00
6	SINGAPORE	55.00
7	NORWAY	54.70
7	SWITZERLAND	54.70
9	UAE	53.50
10	BELGIUM	53.30
11	SWEDEN	51.70
12	NETHERLANDS	51.00
13	FINLAND	50.90
14	SAUDI ARABIA	49.60
15	ICELAND	49.00
16	CANADA	43.80
17	MALAYSIA	43.30
18	IRELAND	41.80
19	ISRAEL	39.70
20	UNITED KINGDOM	38.70
21	JAPAN	38.10
22	GERMANY	37.70
23	NEW ZEALAND	34.00
24	TURKEY	29.60
25	ITALY	29.50
25	TAIWAN	29.50
27	FRANCE	27.50
28	SPAIN	26.90
29	CHILE	23.20
30	AUSTRIA	23.10
31	SLOVENIA	22.90
32	PORTUGAL	22.70
33	COLOMBIA	18.80
34	KOREA REP.	18.60
35	POLAND	17.50
36	ROMANIA	16.40
37	CZECH REPUBLIC	16.30
37	KAZAKHSTAN	16.30
39	RUSSIA	16.00
40	GREECE	15.80
41	BRAZIL	15.70
42	PERU	15.30
43	MEXICO	13.10
44	SLOVAK REPUBLIC	12.30
45	CROATIA	12.10
46	ARGENTINA	11.90
47	CHINA MAINLAND	11.80
48	ESTONIA	11.70
48	LATVIA	11.70
50	LITHUANIA	11.60
51	HUNGARY	10.70
52	THAILAND	4.60
53	BULGARIA	3.60
54	INDONESIA	2.80
55	JORDAN	2.50
55	UKRAINE	2.50
57	SOUTH AFRICA	2.40
58	PHILIPPINES	2.10
59	INDIA	1.10
60	VENEZUELA	0.60
-	CYPRUS	-
-	LUXEMBOURG	-
-	MONGOLIA	-

SMARTPHONE POSSESSION

2016

% households

Ranking		%
1	ICELAND	86.70
2	DENMARK	83.00
3	HONG KONG SAR	79.90
3	NORWAY	79.90
5	TAIWAN	79.30
6	SWEDEN	79.20
7	SINGAPORE	79.00
8	KOREA REP.	78.70
9	IRELAND	78.00
10	QATAR	77.70
11	UAE	77.20
12	NETHERLANDS	76.60
13	AUSTRALIA	76.50
14	USA	75.90
15	ISRAEL	75.70
16	FINLAND	74.90
17	SPAIN	74.50
18	CANADA	72.80
19	TURKEY	72.00
20	PORTUGAL	71.80
21	ESTONIA	71.40
22	JAPAN	71.20
23	CHILE	70.40
23	HUNGARY	70.40
25	GERMANY	70.10
25	MALAYSIA	70.10
27	GREECE	70.00
28	SAUDI ARABIA	69.60
29	CROATIA	69.10
30	JORDAN	69.00
31	BELGIUM	68.40
31	FRANCE	68.40
33	ITALY	67.50
33	SLOVENIA	67.50
35	LATVIA	65.50
36	LITHUANIA	63.70
37	AUSTRIA	63.30
38	SOUTH AFRICA	61.30
39	NEW ZEALAND	60.90
40	SWITZERLAND	59.80
41	CZECH REPUBLIC	59.30
42	SLOVAK REPUBLIC	58.60
43	RUSSIA	57.60
44	ARGENTINA	56.30
45	UNITED KINGDOM	55.20
46	PHILIPPINES	55.00
47	BULGARIA	54.70
48	CHINA MAINLAND	53.20
49	POLAND	51.30
49	THAILAND	51.30
51	VENEZUELA	44.10
52	KAZAKHSTAN	43.90
53	BRAZIL	42.90
54	MEXICO	27.80
55	UKRAINE	26.30
56	COLOMBIA	25.00
57	ROMANIA	19.00
58	PERU	15.10
59	INDONESIA	7.70
60	INDIA	5.70
-	CYPRUS	-
-	LUXEMBOURG	-
-	MONGOLIA	-

ATTITUDES TOWARD GLOBALIZATION

2017

Attitudes toward globalization are generally
negative in your society



positive in your society

Ranking		Survey [0..10]
1	IRELAND	8.26
2	UAE	8.25
3	HONG KONG SAR	8.12
4	SWEDEN	8.08
5	SINGAPORE	7.86
6	DENMARK	7.82
7	CHINA MAINLAND	7.75
8	CHILE	7.70
9	NETHERLANDS	7.54
10	TAIWAN	7.47
11	FINLAND	7.43
12	MEXICO	7.38
13	CANADA	7.30
14	INDIA	7.19
15	PHILIPPINES	7.17
16	MALAYSIA	7.15
17	NORWAY	7.08
18	THAILAND	7.08
19	NEW ZEALAND	7.06
20	ICELAND	7.05
21	ISRAEL	7.05
22	QATAR	6.99
23	KAZAKHSTAN	6.83
24	SWITZERLAND	6.80
25	LUXEMBOURG	6.61
26	PORTUGAL	6.54
27	INDONESIA	6.40
28	GERMANY	6.32
29	BELGIUM	6.26
30	SOUTH AFRICA	6.24
31	KOREA REP.	6.24
32	SPAIN	6.22
33	JAPAN	6.05
34	CZECH REPUBLIC	6.04
35	LITHUANIA	6.03
36	PERU	6.03
37	BRAZIL	6.03
38	UNITED KINGDOM	6.02
39	AUSTRALIA	5.87
40	COLOMBIA	5.84
41	TURKEY	5.82
42	CYPRUS	5.78
43	ESTONIA	5.77
44	LATVIA	5.74
45	AUSTRIA	5.71
46	ITALY	5.64
47	BULGARIA	5.60
48	SAUDI ARABIA	5.52
49	JORDAN	5.51
50	USA	5.50
51	UKRAINE	5.28
52	MONGOLIA	5.24
53	SLOVENIA	5.13
54	ROMANIA	5.13
55	SLOVAK REPUBLIC	4.92
56	GREECE	4.91
57	VENEZUELA	4.81
58	POLAND	4.77
59	ARGENTINA	4.59
60	RUSSIA	4.11
61	CROATIA	3.66
62	FRANCE	3.55
63	HUNGARY	3.08

OPPORTUNITIES AND THREATS

2017

Companies are

not good at responding quickly to
opportunities and threats



very good at responding
quickly to opportunities
and threats

Ranking		Survey [0..10]
1	HONG KONG SAR	7.76
2	UAE	7.27
3	IRELAND	7.00
4	TAIWAN	6.96
5	LITHUANIA	6.90
6	MALAYSIA	6.73
7	SWITZERLAND	6.73
8	DENMARK	6.72
9	CHILE	6.68
10	TURKEY	6.67
11	ICELAND	6.59
12	ARGENTINA	6.58
13	ISRAEL	6.55
14	INDIA	6.54
15	AUSTRIA	6.53
16	SINGAPORE	6.51
17	KAZAKHSTAN	6.48
18	CHINA MAINLAND	6.48
19	LUXEMBOURG	6.45
20	USA	6.38
21	PHILIPPINES	6.36
22	SWEDEN	6.33
23	VENEZUELA	6.27
24	LATVIA	6.26
25	INDONESIA	6.25
26	THAILAND	6.25
27	QATAR	6.24
28	NETHERLANDS	6.20
29	ESTONIA	6.17
30	UNITED KINGDOM	6.04
31	CZECH REPUBLIC	6.04
32	NORWAY	5.93
33	POLAND	5.93
34	SOUTH AFRICA	5.90
35	NEW ZEALAND	5.88
36	ITALY	5.87
37	BRAZIL	5.86
38	SLOVENIA	5.79
39	GERMANY	5.76
40	FINLAND	5.69
41	MEXICO	5.65
42	JORDAN	5.59
43	CANADA	5.53
44	BELGIUM	5.52
45	UKRAINE	5.51
46	KOREA REP.	5.48
47	PERU	5.46
48	SAUDI ARABIA	5.45
49	RUSSIA	5.45
50	PORTUGAL	5.33
51	SPAIN	5.30
52	GREECE	5.14
53	CYPRUS	5.11
54	SLOVAK REPUBLIC	5.05
55	BULGARIA	4.89
56	AUSTRALIA	4.88
57	ROMANIA	4.88
58	COLOMBIA	4.86
59	FRANCE	4.73
60	JAPAN	4.61
61	HUNGARY	4.21
62	MONGOLIA	3.89
63	CROATIA	3.83

