The Global Sustainable Competitiveness Index 2020

the REAL competitiveness index

About this Report

The Sustainable Competitiveness Report, 9th edition

November 2020

Methodology, calculation, & report compilation by SolAbility.

Acknowledgements

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About SolAbility

SolAbility is an independent sustainability think-tank and advisory, with presence in Korea and Switzerland.

SolAbility is the maker of 3 DJSI Super-Sector Leaders. We have designed and implemented the sustainable management for GS Engineering & Construction (DJSI Global Industry leader 2012), Korea Telecom (DJSI Global Industry Leader 2011-2013, 2015), and Lotte Shopping (DJSI Global Industry Leader 2011-2015).

SolAbility Sustainable Intelligence
Zurich, Seoul
www.solability.com
contact@solability.com

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1 Executive Summary

Sustainable Competitiveness

Sustainable competitiveness is the ability to generate and sustain inclusive wealth without diminishing the future capability of sustaining or increasing current wealth levels.

The Global Sustainable Competitiveness Index (GSCI) measures the competitiveness of nations. We believe the integration of all relevant dimensions that together form the basis of competitiveness is a much more accurate representation of a countries stand than, for example, the commonly used GDP– now, and the potential into the future – of nation-economies. The GSCI is based on 127 quantitative indicators grouped in the 5 pillars of national competitiveness. It is based both on the latest available performance data as well as the recent development of the indicators.

- **Based on purely quantitative indicators**
- **Taking into account 127 indicators derived from recognised global data sources (World Bank, various UN agencies, IMF)**
- **Grouped into the pillars of development: natural capital, resource efficiency, social capital, intellectual & innovation capital, governance performance**
- **Evaluating latest available data points and trends over time to better reflect future development**

The GSCI is the most comprehensive measurement of the competitiveness of nation-states, for the current state of affairs as well with respective to future potential.

Alternative to GDP & identification of policy priorities

GDP and other measurements based on economic indicators do not measure real competitiveness. To counter the lack of integral competitiveness measurement of nations, the GSCI integrates all three dimensions of sustainable development: the environment, the society, the economy. Because development that is not sustainable is not development. It is called regression.

Based on 127 quantitative indicators

The GSCI is based on 127 measurable and comparable quantitative indicators derived from the major global agencies (World Bank, UN organisations). Quantitative indicators can be measured and exclude subjectivity associated with qualitative indicators to ensure absolute objectivity. IN addition to the latest data (from which the current score is derived), the GSCI also scores the development over time for each indicator. Taking into account the indicator trends ensures a better reflection of the future potential of the country.

The sustainable competitiveness model

The Sustainable Competitiveness Index is based on 5 pillars of equal importance:

Natural Capital: the given natural environment, including the availability of resources, and the level of the depletion of those resources.

Social Capital: health, security, freedom, equality and life satisfaction within a country.

Resource Efficiency: the efficiency of using available resources as a measurement of operational competitiveness in a resource-constraint World.

Intellectual Capital: the capability to generate wealth and jobs through innovation and value-added industries in the globalised markets.

Governance Performance: Results of core state areas and investments – infrastructure, market and employment structure, the provision of a framework for sustained and sustainable wealth generation.

Conventional country comparisons, rankings and ratings are based on economic and/or financial indicators. However, economic and financial indicators - *at best* - reflect current economic success; without looking at or explaining what makes this economic success possible. They also fail to account for current developments – financial and non-financial - that shape future potential or decline.

In addition, economic activities have adverse side-effects on the environment and societies: pollution and depletion of natural resources, climate change, health impacts, inequality and impacts on the socio-cultural fabric of a country. Neglect of these factors can diminish the very basis of current economic output and success measured in conventional ratings.

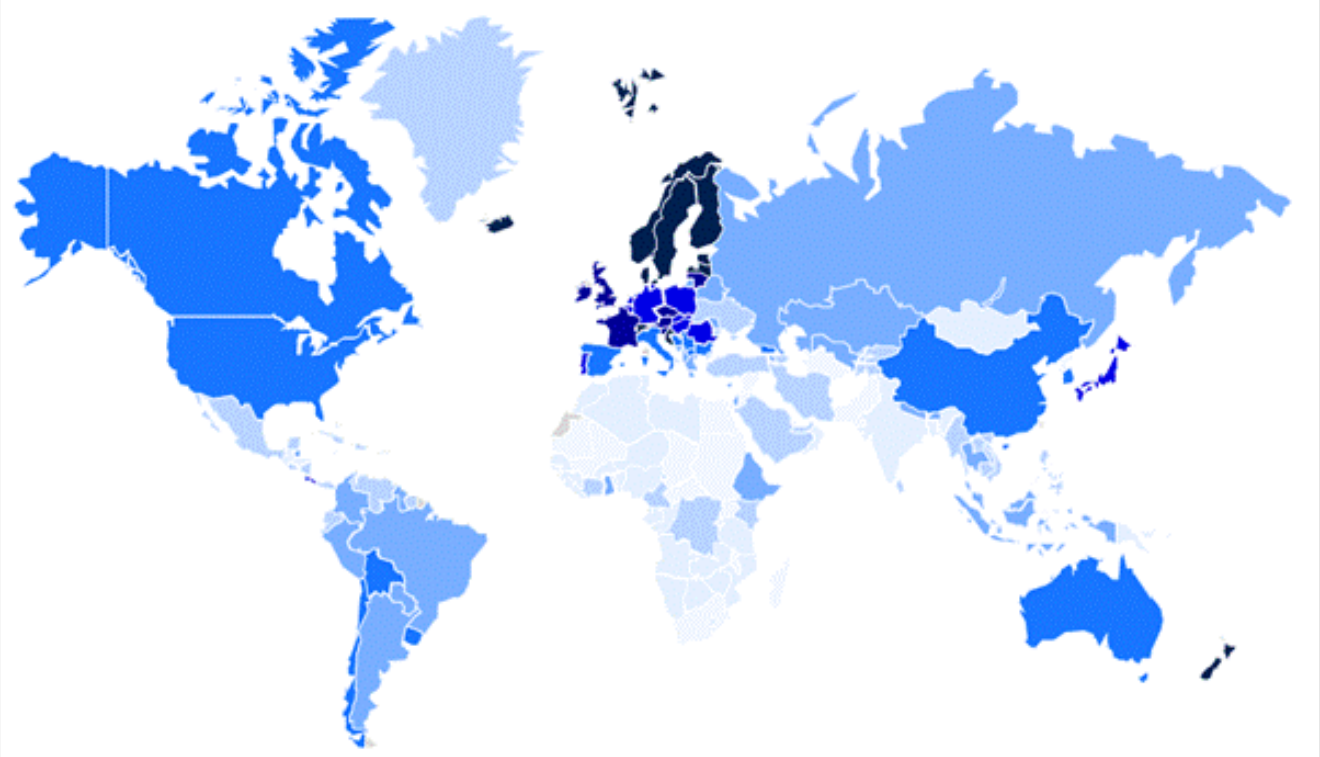
Economic and financial indicators are therefore insufficient measurements for risk and investment analysis – or credit ratings. In other words: **"competitiveness" in its current meaning and commonly used financial/industrial indicators are an insufficient basis for investment decisions and policy making.**

The Sustainable Competitiveness Index is based on a model that integrates economic and financial indicators with the pillars that make the business success possible in the first place. It is based purely on comparable and measurable performance data collected by recognised international agencies, therefore excluding all subjectivity. We believe that the Index presents the currently most accurate basis to compare countries amongst each other, and an inclusive tool to identify policy priorities.

1.1 Key Take-aways: Sustainable Competitiveness Index 2020

- Scandinavia keeps topping: Sweden is leading the Sustainable Competitiveness Index – closely followed by Iceland, Denmark & Finland, while Norway is ranked 9
- The top 20 are dominated by Northern European countries, including the Baltic states
- Of the top twenty nations only one is not European – New Zealand on 11,
- Germany ranks 15, the UK 17,
- The World's largest economy, the US, is ranked 32. The US ranks particularly low in resource efficiency, but also social capital – potentially undermining the global status of the US in the future
- Of the large emerging economies (BRICs), China is ranked 37, Brazil 49, Russia 51, and India 130.
- Some of the least developed nations have a considerable higher GSCI ranking than their GDP would suggest (e.g. Nepal, Guyana, Laos, Belize, …)
- Asian nations (South Korea, Japan, Singapore, and China) lead the Intellectual Capital Index – the fundament of innovation. However, achieving sustained prosperity in these countries might be compromised by Natural Capital constraints and current low resource efficiency
- The Social Capital Index ranking is headed by Northern European (Scandinavian) countries, indicating that Social Cohesion is the result of economic growth combined with a country-wide social consensus

The Sustainable Competitiveness World Map 2020

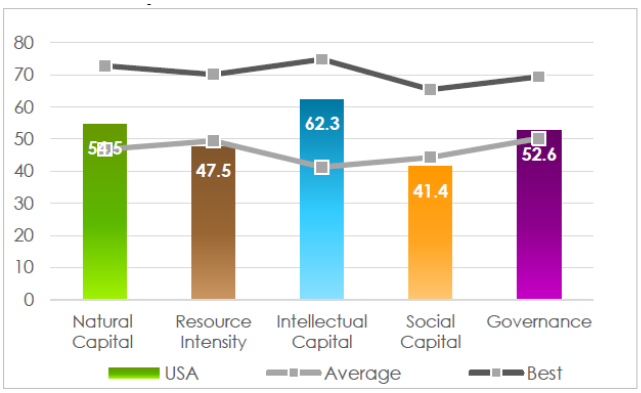


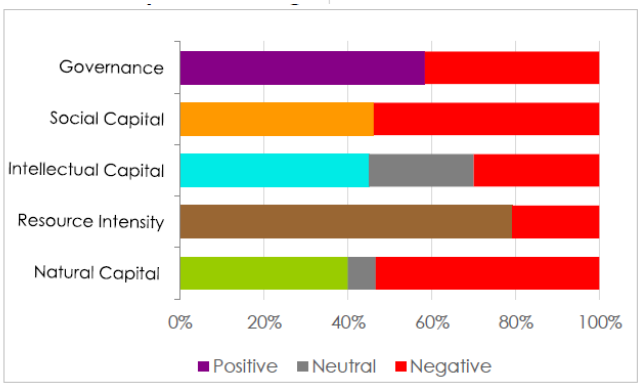
The Sustainable Competitiveness World Map. Dark areas indicate high competitiveness, light areas low competitiveness

1.2 Sustainable Competitiveness of Selected Countries

USA

Rank 32/180; Score:51.7 (83% of best)



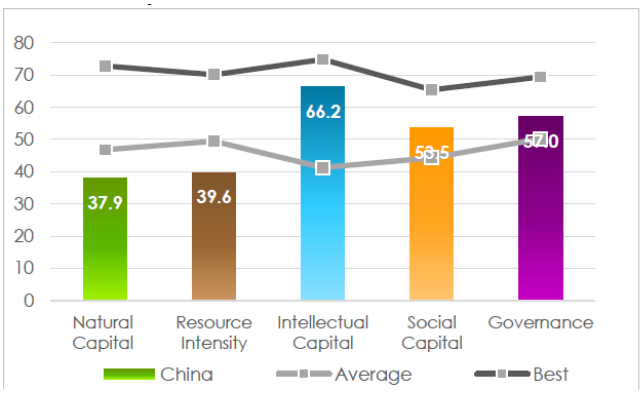


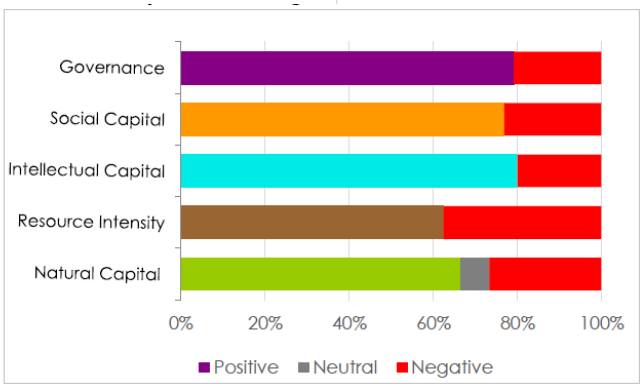
The US is coring with or slightly above/under the global average in 4 of the 5 dimensions – natural capital, resource efficiency, social capital, and governance performance – indicating a somewhat mediocre performance. The fact that the US scores comparable high in intellectual capital - the key dimension to maintain competitiveness in a innovation-driven global economy – shows that all hope is not yet lost.

A look at the trends reveals a mixed picture: while resource efficiency is improving, more than 50% of indicators in social capital and natural capital show declining trends.

China

Rank 39/180; Score: 50.9 (82% of best)



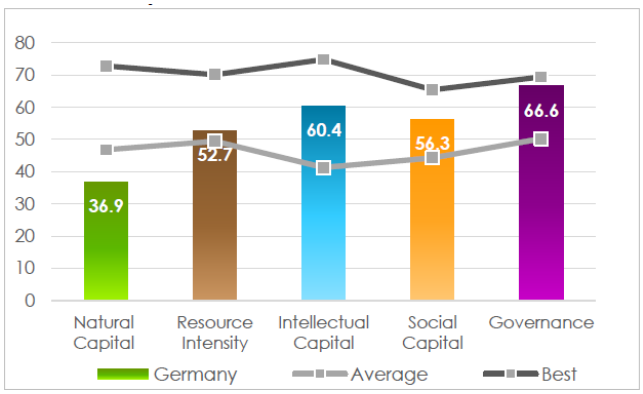


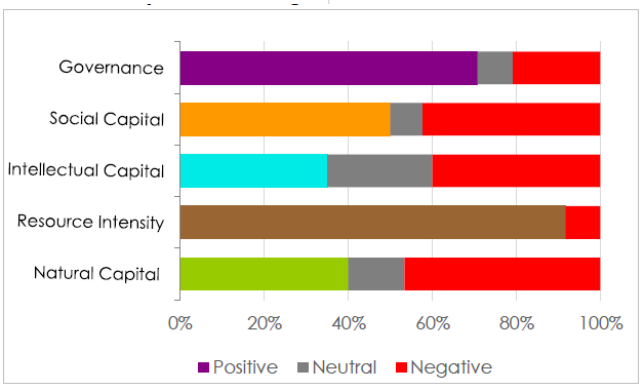
China scores above global averages in social capital and governance performance, and amongst the global best in intellectual capital. On the other hand, China's development could be negatively affected by low scores in both natural capital and resource efficiency. However, a majority of trends in natural capital and resource efficiency are positive, indicating that these dimensions could improve into the future. Trends in social capital, intellectual capital and

governance performance show the right direction, indicating that China is on a path to improve its sustainable competitiveness n the future.

Germany

Rank 22/180; Score:54.6 (88% of best)

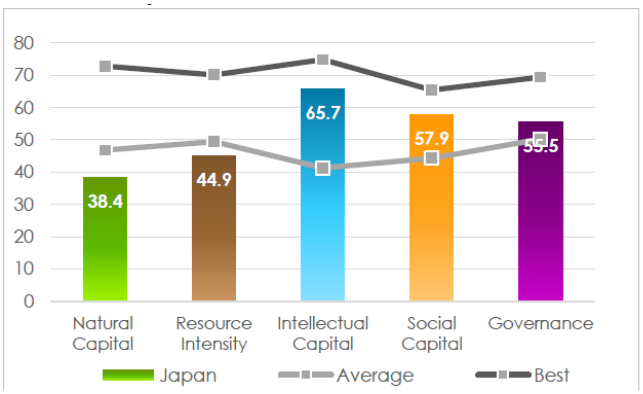


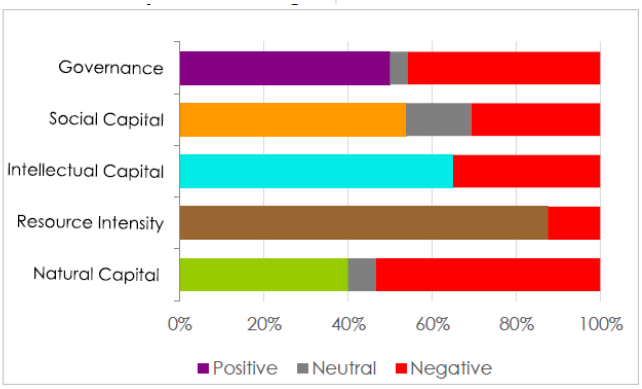


Germany scored good in social capital, governance performance, and intellectual capital, while being considerably below the global average in natural capital. In addition, a significant proportion of natural capital trends are negative, adding further pressure. What is more worrying, however, is the percentage of negative trends in intellectual capital in an economy that is based on exporting high-tech and quality goods

Japan

Rank 28/180; Score:52.5 (85% of best)

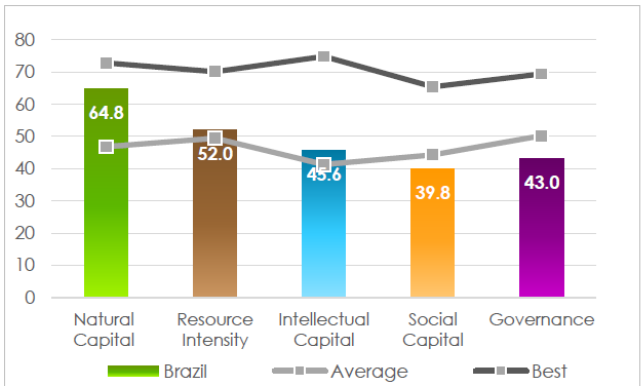


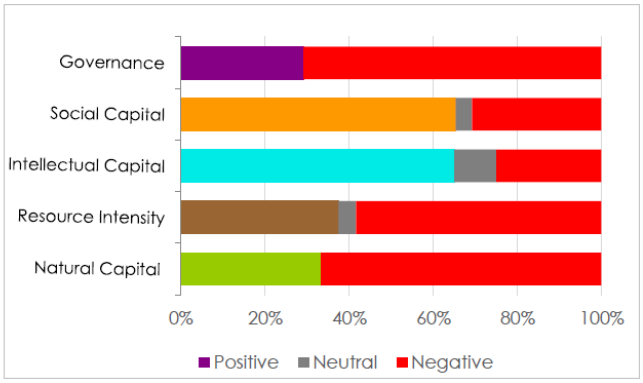


Japan ranks surprisingly low on the Global Sustainable Competitiveness Index, with below-average scores in both natural capital and resource efficiency, while scoring above average in social capital and amongst the global leaders in intellectual capital. On the positive side, a nearly 90% of indicators in resource efficiency are going the right direction, indicating that Japan could improve its standing over time with increased efforts in circular economy and renewable energy.

Brazil

Rank 49/180; Score: 49.0 (79% of best)

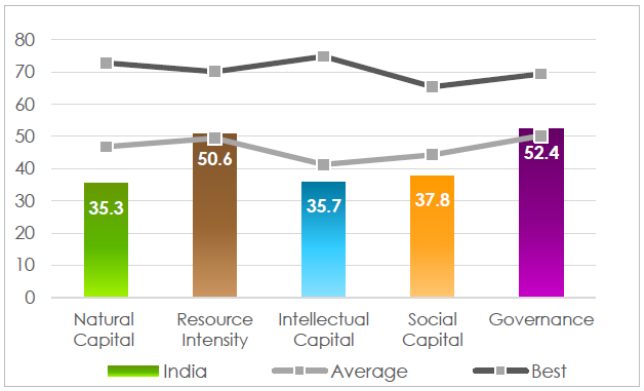


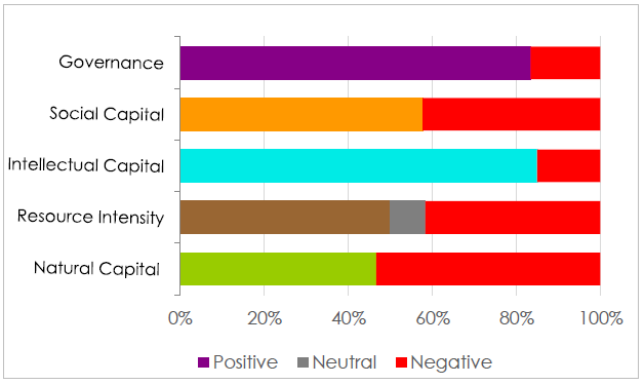


Brazil's performance is in line with global averages across most dimensions, and thanks to a rich and diverse natural environment amongst the highest in natural capital. However, Moe than 60% of natural capital indicators are negative, indicating that Brazil is chipping away on its main resource, the natural capital. On a positive side, social capital indicators and intellectual capital indicators are mostly positive, hopefully translating into improved sustainable competitiveness performance.

India

Rank 127/180; Score:42.4 (68% of best)





India performs in the average in resource efficiency and governance, but significantly below in natural capital, social capital and intellectual capital, reflected in low lobal ranking. In addition, a majority of natural capital indicators are negative, putting further strain on the densely populated country. On a positive not, nearly 90% of intellectual capital indicators are positive, raising hopes that the country can improve its future standing through improved education

Individual overview and score sheetsw for all countries are available on our website.

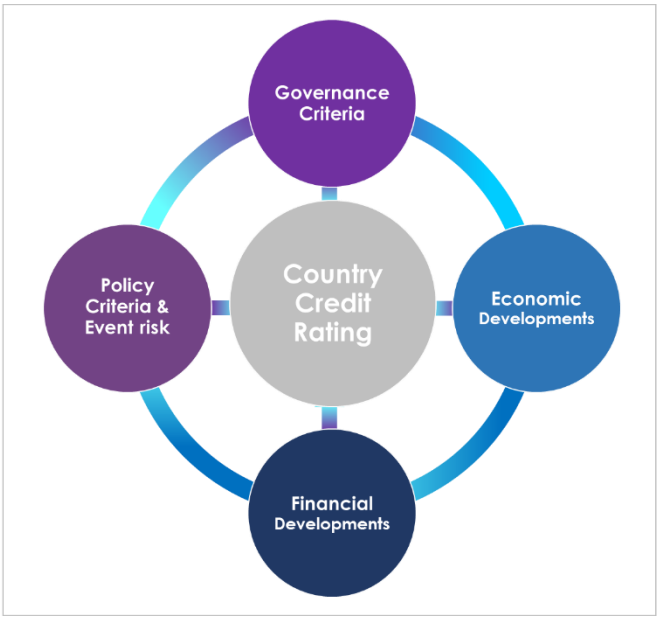
1.3 Sustainable Competitiveness Vs. Sovereign Bond Ratings: Sovereign Bond Ratings Do Not Reflect Risks

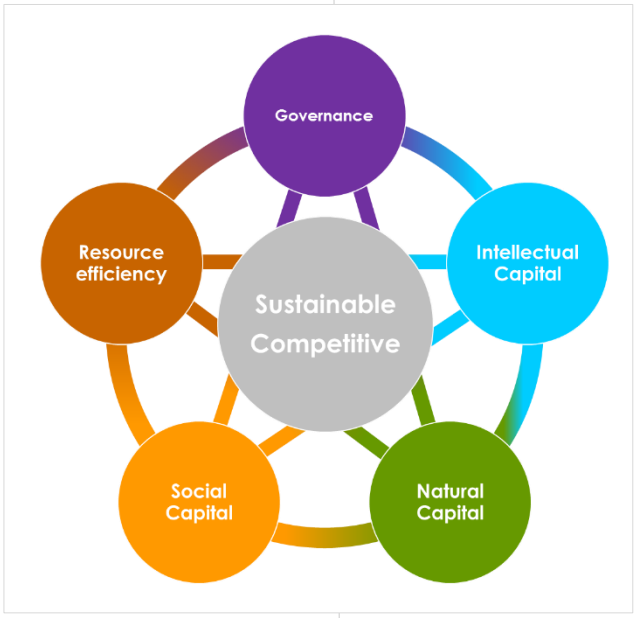
The sovereign bond rating of a country – commonly referred to as credit rating - determines the level of interest a country has to pay for loans and credits on the financial markets. It is therefore a very important parameter for every economy – it defines the level of capital cost for new investments, and the cost of debt. Credit ratings also affect the risks investors are willing to take in overseas investments.

