

# SUSTAINABILITY AND COMPETITIVENESS AT THE GLOBAL LEVEL: AN ANALYSIS OF THE TOP 10 COUNTRIES IN THE PERIOD 2018-2020

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**Abstract:** *Sustainability and competitiveness are key drivers in nowadays economies, and the experts turn their attention towards this forward-thinking approach, vital for long-term and healthy economic and social development that can be expressed through sustainable competitiveness. The purpose of the paper is to highlight the situation specific to the top 10 countries in the world in terms of sustainability and competitiveness comprised within sustainable competitiveness for the period 2018-2020. From this standpoint, the methodology used is based on the research of secondary sources such as articles and reports. The findings show a commanding position of the Nordic countries and a true domination of the European ones.*

**Key words:** *sustainability, competitiveness, country, rank, Nordic countries.*

**JEL Classification:** *F00, Q01.*

## 1. Introduction

Every country should be able to have the necessary framework and provide organizations, companies, individuals and other stakeholders to competitive in a sustainable manner, whilst protecting “the environment and social welfare” (Thore and Tarverdyan, 2016). It is of utmost importance to understand that a nation’s economic performance is not the complete picture of competitiveness but it also encompasses environmental and social performance in this pursuit of providing a high level of wellbeing (Herciu and Ogreaan, 2014) and sustainability is key as it is related to time, territory, people and resources (Toma, et al., 2016) and it is based on society, economy and environment (Strange and Bayley, 2008). The competitiveness concept is aimed at “capturing the economic development process” and it is a required condition in terms of improving the living standard (Schwab, 2013) of a nation’s citizens on a “sustainable basis” and also providing them with access to jobs (Balkyte and Tvaronavičiene, 2010); the concept’s promotion has been a central goal belonging to the economic policy of the countries around the world (Despotovic et al., 2016) as it ensures “a country’s sustainable position in a competitive environment” (Širá et al., 2020).

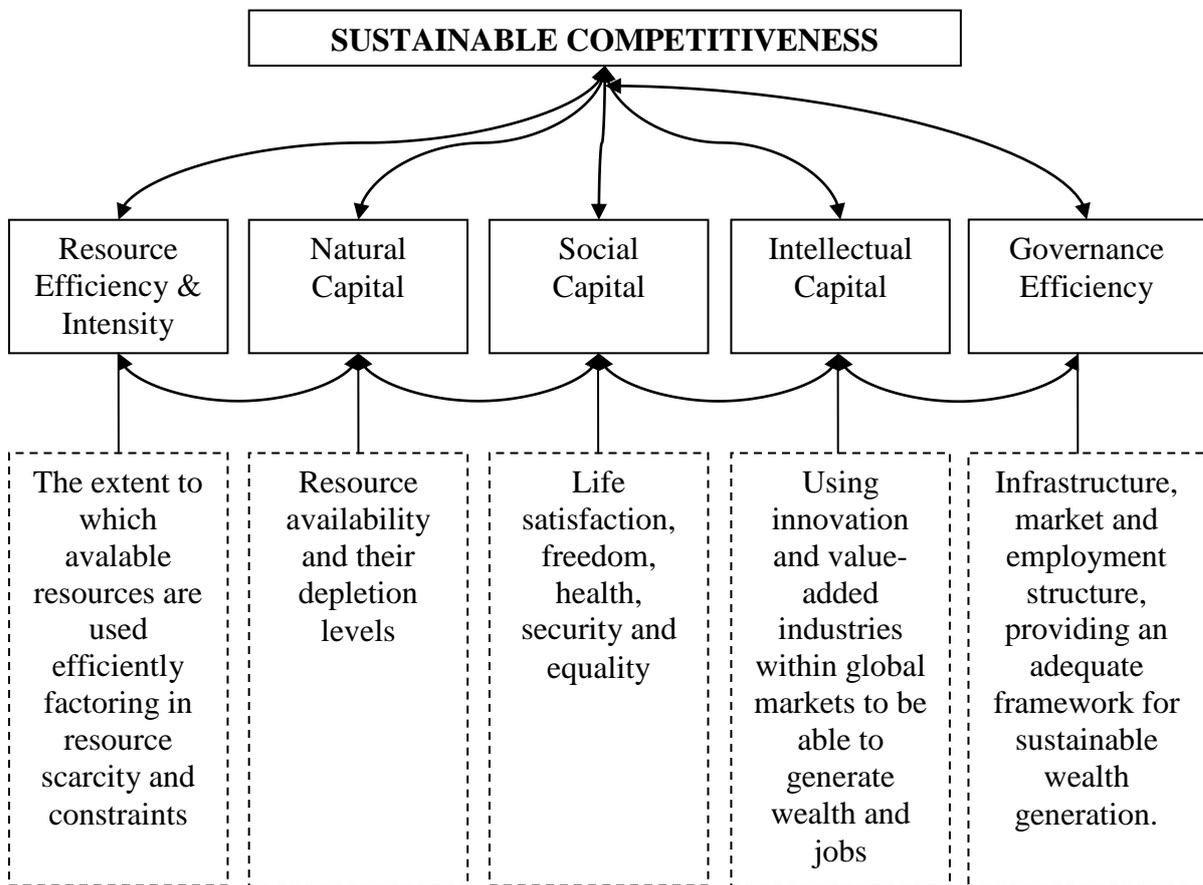
The aim of the paper is to portray the situation of the top ten countries in the world based on their sustainability and competitiveness for the 2018-2020 period, using the data provided by the Swiss-Korean joint venture and think tank, SolAbility. The other sections of the paper are structured as follows: in the second section the focus is put on the theoretical background; the third section is aimed at the used research methodology; in the fourth section the findings of the research are presented and the paper ends with conclusions.