INNOVATIVE FIRMS

2014

Percentage of all medium manufacturing firms

Ranking		%	
1	CANADA	78.70	2012
2	ICELAND	67.12	2010
3	NETHERLANDS	65.83	2010
4	ITALY	64.73	2012
5	IRELAND	64.50	2012
6	AUSTRIA	63.86	2012
7	GERMANY	63.02	2012
8	BELGIUM	62.12	2012
9	PHILIPPINES	58.80	2010
10	FRANCE	57.99	2012
11	ESTONIA	57.07	2012
12	SWEDEN	56.51	2012
13	FINLAND	56.39	2012
14	NEW ZEALAND	54.55	2013
15	PORTUGAL	53.23	2012
16	ISRAEL	52.67	2012
17	LUXEMBOURG	52.44	2012
18	AUSTRALIA	52.37	2013
19	MALAYSIA	52.21	2011
20	DENMARK	51.12	2012
21	CHINA MAINLAND	50.36	
22	CZECH REPUBLIC	50.32	2012
23	SPAIN	49.13	2012
24	CYPRUS	44.62	2012
25	UNITED KINGDOM	43.33	2012
26	NORWAY	40.72	2012
27	GREECE	39.89	2012
28	JAPAN	38.02	2011
29	CROATIA	36.93	2012
30	TURKEY	34.23	2012
31	LATVIA	31.47	2012
32	KOREA REP.	31.19	2013
33	INDONESIA	30.62	2010
34	POLAND	30.43	2012
35	CHILE	30.29	2012
36	LITHUANIA	30.17	2012
37	COLOMBIA	29.08	2012
38	SLOVAK REPUBLIC	27.38	2012
39	HUNGARY	25.71	2012
40	UKRAINE	20.13	
41	KAZAKHSTAN	19.63	
42	BULGARIA	15.83	2010
43	MEXICO	12.71	2011
44	ROMANIA	9.13	2012
45	RUSSIA	8.82	2013
46	HONG KONG SAR	1.41	2013
-	ARGENTINA	-	
-	BRAZIL	-	
-	INDIA	-	
-	JORDAN	-	
-	MONGOLIA	-	
-	PERU	-	
-	QATAR	-	
-	SAUDI ARABIA	-	
-	SINGAPORE	-	
-	SLOVENIA	-	
-	SOUTH AFRICA	-	
-	SWITZERLAND	-	
-	TAIWAN	-	
-	THAILAND	-	
-	UAE	-	
-	USA	-	
-	VENEZUELA	-	

AGILITY OF COMPANIES

2017

Companies are

not agile



agile

Ranking		Survey [0..10]
1	HONG KONG SAR	7.62
2	IRELAND	7.23
3	TAIWAN	7.05
4	UAE	6.99
5	SWITZERLAND	6.96
6	LITHUANIA	6.83
7	USA	6.79
8	ICELAND	6.78
9	DENMARK	6.78
10	CHILE	6.77
11	AUSTRIA	6.75
12	NORWAY	6.60
13	LUXEMBOURG	6.55
14	SINGAPORE	6.51
15	SWEDEN	6.47
16	NETHERLANDS	6.42
17	TURKEY	6.42
18	KAZAKHSTAN	6.41
19	MALAYSIA	6.30
20	BRAZIL	6.29
21	ISRAEL	6.27
22	LATVIA	6.21
23	PHILIPPINES	6.20
24	ESTONIA	6.20
25	QATAR	6.16
26	INDIA	6.15
27	NEW ZEALAND	6.12
28	INDONESIA	6.08
29	GERMANY	6.06
30	CANADA	6.05
31	CZECH REPUBLIC	6.04
32	FINLAND	6.02
33	UNITED KINGDOM	5.98
34	KOREA REP.	5.98
35	POLAND	5.96
36	THAILAND	5.96
37	BELGIUM	5.74
38	SLOVENIA	5.71
39	CHINA MAINLAND	5.69
40	MEXICO	5.60
41	ITALY	5.59
42	PERU	5.59
43	PORTUGAL	5.45
44	SOUTH AFRICA	5.41
45	JORDAN	5.39
46	ARGENTINA	5.35
47	SPAIN	5.28
48	SAUDI ARABIA	5.20
49	UKRAINE	5.02
50	COLOMBIA	5.00
51	SLOVAK REPUBLIC	4.97
52	ROMANIA	4.96
53	CYPRUS	4.94
54	VENEZUELA	4.85
55	GREECE	4.75
56	AUSTRALIA	4.74
57	HUNGARY	4.73
58	BULGARIA	4.72
59	RUSSIA	4.62
60	FRANCE	4.61
61	MONGOLIA	4.48
62	CROATIA	3.89
63	JAPAN	3.63

USE OF BIG DATA AND ANALYTICS

2017

Companies are

not good at using big data and analytics to support decision-making



very good at using big data and analytics to support decision-making

Ranking		Survey [0..10]
1	UAE	7.06
2	QATAR	6.78
3	KAZAKHSTAN	6.74
4	ISRAEL	6.31
5	MALAYSIA	6.26
6	USA	6.21
7	TAIWAN	6.07
8	HONG KONG SAR	5.90
9	CANADA	5.81
10	JORDAN	5.69
11	NORWAY	5.61
12	FINLAND	5.57
13	SINGAPORE	5.57
14	LITHUANIA	5.55
15	DENMARK	5.53
16	SWEDEN	5.51
17	IRELAND	5.48
18	SAUDI ARABIA	5.42
19	LUXEMBOURG	5.40
20	NETHERLANDS	5.37
21	CHINA MAINLAND	5.36
22	INDIA	5.35
23	CHILE	5.32
24	SOUTH AFRICA	5.31
25	SWITZERLAND	5.30
26	ESTONIA	5.30
27	INDONESIA	5.22
28	UNITED KINGDOM	5.18
29	ICELAND	5.16
30	SLOVAK REPUBLIC	5.15
31	AUSTRIA	5.13
32	VENEZUELA	5.00
33	THAILAND	4.95
34	NEW ZEALAND	4.94
35	PHILIPPINES	4.86
36	BELGIUM	4.82
37	AUSTRALIA	4.78
38	ROMANIA	4.70
39	GERMANY	4.67
40	LATVIA	4.67
40	POLAND	4.67
42	MEXICO	4.65
43	SLOVENIA	4.64
44	ARGENTINA	4.63
45	COLOMBIA	4.61
46	RUSSIA	4.60
47	UKRAINE	4.52
48	CZECH REPUBLIC	4.30
49	FRANCE	4.27
50	ITALY	4.19
51	HUNGARY	4.12
52	TURKEY	4.04
53	GREECE	4.03
54	BRAZIL	4.00
55	PERU	3.94
56	KOREA REP.	3.90
57	PORTUGAL	3.88
58	SPAIN	3.83
59	JAPAN	3.77
60	CYPRUS	3.44
61	CROATIA	3.43
62	MONGOLIA	3.37
63	BULGARIA	3.00

KNOWLEDGE TRANSFER

2017

Knowledge transfer is

lacking between companies and universities



highly developed between companies and universities

Ranking		Survey [0..10]
1	SWITZERLAND	8.23
2	USA	7.68
3	NETHERLANDS	7.52
4	DENMARK	7.35
5	ISRAEL	7.20
6	IRELAND	7.04
7	UNITED KINGDOM	7.00
8	FINLAND	6.99
9	SINGAPORE	6.99
10	UAE	6.96
11	GERMANY	6.92
12	AUSTRIA	6.84
13	CANADA	6.79
14	SWEDEN	6.68
15	LUXEMBOURG	6.66
16	BELGIUM	6.62
17	NORWAY	6.49
18	HONG KONG SAR	6.30
19	MALAYSIA	6.28
20	TAIWAN	6.09
21	QATAR	6.07
22	ICELAND	5.86
23	KAZAKHSTAN	5.75
24	NEW ZEALAND	5.41
25	AUSTRALIA	5.33
26	FRANCE	5.25
27	CHINA MAINLAND	5.19
28	SAUDI ARABIA	5.13
29	JAPAN	5.09
30	PORTUGAL	5.09
31	ESTONIA	4.95
32	KOREA REP.	4.83
33	THAILAND	4.81
34	CHILE	4.60
35	JORDAN	4.59
36	LITHUANIA	4.55
37	INDONESIA	4.53
38	ITALY	4.51
39	ARGENTINA	4.42
40	SOUTH AFRICA	4.41
41	HUNGARY	4.38
42	POLAND	4.29
43	COLOMBIA	4.28
44	INDIA	4.25
45	MEXICO	4.17
46	SPAIN	4.17
47	SLOVENIA	4.17
48	CZECH REPUBLIC	4.16
49	CYPRUS	4.11
50	PHILIPPINES	4.06
51	LATVIA	4.00
52	SLOVAK REPUBLIC	3.97
53	TURKEY	3.93
54	ROMANIA	3.83
55	RUSSIA	3.78
56	BRAZIL	3.58
57	GREECE	3.53
58	UKRAINE	3.45
59	PERU	3.40
60	BULGARIA	3.28
61	VENEZUELA	2.58
62	CROATIA	2.49
63	MONGOLIA	2.45