Sovereign risk ratings market is dominated by the "three sisters": Moody's, S&P, and Fitch. Sovereign risks are calculated based on a mix of economic, political and financial risks. All of these criteria represent current risks that, like GDP calculations, do not take into account the framework that defines the current situation. They do not consider the wider environment – the education availability, the ability and motivation of the workforce, the health, well-being and the social fabric of a society, the physical environment (natural and man-made) that are the fundament of the current situation. Credit ratings describe symptoms, they do not look at the root causes. It is therefore questionable whether credit ratings truly reflect investor risks of investing in a specific country, in particular for long-term bonds and investments.

Sustainable vs. conventional country credit rating

Comparison of evaluation models:





The Global Competitiveness Model is based on 5 pillars, aiming to cover & evaluate performance of all elements that make economic development (the root). Conventional ratings are based on 4 areas of results. Conventional credit ratings rate the outcome (the end-result); the GSCI the root cause of the outcome.

Rating comparisons and implications

In order to test the implications of the conventional applied sovereign bond ratings, a virtual sustainability-adjusted credit rating was calculated. The sustainability-adjusted rating is equally based on GSCI ratings and conventional ratings (average of Moody's, S&P, and Fitch).

Credit ratings vs Sustainable Ratings of selected countries:

Country	Credit rating (average of Moody's, S&P; Fitch)	Sustainability-adjusted rating	Level difference
Argentina	CCC	BB+	7
Australia	AAA	AA+	-1
Morocco	BB+	BB+	0
Paraguay	BB+	BBB+	3
Portugal	BBB	A	3
Qatar	AA-	BBB+	-4
Romania	BBB-	A	4
Saudi Arabia	A+	A-	-2
South Africa	BB+	BB	-1
Spain	A-	A+	2
United Arab Emirates	AA	A	-3
United Kingdom	AA-	AA	1
USA	AAA	AA	-2
Vietnam	BB	BBB-	2

Country	Credit rating (average of Moody's, S&P; Fitch)	Sustainability-adjusted rating	Level difference
Bangladesh	BB-	BB+	2
Belgium	AA-	AA-	0
Belize	CCC+	BB+	6
Bolivia	B	BBB	6
Laos	CCC+	BB	6
China	A+	AA-	1
Germany	AAA	AA+	-1
Kuwait	AA-	BBB+	-4
Norway	AAA	AAA	0
Qatar	AA-	BBB+	-4
Romania	BBB-	A	4
Russia	BBB	A-	3
United Arab Emirates	AA	A	-3
Vietnam	BB	BBB-	2

Based on sustainable competitiveness, countries dependent on exploitation of natural resources would receive a significant lower credit rating. On the other hand, some developing nations would receive higher ratings (and therefor lower interest rates) based on their development potential.

In the asset management world, it is now standard procedure to integrate "E, S and G" into financial investment risk/opportunity evaluation, while credit ratings do exclude ESG risks - and therefore do not cover all investor risks. Key observations:

- Sovereign bond ratings show a high correlation to GDP/capita levels: ***Poor countries have to pay higher interest rates than rich countries.***
- Sovereign bond ratings do not reflect the non-tangible risks and opportunities associated with nation economies
- ***Sustainable adjusted ratings and conventional ratings show significant differences.*** Under a sustainability-adjusted credit rating, countries with high reliance on exploitation of natural resources would be rated lower, while poor country with a healthy fundament (biodiversity, education, governance) would receive higher ratings.

It is high time that credit ratings include sustainability in their risk calculations.

1.4 Sustainable vs. WEF-Competitiveness

Why the WEF Competitiveness Index is so wrong

The success of nations currently is mostly expressed in terms of economic output – GDP, GDP per capita, GDP growth. The GDP or GNI, however, are limited to the current economic output, and do not evaluate underlying structures.

Alternatively, there are indexed competitiveness comparisons. The best-know competitiveness ranking is the WEF's Competitiveness Index. Unfortunately, the WEF index is flawed, both methodically and in terms of indicators considered. The WEF Index largely relies on perception survey amongst its considerable network of what the WEF thinks are "leaders" – i.e. Politicians, CEOs, and those that want to be either one of the two. In addition, indicators used in the WEF index do not sufficiently reflect competitiveness. It is therefore not really surprising that the Index results rise eyebrows. For example: we are all fully aware that the US is a big economy – but the 2nd most competitive economy? Please.

Here are selected differences between the WEF-Index rankings and the Global Sustainable Competitiveness Index:

	Rank		
Country	**GSCI**	**WEF**	**+/-**
Sweden	1	8	+7
Iceland	3	26	+23
Switzerland	5	5	-
Latvia	7	41	+34
New Zealand	11	19	+8
United Kingdom	15	9	-6
France	18	15	-3
Germany	22	7	-15
Poland	26	37	+11
Belgium	29	22	-7
USA	32	2	-30
Bulgaria	34	49	+15
China	39	28	-11
Bolivia	46	107	+61
Russia	48	43	-5
Brazil	54	71	+17
Armenia	71	69	-2
Laos	82	113	+31
Turkey	84	61	-23
Saudi Arabia	108	36	-72
India	127	68	-59

We consider the GSCI to be a more balanced and more inclusive index than the WEF Competitiveness ranking. and measurement of competitiveness that delivers a deeper and more accurate picture of the true competitiveness of a nation-economy. For a detailed analysis of the similarities and differences between the GSCI and the WEF index, please refer to the research paper "Sustainable Vs WEF Competitiveness").

1.5 Higher Sustainability Equals Higher Wealth

The chicken or the egg?

Sustainable competitiveness means that current wealth levels are not in danger of being reduced or diminished through over-exploitation of resources (i.e. natural and human resources), the lack of innovation investments required to compete in the globalised markets (i.e. education), or the discrimination, marginalisation or exploitation of segments of a society.

The leading nations on the GSCI ranking are mostly high-income countries, suggesting a certain correlation between Sustainable Competitiveness score and GDP per capita, or income levels (high income = high sustainability). The same is true when visualizing average deviations of GDP per capita and the sustainable competitiveness score.

GDP/capita and sustainable competitiveness

However, the correlation is superficial and refuted by too many exceptions to the rule. Resource economies (e.g. Sadia Arabia, Kuwait) are ranked significantly below their GDP ranks. This indicates that **the correlation is** not from GDP to sustainable competitiveness, but rather **from sustainable competitiveness to income levels**. In other words: higher sustainable competitiveness can be associated with higher income levels.

The presence of large natural resources allows for exploitation of the natural capital (e.g. the oil-rich countries of the Middle East). However, such wealth is highly unsustainable and the wealth generated will diminish with depletion of the resources in the absence of an adequate alternative development and fostering of all 5 pillars. The influence of sustainable competitiveness on GDP is not immediate; it is time-deferred. Policy decisions therefore have to be made in light of sustainable competitiveness to achieve desired results at a later stage.

In other words:

Sustainability is the chicken AND the egg.

1.6 12 Key Points to Achieve Sustainable Competitiveness

1. **A global climate tax.** Climate change is a gigantic market failure. We need a global climate tax - introduced in phases, paid back to the people in cash and reinvested in a renewable energy infrastructure - to avoid disaster. Now.
2. **More democracy.** In the 21st century, it is not possible that individuals decide over whole countries. The people need to be consulted on policy and law changes through mandatory referenda, and the possibility to induce issues on the governing agenda. And - it is not possible that people have to stand in line to vote in the 21st century.
3. **Better governance.** It's silly to assign responsibility for an entity as complex a country to a single individual, and winner-takes-it-all-systems allow minorities to govern. Ministries should be assigned according to national voter share, cabinet meetings are chaired by one of the ministers, in turns. The same applies in the corporate World: we don't need presidents and we don't need CEOs; we need teams of decision makers.
4. **Real market economy.** Markets only work when all costs are incorporated. The environmental costs of substances, materials and processes have to be integrated in the market price – based on a globally agreed level. The taxes generated need to be fiscally neutral (cash-back and/or used to offset the environmental cost).
5. **Quality education for all.** We need quality education, equal for all; taxed and re-distributed at the national level so the same resources are available to each student
6. **Working financial markets.** We need financial markets that support the real economy, and not vice-versa. This can be achieved through a transaction tax on, and/or a minimal holding periods for all financial instruments.
7. **Health care and social security for all.** We need affordable basic health care for all – paid for as percentage of income, directly deducted, with the choice of additional insurance for more luxurious health care.
8. **Impartial and efficient justice system accessible to all.** The justice system has to work fast, efficient, accessible to all while minimising abuse. Judges need to be completely impartial, appointed through a process that is safeguarded from any political influence.
9. **Unitary Taxing.** We need a global approach to tax multi-national corporations (e.g. by a combination of revenues/employees/sourcing per country), as well as private tax. These are not normal times. A wealth tax on the rich, maybe for a limited time, needs to be seriously considered.
10. **Fact-based, impartial information.** We need impartial, science- and fact-based information, not opinions. Financed through taxes, but safe-guarded against any control attempts by governments/politicians.
11. **Freedom for, and from, religion.** Faith is a choice. Science is not. Everybody is free to practice their faith, and nobody has their freedom impaired by other people's faith We need a total separation of state governance and religion.
12. **Total equality.** It is a shame that this has to be mentioned in the 21st century – but we need total equality. Between genders, races, regions, wealth.

1.7 The 2020 Global Index Rankings

Previous indexes and data in excel format can be downloaded on the SolAbility website.

Rank	Country	Score	Rank	Country	Score	Country	Rank	Score	Country	Rank	Score
1	Sweden	62.1	46	Bolivia	50.0	Vietnam	91	45.8	Republic of Congo	136	41.7
2	Denmark	61.0	47	Greece	50.0	Cuba	92	45.6	Oman	137	41.6
3	Iceland	60.7	48	Russia	49.9	Iran	93	45.3	Guatemala	138	41.6
4	Finland	60.4	49	Peru	49.9	Dominica	94	45.3	Rwanda	139	41.6
5	Switzerland	59.4	50	Moldova	49.8	Cote d'Ivoire	95	45.3	Gambia	140	41.5
6	Estonia	59.4	51	Paraguay	49.7	Samoa	96	45.1	Togo	141	41.5
7	Latvia	58.2	52	Mauritius	49.5	Azerbaijan	97	45.1	Djibouti	142	41.4
8	Luxembourg	58.0	53	Nepal	49.4	Sao Tome and Principe	98	45.0	Liberia	143	41.4
9	Norway	57.7	54	Brazil	49.1	Venezuela	99	44.8	Lesotho	144	41.3
10	Croatia	57.2	55	Bhutan	49.0	Tajikistan	100	44.8	Bahrain	145	41.3
11	New Zealand	57.2	56	Timor-Leste	48.9	El Salvador	101	44.7	Kuwait	146	41.2
12	Liechtenstein	57.1	57	Israel	48.9	Philippines	102	44.7	Algeria	147	41.1
13	Ireland	56.8	58	Guyana	48.7	Solomon Islands	103	44.6	Zambia	148	41.1
14	Austria	56.7	59	Belarus	48.6	United Arab Emirates	104	44.5	Nigeria	149	40.9
15	United Kingdom	56.1	60	Ghana	48.5	Democratic Republic o	105	44.5	Qatar	150	40.9
16	Slovenia	55.9	61	Uzbekistan	48.4	Dominican Republic	106	44.5	Benin	151	40.8
17	Lithuania	55.9	62	Belize	48.2	Nicaragua	107	44.1	Equatorial Guinea	152	40.8
18	France	55.5	63	Montenegro	48.1	Saudi Arabia	108	44.1	Trinidad and Tobago	153	40.8
19	Czech Republic	55.2	64	Argentina	48.1	Gabon	109	43.9	Namibia	154	40.6
20	Portugal	55.0	65	Maldives	48.0	Mongolia	110	43.8	Niger	155	40.4
21	Slovakia	54.9	66	Thailand	47.6	Mozambique	111	43.7	Angola	156	40.3
22	Germany	54.6	67	Cyprus	47.6	Sierra Leone	112	43.4	South Africa	157	39.9
23	Romania	54.5	68	Indonesia	47.4	Tanzania	113	43.4	Malawi	158	39.9
24	Hungary	52.9	69	Albania	47.4	Vanuatu	114	43.3	Mali	159	39.6
25	Netherlands	52.9	70	Colombia	47.4	Bangladesh	115	43.3	Jordan	160	39.5
26	Poland	52.8	71	Armenia	47.2	Bahamas	116	43.1	Guinea-Bissau	161	39.4
27	Costa Rica	52.6	72	Kazakhstan	47.1	Swaziland	117	43.1	Madagascar	162	39.2
28	Japan	52.5	73	Malaysia	47.0	Senegal	118	43.0	Sudan	163	39.0
29	Belgium	52.1	74	Brunei	47.0	Cape Verde	119	43.0	Turkmenistan	164	39.0
30	Uruguay	52.0	75	Ethiopia	47.0	Papua New Guinea	120	42.9	Egypt	165	38.9
31	Spain	51.8	76	Ukraine	46.7	Kiribati	121	42.7	Comoros	166	38.6
32	USA	51.7	77	Fiji	46.7	Grenada	122	42.6	Burundi	167	38.4
33	Italy	51.6	78	Kyrgistan	46.6	Zimbabwe	123	42.6	Syria	168	38.0
34	Bulgaria	51.6	79	Ecuador	46.6	Jamaica	124	42.5	Lebanon	169	37.9
35	South Korea	51.3	80	Suriname	46.5	Burkina Faso	125	42.4	West Bank and Gaza	170	37.8
36	Canada	51.3	81	Kenya	46.5	Micronesia	126	42.4	Uganda	171	37.6
37	Georgia	51.2	82	Laos	46.5	India	127	42.4	Chad	172	37.1
38	Malta	50.9	83	Mexico	46.4	St. Kitts and Nevis	128	42.2	Central African Republ	173	36.9
39	China	50.8	84	Turkey	46.3	Botswana	129	42.2	Pakistan	174	36.1
40	Serbia	50.7	85	Panama	46.3	Honduras	130	42.2	Eritrea	175	35.9
41	Chile	50.6	86	Sri Lanka	46.3	Guinea	131	42.0	Haiti	176	35.5
42	Bosnia and Herzegovir	50.5	87	Tonga	46.1	Tunisia	132	41.9	Mauritania	177	35.1
43	Macedonia	50.4	88	Cameroon	46.0	Morocco	133	41.8	Afghanistan	178	35.0
44	Singapore	50.3	89	Burma	45.9	Libya	134	41.8	Yemen	179	34.9
45	Australia	50.2	90	Cambodia	45.9	Seychelles	135	41.7	Iraq	180	33.9

Natural Capital Index

2 Natural Capital Index

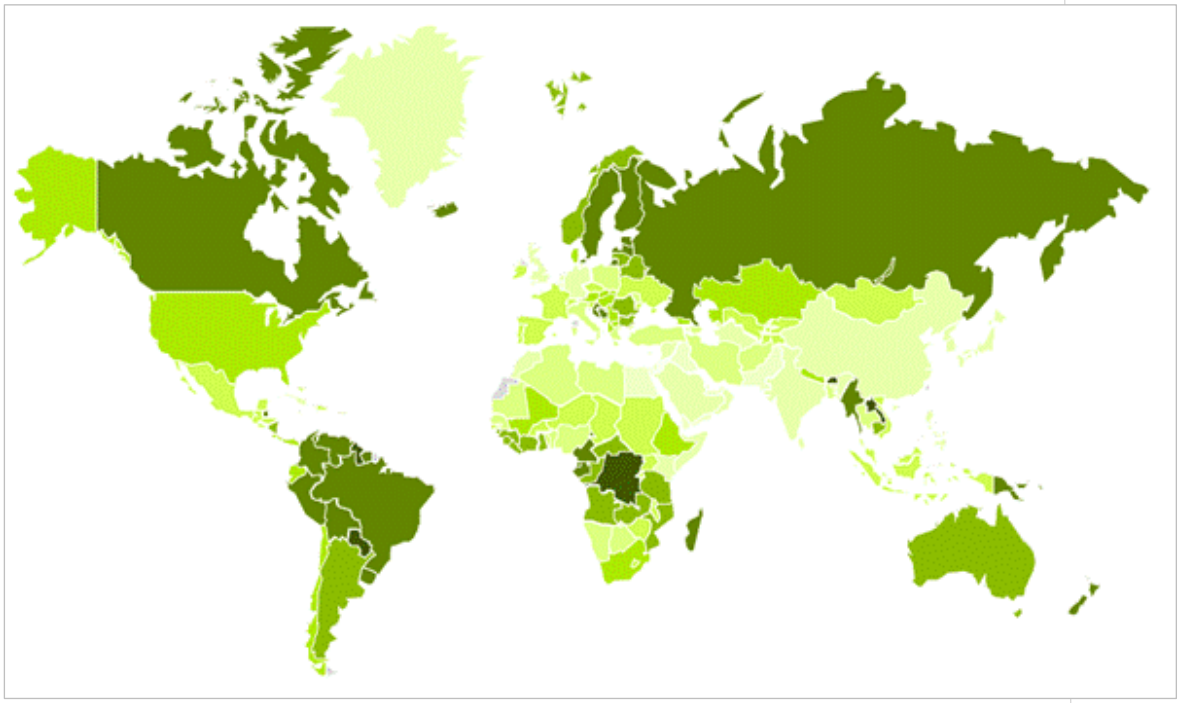
Natural capital is the basis on which a country is built: the physical environment and climatic conditions, combined with the extent of human activities that have or will affect the natural environment. The Natural Capital of a country reflects its ability to sustain the population and the economy, now and into the future.

A nation's natural capital is a given value – it is as it is – i.e. there are limitations to human ability to improve or change the availability of natural capital. However, continuing exploitation and extension of human activities diminish the existing Natural Capital

Natural Capital Index 2020 – Key Take-aways

High-ranking countries are characterised by abundant water availability, the source of a rich biodiversity. Many of the highest scoring countries are located in tropical areas. While some of these countries currently may lack social, intellectual and governance capital, their Natural Capital would allow them to develop sustainable competitive economies over time. A certain correlation with the level of human activities and population density can also be observed: large countries with a comparably small population density and rich biodiversity tend to score higher.

The Natural Capital Index 2020 is topped by Laos, followed by Paraguay, Bhutan, and Congo. OECD representation in the top 30 is limited to Sweden, and New Zealand. The two most populated countries, China (155) and India (164) are both affected by a combination of arid climate, high population density and depletion levels, raising concerns over those countries' ability to self-sustain their large populations in the long term.

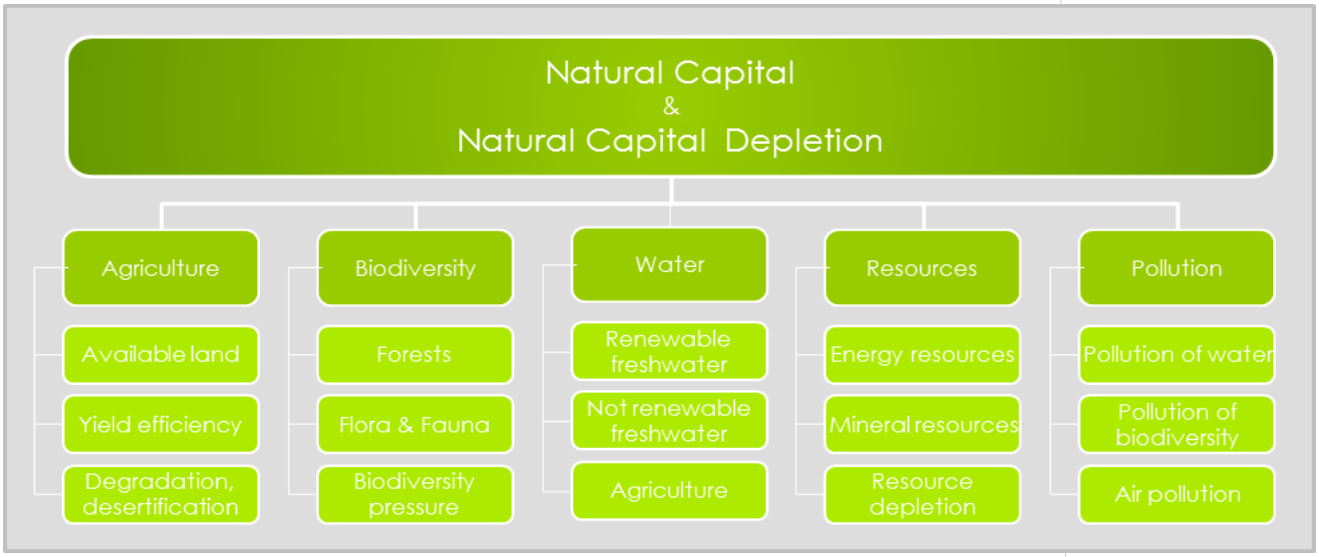


The Natural Capital World Map. Dark areas indicate high, light areas low levels of natural capital

Natural Capital Components

The Natural Capital of a country is defined by the natural physical environment. The Natural Capital model incorporates the essence of resources available that allow a country to be completely self-sustaining: land, water, climate, biodiversity, food production and capacity, as well as renewable and non-renewable energy and mineral resources. In addition, the level of depletion or degradation of those resources that could endanger future self-sufficiency are taken into account to reflect the full picture of the available natural capital.