## 2. Theoretical background

Sustainability, sustainable development and competitiveness have been credited to have positive effects over the activities of companies and, generally, of nations (Toma and

Grădinaru, 2017; Toma and Grădinaru, 2018) that should pay attention to the optimal use of resources and capabilities so as to create conditions for long term development, freedom, prosperity and the security of citizens (Grădinaru and Toma, 2018; Toma, 2019).

The paper is focused on the ranking created by SolAbility entitled The Global Sustainable Competitiveness Index specific to the 2018-2020 period. This is an annual ranking used to measure the competitiveness of nations (SolAbility, 2020) and is currently comprised of the following five sub-indexes (that subsume 127 quantitative indicators originating from sources such as UN agencies, the IMF or the World Bank) (SolAbility, 2021): Resource Efficiency & Intensity, Natural Capital, Social Capital, Intellectual Capital and Innovation and Governance Efficiency. Each Rank is based on the data available (where available; if not, the latest available data is used) from the previous year for all 180 countries subject to this analysis. For the analysed period, the measurable and comparable indicators have increased from 111 in 2018 (Solability, 2018), to 116 in 2019 (Solability, 2019) and, finally, to 127 in 2020 (Solability, 2020).



**Figure no. 1. The five pillars of sustainable competitiveness**

Source: Adapted from (SolAbility, 2021)

This ranking is a comprehensive measurement for competitiveness and having sustainability into account, it shows that we should go beyond a traditional set of economic indicators (Möbius and Althammer, 2019) and look at sustainable competitiveness as a mindset.

### 3. Research methodology

In order to reach the research objective of the paper, the authors based their research methodology on a quantitative research method. For the analysis specific to the top ten economies in the world according to their Global Sustainable Competitiveness Index (GSCI) sources of secondary data were used, such as articles and reports (rankings). The literature review was conducted using electronic databases.

### 4. Findings

The paper is focused on the analysis of the ranking conducted by SolAbility entitled The Global Sustainable Competitiveness Index within the 2018-2020 period. The first ranking under analysis is the GSCI 2018 (table no.1) and the competitiveness scores based on Natural Capital (NC), Resource Intensity (RI), Social Capital (SC), Intellectual Capital (IC) and Governance Efficiency (GE).