E-GOVERNMENT

2016

Provision of online government services to promote access and inclusion of citizens

Ranking		index (0-1)
1	UNITED KINGDOM	0.92
2	AUSTRALIA	0.91
3	KOREA REP.	0.89
4	SINGAPORE	0.88
5	FINLAND	0.88
6	SWEDEN	0.87
7	NETHERLANDS	0.87
8	NEW ZEALAND	0.87
9	DENMARK	0.85
10	FRANCE	0.85
11	JAPAN	0.84
12	USA	0.84
13	ESTONIA	0.83
14	CANADA	0.83
15	GERMANY	0.82
16	AUSTRIA	0.82
17	SPAIN	0.81
18	NORWAY	0.81
19	BELGIUM	0.79
20	ISRAEL	0.78
21	SLOVENIA	0.78
22	ITALY	0.78
23	LITHUANIA	0.77
24	LUXEMBOURG	0.77
25	IRELAND	0.77
26	ICELAND	0.77
27	SWITZERLAND	0.75
28	UAE	0.75
29	KAZAKHSTAN	0.72
30	RUSSIA	0.72
31	POLAND	0.72
32	CROATIA	0.72
33	PORTUGAL	0.71
34	ARGENTINA	0.70
35	CHILE	0.69
36	GREECE	0.69
37	SAUDI ARABIA	0.68
38	LATVIA	0.68
39	HUNGARY	0.67
40	QATAR	0.67
41	CZECH REPUBLIC	0.65
42	BRAZIL	0.64
43	BULGARIA	0.64
44	COLOMBIA	0.62
45	MEXICO	0.62
46	MALAYSIA	0.62
47	UKRAINE	0.61
48	CHINA MAINLAND	0.61
49	CYPRUS	0.60
50	SLOVAK REPUBLIC	0.59
51	TURKEY	0.59
52	PHILIPPINES	0.58
53	ROMANIA	0.56
54	SOUTH AFRICA	0.55
55	THAILAND	0.55
56	PERU	0.54
57	MONGOLIA	0.52
58	VENEZUELA	0.51
59	JORDAN	0.51
60	INDIA	0.46
61	INDONESIA	0.45
-	HONG KONG SAR	-
-	TAIWAN	-

PUBLIC-PRIVATE PARTNERSHIPS

2017

Public and private sector ventures

are not supporting technological development



are supporting technological development

Ranking		Survey [0..10]
1	UAE	7.98
2	NETHERLANDS	7.54
3	SINGAPORE	7.27
4	ISRAEL	7.11
5	SWITZERLAND	7.09
6	NORWAY	6.97
7	LUXEMBOURG	6.95
8	MALAYSIA	6.94
9	FINLAND	6.88
10	QATAR	6.67
11	DENMARK	6.56
12	SWEDEN	6.56
13	KAZAKHSTAN	6.52
14	HONG KONG SAR	6.48
15	CHINA MAINLAND	6.47
16	CANADA	6.47
17	USA	6.46
18	TAIWAN	6.45
19	UNITED KINGDOM	6.36
20	BELGIUM	6.24
21	GERMANY	6.09
22	IRELAND	6.09
23	THAILAND	6.04
24	AUSTRALIA	5.91
25	ICELAND	5.89
26	INDIA	5.88
27	SAUDI ARABIA	5.87
28	AUSTRIA	5.78
29	KOREA REP.	5.73
30	FRANCE	5.72
31	TURKEY	5.65
32	SPAIN	5.60
33	LITHUANIA	5.59
34	INDONESIA	5.53
35	PHILIPPINES	5.52
36	JAPAN	5.45
37	SLOVAK REPUBLIC	5.38
38	CHILE	5.37
39	JORDAN	5.28
40	COLOMBIA	5.28
41	NEW ZEALAND	5.22
42	ESTONIA	5.15
43	CZECH REPUBLIC	5.10
44	PORTUGAL	5.07
45	LATVIA	4.92
46	RUSSIA	4.77
47	HUNGARY	4.72
48	SOUTH AFRICA	4.69
49	SLOVENIA	4.67
50	CYPRUS	4.67
51	MEXICO	4.62
52	GREECE	4.59
53	UKRAINE	4.55
54	POLAND	4.42
55	PERU	4.35
56	ITALY	4.28
57	BULGARIA	4.17
58	BRAZIL	4.03
59	ARGENTINA	3.95
60	ROMANIA	3.52
61	MONGOLIA	3.40
62	CROATIA	3.31
63	VENEZUELA	2.96

CYBER SECURITY

2017

Cyber security

is not being adequately addressed
by corporationsis being adequately
addressed by corporations

Ranking		Survey [0..10]
1	UAE	7.90
2	ISRAEL	7.82
3	QATAR	7.30
4	HONG KONG SAR	7.28
5	AUSTRIA	7.17
6	SINGAPORE	7.15
7	LUXEMBOURG	7.05
8	SWITZERLAND	6.77
9	ESTONIA	6.75
10	FINLAND	6.63
11	TAIWAN	6.51
12	MALAYSIA	6.41
13	SAUDI ARABIA	6.33
14	CHINA MAINLAND	6.31
15	NETHERLANDS	6.19
16	JORDAN	6.13
17	CANADA	6.00
18	SWEDEN	5.97
19	IRELAND	5.87
20	KAZAKHSTAN	5.87
21	DENMARK	5.87
22	LITHUANIA	5.86
23	FRANCE	5.84
24	GERMANY	5.79
25	BELGIUM	5.76
26	LATVIA	5.74
27	NORWAY	5.70
28	SLOVENIA	5.54
29	CHILE	5.53
30	ICELAND	5.46
31	JAPAN	5.38
32	ROMANIA	5.35
33	CZECH REPUBLIC	5.35
34	RUSSIA	5.32
35	SPAIN	5.29
36	SLOVAK REPUBLIC	5.28
37	NEW ZEALAND	5.25
38	THAILAND	5.23
39	UNITED KINGDOM	5.20
40	AUSTRALIA	5.12
41	PORTUGAL	5.09
42	USA	5.04
43	INDONESIA	4.98
44	GREECE	4.97
45	SOUTH AFRICA	4.93
46	ITALY	4.92
47	INDIA	4.88
48	CROATIA	4.79
49	KOREA REP.	4.74
50	ARGENTINA	4.58
51	CYPRUS	4.57
52	HUNGARY	4.56
53	TURKEY	4.54
54	POLAND	4.53
55	COLOMBIA	4.47
56	PHILIPPINES	4.29
57	BRAZIL	4.28
58	BULGARIA	4.06
59	MEXICO	3.96
60	PERU	3.94
61	UKRAINE	2.90
62	MONGOLIA	2.42
63	VENEZUELA	2.36

SOFTWARE PIRACY

2015

% of unlicensed software installation

Ranking		%
1	USA	17
2	JAPAN	18
2	NEW ZEALAND	18
4	LUXEMBOURG	19
5	AUSTRALIA	20
6	AUSTRIA	21
6	SWEDEN	21
8	DENMARK	22
8	GERMANY	22
8	UNITED KINGDOM	22
11	BELGIUM	23
11	NORWAY	23
11	SWITZERLAND	23
14	CANADA	24
14	FINLAND	24
14	NETHERLANDS	24
17	ISRAEL	29
18	SINGAPORE	30
19	IRELAND	32
20	CZECH REPUBLIC	33
20	SOUTH AFRICA	33
22	FRANCE	34
22	UAE	34
24	KOREA REP.	35
25	SLOVAK REPUBLIC	36
25	TAIWAN	36
27	HUNGARY	38
28	PORTUGAL	39
29	HONG KONG SAR	41
30	ESTONIA	42
31	SLOVENIA	43
32	SPAIN	44
33	CYPRUS	45
33	ITALY	45
35	ICELAND	46
36	BRAZIL	47
37	POLAND	48
37	QATAR	48
39	LATVIA	49
39	SAUDI ARABIA	49
41	COLOMBIA	50
42	CROATIA	51
42	LITHUANIA	51
44	MEXICO	52
45	MALAYSIA	53
46	JORDAN	56
47	CHILE	57
48	INDIA	58
48	TURKEY	58
50	BULGARIA	60
50	ROMANIA	60
52	GREECE	63
52	PERU	63
54	RUSSIA	64
55	PHILIPPINES	67
56	ARGENTINA	69
56	THAILAND	69
58	CHINA MAINLAND	70
59	KAZAKHSTAN	73
60	UKRAINE	82
61	INDONESIA	84
62	VENEZUELA	88
-	MONGOLIA	-