The number of data points related to natural capital available from a variety of sources is nearly endless. The main challenge is to select the most relevant and meaningful indicators amongst the wealth of available data. In order to define meaningful and relevant, the core issues affecting the sustainable use of natural capital have been defined in the natural capital model below:



Key elements of competitiveness drivers in the Natural Capital Sub-Index

Natural capital indicators

Based on the definition of the key natural capital areas, data series are chosen as indicators that reflect the sustainable competitiveness of a country based on its natural resources (natural capital).

The indicators have been analysed for the latest data point available as well as their development over time, reflecting the current status and the future outlook in relation to the size and population of a country. In addition, indictors that measure the depletion or degradation of the natural resources have been taken into account. The combination of these indicators reflects the current status as well as the ability to sustain the population and the national economy.

As some of the above key areas are difficult to express in numerical values, some quantitative scores compiled by UN agencies have been used for certain indicators, such as biodiversity potential, resource depletion, and the ecological footprint.

For the full list of indicators used, please refer to the methodology section.

Natural Capital Index 2020

Country	Rank	Score	Country	Rank	Score	Country	Rank	Score	Country	Rank	Score
Laos	1	72.8	Liberia	46	56.0	Malawi	91	46.9	Algeria	136	41.0
Guyana	2	70.7	Angola	47	55.7	Luxembourg	92	46.8	Turkey	137	40.9
Paraguay	3	67.6	Ghana	48	55.6	Gambia	93	46.8	El Salvador	138	40.7
Bhutan	4	66.8	Australia	49	55.5	Indonesia	94	46.8	Senegal	139	40.7
Democratic Republic of C	5	65.3	Mozambique	50	55.5	Vietnam	95	46.8	Bangladesh	140	40.1
Cameroon	6	65.0	Cote d'Ivoire	51	55.2	Cape Verde	96	46.3	South Sudan	141	40.0
Brazil	7	64.8	Nicaragua	52	55.1	Portugal	97	46.3	Cuba	142	40.0
Papua New Guinea	8	64.5	USA	53	54.5	Tonga	98	46.3	Philippines	143	39.9
Suriname	9	64.4	Costa Rica	54	54.4	Bahamas	99	46.2	Sri Lanka	144	39.8
Venezuela	10	64.2	Chile	55	54.2	Niger	100	46.1	Oman	145	39.8
Bolivia	11	64.1	Mali	56	53.8	Burkina Faso	101	46.1	Armenia	146	39.3
Estonia	12	63.8	Samoa	57	53.6	Kyrgistan	102	46.0	Saudi Arabia	147	39.2
Iceland	13	63.8	Hungary	58	53.5	Togo	103	46.0	Turkmenistan	148	38.7
Sweden	14	63.1	Georgia	59	52.6	Rwanda	104	46.0	Jamaica	149	38.6
Russia	15	62.4	Panama	60	52.6	Vanuatu	105	45.9	Trinidad and Tobago	150	38.5
Uruguay	16	62.3	Ecuador	61	52.6	Honduras	106	45.8	Morocco	151	38.4
Latvia	17	62.1	Serbia	62	52.5	Spain	107	45.5	Eritrea	152	38.4
Colombia	18	62.0	Kazakhstan	63	52.3	Guatemala	108	45.5	Japan	153	38.4
Peru	19	61.4	Ethiopia	64	51.7	Dominican Republic	109	45.4	Kiribati	154	38.0
Belize	20	61.2	Macedonia	65	51.6	Tajikistan	110	45.4	China	155	37.9
Croatia	21	61.1	Albania	66	51.4	Ireland	111	45.4	Netherlands	156	37.5
Burma	22	61.1	Denmark	67	51.4	Zimbabwe	112	45.4	Maldives	157	37.4
Fiji	23	61.0	Nepal	68	51.3	Uzbekistan	113	45.3	Syria	158	37.3
New Zealand	24	60.9	Liechtenstein	69	51.2	Greece	114	44.7	Germany	159	36.9
Madagascar	25	60.7	Austria	70	51.2	Poland	115	44.6	Kenya	160	35.7
Canada	26	60.6	South Africa	71	50.7	Namibia	116	44.2	South Korea	161	35.5
Finland	27	60.5	Slovakia	72	50.6	Burundi	117	44.0	Kuwait	162	35.5
Bosnia and Herzegovina	28	60.1	Sao Tome and Principe	73	50.0	Azerbaijan	118	43.6	United Kingdom	163	35.4
Gabon	29	60.0	Swaziland	74	49.8	Comoros	119	43.2	India	164	35.3
Equatorial Guinea	30	60.0	Lesotho	75	49.3	Djibouti	120	42.8	Yemen	165	34.1
Belarus	31	59.7	Slovenia	76	49.3	Benin	121	42.4	Egypt	166	33.9
Solomon Islands	32	59.6	Mexico	77	49.3	Grenada	122	42.3	Qatar	167	33.7
Cambodia	33	59.5	Sudan	78	49.3	Iran	123	42.2	United Arab Emirates	168	33.6
Sierra Leone	34	59.3	Montenegro	79	49.2	Libya	124	42.1	Pakistan	169	32.8
Central African Republic	35	58.9	France	80	48.8	Moldova	125	41.9	Malta	170	32.4
Republic of Congo	36	58.3	Malaysia	81	48.7	Mauritania	126	41.7	Cyprus	171	31.8
Argentina	37	57.9	Czech Republic	82	48.6	Afghanistan	127	41.6	Israel	172	31.6
Zambia	38	57.7	Chad	83	48.5	Botswana	128	41.6	Belgium	173	31.5
Lithuania	39	57.5	Timor-Leste	84	48.3	St. Kitts and Nevis	129	41.5	West Bank and Gaza	174	31.2
Norway	40	57.5	Uganda	85	48.3	Mauritius	130	41.5	Haiti	175	31.1
Romania	41	56.9	Brunei	86	47.7	Nigeria	131	41.4	Iraq	176	30.6
Guinea-Bissau	42	56.8	Switzerland	87	47.6	Thailand	132	41.4	Bahrain	177	30.3
Guinea	43	56.4	Dominica	88	47.6	Italy	133	41.4	Jordan	178	29.1
Tanzania	44	56.2	Ukraine	89	47.2	Seychelles	134	41.2	Singapore	179	28.6
Bulgaria	45	56.1	Mongolia	90	47.0	Micronesia	135	41.2	Tunisia	180	28.5

Governance Performance Index

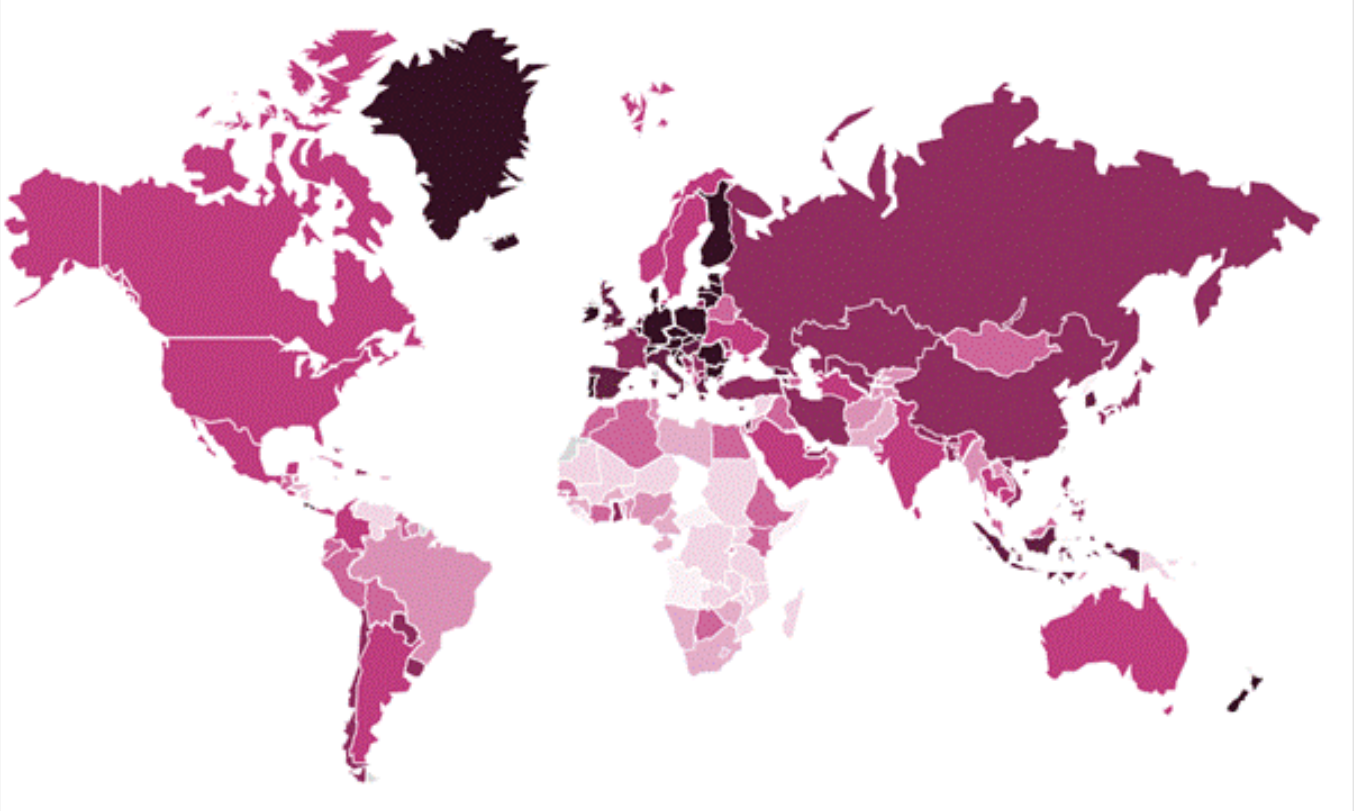
3 Governance Performance Index

The Governance Sub-Index of the Sustainable Competitiveness Index is based on quantitative data series – i.e. *not* based on qualitative evaluation of government systems. In addition, some aspects of government direction implications (such as human rights, freedom of press, etc.) are assigned to the Social Capital Index. The Governance Sub-Index aims at evaluating the performance of a country's regulatory framework and infrastructure environment to facilitate sustainable competitiveness. The regulatory and infrastructure framework should enable an environment in which the country's natural, social and intellectual capital can flourish to generate new and sustain existing wealth.

The Governance Efficiency rankings 2020:

- The Governance Ranking is topped by the Czech Republic, followed by Ireland, Slovenia, and Estonia; Germany follows on 6.
- The ranking is dominated by Central and Eastern European nations
- The UK is ranked 26, Japan 51 and the US at 73.
- Of the BRICs, China is ranked 38, Russia 55, India 79, and Brazil 137
- The map shows a clear north-South gap: all African countries score comparable low

The Governance World Map

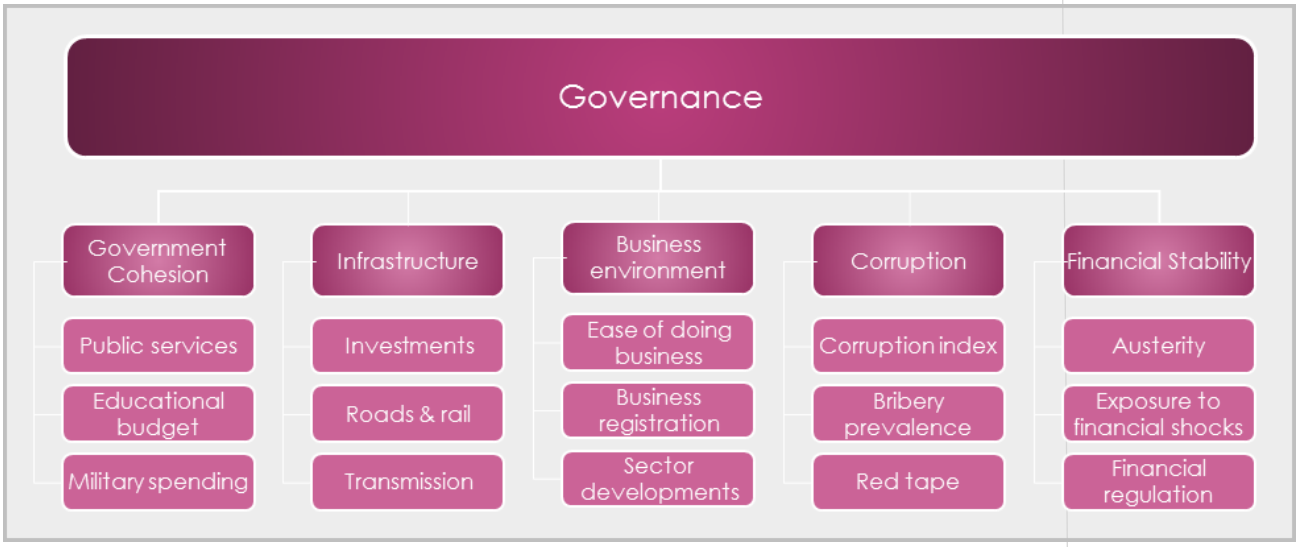


The Governance World Map. Dark areas indicate high, light areas low levels of Governance quality

Governing National Development: Shaping Social and Economic Capital

The base of the Sustainable Competitiveness Pyramid – the Natural Capital of a country, is given. Everything else – the society, the economy - is shaped by the legal, regulatory and physical (human built) framework. This framework – the environment in which society exists and businesses operate - is developed, maintained and updated by authorities and institutions, most often government bodies. The Governance Sub-Index therefor encompasses all aspects that shape the framework of society (the Social Capital), and in which the economy (Intellectual Capital, Resource Management) operates. Key aspects of the Governance aspects include:

- Strategic direction of government-led development (the balance between the key elements of government spending: health, education, infrastructure, security).
- The built physical environment (infrastructure) required for smooth operation of the society and businesses, the availability and quality of public services,
- The framework provided to businesses (formal in terms of business regulations, and informal in terms of red tape and corruption negatively affecting businesses),
- Exposure to volatility in terms of government balance sheets, and exposure to volatility shocks as posed by financial market fluctuations.



Key elements of competitiveness drivers in the Governance Sub-Index

Measuring Governance

The result of qualitative governance quality & strategy evaluation depends very much on the evaluator. The Sustainable Competitiveness Index therefore relies on purely quantitative data series to exclude all subjectivity in evaluating and calculating the Governance Sub-Index. In addition, some qualitative indicators (perceived quality of public services and perceived levels of corruption determined through reliable and international surveys) have been incorporated.

For the full list of indicators used, please refer to the methodology section.

Governance Performance Index 2020

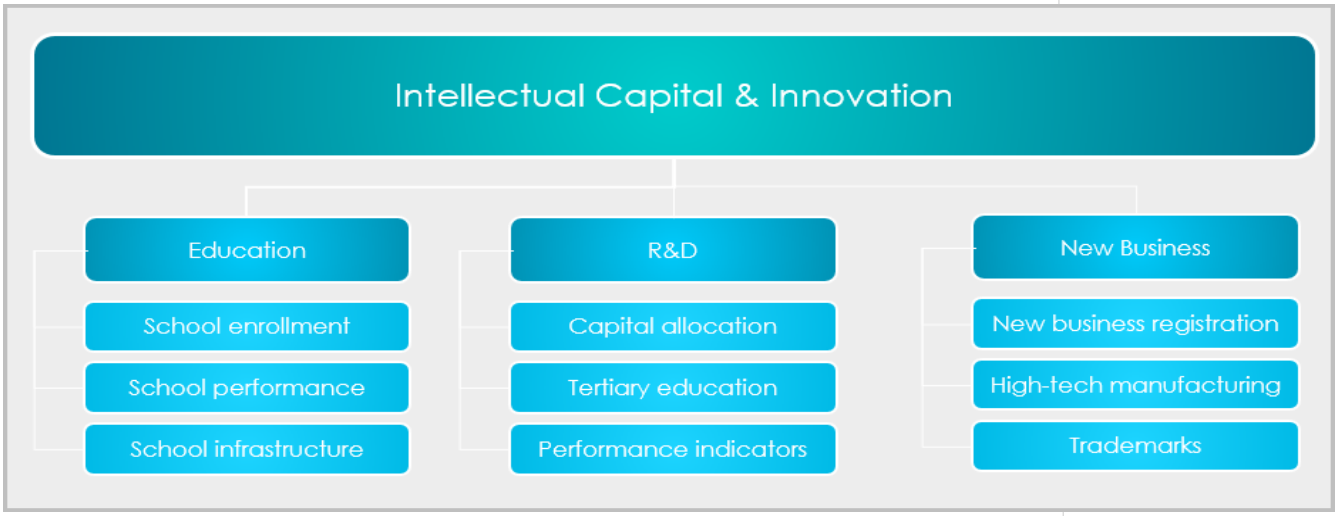
Country	Rank	Score	Country	Rank	Score	Country	Rank	Score	Country	Rank	Score
Czech Republic	1	69.4	Iran	46	56.2	Egypt	91	50.4	Belize	136	43.1
Ireland	2	68.8	Paraguay	47	55.9	Bahrain	92	50.4	Brazil	137	43.0
Slovenia	3	68.1	Kazakhstan	48	55.7	Cuba	93	50.3	Lebanon	138	42.8
Estonia	4	68.0	United Arab Emirates	49	55.6	Ethiopia	94	50.1	Sao Tome and Principe	139	42.4
Slovakia	5	66.7	Uruguay	50	55.6	Bolivia	95	49.9	Togo	140	42.4
Germany	6	66.6	Japan	51	55.5	Kiribati	96	49.9	Gabon	141	42.1
Latvia	7	66.1	Kuwait	52	55.4	Mongolia	97	49.8	Jamaica	142	41.9
Liechtenstein	8	65.9	Seychelles	53	55.3	Botswana	98	49.6	Comoros	143	41.7
Poland	9	65.6	Serbia	54	55.2	Peru	99	49.6	Zimbabwe	144	41.5
Mauritius	10	64.6	Russia	55	55.1	Grenada	100	49.5	Burkina Faso	145	41.4
Luxembourg	11	63.9	Philippines	56	55.1	Azerbaijan	101	49.4	Libya	146	41.2
Croatia	12	63.9	Turkey	57	55.1	Guatemala	102	49.3	Honduras	147	40.9
Portugal	13	63.7	Ghana	58	55.1	Trinidad and Tobago	103	49.2	Namibia	148	40.8
Denmark	14	63.1	Bhutan	59	54.9	Samoa	104	49.2	Cameroon	149	40.7
New Zealand	15	62.8	Bahamas	60	54.3	Guyana	105	49.1	South Africa	150	40.7
Austria	16	62.5	Bangladesh	61	54.2	Albania	106	49.1	Pakistan	151	40.2
Bulgaria	17	61.9	St. Kitts and Nevis	62	54.2	Vanuatu	107	48.8	Lesotho	152	40.1
Romania	18	61.7	Chile	63	54.1	Ecuador	108	48.5	Guinea	153	39.4
Iceland	19	61.2	Nepal	64	54.0	Oman	109	48.5	Syria	154	38.9
Malta	20	61.0	Bosnia and Herzegovir	65	54.0	Senegal	110	48.4	Tanzania	155	38.5
Belgium	21	60.9	Sri Lanka	66	53.9	Kenya	111	48.2	Sudan	156	38.2
Switzerland	22	60.7	Mexico	67	53.8	Cote d'Ivoire	112	48.0	Democratic Republic c	157	38.0
Costa Rica	23	60.5	Cambodia	68	53.4	Fiji	113	48.0	Sierra Leone	158	37.8
Finland	24	60.3	Colombia	69	53.0	Algeria	114	47.5	Venezuela	159	37.6
Lithuania	25	60.2	Panama	70	52.8	Iraq	115	47.3	Nicaragua	160	37.4
United Kingdom	26	59.9	Norway	71	52.8	Micronesia	116	47.0	Mali	161	37.3
Israel	27	59.6	Argentina	72	52.7	Suriname	117	46.9	Mauritania	162	36.5
Netherlands	28	59.4	USA	73	52.6	Tunisia	118	46.9	Niger	163	36.3
Georgia	29	59.3	Turkmenistan	74	52.6	Burma	119	46.8	Uganda	164	36.1
Greece	30	59.1	El Salvador	75	52.6	Gambia	120	46.6	Zambia	165	36.1
Indonesia	31	59.1	Canada	76	52.5	Timor-Leste	121	46.6	Madagascar	166	36.0
Hungary	32	59.0	Sweden	77	52.5	Jordan	122	46.6	Malawi	167	35.5
Cyprus	33	58.8	Maldives	78	52.4	Nigeria	123	46.2	Papua New Guinea	168	35.3
Spain	34	58.4	India	79	52.4	Kyrgistan	124	46.1	Mozambique	169	35.3
Armenia	35	58.1	Thailand	80	52.4	Benin	125	46.0	Liberia	170	34.8
Italy	36	58.0	Ukraine	81	52.3	Cape Verde	126	44.3	Central African Republ	171	34.3
South Korea	37	57.7	Montenegro	82	52.1	Laos	127	44.1	Angola	172	34.1
China	38	57.0	Saudi Arabia	83	51.9	Djibouti	128	44.0	Equatorial Guinea	173	33.9
Moldova	39	57.0	Qatar	84	51.8	West Bank and Gaza	129	44.0	Guinea-Bissau	174	33.7
Singapore	40	56.8	Australia	85	51.6	Afghanistan	130	43.8	Eritrea	175	32.6
France	41	56.7	Morocco	86	51.0	Brunei	131	43.6	Burundi	176	31.1
Uzbekistan	42	56.6	Tonga	87	50.9	Rwanda	132	43.5	Yemen	177	30.9
Vietnam	43	56.5	Malaysia	88	50.7	Tajikistan	133	43.4	Haiti	178	30.5
Dominican Republic	44	56.3	Dominica	89	50.6	Swaziland	134	43.2	Republic of Congo	179	28.9
Macedonia	45	56.2	Belarus	90	50.5	Solomon Islands	135	43.1	Chad	180	28.6

Intellectual Capital Index

4 Intellectual Capital & Innovation Index

Intellectual Capital is the fourth level of the Sustainable Competitiveness Pyramid. In order to create and sustain wealth, jobs and income for the population are required. Providing jobs requires producing goods and providing services that people or businesses, domestically or abroad, are willing to buy. This in turn requires products and services to be competitive in the global market in terms of quality and price. To maximise the domestic benefits, the value chain is ideally covered within the boundaries of a national economy - the largest share of adding value is contained in processing raw materials and/or parts to finished products.

Sustainable competitiveness therefore requires high R&D capabilities (based on solid education), and business entrepreneurship. In addition, sustained economic success requires a healthy balance between service and manufacturing sectors. Over-reliance on the service sector sooner or later leads to diminishing growth potential and loss of knowledge.



Key elements of competitiveness drivers in the Intellectual Capital (innovation capabilities) Sub-Index

Measuring innovation

Quality and availability of education in the past are an indication for today's R&D and innovation capabilities, and today's education performance reflect future innovation capabilities. Strength and depth of R&D activities is the basis for the development of value-added technologies and services. Educational performance indicators are therefore highly important to estimate the ability for sustained innovation and competitiveness.

Additional indicators include performance data on R&D activities and new business development indicators.

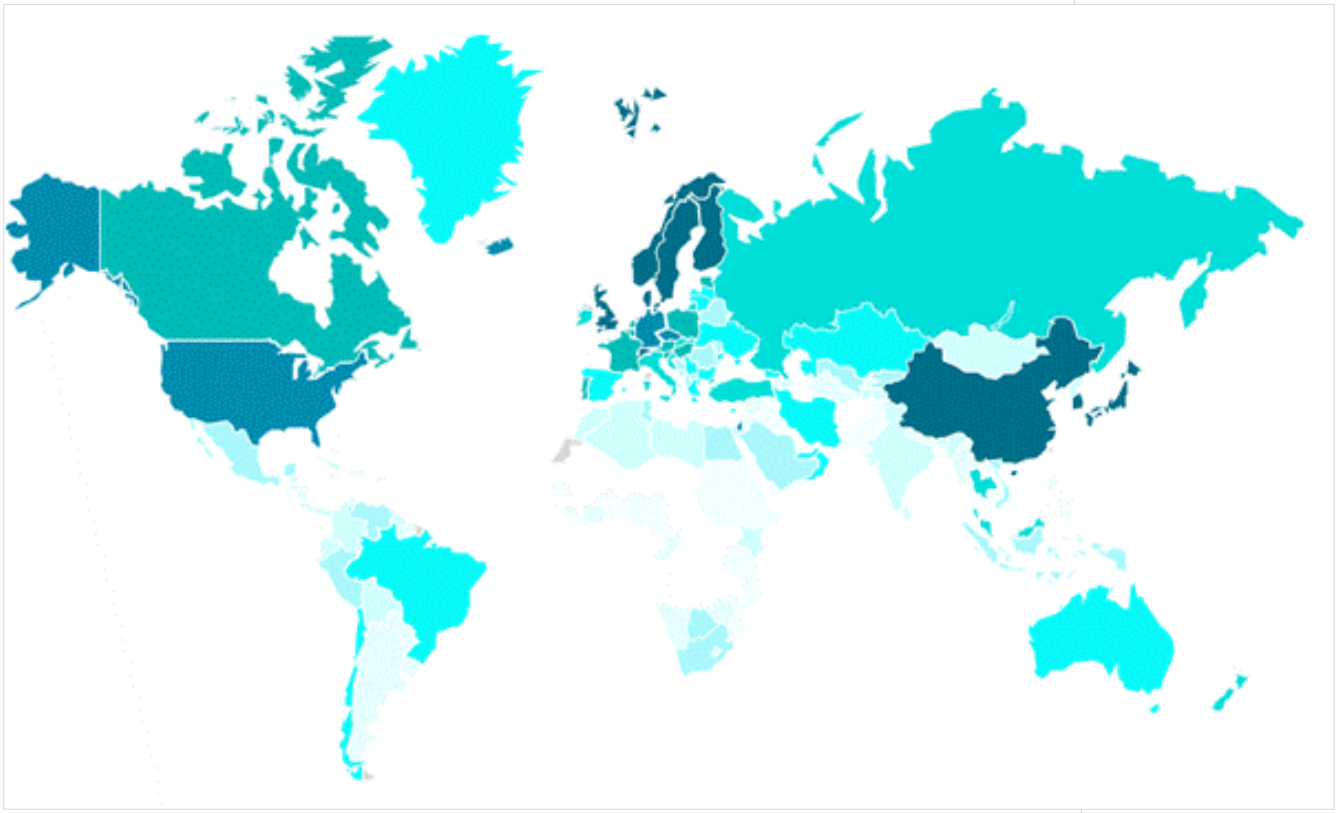
Further indicators relate to the actual business entrepreneurship – new business registration, trademark applications, and the health of the balance between agricultural, industrial and service sectors of an economy.

For the full list of indicators used, please refer to the methodology section.

The Intellectual Capital World Map 2020

Intellectual Capital is the basis for innovation capability and sustainable economic competitiveness. The indicators used for assessing these criteria are composed of data points relating to education, innovation capabilities, and entrepreneurship. Countries with a high score in this ranking are more likely than others to develop (or sustain) successful economies through research and knowledge driven industries, i.e. high-value added industries, and therefore achieve higher growth rates. All indicators used to assess the innovation capability and sustainable competitiveness have been scored against size of the population or against GDP in order to gain a full picture of the competitiveness, independent of the size of a country. In addition, developments (trends) of performance indicators have also been taken into account. Key observations of the Intellectual Capital ranking include:

- The innovation and competitiveness ranking continues to be topped by South Korea – by a considerable margin.
- North-Eastern Asian nations (S. Korea, China, Japan, Singapore) and the Scandinavian Nations (Sweden, Norway, Denmark) dominate the intellectual capital sub-index of the GSCI.
- Eastern European countries and the Baltic States also rank high.
- The UK is ranked 6, Germany 15, the US 11.
- China is ranked 7, Russia 33, Brazil 52, and India 101.
- The highest ranked South American Nation are Chile (51) and Brazil (52) and Costa Rica (58)
- Africa is unfortunately still underperforming in the global comparison

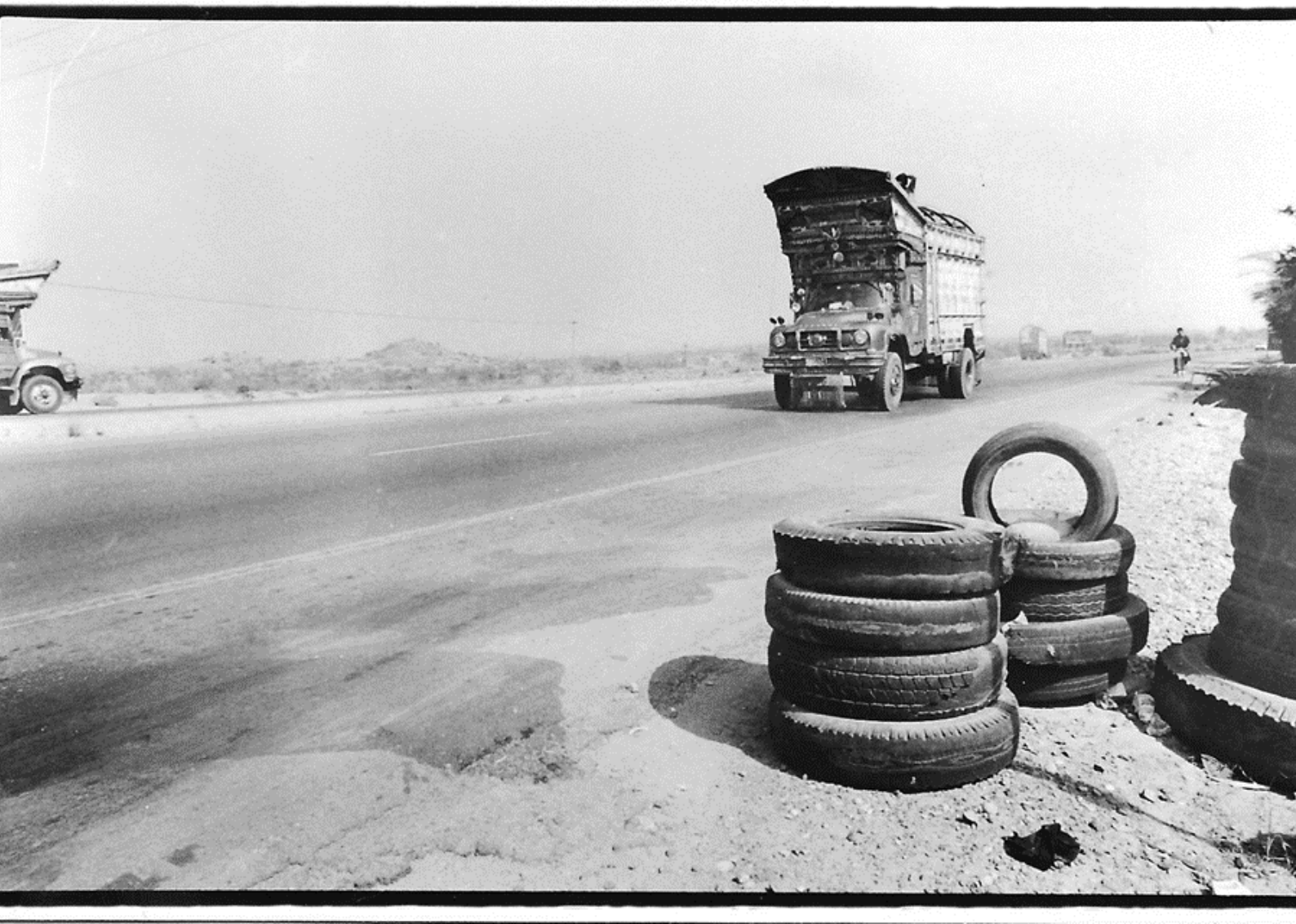


The Intellectual Capital World Map. Dark areas indicate high, light areas low availability of Intellectual Capital

Intellectual Capital Index 2020

Country	Rank	Score	Country	Rank	Score	Country	Rank	Score	Country	Rank	Score
South Korea	1	74.8	Serbia	46	48.0	St. Kitts and Nevis	91	37.6	Sierra Leone	136	29.0
Sweden	2	69.5	Ukraine	47	47.7	Libya	92	37.5	Republic of Congo	137	28.6
Singapore	3	69.4	Georgia	48	47.3	Sao Tome and Principe	93	37.0	Burma	138	28.2
Denmark	4	67.0	Spain	49	46.5	Bhutan	94	36.7	Ghana	139	27.3
Norway	5	66.7	Australia	50	46.4	Timor-Leste	95	36.7	Togo	140	26.9
United Kingdom	6	66.5	Chile	51	46.1	Kuwait	96	36.7	Laos	141	26.7
China	7	66.2	Brazil	52	45.6	Tajikistan	97	36.6	Mozambique	142	26.6
Japan	8	65.7	Kazakhstan	53	45.5	Panama	98	36.6	El Salvador	143	26.2
Switzerland	9	64.7	United Arab Emirates	54	45.2	Trinidad and Tobago	99	36.2	Sudan	144	25.7
Finland	10	64.3	Oman	55	45.1	Lebanon	100	35.9	Senegal	145	25.7
USA	11	62.3	Tunisia	56	44.9	India	101	35.7	Yemen	146	25.4
Israel	12	62.0	Saudi Arabia	57	44.7	Algeria	102	35.7	Pakistan	147	25.2
Iceland	13	61.3	Kyrgistan	58	43.7	Cape Verde	103	35.6	Cameroon	148	24.7
Czech Republic	14	61.2	Uzbekistan	59	43.2	West Bank and Gaza	104	35.3	Benin	149	24.5
Germany	15	60.4	Bosnia and Herzegovin	60	43.1	Mongolia	105	35.3	Burkina Faso	150	24.5
Belgium	16	59.9	Macedonia	61	43.0	Colombia	106	35.1	Iraq	151	24.4
Netherlands	17	59.8	Costa Rica	62	42.8	Qatar	107	35.0	Comoros	152	23.7
Austria	18	59.7	Romania	63	42.7	Suriname	108	34.8	Nigeria	153	23.6
France	19	59.7	Montenegro	64	42.0	Fiji	109	34.4	Ethiopia	154	23.5
Slovenia	20	59.4	Indonesia	65	41.8	Argentina	110	34.4	Liberia	155	23.5
Poland	21	58.3	Belarus	66	41.7	Micronesia	111	34.1	Tanzania	156	23.4
Hungary	22	57.5	Albania	67	41.7	Djibouti	112	33.9	Cambodia	157	23.3
Liechtenstein	23	56.5	South Africa	68	41.6	Turkmenistan	113	33.9	Equatorial Guinea	158	22.5
Estonia	24	55.8	Moldova	69	41.2	Tonga	114	33.9	Burundi	159	22.4
Portugal	25	55.4	Peru	70	40.7	Namibia	115	33.4	Guatemala	160	22.4
Canada	26	55.4	Vietnam	71	40.6	Bahamas	116	33.3	Gabon	161	21.9
New Zealand	27	54.3	Venezuela	72	40.5	Dominica	117	33.2	Papua New Guinea	162	21.8
Turkey	28	53.8	Botswana	73	40.3	Jordan	118	33.1	Rwanda	163	21.6
Slovakia	29	53.7	Egypt	74	40.3	Dominican Republic	119	33.0	Angola	164	21.3
Malaysia	30	52.7	Mexico	75	40.2	Grenada	120	32.9	Gambia	165	20.8
Ireland	31	52.2	Bahrain	76	40.2	Kiribati	121	32.8	Mauritania	166	19.9
Luxembourg	32	51.8	Seychelles	77	40.1	Nepal	122	32.7	Afghanistan	167	19.9
Russia	33	51.5	Maldives	78	40.0	Honduras	123	32.6	Bangladesh	168	19.9
Brunei	34	51.4	Swaziland	79	39.6	Uruguay	124	32.4	Malawi	169	19.5
Mauritius	35	51.1	Ecuador	80	39.3	Lesotho	125	31.9	Chad	170	18.5
Thailand	36	51.1	Cuba	81	39.3	Philippines	126	31.9	Niger	171	18.0
Croatia	37	50.9	Kenya	82	38.9	Syria	127	31.4	Guinea-Bissau	172	18.0
Italy	38	50.9	Guyana	83	38.7	Haiti	128	31.3	Guinea	173	17.6
Iran	39	50.0	Bolivia	84	38.6	Paraguay	129	30.7	Eritrea	174	17.0
Greece	40	49.9	Armenia	85	38.4	Zimbabwe	130	30.5	Democratic Republic o	175	16.3
Bulgaria	41	49.4	Jamaica	86	38.3	Vanuatu	131	30.2	Madagascar	176	15.0
Latvia	42	49.4	Azerbaijan	87	38.2	Samoa	132	30.2	Zambia	177	14.5
Malta	43	48.7	Sri Lanka	88	38.0	Cote d'Ivoire	133	29.6	Mali	178	14.5
Cyprus	44	48.2	Belize	89	37.9	Solomon Islands	134	29.5	Central African Republ	179	13.7
Lithuania	45	48.2	Morocco	90	37.9	Nicaragua	135	29.4	South Sudan	180	12.6

Resource Efficiency Index



5 Resource Efficiency Index

Resource efficiency determines the ability to manage available resource (natural capital, human capital, financial capital) efficiently – regardless of whether the capital is scarce or abundant. Whether a country does or does not possess resources within its boundaries (natural and other resources), efficiency in using resources – whether domestic or imported - is a cost factor, affecting the competitiveness and thus wealth of nations. Over-exploitation of existing natural resources also affects the natural capital of the country, i.e. the ability of a country to support its population and economy with the required resources into the future.

In addition, non-renewable resources that are used today might be scarce and expensive tomorrow, affecting competitiveness, wealth and the quality of life in the future. A number of factors are pointing to rising cost for resources in the future, in particular natural resources: scarcity and depletion of energy, water, and mineral resources, increasing consumption (particular in non-OECD countries), financial speculation on raw materials, and possibly geo-political influences. The key objective of the resource management category is therefore to evaluate a country's ability to deal with rising cost and sustain economic growth in the face of rising prices in the global commodity markets.

Key elements of competitiveness drivers in the Resource Management Sub-Index

Vital natural resources include water, energy, and raw materials. Most of the resources used today are non-renewable, or only partly renewable: fossil-based energy, and minerals. Water aquifers and other natural products (e.g. wood) are renewable, as long as their capacity is not overused and the replacement patterns are not drastically altered, e.g. trough depletion, biodiversity loss, pollution, or climate change.

Resource efficiency indicators are evaluated both in terms of intensity (per capita) and efficiency (relative GDP). The availability of accurate global data is not as wide as in other criteria, particularly in terms of usage of raw materials. Other than steel & minerals usage, reliable raw material usage statistics are not available on a global level. The focus is therefore on energy, energy sources, water, steel usage, as well as GHG emission intensity and productivity. For the full list of indicators, refer to the methodology section.

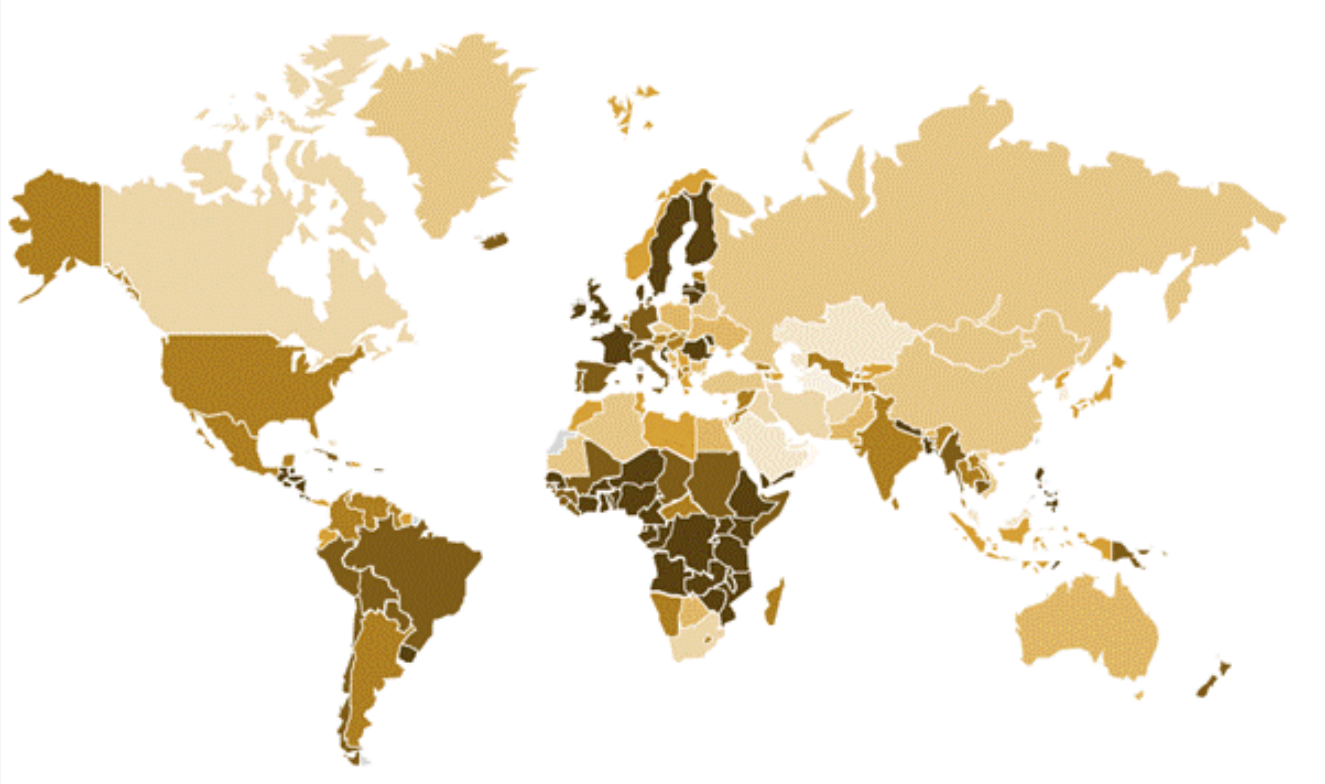
Resource Management World Map

The Resource Management Sub-Index is composed of indicators scored relative to population (e.g. GHG per capita) as well as relative to economic output (e.g. energy consumption per GDP). Indicators measured against population (per capita) clearly favour countries with low resource and raw material consumption (i.e. less developed countries), while indicators scored relative to GDP measure economic efficiency.

The resource intensity map shows that the resource intensity of less developed countries seems to be – generally speaking - lower than that of higher developed economies. However, indicators are measured both against economic output (GNI/GDP) and against per-capita performance. While the per-capita intensity is naturally lower in less developed economies, the per-output performance in efficient developed countries is lower than in the developing countries.

The resource intensity ranking 2020 is topped by Congo, followed by Kenya and Ethiopia – mainly due to low resource consumption. However, also highly developed economies achieve high rankings – Luxembourg (4), UK (5), Denmark (6)) and Ireland (7) are all ranked within the top ten. However, the World's economic powerhouses are ranked significantly lower – Germany on 71, Japan on 133, the US on 117, and China on 158. The low rankings indicate a distinctive potential for improving sustainable competitiveness through reducing resource intensity and resource management – i.e. reducing costs, at the end of the day.

The main implications of higher or lower resource management capabilities are related to stability and sustained economic growth: should global prices for raw materials and energy rise significantly in the future (as trends and the majority of available research suggests), the countries in the lower ranks will face substantial higher costs and challenges to maintain their growth compared to countries with higher efficiency and intensity scores.



The Resource Intensity World Map. Dark areas indicate low, light areas indicate high resource Intensity.