Background Criteria

Exchange Rate

National currency per US\$ (average)							
	2011	2012	2013	2014	2015	2016	
1 ARGENTINA	4.110	4.537	5.459	8.075	9.233	14.758	
2 AUSTRALIA	0.969	0.966	1.036	1.109	1.331	1.345	
3 AUSTRIA	0.719	0.778	0.753	0.754	0.902	0.904	
4 BELGIUM	0.719	0.778	0.753	0.754	0.902	0.904	
5 BRAZIL	1.673	1.953	2.156	2.353	3.327	3.489	
6 BULGARIA	1.406	1.522	1.474	1.474	1.764	1.768	
7 CANADA	0.990	0.999	1.030	1.106	1.279	1.325	
8 CHILE	483.668	486.471	495.273	570.348	654.124	676.958	
9 CHINA MAINLAND	6.461	6.312	6.196	6.143	6.227	6.644	
10 COLOMBIA	1.848	1.797	1.869	2.002	2.742	3.054	
11 CROATIA	5.344	5.850	5.705	5.748	6.858	6.806	
12 CYPRUS	0.719	0.778	0.753	0.754	0.902	0.904	
13 CZECH REPUBLIC	17.696	19.578	19.571	20.758	24.599	24.440	
14 DENMARK	5.369	5.792	5.616	5.612	6.728	6.732	
15 ESTONIA	0.719	0.778	0.753	0.754	0.902	0.904	
16 FINLAND	0.719	0.778	0.753	0.754	0.902	0.904	
17 FRANCE	0.719	0.778	0.753	0.754	0.902	0.904	
18 GERMANY	0.719	0.778	0.753	0.754	0.902	0.904	
19 GREECE	0.719	0.778	0.753	0.754	0.902	0.904	
20 HONG KONG SAR	7.784	7.756	7.756	7.754	7.752	7.762	
21 HUNGARY	201.055	225.104	223.695	232.602	279.333	281.523	
22 ICELAND	115.954	125.083	122.179	116.767	131.919	120.812	
23 INDIA	46.670	53.437	58.598	61.030	64.152	67.195	
24 INDONESIA	8.770	9.387	10.461	11.865	13.389	13.308	
25 IRELAND	0.719	0.778	0.753	0.754	0.902	0.904	
26 ISRAEL	3.578	3.856	3.611	3.578	3.887	3.841	
27 ITALY	0.719	0.778	0.753	0.754	0.902	0.904	
28 JAPAN	0.080	0.080	0.098	0.106	0.121	0.109	
29 JORDAN	0.710	0.710	0.710	0.710	0.710	0.710	
30 KAZAKHSTAN	146.621	149.113	152.129	179.192	221.728	342.160	
31 KOREA REP.	1.108	1.126	1.095	1.053	1.131	1.160	
32 LATVIA	0.501	0.547	0.529	0.754	0.902	0.904	
33 LITHUANIA	2.481	2.686	2.601	2.600	0.902	0.904	
34 LUXEMBOURG	0.719	0.778	0.753	0.754	0.902	0.904	
35 MALAYSIA	3.060	3.089	3.151	3.273	3.906	4.148	
36 MEXICO	12.423	13.169	12.772	13.292	15.848	18.664	
37 MONGOLIA	1,265.516	1,357.580	1,523.928	1,817.939	1,970.309	2,140.291	
38 NETHERLANDS	0.719	0.778	0.753	0.754	0.902	0.904	
39 NEW ZEALAND	1.266	1.234	1.219	1.205	1.434	1.437	
40 NORWAY	5.605	5.818	5.875	6.302	8.064	8.400	
41 PERU	2.754	2.638	2.702	2.839	3.184	3.375	
42 PHILIPPINES	43.313	42.229	42.446	44.395	45.503	47.492	
43 POLAND	2.963	3.257	3.161	3.155	3.770	3.943	
44 PORTUGAL	0.719	0.778	0.753	0.754	0.902	0.904	
45 QATAR	3.640	3.640	3.640	3.640	3.640	3.640	
46 ROMANIA	3.049	3.468	3.328	3.349	4.006	4.079	
47 RUSSIA	29.382	30.840	31.837	38.378	60.938	67.056	
48 SAUDI ARABIA	3.750	3.750	3.750	3.750	3.750	3.750	
49 SINGAPORE	1.258	1.250	1.251	1.267	1.375	1.382	
50 SLOVAK REPUBLIC	0.719	0.778	0.753	0.754	0.902	0.904	
51 SLOVENIA	0.719	0.778	0.753	0.754	0.902	0.904	
52 SOUTH AFRICA	7.261	8.210	9.655	10.853	12.759	14.710	
53 SPAIN	0.719	0.778	0.753	0.754	0.902	0.904	
54 SWEDEN	6.494	6.775	6.514	6.861	8.435	8.562	
55 SWITZERLAND	0.888	0.938	0.927	0.916	0.962	0.985	
56 TAIWAN	29.464	29.614	29.770	30.368	31.898	32.318	
57 THAILAND	30.492	31.083	30.726	32.480	34.248	35.296	
58 TURKEY	1.675	1.796	1.904	2.189	2.720	3.020	
59 UAE	3.673	3.673	3.673	3.673	3.673	3.673	
60 UKRAINE	7.968	7.991	7.993	11.887	21.845	25.551	
61 UNITED KINGDOM	0.624	0.633	0.640	0.608	0.655	0.741	
62 USA	1.000	1.000	1.000	1.000	1.000	1.000	
63 VENEZUELA	4.063	4.934	9.849	14.079	23.166	98.179	

POPULATION - MARKET SIZE

2016

Estimates in millions



Ranking		millions
1	CHINA MAINLAND	1,382.71
2	INDIA	1,308.76
3	USA	324.22
4	INDONESIA	258.71
5	BRAZIL	210.75
6	RUSSIA	146.50
7	JAPAN	126.92
8	MEXICO	122.75
9	PHILIPPINES	103.24
10	GERMANY	82.24
11	TURKEY	79.81
12	FRANCE	66.73
13	THAILAND	65.32
14	UNITED KINGDOM	65.21
15	ITALY	60.67
16	SOUTH AFRICA	55.91
17	KOREA REP.	51.25
18	COLOMBIA	48.75
19	SPAIN	46.47
20	ARGENTINA	43.59
21	UKRAINE	42.67
22	POLAND	38.43
23	CANADA	36.20
24	SAUDI ARABIA	31.74
25	MALAYSIA	31.70
26	PERU	31.49
27	VENEZUELA	31.00
28	AUSTRALIA	24.13
29	TAIWAN	23.54
30	ROMANIA	19.76
31	CHILE	18.19
32	KAZAKHSTAN	17.71
33	NETHERLANDS	17.03
34	BELGIUM	11.32
35	GREECE	10.82
36	CZECH REPUBLIC	10.57
37	PORTUGAL	10.31
38	SWEDEN	9.94
39	HUNGARY	9.83
40	JORDAN	9.68
41	UAE	9.27
42	AUSTRIA	8.74
43	ISRAEL	8.63
44	SWITZERLAND	8.33
45	HONG KONG SAR	7.34
46	BULGARIA	7.15
47	DENMARK	5.71
48	SINGAPORE	5.61
49	FINLAND	5.50
50	SLOVAK REPUBLIC	5.43
51	NORWAY	5.26
52	IRELAND	4.76
53	NEW ZEALAND	4.65
54	CROATIA	4.17
55	MONGOLIA	3.12
56	LITHUANIA	2.85
57	QATAR	2.62
58	SLOVENIA	2.06
59	LATVIA	1.97
60	ESTONIA	1.32
61	CYPRUS	0.82
62	LUXEMBOURG	0.58
63	ICELAND	0.34