Resource Efficiency Index 2020

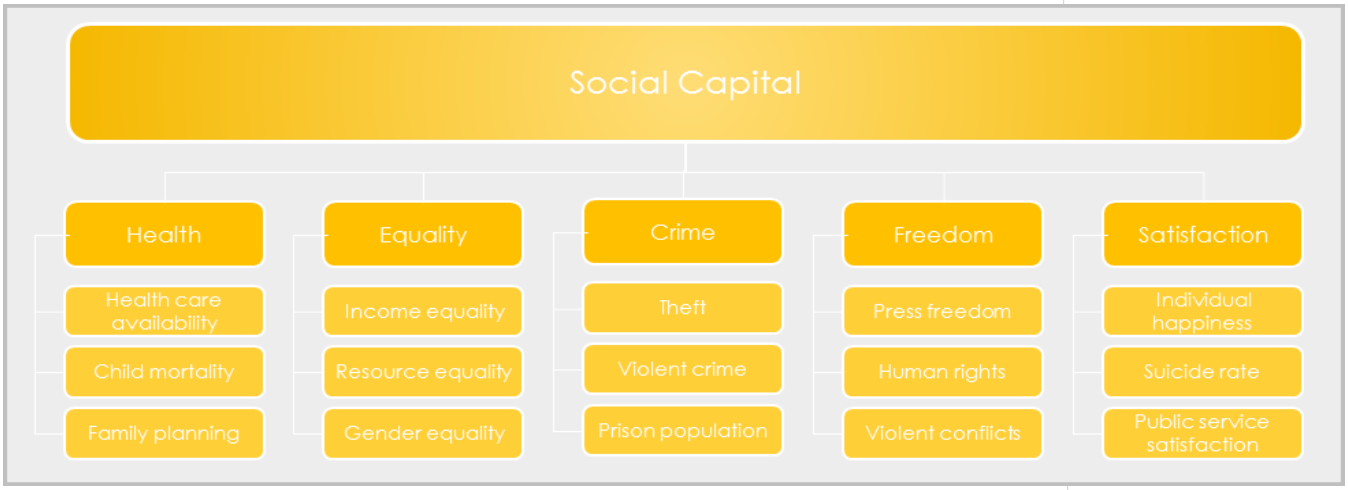
Country	Rank	Score	Country	Rank	Score	Country	Rank	Score	Country	Rank	Score
Democratic Republic c	1	70.0	Senegal	46	55.6	Tajikistan	91	50.4	Israel	136	44.1
Ethiopia	2	69.7	Angola	47	55.5	Djibouti	92	50.3	Botswana	137	44.0
Kenya	3	69.6	Malawi	48	55.3	Comoros	93	50.2	West Bank and Gaza	138	43.4
Luxembourg	4	68.3	Kiribati	49	55.3	Fiji	94	50.1	Bulgaria	139	43.2
United Kingdom	5	67.3	Finland	50	55.3	Slovakia	95	50.1	Pakistan	140	43.1
Denmark	6	65.6	Jamaica	51	55.2	Estonia	96	49.8	Slovenia	141	43.1
Ireland	7	64.4	Gabon	52	55.1	Colombia	97	49.8	Australia	142	43.0
Ghana	8	63.8	Uganda	53	55.0	Albania	98	49.7	Mauritius	143	42.6
Sweden	9	63.7	Benin	54	55.0	Georgia	99	49.6	Poland	144	42.6
Uruguay	10	63.3	Liberia	55	54.9	Macedonia	100	49.3	Bosnia and Herzegovir	145	42.6
Switzerland	11	63.1	South Sudan	56	54.8	Austria	101	49.1	Bahrain	146	42.4
Tanzania	12	62.9	Chad	57	54.8	Solomon Islands	102	49.0	Brunei	147	42.4
Lithuania	13	62.3	Guinea	58	54.6	Armenia	103	48.9	Grenada	148	41.9
Zambia	14	61.8	Italy	59	54.6	Netherlands	104	48.9	Ukraine	149	41.9
Latvia	15	61.5	Burma	60	54.6	Swaziland	105	48.8	Egypt	150	41.5
Nepal	16	61.3	Guinea-Bissau	61	54.4	Central African Republ	106	48.8	Bhutan	151	41.5
El Salvador	17	61.1	Cuba	62	54.4	Guyana	107	48.7	Cape Verde	152	41.0
Belize	18	60.8	Papua New Guinea	63	54.4	Venezuela	108	48.6	Mauritania	153	40.7
Bangladesh	19	60.8	Bolivia	64	53.8	Syria	109	48.4	Bahamas	154	40.1
Cameroon	20	60.2	Gambia	65	53.5	Hungary	110	48.3	Czech Republic	155	40.0
Nigeria	21	60.0	Mali	66	53.3	Thailand	111	48.3	Lebanon	156	39.9
Burundi	22	60.0	Tonga	67	53.2	Namibia	112	48.2	Algeria	157	39.8
Cote d'Ivoire	23	59.8	Cambodia	68	53.1	Argentina	113	47.9	China	158	39.6
Togo	24	59.4	Paraguay	69	52.7	Belgium	114	47.8	Vietnam	159	39.2
Zimbabwe	25	59.2	Sierra Leone	70	52.7	Laos	115	47.8	Belarus	160	39.0
Niger	26	58.1	Germany	71	52.7	Mexico	116	47.7	Singapore	161	39.0
Nicaragua	27	58.0	Peru	72	52.5	USA	117	47.5	Turkey	162	38.9
Mozambique	28	57.9	Sao Tome and Principe	73	52.5	Uzbekistan	118	47.5	Trinidad and Tobago	163	38.8
Rwanda	29	57.7	Haiti	74	52.5	Jordan	119	47.4	Russia	164	38.8
Croatia	30	57.7	Iceland	75	52.0	Panama	120	46.7	Mongolia	165	38.2
Guatemala	31	57.7	Micronesia	76	52.0	Dominican Republic	121	46.6	St. Kitts and Nevis	166	38.2
Eritrea	32	57.6	Brazil	77	52.0	Norway	122	46.4	Canada	167	37.1
Honduras	33	57.6	Spain	78	52.0	Azerbaijan	123	46.3	Afghanistan	168	36.8
Timor-Leste	34	57.5	Chile	79	51.8	Libya	124	46.1	Iraq	169	35.6
Romania	35	57.5	Portugal	80	51.7	Greece	125	46.0	South Africa	170	35.5
Moldova	36	57.1	New Zealand	81	51.7	Indonesia	126	45.6	Iran	171	35.3
Costa Rica	37	56.9	Vanuatu	82	51.5	Morocco	127	45.5	Malaysia	172	34.7
France	38	56.7	Equatorial Guinea	83	51.1	Ecuador	128	45.5	United Arab Emirates	173	33.4
Republic of Congo	39	56.5	Sudan	84	51.1	Kyrgistan	129	45.5	Saudi Arabia	174	33.2
Dominica	40	56.5	Madagascar	85	50.9	Montenegro	130	45.5	Kazakhstan	175	33.0
Liechtenstein	41	56.4	Sri Lanka	86	50.8	Cyprus	131	45.4	Qatar	176	33.0
Yemen	42	56.1	Maldives	87	50.7	Tunisia	132	45.2	South Korea	177	31.9
Malta	43	56.0	India	88	50.6	Japan	133	44.9	Turkmenistan	178	30.6
Burkina Faso	44	55.9	Lesotho	89	50.6	Suriname	134	44.6	Seychelles	179	29.2
Philippines	45	55.8	Samoa	90	50.6	Serbia	135	44.4	Kuwait	180	27.3

Social Capital Index

6 Social Capital Index

The Social Capital of a nation is the sum of social stability and the well-being (perceived or real) of the entire population. Social Capital generates social cohesion and a certain level of consensus, which in turn delivers a stable environment for the economy, and prevents natural resources from being over-exploited. Social Capital is not a tangible value and therefore hard to measure and evaluate in numeric values. In addition to local historical and cultural influences, the social consensus in a society is affected by several factors: health care systems and their universal availability/affordability (measuring physical health); income and asset equality, which are correlated to crime levels; demographic structure (to assess the future generational balance within a society); and freedom of expression, freedom from fear and the absence of violent conflicts that are required for businesses to be able to generate value.

While a direct connection of social cohesion to creating wealth and sustain economic development might be difficult to establish scientifically, a certain degree of equality, adequate health systems, freedom from fear and equal opportunities (without which no American Dream ever would have been possible) are pre-requisites to achieve the same. The absence or deterioration of social cohesion in turn leads to lower productivity (health), rising crime rates, and potentially social unrest, paralysing economic development and growth.



Key elements of competitiveness drivers in the Social Capital Sub-Index

Social Capital Indicators

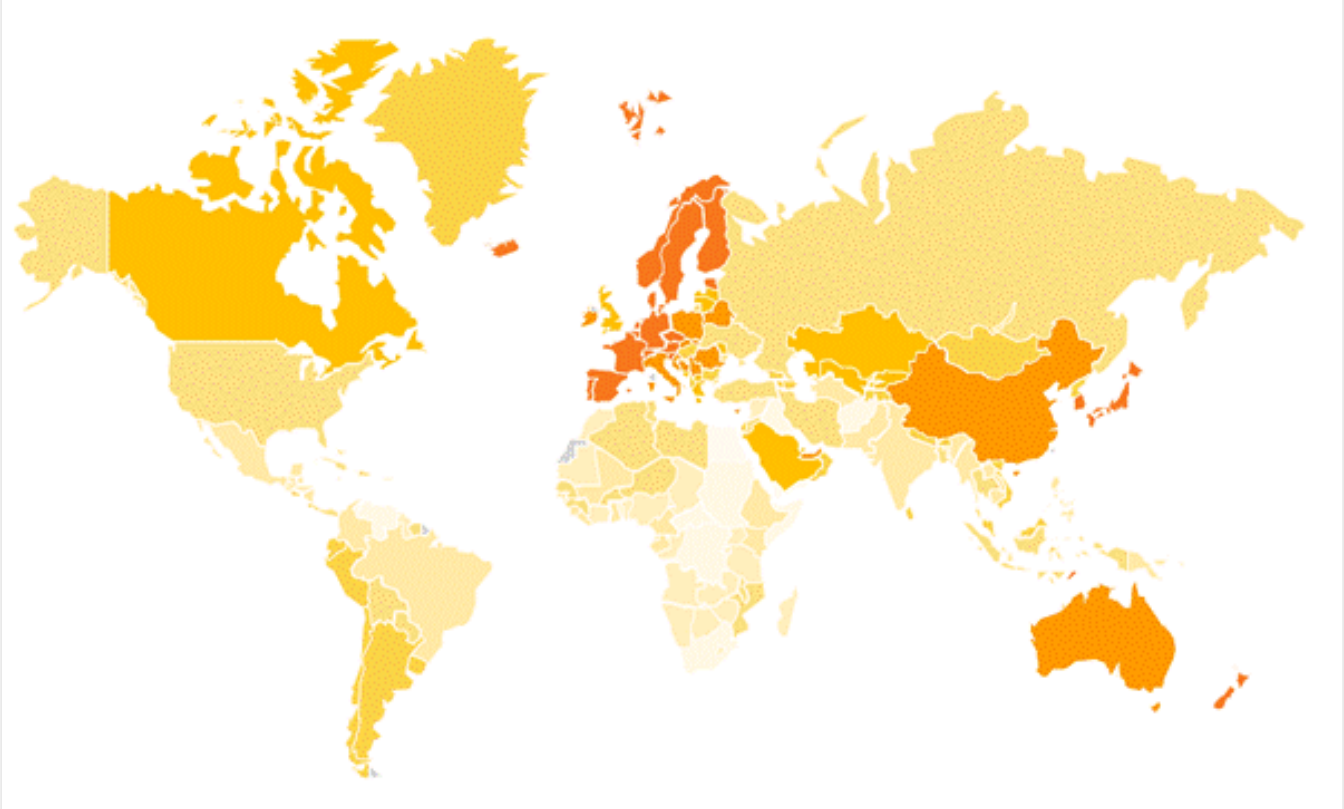
The indicators selected to measure social cohesion have been selected from the 5 themes above (health, equality, crime, freedom and age structure). Some of these indicators (e.g. "happiness") are qualitative, i.e. not based on performance data that can be measured. Instead, qualitative indicators from surveys and other sources compiled by recognised organisations were used to measure the qualitative aspects of social cohesion, including single indicators from the Happy Planet Index (New Economics Foundation), the Press Freedom Index (Reporters Without Borders), and the Global Peace Index (Institute for Economics and Peace). For the full list of used indicators, please refer to the methodology section.

Social Capital World Map

A certain level of social balance or social consensus is required to maintain a stable environment in which economic activities can take place. The higher the social capital of a country, the better the economy can flourish. The higher the social consensus, the higher the motivation of individuals to contribute to the wider good, i.e. the sustainable development of the nation – and the less likely they are to fall off the track into illegal paths of wealth generation that eventually hurt the legal economy. The indicators used to calculate the Social Capital score of countries is composed of health and health care factors (availability and affordability), the quantitative equality within societies (income, assets, and gender equality), freedom indicators (political freedom, freedom from fear, individual happiness), crime levels, and demographic indicators.

- The top 20 in the Social Capital sub-index is dominated by European countries from the North (particularly Scandinavia) – only Japan (13), Singapore (13) and South Korea (17) break into the ranks
- The USA, due to comparable high crime rates, low availability of health services, and rising inequality, is ranked 109, just below Jordan and above Dominican Republic.
- The UK is ranked 43, reflecting the deteriorating social fabric.
- China is ranked 31, India 137, Russia 99, and Brazil 123
- The highest ranked South American country are Costa Rica (62), Argentina (66) and Ecuador (69); the highest-ranking African country are Senegal (80) and Burkina Faso (83).

Most African nations, particular within and south of the Sahel zone, are at the bottom of this list, due to a combination of low availability of health care services and child mortality, limited freedom of expression, and unstable human rights situation



The Social Capital World Map. Dark areas indicate high, light areas low maturity of Social Capital

Social Capital Index 2020

Country	Rank	Score	Country	Rank	Score	Country	Rank	Score	Country	Rank	Score
Iceland	1	65.4	Saudi Arabia	46	51.3	Iran	91	43.1	Belize	136	37.8
Norway	2	65.0	Lithuania	47	51.2	El Salvador	92	43.0	India	137	37.8
Sweden	3	61.6	Qatar	48	51.0	Sao Tome and Principe	93	43.0	Kiribati	138	37.8
Finland	4	61.6	Kuwait	49	50.8	Seychelles	94	42.9	Liberia	139	37.7
Switzerland	5	61.0	Canada	50	50.8	Turkey	95	42.8	Micronesia	140	37.5
Austria	6	60.9	Brunei	51	50.2	Panama	96	42.7	Colombia	141	37.1
Belgium	7	60.5	Greece	52	50.0	Malawi	97	42.3	Mauritania	142	36.8
Maldives	8	59.6	Uzbekistan	53	49.2	Samoa	98	42.2	Morocco	143	36.4
Slovenia	9	59.6	Kazakhstan	54	49.0	Russia	99	42.0	Uganda	144	36.4
Estonia	10	59.4	Sri Lanka	55	48.8	Suriname	100	42.0	Namibia	145	36.4
Luxembourg	11	58.9	Mongolia	56	48.6	Guinea	101	41.9	Republic of Congo	146	36.3
Netherlands	12	58.7	Malaysia	57	48.6	Libya	102	41.9	Equatorial Guinea	147	36.2
Japan	13	57.9	Costa Rica	58	48.4	Bahamas	103	41.7	Zimbabwe	148	36.2
Denmark	14	57.8	Oman	59	47.9	Solomon Islands	104	41.7	Guyana	149	36.1
Singapore	15	57.8	Azerbaijan	60	47.9	Algeria	105	41.6	Benin	150	36.0
Portugal	16	57.7	Tajikistan	61	47.9	Paraguay	106	41.6	Djibouti	151	36.0
South Korea	17	56.9	Nepal	62	47.7	Bangladesh	107	41.5	Tanzania	152	35.9
Spain	18	56.7	Cape Verde	63	47.6	Jordan	108	41.4	Botswana	153	35.6
Czech Republic	19	56.6	Mauritius	64	47.4	USA	109	41.4	Zambia	154	35.3
Germany	20	56.3	Georgia	65	47.4	Trinidad and Tobago	110	41.1	Chad	155	35.3
Malta	21	56.2	Argentina	66	47.4	Dominican Republic	111	41.0	West Bank and Gaza	156	35.1
New Zealand	22	56.1	Israel	67	47.2	Laos	112	41.0	Angola	157	35.0
France	23	55.6	Bulgaria	68	47.2	Philippines	113	40.8	South Sudan	158	34.9
Timor-Leste	24	55.5	Ecuador	69	47.0	Mexico	114	40.8	Lesotho	159	34.7
Liechtenstein	25	55.3	Chile	70	46.6	Ghana	115	40.6	Burundi	160	34.6
United Arab Emirates	26	54.7	Uruguay	71	46.4	Nicaragua	116	40.5	Guinea-Bissau	161	34.0
Australia	27	54.5	Grenada	72	46.2	Gabon	117	40.4	Swaziland	162	34.0
Romania	28	53.7	Tonga	73	46.2	Kenya	118	40.3	Honduras	163	34.0
Cyprus	29	53.6	Hungary	74	46.0	Vanuatu	119	40.3	Comoros	164	34.0
Slovakia	30	53.6	Vietnam	75	45.9	Ethiopia	120	40.0	Syria	165	33.9
China	31	53.5	Peru	76	45.5	Cambodia	121	40.0	Cote d'Ivoire	166	33.7
Serbia	32	53.5	Albania	77	45.2	Gambia	122	39.9	Eritrea	167	33.6
Italy	33	53.2	Bhutan	78	45.2	Brazil	123	39.8	Madagascar	168	33.6
Poland	34	53.1	Thailand	79	44.9	Fiji	124	39.8	Nigeria	169	33.4
Ireland	35	52.9	Senegal	80	44.6	St. Kitts and Nevis	125	39.7	Guatemala	170	33.3
Bosnia and Herzegovir	36	52.5	Lebanon	81	44.5	Mali	126	39.3	Togo	171	33.0
Croatia	37	52.3	Ukraine	82	44.4	Cameroon	127	39.3	Venezuela	172	32.9
Belarus	38	52.0	Burkina Faso	83	44.3	Turkmenistan	128	39.2	Democratic Republic c	173	32.8
Macedonia	39	51.9	Cuba	84	44.1	Pakistan	129	39.2	Afghanistan	174	32.6
Latvia	40	51.8	Indonesia	85	44.0	Rwanda	130	39.1	Haiti	175	32.4
Moldova	41	51.7	Tunisia	86	43.9	Burma	131	39.0	Iraq	176	31.6
Kyrgistan	42	51.7	Bolivia	87	43.6	Dominica	132	38.6	South Africa	177	31.1
United Kingdom	43	51.6	Niger	88	43.5	Jamaica	133	38.6	Sudan	178	30.7
Montenegro	44	51.6	Bahrain	89	43.3	Papua New Guinea	134	38.4	Central African Republ	179	29.0
Armenia	45	51.6	Mozambique	90	43.3	Sierra Leone	135	38.1	Egypt	180	28.7

Achieving Sustainable Competitiveness

7 Sustainable, Democratic, Competitive

12 Key Points to achieve sustainable competitiveness

1. **A global climate tax.** Climate change is a gigantic market failure. We need a global climate tax - introduced in phases, paid back to the people in cash and reinvested in a renewable energy infrastructure - to avoid disaster. Now.
2. **More democracy.** In the 21st century, it is not possible that individuals decide over whole countries. The people need to be consulted on policy and law changes through mandatory referenda, and the possibility to induce issues on the governing agenda. And - it is not possible that people have to stand in line to vote in the 21st century.
3. **Better governance.** It's silly to assign responsibility for an entity as complex a country to a single individual, and winner-takes-it-all-systems allow minorities to govern. Ministries should be assigned according to national voter share, cabinet meetings are chaired by one of the ministers, in turns. The same applies in the corporate World: we don't need presidents and we don't need CEOs; we need teams of decision makers.
4. **Real market economy.** Markets only work when all costs are incorporated. The environmental costs of substances, materials and processes have to be integrated in the market price – based on a globally agreed level. The taxes generated need to be fiscally neutral (cash-back and/or used to offset the environmental cost).
5. **Quality education for all.** We need quality education, equal for all; taxed and re-distributed at the national level so the same resources are available to each student
6. **Working financial markets.** We need financial markets that support the real economy, and not vice-versa. This can be achieved through a transaction tax on, and/or a minimal holding periods for all financial instruments.
7. **Health care and social security for all.** We need affordable basic health care for all – paid for as percentage of income, directly deducted, with the choice of additional insurance for more luxurious health care.
8. **Impartial and efficient justice system accessible to all.** The justice system has to work fast, efficient, accessible to all while minimising abuse. Judges need to be completely impartial, appointed through a process that is safeguarded from any political influence.
9. **Unitary Taxing.** We need a global approach to tax multi-national corporations (e.g. by a combination of revenues/employees/sourcing per country), as well as private tax. These are not normal times. A wealth tax on the rich, maybe for a limited time, needs to be seriously considered.
10. **Fact-based, impartial information.** We need impartial, science- and fact-based information, not opinions. Financed through taxes, but safe-guarded against any control attempts by governments/politicians.
11. **Freedom for, and from, religion.** Faith is a choice. Science is not. Everybody is free to practice their faith, and nobody has their freedom impaired by other people's faith We need a total separation of state governance and religion.
12. **Total equality.** It is a shame that this has to be mentioned in the 21st century – but we need total equality. Between genders, races, regions, wealth.

7.1 Achieving Sustainable Competitiveness

The GSCI evaluates the competitiveness of nation-economies. But what actually is competitiveness?

Policy and investment decision in all pillars of competitiveness are inter-acting and affect the competitiveness of a country:

- The availability and state of **natural capital** does not affect short-term economic development or recovery – unless the capital in question is oil or other commodities in demand on the global market. Exploitation of natural resources (natural capital) can bring short-term economic benefits, but is often accompanied by diminishing the basis of future development (e.g. in the case of forest exploitation)
- **Resource intensity** is cost. The higher the resource efficiency, the higher the competitiveness of an economy. However, resource intensity is not directly linked to short-term economic development. While resource usage is increasing with initial development, efficiency tends to increase with higher development and investments. However, economic decline (as has occurred in Greece since 2010), leads to lower resource consumption.
- **Social capital** is negatively affected by economic decline. A declining economy leads to fewer financial resources available for social capital aspects (health, community development, integration, …), and leads to higher criminality as well as individual despair – all of which negatively affects the competitiveness of a nation-economy on the long term.
- There seems to be a fairly direct connection of **Intellectual capital** availability and positive/negative economic development. All countries that have cut investments (including, but not restricted to, innovation, R&D and education), have seen a slower recovery or even further decline since the financial crisis – and vice versa. While it may look sensible at first glance to cut expenditure to reduce deficits, cuts do not work because they also cut the required base to kick-start growth. Cutting investments is unsustainable competitive, i.e. not sustainable competitive. Sustainable competitiveness means: analysing the likely outcome of measurements before they are implemented – i.e. calculating not only the cuts, but also the cost of cuts. A majority of policy makers these days seem to be blind to the long-term cost of cuts and benefits of investments. They do not look ahead.
- The analysis of individual indicators suggests a fairly straightforward connection between the **Governance framework** provided to the economy: countries who cut investments (infrastructure, general investments), countries with a large (uncontrolled) domestic financial investment markets, and a low industrial base have all declined more and recovered slower than countries with higher investments, smaller domestic financial markets and a better industrial base. It also seems straightforward that a steep increase of financial market size in short term seems to be the indication of an imminent burst of a bubble.

In a sustainable efficient entity, powers are balanced. Imbalance in power between individuals, groups, and entities always lead to lower efficiency over time. Low efficiency means higher overall cost, less benefits. What might appear competitive now (e.g. the exploitation of natural non-renewable resources), but is not into the future, is not competitive. Competitiveness that is not sustainable is not competitive.

In a sustainable entity, the economy does not run against nature and/or communities/society. All dimensions of an entity are all running in parallel in win-win interactions. The fundamentals hat make an economy, a society, and the natural environment in which both of the above operate/live in, are balanced interacting:

The Sustainable Competitiveness Framework:

Sustainable competitiveness only requires two fundamentals as its base:

- Equal opportunities, everywhere
- Decision-making based on science and sustainable cost-benefit analysis that lead to l**ow-cost, high-benefit solutions** (**LCHB**s)

7.2 Requirements for Sustainable Competitiveness

Sustain able competitive economies/nation-states are characterised by high efficiency – i.e. systems and policies that enable and foster efficiency. We need efficient systems of governance, free of any religious, political or special interest views

Sustainable governance

- Efficient governance systems that have built-in guarantees against authorism with clear assigned and shared responsibilities
- Direct democracy (citizens can not only elect politicians, but also vote on legislation and policies)
- Efficient legal framework and judicial system that is available and equal for and to all
- Financial markets that serve the real economy, not vice-versa
- Simple tax regime that taxes all forms of income equally. Public services, including health, education and infrastructure, are financed through progressive income taxes
- Harmonised tax rates across regions and countries
- Efficient and well-maintained transport infrastructure, and other public infrastructure (health, education, recreation)
- Corruption prevention
- Wise allocation of state resources, balancing social, environmental and economic interests

Innovation

- Equal quality education for all, constantly adjusted to changing requirements, including vocational training
- A national/regional economic development strategy/vision supported by government policies, co-ordination, and incentives
- An environment that supports and rewards investment in R&D
- Curbing the power of monopoly-like entities

Social cohesion

- Universal public health services for all, with additional private health services beyond the basics
- Respected law enforcement deeply integrated in local communities and related services to curb crime
- Treatment of diseases as diseases, not as crimes (e.g. drug addiction)
- Equal opportunities for all genders, races and minority groups
- New models of employment and public participation in public services in light of increasing automatization (robotics and artificial intelligence)

Resource intensity

- Introducing sustainable balance-sheets for all economic activities (integration of externalities): polluter pays principle for all substances and activities. Cost to the environment and/or society are factored into the cost of all products and services

- Harmonised global taxing of greenhouse gases, to be reinvested in renewable energy technologies and climate change impact mitigation
- Resource efficiency – supporting the development of the circular economy
- Improvement and streamlining of organic food production

Natural capital

- Legal protection of the leftover natural biodiversity
- Restoring biodiversity where possible through sustainable agriculture and land management
- Reforestation
- Protection of waterways, investment in desalination facilities

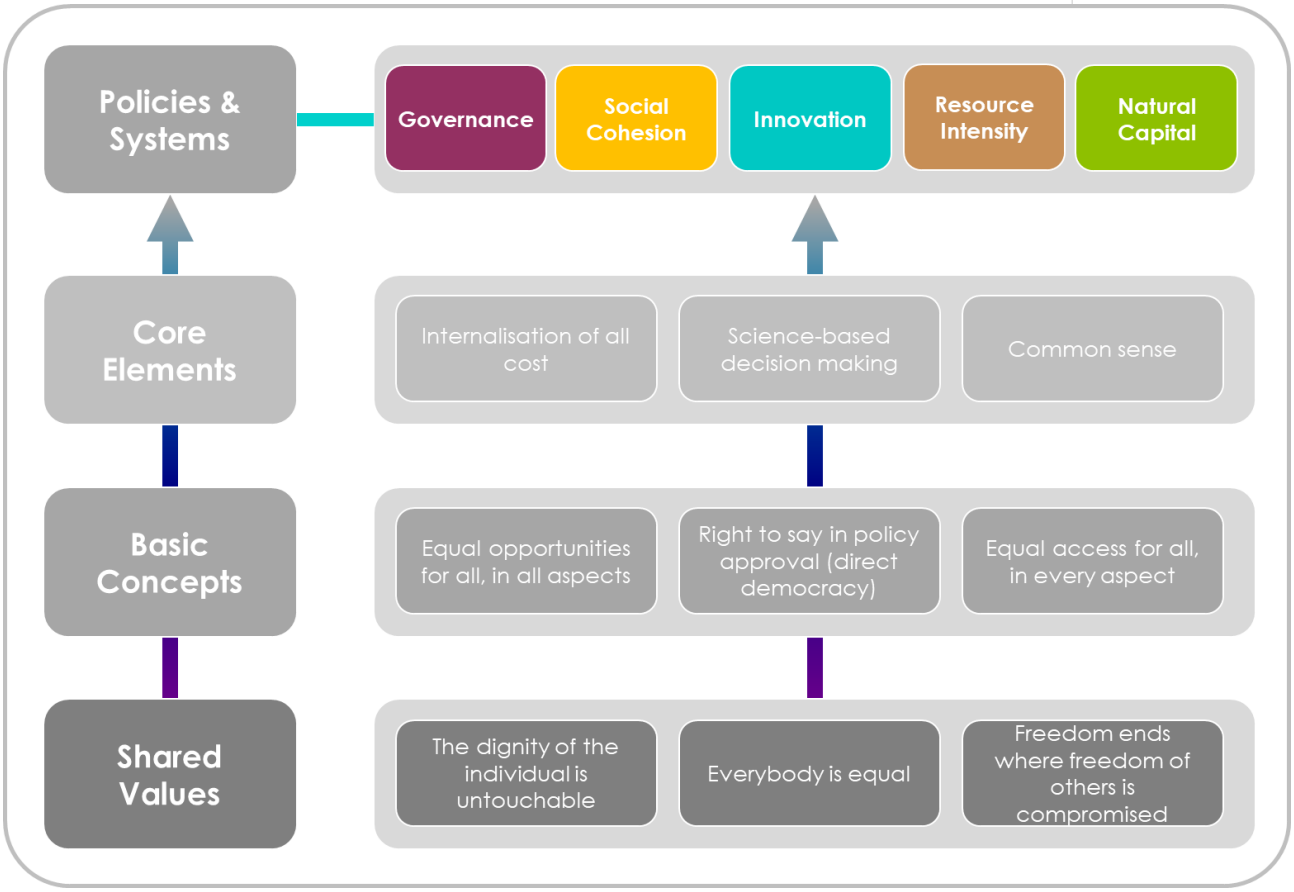
7.3 Shared Values

At the base of sustainable economy, we need simple shared values:

- The dignity of the individual is untouchable.
- All individuals are free. The freedom of an individual (or group) ends where the freedom of others is compromised.

The economics of sustainable competitiveness is equally simple:

- Provision of equal opportunities and equal access for all.
- Internalising all cost, tangible and intangible, in the balance sheets – of products, services, and in project and policy appraisal.



7.4 Outlining Sustainable Governance

The following is a rough outline of issues to be considered when aiming for a real sustainable & competitive framework:

1. **A global climate tax**
2. **More democracy**
3. **Better governance**
4. **Real market economy**
5. **Education, education, education - quality education for all**
6. **Working financial markets**
7. **Health care and social security for all**
8. **Impartial and efficient justice system accessible to all**
9. **Unitary Taxing**
10. **Fact-based, impartial information**
11. **Freedom for, and from, religion**.
12. **Total equality**

- **Governance update**
  Our current systems were designed when monarchies were the going power structures: elected presidents replace the king. It is stupid to concentrate power in a single pair of hands, be that in a company, an organisation, local authorities or on the state level. We don't need kings, presidents, prime ministers and CEOs. We need teams of decision makers.
- **Democracy upgrade**
  We currently have systems that allow us to choose between different versions of jokes every couple of years. That is not democracy. We need real democracy – we need systems that allow citizens to vote on policy and regulation changes on a regular basis.
- **Legal equality**
  As is, justice is for the rich and powerful. Suing for your legal rights and defending yourself in court requires significant financial resources. If you don't have financial resources, you are seriously restricted in obtaining your legal rights, and being sued can ruin you. The justice system has to be available to all, while there should be barriers for people/entities that sue for the sake of suing.
- **Financial markets reboot**
  The real economy (the producing economy) currently serves as collateral for the rent seeking/gambling industry that we call "the financial markets". We need financial markets that serve for what they

were initially intended: provide money transfer and provision of capital for innovation and production.

- **Taxing re-start**
  There will and should always be different levels of wealth. But the discrepancies have gone completely out of hand, with taxing favouring those that already have. Being at the right place at the right time or being a CEO should be neither grounds for amassing millions/billions, nor for yielding influence and power.
- **Integrating the environment in the economy**
  If pollution dos not have a price, pollution does happen. We need a system that quantifies pollution, and then can be integrated into the price of resources and materials. The price has to be paid before the pollution occurs. For example - we need a global climate tax. Now.
- **The role of the state**
  Privatisation of infrastructure-based public services (railroad services, water provision, electricity, gas, health care provision) has lead to lower quality, more frequent disruption, higher prices. The role of the state in provision of infrastructure-based service provision therefore has to be discussed, and frameworks to ensure efficient management and prevention of corruption in public services have to be developed. Or should the state be a player in the markets itself?
- Economic co-operation

  Countries that have a close relationship and co-ordination (e.g. South Korea, China) have experienced above-average success over the past decades. While such close relationships are not without their own inherited complications, a closer alignment of national development priorities and the private sector can be highly beneficial and should be more closely scrutinised.

- **Intelligent investment**
  Investment decisions need to be based on a broader assessment of impacts – both negative and positive – and further into the future. In addition, they should be aligned with a clear development strategy, to allocate the limited resources at the highest possible return for society, the economy, the environment and the countries
- **Harvesting on technology**
  New technologies potentially can bring huge benefits to humanity – clean energy technologies, nano-technologies, artificial intelligence, robotics, further digitalisation. A clear strategy is required to prioritise and support beneficial technologies and applications leads to guided development that is beneficial
- **Labour markets and labour security**
  Digitalisation, robotics and artificial intelligence are expected to substitute a significant percentage of today's labour. It is highly likely that there will not be jobs for everybody into the future. Alternative models of labour – for example through a base salary tied to work in organic agriculture, elderly care and other community services, to name a few – need to be evaluated and discussed timely.
- **Public service upgrades**
  The private sector has completely failed to deliver efficient services in monopolistic distribution environments (e.g. running water, rail transport, electricity, …). We need systems that guarantee efficient management of public infrastructure and services.
- **Freeing the press**
  lies and conspiracy theories is not free speech, it is spreading lies and

conspiracy theories. Pushing the opinions of owners of media companies is also not free speech. We need a completely independent fact-based press. Less opinions, more facts. Easy in theory, very complex in reality.

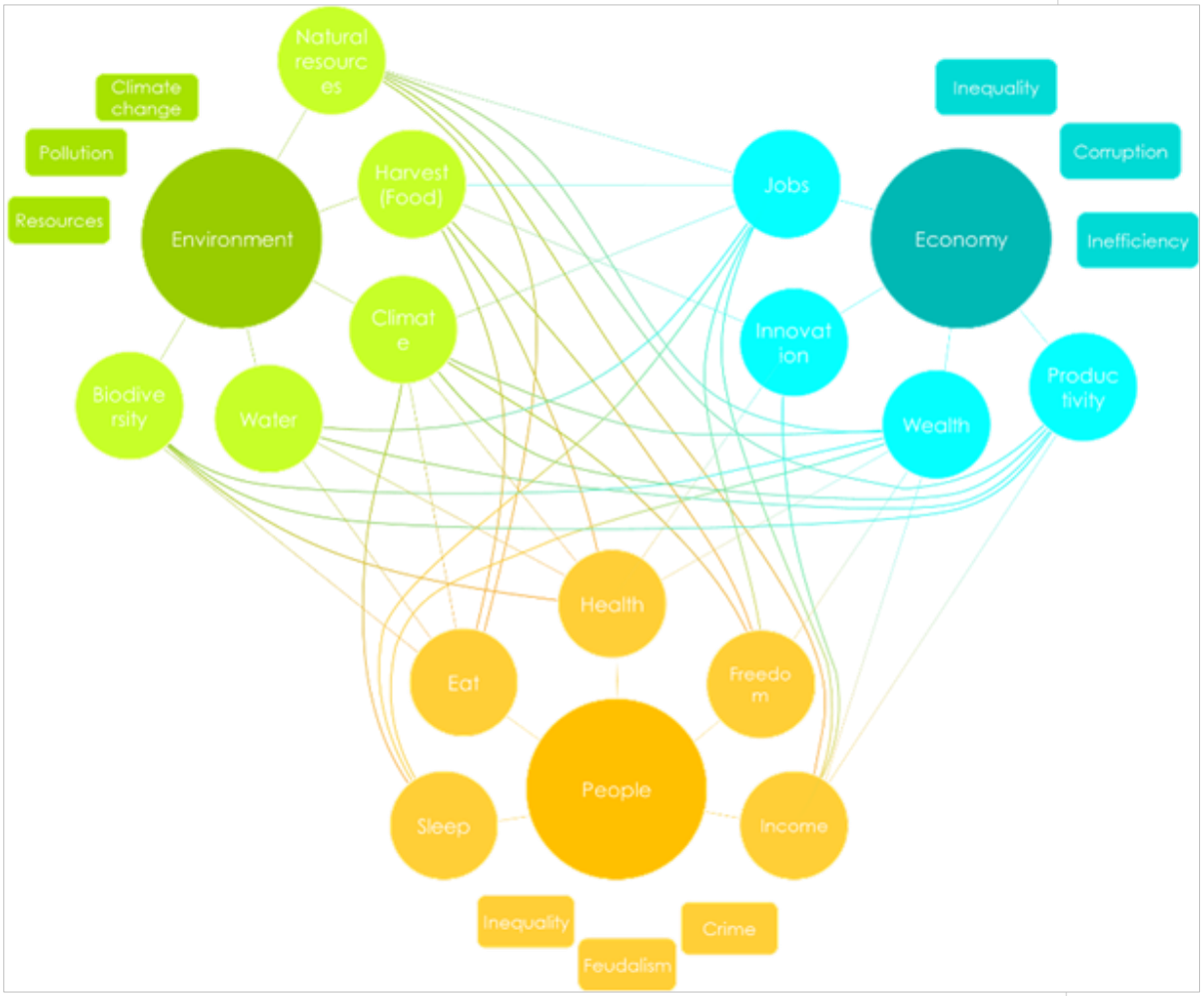
- **Education update**
  We need better and adequate education for all, including practical skills. Vocational training needs to be increased and improved, and curriculums updated regularly based on technology and societal developments.
- **Health re-loaded**
  Basic health care has to be available to all, paid for by all. That probably requires state-guided policies, state-managed insurance, and state-managed health services
- **Greening agriculture**
  Industrial agriculture is based on the use of fertilisers, pesticides, and managing land in mono-cultures. All three of these have to be replaced with organic approaches. However, organic agriculture is inevitably more labour intensive. Solutions to keep the cost of food product within reasonable scope for the wider public therefore have to be discussed.
- **Saving the biosphere**
  We need more protection for vital eco-systems, such as the Amazon and other rain-forests. However – it is not only the rainforests. We need more biodiversity across this World – in all countries, in all regions. More land needs more land to be protected as parks, and sustainable management of the resources has to be implemented in line with the communities living in these areas. Water is vital to the survival of humanity; waterways ned to be protected better.

Index Methodology

8 Sustainable Competitiveness Model & Index Methodology

8.1 The Sustainable Competitiveness Model

The three-dimensional sustainability model of reconciling the economy, the environment and the society is often used and applied in the corporate world to evaluate and manage sustainability issues and performance.



The ESG model

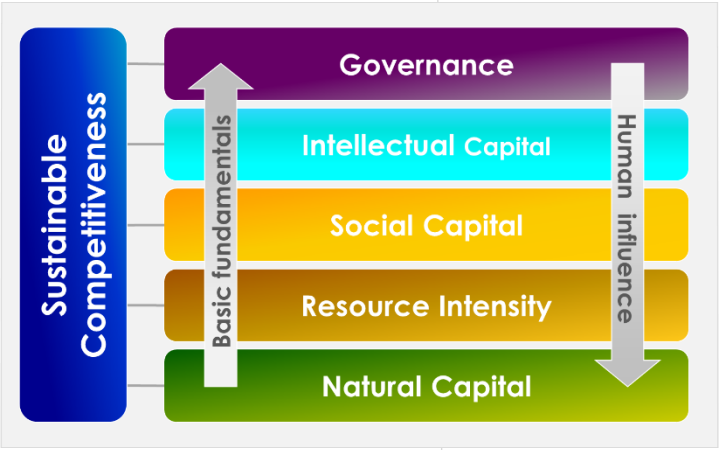
However, corporations are entities that operate in very different boundaries and with different goals than states and nation-economies. The elements of the model therefore have to be adapted to the characteristics of nations and their fundament of sustained prosperity.

While corporate or economic entities (depending on the nature of their business) are working with natural capital, they do not depend on the location of the capital (natural, human, financial) they utilize, and therefore can move their operations to where the external conditions are most favourable, both in terms of physical location (offices/factories) and markets, as well as in terms of business fields. Transport and international trade have made countries and people less dependent on their immediate environment through international trade of

resources, including water. However, countries and population cannot simply move should fundamental resources (water, agricultural output) become scarce or the country inhabitable due to climate change. At the end of the day people rely on, and life off, the natural capital of their environment for better or worse.

The Sustainable Competitiveness Pyramid

Sustainable competitiveness - they ability to generate and sustain inclusive wealth and dignifying standard of life for all citizens in a globalised world of competing economies, consists of 5 key elements that interact and influence each other: natural capital (the given natural environment and climate, minus human induced degradation and pollution), social capital, intellectual capital (the ability to compete in a globalised market through sustained innovation), resource management (the ability to extract the highest possible value from existing resources (natural, human, financial), and governance (the framework given, normally by government policies & investments, in which a national economy operates).

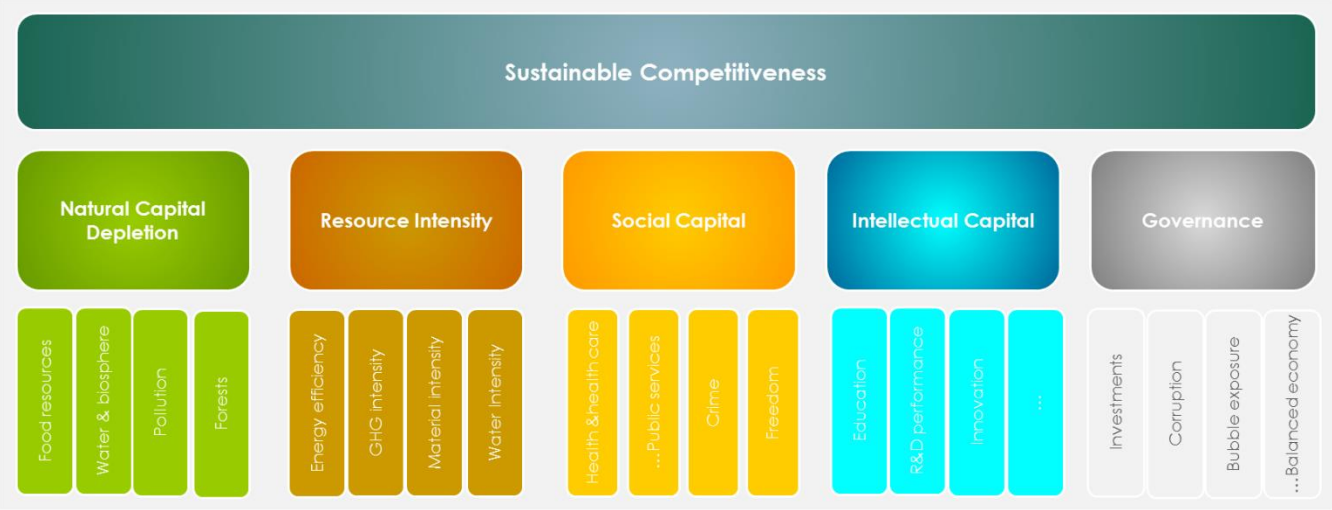


The Sustainable Competitiveness Pyramid

It is now widely accepted that economic activities have adverse impacts or side-effects on the non-financial assets of a country. The negative impacts of economic activities - including negative impacts on the social fabric and cohabitation within a society - can undermine or even reverse future growth and wealth creation. Due to the omission of key non-financial indicators and performance that are fundamental to sustain economic activities, conventionally used measurements to measure wealth of nations such as the GDP have limited informative value for the future development of a country.

Sustainable competitiveness means the ability of a country to meet the needs and basic requirements of current generations while sustaining or growing the national and individual wealth into the future without depleting natural and social capital.

The Sustainable Competitiveness Index is built and calculated based on the sustainable competitiveness model that covers 106 data indicators grouped in5 pillars:



Social Cohesion is the fundamental stability required to maintain interruption-free economic activities: the health of populations, equality, security and freedom within a country

- Natural Capital is the based to sustain a society and economic activities: the given natural environment within the frontiers of a country, including availability of resources, and the level of the depletion of those resources.
- Resource Intensity is a measurement of efficiency, and thus an element of competitiveness: the efficiency of using available resources (domestic or imported) as a measurement of operational competitiveness in a resource-constraint World.
- Social Cohesion is the fundamental stability required to maintain interruption-free economic activities: the health of populations, equality, security and freedom within a country
- Sustainable Innovation is key to sustain economic development in the globalised market: the capability of a country to generate wealth and jobs through innovation and value-added industries in the globalised markets
- The Governance framework is the environment businesses and a national economy are operating in. It is key to future development, not only for software, but also hardware.

Methodology Development

The competitiveness of a nation is influenced by a wide range of factors, i.e. is a complex matter. We are striving to develop a model that can reflect all aspects that define the level of competitiveness. The methodology for the Sustainable Competitiveness is therefore constantly reviewed and has evolved over time. The changes to the Sustainable Competitiveness Model and indicators have been undertaken based on past experiences, new research, data availability, and back-track analysis.

We prioritise accuracy over consistency. Due to changes in methodology, year-on-year comparison of rankings have a somewhat limited informative value. From an index point of view, it might be preferable to base rankings on the same methodology and data. However, we believe that delivering the most accurate result possible is more important than direct of year-on-year rankings comparison. The main changes that have been implemented as a result of the methodology review include changes to the model of competitiveness on which the calculation is based, and further adaptation to availability of congruent data series.

The sustainable competitiveness model has been adapted to better reflect the elements that characterise and influence sustainable competitiveness of nation-economy, and how those elements influence and impact each other. The model used for the first Index consisted of 4 key elements – Natural Capital, Resource Intensity, Sustainable Innovation, and Social Cohesion. Since 2014, the Sustainable Competitiveness model is based on a pyramid with 5 levels. The basic conditions form the basis of the pyramid, on which the next level is built. Vice-versa, the higher levels of the pyramid are influencing the performance of the levels below.