GDP PER CAPITA

2016

US\$ per capita



Ranking		US\$
1	LUXEMBOURG	104,076
2	SWITZERLAND	79,255
3	NORWAY	70,406
4	IRELAND	61,752
5	QATAR	59,868
6	ICELAND	59,312
7	USA	57,262
8	DENMARK	53,644
9	SINGAPORE	52,961
10	AUSTRALIA	52,152
11	SWEDEN	51,459
12	NETHERLANDS	45,275
13	AUSTRIA	44,237
14	HONG KONG SAR	43,706
15	FINLAND	43,028
16	CANADA	42,242
17	GERMANY	42,138
18	BELGIUM	41,233
19	UNITED KINGDOM	40,170
20	NEW ZEALAND	39,057
21	JAPAN	38,911
22	UAE	37,633
23	FRANCE	36,889
24	ISRAEL	36,884
25	ITALY	30,495
26	KOREA REP.	27,539
27	SPAIN	26,515
28	CYPRUS	24,081
29	TAIWAN	22,492
30	SLOVENIA	21,311
31	SAUDI ARABIA	20,150
32	PORTUGAL	19,859
33	CZECH REPUBLIC	18,252
34	GREECE	17,988
35	ESTONIA	17,582
36	SLOVAK REPUBLIC	16,505
37	LITHUANIA	14,997
38	LATVIA	14,055
39	CHILE	13,579
40	HUNGARY	12,649
41	ARGENTINA	12,523
42	POLAND	12,225
43	CROATIA	12,090
44	TURKEY	10,747
45	ROMANIA	9,420
46	MALAYSIA	9,349
47	VENEZUELA	9,267
48	RUSSIA	8,742
49	BRAZIL	8,523
50	MEXICO	8,522
51	CHINA MAINLAND	8,099
52	KAZAKHSTAN	7,547
53	BULGARIA	7,325
54	THAILAND	6,228
55	PERU	6,198
56	COLOMBIA	5,794
57	SOUTH AFRICA	5,273
58	JORDAN	3,994
59	INDONESIA	3,604
60	MONGOLIA	3,577
61	PHILIPPINES	2,947
62	UKRAINE	2,186
63	INDIA	1,734

The following organizations have supplied their most currently available statistical data for the World Competitiveness Yearbook. This has enabled us to provide the most up-to-date and accurate data for this edition. We would like to thank them for their generous cooperation and their kind permission to reproduce their statistical material.

International and Regional Organizations

Eurostat, Luxembourg:
<http://ec.europa.eu/eurostat>
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Food and Agriculture Organization of the UN, Rome, Italy:
www.fao.org

International Civil Aviation Organization (ICAO), Montreal, Canada:
Traffic (Commercial Air Carriers)

International Energy Agency (IEA), Paris, France:
IEA Statistics Online: World Energy Balances © OECD/IEA
Renewable Statistics

International Labour Office (ILO), Geneva, Switzerland:
<http://laborsta.ilo.org>

International Monetary Fund (IMF), Washington, USA:
Government Finance Statistics Yearbook
International Financial Statistics, IMF eLIBRARY-DATA
World Economic Outlook Database

International Road Federation (IRF), Geneva, Switzerland:
www.irfnet.org
World Road Statistics

International Union of Railways, Paris, France:
International Railways Statistics

Organization for Economic Cooperation and Development (OECD), Paris, France:
OECD, Main Economic Indicators - complete database
Consumption Tax Trends
Education at a Glance
Energy Prices and Taxes (International Energy Agency)
Environmental Data
Unit labor costs database
Main Science and Technology Indicators
PISA
Revenue Statistics

United Nations, New York, USA and Geneva, Switzerland:
Comtrade - International Merchandise Trade Statistics
Energy Statistics Yearbook
Human Development Report (UNDP)
UN Demographic Database
World Investment Database UNCTADSTAT

United Nations Educational, Scientific and Cultural Organization (UNESCO), Montreal, Canada:
Global Education Digest
www.unesco.org

World Bank, Washington DC, USA:
World Development Indicators Database
Development Data Group – <http://databank.worldbank.org>
Doing Business

World Health Organization, Geneva, Switzerland:
World Health Statistics
www.who.org

World Intellectual Property Organization (WIPO), Geneva, Switzerland:
WIPO Statistics Database
www.wipo.int/ipstats

World Tourism Organization, Madrid, Spain:
Tourism Highlights

World Trade Organization, Geneva, Switzerland:
World Trade Organization Statistics Database
World Tariff Profiles
www.wto.org

National Sources

The information has been collected by our Partner Institutes in their respective countries, from the following sources:

Argentina: Economic Development and Institutions Research Program, Faculty of Economic Sciences, Catholic University of Argentina, Buenos Aires
Central Bank of the Argentine Republic, Ministry of Economy, Statistics and Census National Institute (INDEC).

Australia: CEDA - Committee for Economic Development of Australia, Melbourne
ABS Quarterly and Annual National Accounts, RBA Bulletin, ABS Labour Force Statistics, ABS employee earnings, ABS Demographic Statistics, AIHW Health Expenditure Australia, Reserve Bank of Australia.

Austria: Federation of Austrian Industries, Vienna; Austrian Institute of Economic Research, Vienna
Statistics Austria, Economic Bulletin, Austrian National Bank, WIFO, Ministry of Finance, BMF, Austrian Institute of Economic Research.

Belgium: FEB - Federation of Enterprises in Belgium, Brussels
National Bank of Belgium (NBB), Institute for National Accounts (INA), Ministry of Economic Affairs, Federal Planning Bureau, Statbel.

Brazil: Fundação Dom Cabral, Innovation and Entrepreneurship Center
Brazilian Central Bank, Brazilian Geographic and Statistics Institute (IBGE), National Treasury, IPEA, Ministry of Finance, Ministry of Tourism, Ministry of Labour and Employment, National Department for Infrastructure and Transport, Focus, PNAD, IBGE.

Bulgaria: Center for the Study of Democracy, Sofia
National Bank of Bulgaria (BNB), NSI Statistical Institute, Ministry of Finance, National Budget, European Commission.

Chile: Universidad de Chile, Facultad de Economía y Negocios
Central Bank of Chile, National Statistical Institute (INE), Dipres, National Science and Technology Commission (CONICYT), IPSA Santiago.

China Mainland: China Institute for Development Planning, Tsinghua University
China Statistical Yearbook, National Debt Association of China, State Administration of Foreign Exchange, National Bureau of Statistics, Ministry of Finance, Shanghai Stock Exchange, Ministry of Science and Technology, Ministry of Education, ADO, WEO.

Colombia: National Planning Department, Bogota
Direction of Economic Studies (DNP), DANE, National Central Bank, National Planning Department, National Statistics Department, Ministry of Education, Ministry for Economic Development, OCYT.

Croatia: National Competitiveness Council, Zagreb
Croatian National Bank, Central Bureau of Statistics, Ministry of Finance, Croatian Employment Service, Zagreb Stock Exchange, Ministry of Health and Social Service, Croatia Chamber of Commerce, Ministry of Science, Education and Sport, Institute of Economics, NCC.

Cyprus: Economics Research Centre, University of Cyprus
Statistical Services of Cyprus, Ministry of Finance, Public Debt Management Office, Tax Department, Labour Force Survey, Transport Statistics.

Czech Republic: CERGE-EI, Prague
Czech National Bank, Czech Statistical Office, Ministry of Finance, Prague Stock Exchange, ARAD, Ministry of Transport.

Denmark: Confederation of Danish Industries (DI)
Statistics Denmark, National Bank, Central Bank of Denmark, Danish Ministry of Children and Education, Danish National Labour Market Authority.

Estonia: Estonian Institute of Economic Research, Tallinn
Statistic Estonia (SE), Estonian Bank (EB), Ministry of Finance, Ministry of Education Research, Labor Inspectorate, Citizenship and Migration Board, Ministry of Social Affairs, Estonian Energy, Tallinn Stock Exchange, Estonian Environment Centre, Ober Haus.

Finland: ETLA, The Research Institute of the Finnish Economy, Helsinki
Bank of Finland, Statistics Finland, National Accounts, Customs Foreign Trade,

France: Business France, Paris
INSEE-DGTPE, OECD Economic Perspectives, Bank of France, Customs Authorities, Agence France Trésor.

Greece: Federation of Industries of Northern Greece, (FING), Thessaloniki; Foundation for Economic and Industrial Research (FEIR/IOBE), Athens
Hellenic Statistical Authority (ELSTAT), Bank of Greece, Ministry of Economy, Labor Force Survey, Ministry of Environment, Ministry of Finance, Athens Stock Exchange.