- The base level of the Pyramid is the **Natural Capital** (the given physical environment and resources) – the resources that feed the population, provide energy, and materials
- The second level is **Resource Efficiency** – the ability to use available resources at the highest possible efficiency - natural resources, human resources, intellectual resources, financial resources.
- The third level is the **Social Capital** of a country, the cohesion between generations, genders, income groups and other society groups. Social cohesion is required for the prosperous development of human capital, i.e. Social Capital is the provision of a framework that facilitates the third level of the pyramid
- The fourth level is the **Intellectual Capital**, the fundament for the ability to compete and generate wealth in a globalised competitive market through design and manufacturing of value-adding products and service. It is the basis for management capabilities
- The fifth and highest level is **Governance Performance**– the direction and framework provided by government interventions, expenditure, and investments. Government policies (or the absence of such policies) have strong influence and or impact on all lower levels of the Sustainable Competitiveness Pyramid.

8.2 Competitiveness Indicators

The sustainable competitiveness model is based on a pyramid, where each level is required to support the next higher level. In the top-down direction, the different levels of the pyramid influence the state of the lower levels.

Natural Capital

The natural capital is the base of the pyramid, and is defined by the characteristics of the given physical environment of a country. The natural capital consists of a mixture of size, population, geography, climate, biodiversity and availability of natural resources (renewable and non-renewable), as well as the level of depletion/degradation of the available resources. The combination of these **factors and the level of depletion of the non-renewable resources due to human activity and climate change represents the potential for sustaining a prosperous** livelihood for the population and the economy of a nation into the future.

Indicators used encompass water, forest and biodiversity indicators, agricultural indicators, land degradation and desertification, minerals and energy resources, pollution indicators and depletion indicators.

Natural Capital Indicators	
Arable land (ha/capita)	Land at risk of desertification
Average rainfall (mm)	Land degradation (% of total)
Biodiversity Benefit Index (GEF)	Mineral reserves (per GNI and capita)
Cereal yield (kg per hectare)	Natural resource depletion (as percentage of GNI)
Electricity from hydropower (%)	Ocean Health Index
Endangered species	Population density
Energy self-sufficiency	Population living below 5m (% of total)
Extreme weather incidents	Potential arable land (ha/capita)
Fertilizer consumption/ha	Renewable freshwater availability/capita
Food Production Index	Tourist attractiveness
Forest area (% of total)	Land area below 5 m (% of total)
Fossil energy prevelance (% of total)	Climate extremes damages ($/1000 people)

Resource Intensity

The more efficient a nation is using resources (natural, human, financial), the more wealth the country is able to generate. In addition, higher efficiency means smaller negative impacts of potential supply scarcity of resources (food, energy, water, minerals). Higher efficiency is also equal to lower cost per production unit throughout all sectors, private and public. Efficient use of resources and energy is an indicator for a nation's ability to maintain or improve living standard levels both under a future business-as-usual Indicators used cover water usage and intensity, energy usage, intensity and energy sources, climate change emissions

and intensity as well as certain raw material usage. However, global data availability for raw materials consumption other than steel is limited and therefore could not be included.

Indicators used cover water usage and intensity, energy usage, intensity and energy sources, climate change emissions and intensity as well as certain raw material usage. However, global data availability for raw materials consumption other than steel is limited and therefore could not be included.

Resource Intensity Indicators	
Air pollution - mean particle concentration	NOx emissions per capita
Air pollution exposure - population	NOx emissions per GDP
CO2 emissions / GDP	Renewable electricity excluding hydro (%)
CO2 emissions /capita	SO2 emission per GNI
Ecological consumption footprint	SO2 emissions per capita
Electricity consumption / GDP	Steel usage efficiency per capita (T/CAPITA)
Electricity consumption per capita	Transmission losses
Electricity from coal (%)	Waste per capita
Electricity from oil (%)	Waste per GDP
Energy per capita	Water productivity
Energy per GDP	Water usage per capita
Freshwater withdrawal rate	GHG emission per capita
Hazardous waste per GDP	GHG emissions per GNI

Social Capital

The economy requires stability to operate smoothly. Nations and societies therefore need a minimum level of social cohesion, coherence, and solidarity between different regions, between authorities and the people, between different interest groups, between income levels, between generations, and between individuals. A lack of social cohesion in any of the above aspects results in social gaps that eventually lead to increased crime, violence and insecurity that can seriously undermine the stability the economy requires as a basis to thrive in the long run.

Indictors used cover health performance indicators, birth statistics, income differences, equal opportunities (gender, economic), freedom of press, human rights considerations, the level of crime against both possession and humans, and perceived levels of well-being and happiness.

Social Capital Indicators	
Aging society	Overweight
Birth per woman	Peace Index
Child mortality (below age 5, death per 1000)	Press Freedom Index
Doctors per 1000 people	Prison population rate (per 100'000 people)
GINI coefficient (income distribution inequality)	Public health expenditure of total expenditure
Homicide rate (per 100'000 people)	Civic disease risk
Hospital bed availability	Suicide rate
Human rights index	Teen moms
Income quintile ratio	Top 10 % income share
Life expectancy	Women in parliament (% of MPs)
Life satisfaction index	Violent assaults/100000
Lower middle class income share (2nd 20%)	Women in management positions
Nurses per 1000 people	Health care efficiency index
Aging society	Drug use prevalence
Birth per woman	Freedom for and from religion
Obesity rate	

Intellectual Capital

The backbone of sustained economic success is the ability to continuously improve and innovate on all levels and throughout all institutions (not limited to the private sector). Sustaining competitiveness also requires a long-term view beyond momentary political interests or opinions, and long-term investments in crucial areas (education, infrastructure). Economies that are being deprived from investments sooner or later face decline, as some nations of the formerly "leading" West are currently learning the hard way. Indicators used for the innovation capability sub-index cover education levels, R&D performance indicators, infrastructure investment levels, employment indexes, and the balance of the agricultural-industrial-service sectors.

Intellectual Capital Indicators	
Cost of business start-up	R&D spending
Education spending (% of GDP)	School dropouts secondary
High tech exports	Secondary education enrolment
New business registrations per 1 million people	Spending on education (% of state expenditure)
Patent applications (per GDP)	Spending per student (% of per capita GDP)
Patent applications per 1 million people	Tertiary education enrolment
Primary education completion	Trademark applications
Primary student repetitions	Pisa Test Results
Pupil gender ratio	Females with secondary education
Pupil-teacher ratio	R&D spending
R&D FTEs per million people	School dropouts secondary

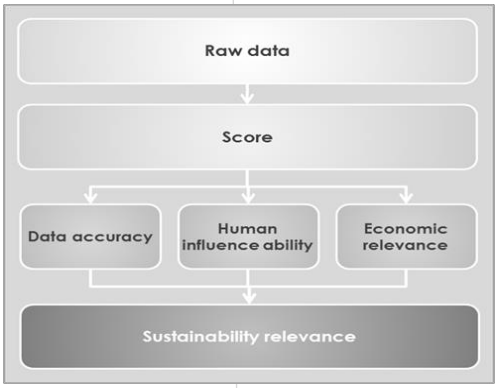
Governance Performance

With the given physical environment and conditions in place, the sustained competitiveness of a country is determined by what the society and the economy is able to extract from available resources. This, in turn, is characterized by the framework provided by authorities. The framework of a country provides the basis for businesses and the social consensus. Governance indicator consist of both physical indicators (infrastructure) as well as non-physical attributes (business legislation, level of corruption, government investments, exposure to business and volatility risks, exposure to financial risks, etc.)

Governance Efficiency Indicators	
Access to electricity	Market fluctuation exposure: company value (% of GDP)
Austerity Index	Market fluctuation exposure: stock trading volume (% of GDP)
Bank capital-asset ratio	Military spending (% of total government spending)
Bribery payments - % of businesses	Mobile communication availability
Ease of doing business	Non-renewable resource income dependency
Employment in the manufacturing sector	Population (total)
Employment in the service sector	Poverty development
GNI (total)	Quality of public services
GNI per capita	Rail network per area & population
Government debt	TI CPI Index
Imports (% of GDP)	Unemployment
Internet availability	Debt service (% of government expenditure)
Investments	Democracy Index
Manufacturing value added	

8.3 Index calculation

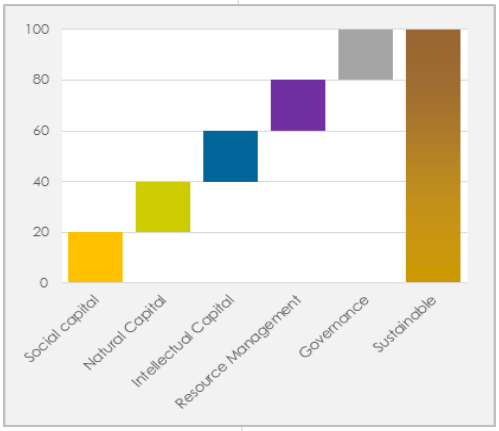
The raw data consist of numerical values. While values can be ranked against each other, they cannot be compared or added to other values (two apples plus three oranges are not equal to five pineapples). It is therefore necessary to extract a scalable and comparable score from the raw data as a first step.



Calculating scores from raw data

When comparing raw data of variables of different countries, an "absolute best" cannot be defined. Scores therefore cannot be calculated against a real or calculated best score. For the purpose of this index, the raw data was analysed and ranked for each indicator individually. Trough calculation of the average deviation, the best performing 5% receive the highest score (100), and the lowest 5% receive the lowest possible score (0). Scores between the highest and the lowest 5% are linearly assigned relative to the best 5% and the worst 5%.

In a second step, the relative importance (weight) of the indicator is assessed against other indicators to calculate scores for the 5 sub-indexes. The Sustainable Competitiveness Index is calculated based on the sub-indexes, each weighted equally.



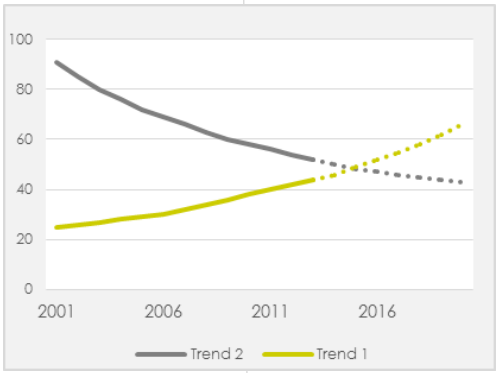
Each level of the Sustainable Competitiveness Pyramid is equally important and therefore equally weighted

Data in perspective

Raw data has to be analysed in perspective: 5000 ha of forest might be a large area for a country like Andorra, but it is a small area in China. Depending on the indicator, the denominator might be the land area, the size of the population, or intensity measurements, e.g. GDP. For certain indicators, (e.g. energy efficiency, but also innovation indicators), the performance is evaluated against two denominators (normally population size and GDP) in order to gain a more altruistic picture of the national sustainability performance that incorporates economic and human efficiency.

Trend analysis: Integrating recent developments

Current data limits the perspective to a momentary picture in time. However, the momentary status is not sufficient to gain a true picture of the sustainable competitiveness, which is, by definition, forward-looking. Of equal importance are therefore the trend developments. Analysing trends and developments allow for understanding of where a country is coming from – and, more importantly - indicates the direction of future developments. Increasing agricultural efficiency, for example, indicates a country's capability to feed an increasing population in the future, or the opposite if the trends are decreasing. Where sufficient data series are available, the trend was calculated for the latest 5 years available and scored to evaluate the current level as well as the future outlook and sustainability potential of a country based on recent developments.



In order to reflect a dynamic performance picture, performance trends are analysed, scored and integrated in the Sustainable Competitiveness Index

Data Sources

Over 90% of the sustainable competitiveness indicators are purely quantitative performance indicators. Data sources were chosen according to reliability and availability of global data. The largest percentage of indicators was derived from the World Bank's indicator database, followed by data sets and indicators provided by various UN agencies. Index calculation

Data reliability & accuracy

The accuracy of the index relies on the accuracy of the underlying data. Given the many individual and agencies involved in data collected around the World, it cannot be excluded that some of the data is not completely accurate. Data sources chosen for this Index (World Bank, UN agencies, OECD, IEA) are considered reasonably reliable. Raw data from the various databases was used as a basis for calculation as-is, i.e. without verifying the actual data.

Limitations of quantitative analysis

In order to exclude subjectivity, only quantitative data has been taken into account. However, quantitative indicators sometimes are not able to differentiate or express real and actual levels of quality. High spending on health care for example does not necessarily guarantee high quality health care system available for the average citizen. Equally, the percentage of school enrolment (on all levels, form primary levels to college and universities) is not necessarily an expression of the quality of the education. However, for some indicators, quality is equally important to quantity from a sustainability viewpoint. For such indicators, quantitative indicators have limited informative value and serve as a proxy.

While explanatory power of quantitative indicators is limited, conducting a qualitative evaluation of the indicators used on the global level would go far beyond the limitations of this index. For indicators with a potentially low correlation between quantity and quality, the weighting has been adjusted accordingly. In order to integrate some qualitative aspects, results of global surveys have been included, e.g. for the quality of public services, or perceived life satisfaction.

Time frame of data used

The Sustainable Competitiveness Index 2020 is based on the latest available data. For most data series, the latest data available dates 2019. Where 2019 data is not available, the latest available data pint is used.

Availability of data

For some indicators data is not available for all countries (in particular for the less or least developed economies). If non-available data points would be converted to a 0 (zero) score, the rankings would be distorted. In order to present a balanced overall picture, the missing data points from those countries have been replaced with calculated values, extrapolated based on regional averages, income and development levels, as well as geographical features and climatic averages.

9 Data Tables

The Global Sustainable Competitiveness Index

Rank	Country	Score	Rank	Country	Score	Country	Rank	Score	Country	Rank	Score
1	Sweden	62.1	46	Bolivia	50.0	Vietnam	91	45.8	Republic of Congo	136	41.7
2	Denmark	61.0	47	Greece	50.0	Cuba	92	45.6	Oman	137	41.6
3	Iceland	60.7	48	Russia	49.9	Iran	93	45.3	Guatemala	138	41.6
4	Finland	60.4	49	Peru	49.9	Dominica	94	45.3	Rwanda	139	41.6
5	Switzerland	59.4	50	Moldova	49.8	Cote d'Ivoire	95	45.3	Gambia	140	41.5
6	Estonia	59.4	51	Paraguay	49.7	Samoa	96	45.1	Togo	141	41.5
7	Latvia	58.2	52	Mauritius	49.5	Azerbaijan	97	45.1	Djibouti	142	41.4
8	Luxembourg	58.0	53	Nepal	49.4	Sao Tome and Principe	98	45.0	Liberia	143	41.4
9	Norway	57.7	54	Brazil	49.1	Venezuela	99	44.8	Lesotho	144	41.3
10	Croatia	57.2	55	Bhutan	49.0	Tajikistan	100	44.8	Bahrain	145	41.3
11	New Zealand	57.2	56	Timor-Leste	48.9	El Salvador	101	44.7	Kuwait	146	41.2
12	Liechtenstein	57.1	57	Israel	48.9	Philippines	102	44.7	Algeria	147	41.1
13	Ireland	56.8	58	Guyana	48.7	Solomon Islands	103	44.6	Zambia	148	41.1
14	Austria	56.7	59	Belarus	48.6	United Arab Emirates	104	44.5	Nigeria	149	40.9
15	United Kingdom	56.1	60	Ghana	48.5	Democratic Republic o	105	44.5	Qatar	150	40.9
16	Slovenia	55.9	61	Uzbekistan	48.4	Dominican Republic	106	44.5	Benin	151	40.8
17	Lithuania	55.9	62	Belize	48.2	Nicaragua	107	44.1	Equatorial Guinea	152	40.8
18	France	55.5	63	Montenegro	48.1	Saudi Arabia	108	44.1	Trinidad and Tobago	153	40.8
19	Czech Republic	55.2	64	Argentina	48.1	Gabon	109	43.9	Namibia	154	40.6
20	Portugal	55.0	65	Maldives	48.0	Mongolia	110	43.8	Niger	155	40.4
21	Slovakia	54.9	66	Thailand	47.6	Mozambique	111	43.7	Angola	156	40.3
22	Germany	54.6	67	Cyprus	47.6	Sierra Leone	112	43.4	South Africa	157	39.9
23	Romania	54.5	68	Indonesia	47.4	Tanzania	113	43.4	Malawi	158	39.9
24	Hungary	52.9	69	Albania	47.4	Vanuatu	114	43.3	Mali	159	39.6
25	Netherlands	52.9	70	Colombia	47.4	Bangladesh	115	43.3	Jordan	160	39.5
26	Poland	52.8	71	Armenia	47.2	Bahamas	116	43.1	Guinea-Bissau	161	39.4
27	Costa Rica	52.6	72	Kazakhstan	47.1	Swaziland	117	43.1	Madagascar	162	39.2
28	Japan	52.5	73	Malaysia	47.0	Senegal	118	43.0	Sudan	163	39.0
29	Belgium	52.1	74	Brunei	47.0	Cape Verde	119	43.0	Turkmenistan	164	39.0
30	Uruguay	52.0	75	Ethiopia	47.0	Papua New Guinea	120	42.9	Egypt	165	38.9
31	Spain	51.8	76	Ukraine	46.7	Kiribati	121	42.7	Comoros	166	38.6
32	USA	51.7	77	Fiji	46.7	Grenada	122	42.6	Burundi	167	38.4
33	Italy	51.6	78	Kyrgistan	46.6	Zimbabwe	123	42.6	Syria	168	38.0
34	Bulgaria	51.6	79	Ecuador	46.6	Jamaica	124	42.5	Lebanon	169	37.9
35	South Korea	51.3	80	Suriname	46.5	Burkina Faso	125	42.4	West Bank and Gaza	170	37.8
36	Canada	51.3	81	Kenya	46.5	Micronesia	126	42.4	Uganda	171	37.6
37	Georgia	51.2	82	Laos	46.5	India	127	42.4	Chad	172	37.1
38	Malta	50.9	83	Mexico	46.4	St. Kitts and Nevis	128	42.2	Central African Republ	173	36.9
39	China	50.8	84	Turkey	46.3	Botswana	129	42.2	Pakistan	174	36.1
40	Serbia	50.7	85	Panama	46.3	Honduras	130	42.2	Eritrea	175	35.9
41	Chile	50.6	86	Sri Lanka	46.3	Guinea	131	42.0	Haiti	176	35.5
42	Bosnia and Herzegovir	50.5	87	Tonga	46.1	Tunisia	132	41.9	Mauritania	177	35.1
43	Macedonia	50.4	88	Cameroon	46.0	Morocco	133	41.8	Afghanistan	178	35.0
44	Singapore	50.3	89	Burma	45.9	Libya	134	41.8	Yemen	179	34.9
45	Australia	50.2	90	Cambodia	45.9	Seychelles	135	41.7	Iraq	180	33.9

Natural Capital Competitiveness Scores

Country	Rank	Score	Country	Rank	Score	Country	Rank	Score	Country	Rank	Score
Laos	1	72.8	Liberia	46	56.0	Malawi	91	46.9	Algeria	136	41.0
Guyana	2	70.7	Angola	47	55.7	Luxembourg	92	46.8	Turkey	137	40.9
Paraguay	3	67.6	Ghana	48	55.6	Gambia	93	46.8	El Salvador	138	40.7
Bhutan	4	66.8	Australia	49	55.5	Indonesia	94	46.8	Senegal	139	40.7
Democratic Republic of C	5	65.3	Mozambique	50	55.5	Vietnam	95	46.8	Bangladesh	140	40.1
Cameroon	6	65.0	Cote d'Ivoire	51	55.2	Cape Verde	96	46.3	South Sudan	141	40.0
Brazil	7	64.8	Nicaragua	52	55.1	Portugal	97	46.3	Cuba	142	40.0
Papua New Guinea	8	64.5	USA	53	54.5	Tonga	98	46.3	Philippines	143	39.9
Suriname	9	64.4	Costa Rica	54	54.4	Bahamas	99	46.2	Sri Lanka	144	39.8
Venezuela	10	64.2	Chile	55	54.2	Niger	100	46.1	Oman	145	39.8
Bolivia	11	64.1	Mali	56	53.8	Burkina Faso	101	46.1	Armenia	146	39.3
Estonia	12	63.8	Samoa	57	53.6	Kyrgistan	102	46.0	Saudi Arabia	147	39.2
Iceland	13	63.8	Hungary	58	53.5	Togo	103	46.0	Turkmenistan	148	38.7
Sweden	14	63.1	Georgia	59	52.6	Rwanda	104	46.0	Jamaica	149	38.6
Russia	15	62.4	Panama	60	52.6	Vanuatu	105	45.9	Trinidad and Tobago	150	38.5
Uruguay	16	62.3	Ecuador	61	52.6	Honduras	106	45.8	Morocco	151	38.4
Latvia	17	62.1	Serbia	62	52.5	Spain	107	45.5	Eritrea	152	38.4
Colombia	18	62.0	Kazakhstan	63	52.3	Guatemala	108	45.5	Japan	153	38.4
Peru	19	61.4	Ethiopia	64	51.7	Dominican Republic	109	45.4	Kiribati	154	38.0
Belize	20	61.2	Macedonia	65	51.6	Tajikistan	110	45.4	China	155	37.9
Croatia	21	61.1	Albania	66	51.4	Ireland	111	45.4	Netherlands	156	37.5
Burma	22	61.1	Denmark	67	51.4	Zimbabwe	112	45.4	Maldives	157	37.4
Fiji	23	61.0	Nepal	68	51.3	Uzbekistan	113	45.3	Syria	158	37.3
New Zealand	24	60.9	Liechtenstein	69	51.2	Greece	114	44.7	Germany	159	36.9
Madagascar	25	60.7	Austria	70	51.2	Poland	115	44.6	Kenya	160	35.7
Canada	26	60.6	South Africa	71	50.7	Namibia	116	44.2	South Korea	161	35.5
Finland	27	60.5	Slovakia	72	50.6	Burundi	117	44.0	Kuwait	162	35.5
Bosnia and Herzegovina	28	60.1	Sao Tome and Principe	73	50.0	Azerbaijan	118	43.6	United Kingdom	163	35.4
Gabon	29	60.0	Swaziland	74	49.8	Comoros	119	43.2	India	164	35.3
Equatorial Guinea	30	60.0	Lesotho	75	49.3	Djibouti	120	42.8	Yemen	165	34.1
Belarus	31	59.7	Slovenia	76	49.3	Benin	121	42.4	Egypt	166	33.9
Solomon Islands	32	59.6	Mexico	77	49.3	Grenada	122	42.3	Qatar	167	33.7
Cambodia	33	59.5	Sudan	78	49.3	Iran	123	42.2	United Arab Emirates	168	33.6
Sierra Leone	34	59.3	Montenegro	79	49.2	Libya	124	42.1	Pakistan	169	32.8
Central African Republic	35	58.9	France	80	48.8	Moldova	125	41.9	Malta	170	32.4
Republic of Congo	36	58.3	Malaysia	81	48.7	Mauritania	126	41.7	Cyprus	171	31.8
Argentina	37	57.9	Czech Republic	82	48.6	Afghanistan	127	41.6	Israel	172	31.6
Zambia	38	57.7	Chad	83	48.5	Botswana	128	41.6	Belgium	173	31.5
Lithuania	39	57.5	Timor-Leste	84	48.3	St. Kitts and Nevis	129	41.5	West Bank and Gaza	174	31.2
Norway	40	57.5	Uganda	85	48.3	Mauritius	130	41.5	Haiti	175	31.1
Romania	41	56.9	Brunei	86	47.7	Nigeria	131	41.4	Iraq	176	30.6
Guinea-Bissau	42	56.8	Switzerland	87	47.6	Thailand	132	41.4	Bahrain	177	30.3
Guinea	43	56.4	Dominica	88	47.6	Italy	133	41.4	Jordan	178	29.1
Tanzania	44	56.2	Ukraine	89	47.2	Seychelles	134	41.2	Singapore	179	28.6
Bulgaria	45	56.1	Mongolia	90	47.0	Micronesia	135	41.2	Tunisia	180	28.5