Hong Kong SAR: Hong Kong Trade Development Council
Census and Statistics Department, Economic Analysis Division, EABFU, Financial Secretary's Office, The Treasury Branch, Hong Kong Monetary Authority, Labour Department, Planning Department, Hong Kong Exchanges and Clearing Ltd, Highways Department, Transport Department, Food and Health Bureau, Hong Kong Medical Council, Department of Health, Environmental Protection Department, Education Bureau.

Hungary: ICEG European Center, Budapest
Central Statistical Office, Hungarian National Bank, Government Debt Management Agency, National Tax and Customs Agency, Hungarian Financial Supervisory Authority, Budapest Stock Exchange.

Iceland: Icelandic Chamber of Commerce, Reykjavik
Statistics Iceland, Central Bank of Iceland, Ministry of Finance, Leigulistinn, Landsvirkjun.

India: National Productivity Council, New Delhi
Central Statistical Office, Economic Survey of India, Economic Census of India, Centre for Monitoring Indian Economy Monthly Review, Reserve Bank of India, Annual Survey of Industries, NSSO, Ministries of Finance, Power, Human Resource Development, and Labour & Employment, Departments of Education, Industrial Policy & Promotion, Science & Technology, Delhi Electricity Regulation Commission, MOSPL.

Indonesia: Lembaga Management FEB-UI, Jakarta; NuPMK Consulting, Jakarta
Bank of Indonesia, Central Board of Statistics, Ministry of Finance, Ministry of Education, National Budget, Department of Manpower, Indonesian Financial Statistics.

Ireland: IDA Ireland, Investment and Development Agency, Dublin
Central Bank of Ireland, Central Statistics Office, ESRI Quarterly Bulletin, National Treasury Management Agency, CSI Quarterly National Household Survey, Department of Finance, Irish Stock Exchange, Department of Education.

Israel: The Federation of Israeli Chambers of Commerce, Tel-Aviv
Bank of Israel, Ministry of Finance, Central Bureau of Statistics, Ministry of Health.

Italy: CONFINDUSTRIA, Economic Research Department, Rome
Bank of Italy, ISTAT National Accounts and Labour Force Survey, Ministry of Education.

Japan: Mitsubishi Research Institute, Inc., Tokyo
Statistical Bureau Japanese Government, Bank of Japan, Economic and Social Research Institute, Ministry of Finance, Ministry of Public Management, Nikkei Stock Exchange, Research Center for Policy and Economy.

Jordan: Ministry of Planning and International Cooperation, Amman
Central Bank of Jordan, Department of Statistics, Ministry of Finance, Ministry of Labor, Ministry of Tourism, Higher Council for Science and Technology, Ministry of Energy and Mineral Resources, Ministry of Health, National Center for Human Resources Development, Social Security Corporation.

Kazakhstan: JSC Economic Research Institute of the Ministry of National Economy, Astana
National Bank, Agency of Statistics, Ministry of Finance, Ministry of Labor and Social Protection, Committee of Intellectual Property Rights of the Ministry of Justice, Ministry of economic Development and Trade.

Korea Rep.: Korea Institute for International Economic Policy (KIEP)
Bank of Korea, Statistics Korea, Ministry of Strategy and Finance, National Tax Service, Ministry of Labor, Ministry of Justice, Ministry of Land, Transport and Maritime Affairs, Ministry of Trade, Industry and Energy, Ministry of Education, Science and Technology.

Latvia: University of Latvia Centre for European and Transition Studies, LU CETS, Riga
CBS Latvia, 2016 Prognosis MoE, Bank of Latvia, Central Statistical Bureau of Latvia, The Treasury, State Revenue Service, State Social Insurance Agency, Ministry of Finance.

Lithuania: Enterprise Lithuania, Vilnius
Bank of Lithuania, Lithuanian Department of Statistics, Ministry of Finance, Ministry of Social Security and Labour, Lithuanian Health Information Centre, Ministry of Environment.

Luxembourg: Chamber of Commerce of the Grand Duchy of Luxembourg
Central Bank, "Service Central de la Statistique et des Etudes Economiques" (STATEC), "Comité de Prévision" IGSS, Luxembourg State Budget, Luxembourg Stock Exchange, Ministry of Finance, Ministry of Environment.

Malaysia: Malaysia Productivity Corporation (MPC), Petaling Jaya, Selangor
Central Bank of Malaysia, Department of Statistics, Employees Provident Funds, Inland Revenue Board, Ministries of Education, of Finance, of Science Technology & Innovation, of Human Resources, of Health, of Energy, Green Technology and Water, Solid Waste And Public Cleansing Management Corporation, Malaysian Science & Technology Information Centre, Department of Immigration, Malaysian Stock Exchange, Ministry of Domestic Trade, Co-operative and Consumerism, MPC, JPPH, LHDN, MOHE, KPDNKK.

Mexico: Strategic Studies Center for Competitiveness, Saltillo
Bank of Mexico, Instituto Nacional de Estadística Geografía e informática (INEGI), Secretaría de Hacienda y Crédito Público (SHCP).

Mongolia: Economic Policy and Competitiveness Research Center, Ulaanbaatar
NRSO Bulletin, NRSO Labor Force Survey, National Employment Service, Ministry of Labor, Ministry of Finance, Bank of Mongolia, Mongolian Tax Administration, Information, Communications Technology and Post Authority, Center for Health Development, Ministry of Environment, Green Development and Tourism, Population and Housing Census.

Netherlands: Confederation of Netherlands Industry and Employers (VNO-NCW), The Hague
CBS Quarterly National Accounts, CPB Economic Outlook, Ministry of Finance, CBS Population and Population Dynamics.

New Zealand: Kerridge & Partners, Auckland
Census, Kiwirails, Education Stats of NZ, NZ GDP Report, NZ treasury department, CJ CTS/National police, nat. road Statistics

Norway:
Central Bank of Norway, Statistics Norway Economic Survey, National Accounts, Ministry of Finance, Statbank.

Peru: CENTRUM Católica Graduate Business School, Lima
 Central Reserve Bank of Peru (BCRP), Ministry of Labour (MINTRA), National Institute of Statistics and Information (INEI), National Superintendency of Tax Administration (SUNAT), Peruvian Congress, Peruvian Banking Association (Asbanc), Superintendency of Banking, Insurance and Private Pension Funds (SBS), Lima Stock Exchange (BVL), Ministry of Agriculture (MINAG), National Sanitation Services Supervisory (SUNASS), Ministry of Economy and Finance (MEF).

Philippines: Asian Institute of Management, Rizalino S. Navarro Policy Center for Competitiveness, Makati City
 National Statistical Coordination Board, Central Bank, National Economic and Development Authority, National Statistics Office, Bureau of Treasury, Bureau of Internal Revenue, Department of Finance, Bureau of Labor and Employment, Department of Transportation and Communications, Department of Energy, Professional Regulation Commission, Department of Science and Technology, ADO.

Poland: Warsaw School of Economics, Warsaw
 Central Statistical Office of Poland, Central Bank of Poland, CSO Statistical Bulletin, Statistical Yearbook of the Republic of Poland, Ministry of Finance, Ministry of Infrastructure.

Portugal: Porto Business School, University of Porto, Porto
 Quarterly National Accounts INE, Statistical Yearbook, State Budget, Labor Force Survey, Ministry of the Economy, Ministry of Finance, Bank of Portugal,

Qatar: Ministry of Development Planning and Statistics, Department of Environmental and Economic Development Planning, Doha
 Qatar Central Bank (QCB), Qatar Statistical Authority (QSA), Labour Force Sample Survey, Ministry of Economy and Finance, General Secretariat of Development Planning, Household Expenditure and Income Survey, Annual Statistical Abstract, Council of Ministries, The Planning Council.

Romania: CIT-IRECSON Center of Technological Information, Bucharest
 Center of Technological Information National Institute of Statistics, National Forecast Commission, Central Budget, Central Bank.

Russia: Moscow Business School
 Central Bank of Russia, Federal State Statistical Service, Ministry of Finance, SDDS, Roskazna, RSY.

Saudi Arabia: SAGIA, Saudi Arabian General Investment Authority, Riyadh
 Saudi Arabia Monetary Authority, CDSI, Labour Force Survey, Bank Saudi Fransi, Ministry of Energy, Industry and Mining, Department of Zakat and Income, Ministry of Finance, GOSI, MODON, National Water Company.

Singapore: Economics Division, Ministry of Trade and Industry, Singapore
 Monetary Authority of Singapore, Singapore Department of Statistics, Ministry of Trade and Industry, Singapore Exchange, Agency for Science, Technology and Research, Ministry of Education, Ministry of Finance, Ministry of Manpower, Public Services Division, Land Transport Authority.

Slovak Republic: The F.A Hayek Foundation, Bratislava
 National Bank of Slovakia, Statistical Office of the Slovak Republic, Trend Analyses from ref. Banks, Ministry of Finance, Ministry of Economy, UPSVAR.

Slovenia: Institute for Economic Research, Ljubljana
 Bank of Slovenia, IMAD, ERBD forecasts, Statistical Yearbook, Ministry of Finance, Management Research, Ljubljana Stock Exchange, Institute of Public Health, Statistical Office of the Slovenia Republic.

South Africa: Productivity SA, Midrand
 South African Reserve Bank Bulletin, Statistics South Africa, South Africa Treasury, Budget Ministry of Finance, Department of Labor, Labour Force Survey, Human Sciences Research Council, QLF survey.

Spain: Spanish Confederation of Employers, Madrid
 National Statistics Institute (INE), Ministry of Economy, Bank of Spain, Balance of Payments, CEOE; Ministry of Education.

Taiwan: National Development Council, Taipei
 Central Bank of the Republic of China, DGBAS Quarterly National Economic Trends, DGBAS Monthly Bulletin of Manpower Statistics, National Treasury Agency, Council of Labor Affairs, Intellectual Property Office, Ministries of Finance, Education, Transportation and Communications and Interior, Manpower Planning Department, Department of Health, National Science Council, Bureau of Energy, Statistics of Taiwan Paper Industry, Construction and Planning Administration.

Thailand: Thailand Management Association (TMA), Bangkok
 The National Economic and Social Board, National Statistical Office, Bank of Thailand, Ministry of Finance, Fiscal Policy Office, Labour Force Statistics, Labor Stand. Dev. Bureau, Department of Employment, Ministry of Transport, Alien Occupation Control Division, NSTDA, Securities and Exchange Commission.

Turkey: Turkish Industrialists' and Businessmen's Association (TUSIAD), Istanbul
 Central Bank of Republic of Turkey, State Institute of Statistics, Turkish Statistical Institute - TURKSTAT, State Planning Organization, Undersecretariat of Treasury, Ministry of Education, Ministry of Finance, Ministry of Labor and Social Security, The Bank Association of Turkey.

United Arab Emirates: Federal Competitiveness & Statistics Authority (FCSA), Dubai
 Central Bureau of Statistics, National Bureau of Statistics, Ministry of Economy, Ministry of Finance, Ministry of Labor, Ministry of Higher Education and Scientific Research, National Foundation on R&D.

Ukraine: International Management Institute (MIM-Kyiv)
 National Bank of Ukraine, National Accounts, Ministry of Economy, Balance of Payments, Statistical Yearbook, Ukrainian State Committee on Statistics, Ministry of Finance.

Venezuela: National Council for Investment Promotion (CONAPRI)
 Central Bank of Venezuela, National Statistics Institute, Ministry of Finance, Ministry of Planning, Ministry of Science, Technology and Intermediate Industries.

Other Institutions

Akamai
State of the Internet Report

BMI Research
A Fitch Group Company

BSA
Global Software Survey

Computer Industry Almanac Inc., Arlington Heights, USA:
www.c-i-a.com

Cushman & Wakefield
Office Space Across the World Report

Educational Testing Service (The TOEFL® Test), Princeton, USA

Euromoney Country Risk Ratings, London, UK:
www.euromoneycountryrisk.com

Euromonitor International, London, UK:
Passport GMID

Global Footprint Network, Oakland, USA:
www.footprintnetwork.org

GMI Ratings, New York, USA:
www.gmiratings.com

HCM Compensation Insights & Technology AG, Geneva, Switzerland:
CCT-ProSurvey™

Institutional Investor Magazine, International Edition, New York, USA
Country Credit Rating

MERCER HR Consulting, Geneva, Switzerland:
www.mercerHR.com

National Science Foundation, Arlington, USA:
Science and Engineering Indicators
www.nsf.gov

The Nobel Foundation, Stockholm, Sweden

PriceWaterhouseCoopers SA, Lausanne and Basel, Switzerland:
Resource Tax Manager

The Nobel Foundation, Stockholm, Sweden

Thomson Reuters, London, England:
Thomson One Banker

Union Bank of Switzerland, Zurich, Switzerland:
Prices and Earnings

US Department of Agriculture, Washington DC, USA

The World Justice Project
Rule of Law Index

Notes and Sources by Criteria

Standard notes used in the data tables

When statistical data is not available or is too out-dated to be relevant for a particular economy, the name appears at the bottom of the statistical table and a dash is shown. When the data is older than the reference year, the year of the data is shown next to the criterion value.

Exchange Rate	As most data are expressed in U.S. dollars, you will find the exchange rates used at the beginning of the Statistical Tables. the sources for the Exchange Rates are International Financial Statistics Online March 2017 (IMF) and national sources.
Per capita	For all information presented “per capita” the sources for the population are Passport GMID (Euromonitor) and national sources.
% of GDP	For all information presented as a “percentage of GDP” the sources for GDP are the OECD Main Economic Indicators April 2017 and national sources.

Factor 1: Knowledge 1.1 Talent

1.1.1 Educational assessment PISA - Math
PISA 2015 (OECD)
<http://www.oecd.org/pisa/>

The OECD's Programme for International Student Assessment (PISA) is a regular survey of 15-year olds which assesses aspects of their preparedness for adult life. Mathematical literacy: an individual's capacity to identify and understand the role that mathematics plays in the world, to make well-founded judgments and to use and engage with mathematics in ways that meet the needs of that individual's life as a constructive, concerned and reflective citizen. Scientific literacy: an individual's scientific knowledge and use of that knowledge to identify questions, to acquire new knowledge, to explain scientific phenomena, and to draw evidence based conclusions about science-related issues, understanding of the characteristic features of science as a form of human knowledge and enquiry, awareness of how science and technology shape our material, intellectual, and cultural environments, and willingness to engage in science-related issues, and with the ideas of science, as a reflective citizen.

1.1.6 Net flow of international students
Global Education Digest 2015 - Comparing Education Statistics Across the World (UNESCO)
<http://www.uis.unesco.org/publications/GED2012>
UNESCO <http://stats.uis.unesco.org>

Net flow of internationally mobile students (inbound from abroad studying in a given country minus outbound from a given country), both sexes, in tertiary education. Data can refer to the school or financial year prior or after the reference year.

1.2 Training & education

1.2.2 Total public expenditure on education
UNESCO <http://stats.uis.unesco.org>
Eurostat April 2017
National sources

Philippines: 2013 figure is based on the Department of Education's budget; 2015 figure includes allocations made by Commission of Higher Education and Department of Science and Technology. Jordan and Chile: Budgetary central government.

1.2.3 Higher education achievement
OECD Education at a Glance 2016
National sources

Percentage of the population aged 25-34 that has attained tertiary-type B and tertiary-type A and advance research programs. Tertiary-type A education covers more theoretical programs that give access to advanced research programs and to professions with high general skills requirements. Tertiary-type B education covers more practical or occupationally specific programs that provide participants with a qualification of immediate relevance to the labor market. New-Zealand and Slovenia: break in series. Singapore: proportion of resident non-students aged 25-34 years with polytechnic, professional qualification or other diploma, or university qualification. Japan: Data for short-cycle tertiary education and total tertiary education include post-secondary non-tertiary programmes (less than 5% of the adults are under this group).

1.2.4 Pupil-teacher ratio (tertiary education)
UNESCO <http://stats.uis.unesco.org>
OECD Education at a Glance 2016
National sources

Average number of pupils per teacher at a given level of education, based on headcounts of both pupils and teachers. Tertiary education (ISCED levels 5 to 8). Tertiary education builds on secondary education, providing learning activities in specialised fields of education. It aims at learning at a high level of complexity and specialisation. Tertiary education includes what is commonly understood as academic education but also includes advanced vocational or professional education.

1.2.5 Graduates in Sciences
OECD Education at a Glance
UNESCO

Share of graduates in Natural Sciences; Mathematics and Statistics; Computing, Information and Communication technologies. In tertiary education (ISCED2011 levels 5 to 8), both sexes (%)

1.2.6 Women with degrees
UNESCO

Percentage of graduates (a person who, during the reference school or academic year, has successfully completed an education programme) from tertiary ISCED 5, 6, 7 and 8 programmes who are female. Israel: ISCED levels 6 and 7 only up to 2012, av. of levels 6-8 in 2014. Russia: ISCED levels 6 and 7 only.