Resource Intensity Competitiveness Scores

Country	Rank	Score	Country	Rank	Score	Country	Rank	Score	Country	Rank	Score
Democratic Republic c	1	70.0	Senegal	46	55.6	Tajikistan	91	50.4	Israel	136	44.1
Ethiopia	2	69.7	Angola	47	55.5	Djibouti	92	50.3	Botswana	137	44.0
Kenya	3	69.6	Malawi	48	55.3	Comoros	93	50.2	West Bank and Gaza	138	43.4
Luxembourg	4	68.3	Kiribati	49	55.3	Fiji	94	50.1	Bulgaria	139	43.2
United Kingdom	5	67.3	Finland	50	55.3	Slovakia	95	50.1	Pakistan	140	43.1
Denmark	6	65.6	Jamaica	51	55.2	Estonia	96	49.8	Slovenia	141	43.1
Ireland	7	64.4	Gabon	52	55.1	Colombia	97	49.8	Australia	142	43.0
Ghana	8	63.8	Uganda	53	55.0	Albania	98	49.7	Mauritius	143	42.6
Sweden	9	63.7	Benin	54	55.0	Georgia	99	49.6	Poland	144	42.6
Uruguay	10	63.3	Liberia	55	54.9	Macedonia	100	49.3	Bosnia and Herzegovir	145	42.6
Switzerland	11	63.1	South Sudan	56	54.8	Austria	101	49.1	Bahrain	146	42.4
Tanzania	12	62.9	Chad	57	54.8	Solomon Islands	102	49.0	Brunei	147	42.4
Lithuania	13	62.3	Guinea	58	54.6	Armenia	103	48.9	Grenada	148	41.9
Zambia	14	61.8	Italy	59	54.6	Netherlands	104	48.9	Ukraine	149	41.9
Latvia	15	61.5	Burma	60	54.6	Swaziland	105	48.8	Egypt	150	41.5
Nepal	16	61.3	Guinea-Bissau	61	54.4	Central African Republ	106	48.8	Bhutan	151	41.5
El Salvador	17	61.1	Cuba	62	54.4	Guyana	107	48.7	Cape Verde	152	41.0
Belize	18	60.8	Papua New Guinea	63	54.4	Venezuela	108	48.6	Mauritania	153	40.7
Bangladesh	19	60.8	Bolivia	64	53.8	Syria	109	48.4	Bahamas	154	40.1
Cameroon	20	60.2	Gambia	65	53.5	Hungary	110	48.3	Czech Republic	155	40.0
Nigeria	21	60.0	Mali	66	53.3	Thailand	111	48.3	Lebanon	156	39.9
Burundi	22	60.0	Tonga	67	53.2	Namibia	112	48.2	Algeria	157	39.8
Cote d'Ivoire	23	59.8	Cambodia	68	53.1	Argentina	113	47.9	China	158	39.6
Togo	24	59.4	Paraguay	69	52.7	Belgium	114	47.8	Vietnam	159	39.2
Zimbabwe	25	59.2	Sierra Leone	70	52.7	Laos	115	47.8	Belarus	160	39.0
Niger	26	58.1	Germany	71	52.7	Mexico	116	47.7	Singapore	161	39.0
Nicaragua	27	58.0	Peru	72	52.5	USA	117	47.5	Turkey	162	38.9
Mozambique	28	57.9	Sao Tome and Principe	73	52.5	Uzbekistan	118	47.5	Trinidad and Tobago	163	38.8
Rwanda	29	57.7	Haiti	74	52.5	Jordan	119	47.4	Russia	164	38.8
Croatia	30	57.7	Iceland	75	52.0	Panama	120	46.7	Mongolia	165	38.2
Guatemala	31	57.7	Micronesia	76	52.0	Dominican Republic	121	46.6	St. Kitts and Nevis	166	38.2
Eritrea	32	57.6	Brazil	77	52.0	Norway	122	46.4	Canada	167	37.1
Honduras	33	57.6	Spain	78	52.0	Azerbaijan	123	46.3	Afghanistan	168	36.8
Timor-Leste	34	57.5	Chile	79	51.8	Libya	124	46.1	Iraq	169	35.6
Romania	35	57.5	Portugal	80	51.7	Greece	125	46.0	South Africa	170	35.5
Moldova	36	57.1	New Zealand	81	51.7	Indonesia	126	45.6	Iran	171	35.3
Costa Rica	37	56.9	Vanuatu	82	51.5	Morocco	127	45.5	Malaysia	172	34.7
France	38	56.7	Equatorial Guinea	83	51.1	Ecuador	128	45.5	United Arab Emirates	173	33.4
Republic of Congo	39	56.5	Sudan	84	51.1	Kyrgistan	129	45.5	Saudi Arabia	174	33.2
Dominica	40	56.5	Madagascar	85	50.9	Montenegro	130	45.5	Kazakhstan	175	33.0
Liechtenstein	41	56.4	Sri Lanka	86	50.8	Cyprus	131	45.4	Qatar	176	33.0
Yemen	42	56.1	Maldives	87	50.7	Tunisia	132	45.2	South Korea	177	31.9
Malta	43	56.0	India	88	50.6	Japan	133	44.9	Turkmenistan	178	30.6
Burkina Faso	44	55.9	Lesotho	89	50.6	Suriname	134	44.6	Seychelles	179	29.2
Philippines	45	55.8	Samoa	90	50.6	Serbia	135	44.4	Kuwait	180	27.3

Social Capital Competitiveness Scores

Country	Rank	Score	Country	Rank	Score	Country	Rank	Score	Country	Rank	Score
Iceland	1	65.4	Saudi Arabia	46	51.3	Iran	91	43.1	Belize	136	37.8
Norway	2	65.0	Lithuania	47	51.2	El Salvador	92	43.0	India	137	37.8
Sweden	3	61.6	Qatar	48	51.0	Sao Tome and Principe	93	43.0	Kiribati	138	37.8
Finland	4	61.6	Kuwait	49	50.8	Seychelles	94	42.9	Liberia	139	37.7
Switzerland	5	61.0	Canada	50	50.8	Turkey	95	42.8	Micronesia	140	37.5
Austria	6	60.9	Brunei	51	50.2	Panama	96	42.7	Colombia	141	37.1
Belgium	7	60.5	Greece	52	50.0	Malawi	97	42.3	Mauritania	142	36.8
Maldives	8	59.6	Uzbekistan	53	49.2	Samoa	98	42.2	Morocco	143	36.4
Slovenia	9	59.6	Kazakhstan	54	49.0	Russia	99	42.0	Uganda	144	36.4
Estonia	10	59.4	Sri Lanka	55	48.8	Suriname	100	42.0	Namibia	145	36.4
Luxembourg	11	58.9	Mongolia	56	48.6	Guinea	101	41.9	Republic of Congo	146	36.3
Netherlands	12	58.7	Malaysia	57	48.6	Libya	102	41.9	Equatorial Guinea	147	36.2
Japan	13	57.9	Costa Rica	58	48.4	Bahamas	103	41.7	Zimbabwe	148	36.2
Denmark	14	57.8	Oman	59	47.9	Solomon Islands	104	41.7	Guyana	149	36.1
Singapore	15	57.8	Azerbaijan	60	47.9	Algeria	105	41.6	Benin	150	36.0
Portugal	16	57.7	Tajikistan	61	47.9	Paraguay	106	41.6	Djibouti	151	36.0
South Korea	17	56.9	Nepal	62	47.7	Bangladesh	107	41.5	Tanzania	152	35.9
Spain	18	56.7	Cape Verde	63	47.6	Jordan	108	41.4	Botswana	153	35.6
Czech Republic	19	56.6	Mauritius	64	47.4	USA	109	41.4	Zambia	154	35.3
Germany	20	56.3	Georgia	65	47.4	Trinidad and Tobago	110	41.1	Chad	155	35.3
Malta	21	56.2	Argentina	66	47.4	Dominican Republic	111	41.0	West Bank and Gaza	156	35.1
New Zealand	22	56.1	Israel	67	47.2	Laos	112	41.0	Angola	157	35.0
France	23	55.6	Bulgaria	68	47.2	Philippines	113	40.8	South Sudan	158	34.9
Timor-Leste	24	55.5	Ecuador	69	47.0	Mexico	114	40.8	Lesotho	159	34.7
Liechtenstein	25	55.3	Chile	70	46.6	Ghana	115	40.6	Burundi	160	34.6
United Arab Emirates	26	54.7	Uruguay	71	46.4	Nicaragua	116	40.5	Guinea-Bissau	161	34.0
Australia	27	54.5	Grenada	72	46.2	Gabon	117	40.4	Swaziland	162	34.0
Romania	28	53.7	Tonga	73	46.2	Kenya	118	40.3	Honduras	163	34.0
Cyprus	29	53.6	Hungary	74	46.0	Vanuatu	119	40.3	Comoros	164	34.0
Slovakia	30	53.6	Vietnam	75	45.9	Ethiopia	120	40.0	Syria	165	33.9
China	31	53.5	Peru	76	45.5	Cambodia	121	40.0	Cote d'Ivoire	166	33.7
Serbia	32	53.5	Albania	77	45.2	Gambia	122	39.9	Eritrea	167	33.6
Italy	33	53.2	Bhutan	78	45.2	Brazil	123	39.8	Madagascar	168	33.6
Poland	34	53.1	Thailand	79	44.9	Fiji	124	39.8	Nigeria	169	33.4
Ireland	35	52.9	Senegal	80	44.6	St. Kitts and Nevis	125	39.7	Guatemala	170	33.3
Bosnia and Herzegovin	36	52.5	Lebanon	81	44.5	Mali	126	39.3	Togo	171	33.0
Croatia	37	52.3	Ukraine	82	44.4	Cameroon	127	39.3	Venezuela	172	32.9
Belarus	38	52.0	Burkina Faso	83	44.3	Turkmenistan	128	39.2	Democratic Republic o	173	32.8
Macedonia	39	51.9	Cuba	84	44.1	Pakistan	129	39.2	Afghanistan	174	32.6
Latvia	40	51.8	Indonesia	85	44.0	Rwanda	130	39.1	Haiti	175	32.4
Moldova	41	51.7	Tunisia	86	43.9	Burma	131	39.0	Iraq	176	31.6
Kyrgistan	42	51.7	Bolivia	87	43.6	Dominica	132	38.6	South Africa	177	31.1
United Kingdom	43	51.6	Niger	88	43.5	Jamaica	133	38.6	Sudan	178	30.7
Montenegro	44	51.6	Bahrain	89	43.3	Papua New Guinea	134	38.4	Central African Republ	179	29.0
Armenia	45	51.6	Mozambique	90	43.3	Sierra Leone	135	38.1	Egypt	180	28.7

Intellectual Capital Competitiveness Scores

Country	Rank	Score	Country	Rank	Score	Country	Rank	Score	Country	Rank	Score
South Korea	1	74.8	Serbia	46	48.0	St. Kitts and Nevis	91	37.6	Sierra Leone	136	29.0
Sweden	2	69.5	Ukraine	47	47.7	Libya	92	37.5	Republic of Congo	137	28.6
Singapore	3	69.4	Georgia	48	47.3	Sao Tome and Principe	93	37.0	Burma	138	28.2
Denmark	4	67.0	Spain	49	46.5	Bhutan	94	36.7	Ghana	139	27.3
Norway	5	66.7	Australia	50	46.4	Timor-Leste	95	36.7	Togo	140	26.9
United Kingdom	6	66.5	Chile	51	46.1	Kuwait	96	36.7	Laos	141	26.7
China	7	66.2	Brazil	52	45.6	Tajikistan	97	36.6	Mozambique	142	26.6
Japan	8	65.7	Kazakhstan	53	45.5	Panama	98	36.6	El Salvador	143	26.2
Switzerland	9	64.7	United Arab Emirates	54	45.2	Trinidad and Tobago	99	36.2	Sudan	144	25.7
Finland	10	64.3	Oman	55	45.1	Lebanon	100	35.9	Senegal	145	25.7
USA	11	62.3	Tunisia	56	44.9	India	101	35.7	Yemen	146	25.4
Israel	12	62.0	Saudi Arabia	57	44.7	Algeria	102	35.7	Pakistan	147	25.2
Iceland	13	61.3	Kyrgistan	58	43.7	Cape Verde	103	35.6	Cameroon	148	24.7
Czech Republic	14	61.2	Uzbekistan	59	43.2	West Bank and Gaza	104	35.3	Benin	149	24.5
Germany	15	60.4	Bosnia and Herzegovir	60	43.1	Mongolia	105	35.3	Burkina Faso	150	24.5
Belgium	16	59.9	Macedonia	61	43.0	Colombia	106	35.1	Iraq	151	24.4
Netherlands	17	59.8	Costa Rica	62	42.8	Qatar	107	35.0	Comoros	152	23.7
Austria	18	59.7	Romania	63	42.7	Suriname	108	34.8	Nigeria	153	23.6
France	19	59.7	Montenegro	64	42.0	Fiji	109	34.4	Ethiopia	154	23.5
Slovenia	20	59.4	Indonesia	65	41.8	Argentina	110	34.4	Liberia	155	23.5
Poland	21	58.3	Belarus	66	41.7	Micronesia	111	34.1	Tanzania	156	23.4
Hungary	22	57.5	Albania	67	41.7	Djibouti	112	33.9	Cambodia	157	23.3
Liechtenstein	23	56.5	South Africa	68	41.6	Turkmenistan	113	33.9	Equatorial Guinea	158	22.5
Estonia	24	55.8	Moldova	69	41.2	Tonga	114	33.9	Burundi	159	22.4
Portugal	25	55.4	Peru	70	40.7	Namibia	115	33.4	Guatemala	160	22.4
Canada	26	55.4	Vietnam	71	40.6	Bahamas	116	33.3	Gabon	161	21.9
New Zealand	27	54.3	Venezuela	72	40.5	Dominica	117	33.2	Papua New Guinea	162	21.8
Turkey	28	53.8	Botswana	73	40.3	Jordan	118	33.1	Rwanda	163	21.6
Slovakia	29	53.7	Egypt	74	40.3	Dominican Republic	119	33.0	Angola	164	21.3
Malaysia	30	52.7	Mexico	75	40.2	Grenada	120	32.9	Gambia	165	20.8
Ireland	31	52.2	Bahrain	76	40.2	Kiribati	121	32.8	Mauritania	166	19.9
Luxembourg	32	51.8	Seychelles	77	40.1	Nepal	122	32.7	Afghanistan	167	19.9
Russia	33	51.5	Maldives	78	40.0	Honduras	123	32.6	Bangladesh	168	19.9
Brunei	34	51.4	Swaziland	79	39.6	Uruguay	124	32.4	Malawi	169	19.5
Mauritius	35	51.1	Ecuador	80	39.3	Lesotho	125	31.9	Chad	170	18.5
Thailand	36	51.1	Cuba	81	39.3	Philippines	126	31.9	Niger	171	18.0
Croatia	37	50.9	Kenya	82	38.9	Syria	127	31.4	Guinea-Bissau	172	18.0
Italy	38	50.9	Guyana	83	38.7	Haiti	128	31.3	Guinea	173	17.6
Iran	39	50.0	Bolivia	84	38.6	Paraguay	129	30.7	Eritrea	174	17.0
Greece	40	49.9	Armenia	85	38.4	Zimbabwe	130	30.5	Democratic Republic c	175	16.3
Bulgaria	41	49.4	Jamaica	86	38.3	Vanuatu	131	30.2	Madagascar	176	15.0
Latvia	42	49.4	Azerbaijan	87	38.2	Samoa	132	30.2	Zambia	177	14.5
Malta	43	48.7	Sri Lanka	88	38.0	Cote d'Ivoire	133	29.6	Mali	178	14.5
Cyprus	44	48.2	Belize	89	37.9	Solomon Islands	134	29.5	Central African Republ	179	13.7
Lithuania	45	48.2	Morocco	90	37.9	Nicaragua	135	29.4	South Sudan	180	12.6

Governance Efficiency Competitiveness Scores

Country	Rank	Score	Country	Rank	Score	Country	Rank	Score	Country	Rank	Score
Czech Republic	1	69.4	Iran	46	56.2	Egypt	91	50.4	Belize	136	43.1
Ireland	2	68.8	Paraguay	47	55.9	Bahrain	92	50.4	Brazil	137	43.0
Slovenia	3	68.1	Kazakhstan	48	55.7	Cuba	93	50.3	Lebanon	138	42.8
Estonia	4	68.0	United Arab Emirates	49	55.6	Ethiopia	94	50.1	Sao Tome and Principe	139	42.4
Slovakia	5	66.7	Uruguay	50	55.6	Bolivia	95	49.9	Togo	140	42.4
Germany	6	66.6	Japan	51	55.5	Kiribati	96	49.9	Gabon	141	42.1
Latvia	7	66.1	Kuwait	52	55.4	Mongolia	97	49.8	Jamaica	142	41.9
Liechtenstein	8	65.9	Seychelles	53	55.3	Botswana	98	49.6	Comoros	143	41.7
Poland	9	65.6	Serbia	54	55.2	Peru	99	49.6	Zimbabwe	144	41.5
Mauritius	10	64.6	Russia	55	55.1	Grenada	100	49.5	Burkina Faso	145	41.4
Luxembourg	11	63.9	Philippines	56	55.1	Azerbaijan	101	49.4	Libya	146	41.2
Croatia	12	63.9	Turkey	57	55.1	Guatemala	102	49.3	Honduras	147	40.9
Portugal	13	63.7	Ghana	58	55.1	Trinidad and Tobago	103	49.2	Namibia	148	40.8
Denmark	14	63.1	Bhutan	59	54.9	Samoa	104	49.2	Cameroon	149	40.7
New Zealand	15	62.8	Bahamas	60	54.3	Guyana	105	49.1	South Africa	150	40.7
Austria	16	62.5	Bangladesh	61	54.2	Albania	106	49.1	Pakistan	151	40.2
Bulgaria	17	61.9	St. Kitts and Nevis	62	54.2	Vanuatu	107	48.8	Lesotho	152	40.1
Romania	18	61.7	Chile	63	54.1	Ecuador	108	48.5	Guinea	153	39.4
Iceland	19	61.2	Nepal	64	54.0	Oman	109	48.5	Syria	154	38.9
Malta	20	61.0	Bosnia and Herzegovin	65	54.0	Senegal	110	48.4	Tanzania	155	38.5
Belgium	21	60.9	Sri Lanka	66	53.9	Kenya	111	48.2	Sudan	156	38.2
Switzerland	22	60.7	Mexico	67	53.8	Cote d'Ivoire	112	48.0	Democratic Republic c	157	38.0
Costa Rica	23	60.5	Cambodia	68	53.4	Fiji	113	48.0	Sierra Leone	158	37.8
Finland	24	60.3	Colombia	69	53.0	Algeria	114	47.5	Venezuela	159	37.6
Lithuania	25	60.2	Panama	70	52.8	Iraq	115	47.3	Nicaragua	160	37.4
United Kingdom	26	59.9	Norway	71	52.8	Micronesia	116	47.0	Mali	161	37.3
Israel	27	59.6	Argentina	72	52.7	Suriname	117	46.9	Mauritania	162	36.5
Netherlands	28	59.4	USA	73	52.6	Tunisia	118	46.9	Niger	163	36.3
Georgia	29	59.3	Turkmenistan	74	52.6	Burma	119	46.8	Uganda	164	36.1
Greece	30	59.1	El Salvador	75	52.6	Gambia	120	46.6	Zambia	165	36.1
Indonesia	31	59.1	Canada	76	52.5	Timor-Leste	121	46.6	Madagascar	166	36.0
Hungary	32	59.0	Sweden	77	52.5	Jordan	122	46.6	Malawi	167	35.5
Cyprus	33	58.8	Maldives	78	52.4	Nigeria	123	46.2	Papua New Guinea	168	35.3
Spain	34	58.4	India	79	52.4	Kyrgistan	124	46.1	Mozambique	169	35.3
Armenia	35	58.1	Thailand	80	52.4	Benin	125	46.0	Liberia	170	34.8
Italy	36	58.0	Ukraine	81	52.3	Cape Verde	126	44.3	Central African Republi	171	34.3
South Korea	37	57.7	Montenegro	82	52.1	Laos	127	44.1	Angola	172	34.1
China	38	57.0	Saudi Arabia	83	51.9	Djibouti	128	44.0	Equatorial Guinea	173	33.9
Moldova	39	57.0	Qatar	84	51.8	West Bank and Gaza	129	44.0	Guinea-Bissau	174	33.7
Singapore	40	56.8	Australia	85	51.6	Afghanistan	130	43.8	Eritrea	175	32.6
France	41	56.7	Morocco	86	51.0	Brunei	131	43.6	Burundi	176	31.1
Uzbekistan	42	56.6	Tonga	87	50.9	Rwanda	132	43.5	Yemen	177	30.9
Vietnam	43	56.5	Malaysia	88	50.7	Tajikistan	133	43.4	Haiti	178	30.5
Dominican Republic	44	56.3	Dominica	89	50.6	Swaziland	134	43.2	Republic of Congo	179	28.9
Macedonia	45	56.2	Belarus	90	50.5	Solomon Islands	135	43.1	Chad	180	28.6

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