1.3 Scientific concentration

1.3.1 Total expenditure on R&D (%)
OECD Main Science and Technology Indicators 2/2016
UNESCO <http://stats.uis.unesco.org>
National sources

National estimates, projections or provisional data for the most recent year. Chile, Denmark, France, Japan, Korea, Netherlands, Portugal, Slovenia, Spain and Sweden: break in series. Hungary (up to 2003), Israel: defense excluded (all or mostly). Indonesia: Estimate based on target GERD by the Ministry of Science and Technology. Sweden: underestimated or based on underestimated data. USA: excludes most or all capital expenditure.

1.3.2 Total R&D personnel per capita
OECD Main Science and Technology Indicators 2/2016
UNESCO <http://stats.uis.unesco.org>
National sources

National estimates, projections or provisional data for most recent year. Czech Republic, Colombia, Denmark, Finland, Korea, Mexico, Netherlands, Hungary, Japan, Portugal, Slovenia, Sweden and Taiwan: break in series. United Kingdom: underestimated or based on underestimated data. Jordan, Philippines: based on headcount, not FTE.

1.3.3 Female researchers
UNESCO

Female researchers (headcount) who are mainly or partially employed in R&D. This includes staff employed both full-time and part-time. Expressed as a percentage of the total workforce (male + female)

1.3.4 R&D productivity by publication
NSF Science & Engineering Indicators 2016
Courtesy: National Science Foundation
National sources

The indicator is calculated as a ratio between the number of scientific articles by author's origin and the total expenditure in R&D as % GDP, which clearly include the input costs to produce research (e.g. researchers' salaries, equipment etc.). The result gives therefore the number of scientific articles published every year for a one percent (of GDP) expenditure in R&D activities. This measure can be considered as a proxy to assess the efficiency (or productivity) in producing high-level scientific research at country level.

1.3.5 Scientific and technical employment
Business Monitor International
Eurostat

Scientific and technical employment as a % of total employment. Defined as formal employment within the 'scientific and technical' sector. For more information, refer to NACE2 category M (or equivalent).

1.3.6 High-tech patent grants
WIPO Statistics Database
<http://www.wipo.int/ipstats/en/statistics/patents/>
TIPO for Taiwan

High-Tech patent grants as a percentage of total patent grants (Direct and PCT national phase entries) by applicant's origin. Three year average to reduce volatility. Counts are based on the grant date. Country of origin refers to the country of residency of the first-named applicant in the application. Taiwan: data compiled by TIPO using data supplied by international patent offices (USPTO, JPO, EPO, KIPO, SIPO).

Factor 2: Technology
2.1 Regulatory framework

2.1.1 Starting a business
Doing Business 2017 - World Bank

The distance to frontier score aids in assessing the absolute level of regulatory performance and how it improves over time. This measure shows the distance of each economy to the frontier, which represents the best performance observed on each of the indicators across all economies in the Doing Business sample since 2005. This allows users both to see the gap between a particular economy's performance and the best performance at any point in time and to assess the absolute change in the economy's regulatory environment over time as measured by Doing Business. An economy's distance to frontier is reflected on a scale from 0 to 100, where 0 represents the lowest performance and 100 represents the frontier. For example, a score of 75 in DB 2016 means an economy was 25 percentage points away from the frontier constructed from the best performances across all economies and across time. A score of 80 in DB 2017 would indicate the economy is improving. In this way the distance to frontier measure complements the annual ease of doing business ranking, which compares economies with one another at a point in time.

2.1.2 Enforcing contracts
Doing Business 2017 - World Bank

The distance to frontier score aids in assessing the absolute level of regulatory performance and how it improves over time. This measure shows the distance of each economy to the frontier, which represents the best performance observed on each of the indicators across all economies in the Doing Business sample since 2005. This allows users both to see the gap between a particular economy's performance and the best performance at any point in time and to assess the absolute change in the economy's regulatory environment over time as measured by Doing Business. An economy's distance to frontier is reflected on a scale from 0 to 100, where 0 represents the lowest performance and 100 represents the frontier. For example, a score of 75 in DB 2016 means an economy was 25 percentage points away from the frontier constructed from the best performances across all economies and across time. A score of 80 in DB 2017 would indicate the economy is improving. In this way the distance to frontier measure complements the annual ease of doing business ranking, which compares economies with one another at a point in time.

2.2 Capital

2.2.4 Investment risk
Euromoney Country Risk Rankings September 2015
www.euromoneycountryrisk.com

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2.2.6 Investment in Telecommunications
Passport GMID
Source: © Euromonitor International 2017
National sources

Investment refers to as the annual capital expenditure; this is the gross annual investment in telecom (including fixed, mobile and other services) for acquiring property and network. The term investment means the expenditure associated with acquiring the ownership of property (including intellectual and non-tangible property such as computer software) and plant. This includes expenditure on initial installations and on additions to existing installations where the usage is expected to be over an extended period of time. Note that this applies to telecom services that are available to the public, and exclude investment in telecom software or equipment for private use.

2.3 Technological framework

2.3.2 Mobile Broadband subscribers Business Monitor International

Total active mobile 3G and 4G subscriptions, excluding broadband connections on dedicated data SIM cards or USB dongles. Data given as a percentage of the total mobile market.

2.3.3 Wireless broadband Passport GMID Source: © Euromonitor International 2017

The penetration rates of wireless broadband is calculated by dividing the number of Wireless Broadband subscribers by the total population and multiplying by 100. Wireless-broadband subscriptions refer to the sum of satellite broadband, terrestrial fixed wireless broadband and active mobile-broadband subscriptions to the public Internet. The indicator refers to total active wireless-broadband Internet subscriptions using satellite, terrestrial fixed wireless or terrestrial mobile connections. Broadband subscriptions are those with an advertised download speed of at least 256 kbit/s. In the case of mobile-broadband, only active subscriptions are included (those with at least one access to the Internet in the last three months or with a dedicated data plan). The service can be standalone with a data card, or an add-on service to a voice plan. The indicator does not cover fixed (wired)-broadband or Wi-Fi subscriptions. Both residential and business subscriptions should be included.

2.3.4 Internet users Computer Industry Almanac Inc. April 2017 <http://www.c-i-a.com> National sources

2.3.5 Internet bandwidth speed © Akamai 2017 State of the Internet Report 4/2016

Average connection speed in Mbps: data transfer rates for Internet access by end-users for documents stored on Akamai networks.

2.3.6 High-tech exports (%) The World Bank (Development Data Group) <http://databank.worldbank.org> National sources

High-technology exports are products with high R&D intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery.

Factor 3: Future readiness 3.1 Adaptive attitudes

3.1.1 E-Participation UN E-Government Knowledge Database

The e-participation index (EPI) measures the use of online services to facilitate provision of information by governments to citizens (e-information sharing), interaction with stakeholders (e-consultation), and engagement in decision-making processes (e-decision making).

3.1.2 Internet retailing Passport GMID Source: © Euromonitor International 2017

Retail Value excluding sales tax

3.1.3 Tablet possession Passport GMID Source: © Euromonitor International 2017

Percentage of households having at least one item. Portable, usually battery-powered, and very thin personal computer contained with a touchscreen panel.

3.1.4 Smartphone possession Passport GMID Source: © Euromonitor International 2017

Percentage of households having at least one item. A smartphone is a cellular telephone with an integrated computer and other features not originally associated with telephones, such as an operating system, Web browsing, music and movie player, camera and camcorder, GPS navigation, voice dictation for messaging, the ability to run software applications, etc.

3.2 Business agility

3.2.2 Innovative firms UNESCO

Medium firms (50-250 employees) that implemented an innovation, as calculated by the UIS Questionnaire on Innovation Statistics. The indicator is presented as a percentage.

3.3 IT integration

3.3.1 E-Government UN E-Government Knowledge Database

The E-Government Development Index presents the state of E-Government Development of the United Nations Member States. Along with an assessment of the website development patterns in a country, the E-Government Development index incorporates the access characteristics, such as the infrastructure and educational levels, to reflect how a country is using information technologies to promote access and inclusion of its people. The EGDI is a composite measure of three important dimensions of e-government, namely: provision of online services, telecommunication connectivity and human capacity.

3.3.4 Software piracy BSA Global Software Survey

The BSA Global Software Survey calculates unlicensed installations of software that runs on PCs — including desktops, laptops, and ultra-portables, such as netbooks. A key component of the BSA Global Software Survey is a global survey of more than 20,000 home and enterprise PC users, conducted by IDC. In addition, a parallel survey was carried out among 2,200 IT managers in 22 countries. Please consult the original report for a more detailed explanation of the methodology.

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