**Table no. 1. Top 10 countries in the world in 2018 by their GSCI**

Country	RANK	GSCI score	RANK	NC score	RANK	RI score	RANK	SC score	RANK	IC score	RANK	GE score
Sweden	1	60.5	5	63.6	9	59.2	11	55.1	2	69.3	37	55.4
Norway	2	58.2	27	57.8	78	47.9	1	58.6	3	66.7	3	66.7
Iceland	3	57.6	20	59.8	60	49.9	3	58.1	18	60.3	12	60.1
Finland	4	57.4	16	60.8	41	51.5	4	57.1	8	63.9	46	53.7
Denmark	5	57.2	61	49.7	18	55.8	12	55.0	5	66.5	19	58.9
Ireland	6	55.4	65	48.8	24	54.0	25	49.9	23	55.8	1	68.7
Switzerland	7	55.3	71	47.8	38	51.7	6	56.4	7	64.0	28	56.8
Austria	8	54.8	70	47.8	72	48.6	13	54.9	12	61.6	9	60.9
Latvia	9	54.2	25	58.4	15	56.7	51	46.0	37	50.5	18	59.3
Estonia	10	53.7	9	63.3	131	42.2	39	47.6	28	52.9	6	62.6

Source: Adapted from (SolAbility, 2018)

Specific to the 2018 ranking, the following conclusions can be drawn:

- The top ten countries are from Europe having quite close scores;
- Scandinavian countries are dominating: Sweden (the leader), Norway (the follower) and Denmark (placed on the fifth position);
- If we extend our arguments from the Scandinavian countries and refer to the Nordic countries, then we easily see that half of the countries stand represented and also occupy the first five positions: Sweden, Norway, Denmark, Iceland (third) and Finland (fourth);
- Considering the Natural Capital criteria, only two from the top 10 countries by their GSCI score are to found amongst the key players in the world: Sweden (fifth) and Estonia (ninth). Denmark, Ireland, Switzerland and Austria have a relatively low ranking (out of 180 countries from the list). Strictly using this criteria, the top 10 countries in the world are as follows (starting, in succession, from the first): Laos, Guyana, Democratic Republic of Congo, Cameroon, Sweden, Peru, Papua New Guinea, Brazil, Estonia and Colombia.

- Regarding the RI score, only Sweden is to be found from the ranking based on their overall performance and it is, from this point of view, ninth. The worst positioned country is Estonia, placed on the one hundred thirty-first place. The countries that have managed to secure a spot among the first in the world are Kenya, Togo, Nigeria, Ethiopia, Democratic Republic of Congo, Tanzania, Cameroon, Benin, Sweden and Republic of Congo;

- The SC score places Norway at the top of the list, closely followed by Iceland, Finland and Switzerland, portraying an intense competition. The leading countries factoring in this score are ranked as follows: Norway, Luxembourg, Iceland, Finland, Germany, Switzerland, Japan, South Korea, Slovenia and the Netherlands.

- Common for IC sub-index and the GSCI are the following countries: Sweden, Norway, Denmark, Switzerland and Finland. The rank is completed in this way: South Korea (the leader), China, Germany, Japan and Israel;

- The GE score shows Ireland as the first country, Norway on the third place, Estonia (sixth) and Austria as being ninth. Other countries from the list are Czech Republic, Romania, New Zealand, Germany, Israel and Liechtenstein;

- Based on the number of appearances (countries from the top ten based on the GSCI Score connected to the other five sub-indexes) the following conclusions can be drawn: Latvia (ninth by GSCI) is not found amongst the top 10 using the other scores. There are countries that appear once (out of five) - Iceland (SC), Denmark (IC), Ireland (GE), Austria (GE), twice - Finland (SC, IC), Switzerland (SC, IC), Estonia (NC, GE) and three times - Sweden (NC, RI and IC), Norway (SC, IC, GE).

In the year 2019 these are some changes in the Global Sustainable Competitiveness Index ranking (table no. 2).

**Table no. 2. Top 10 countries in the world in 2019 by their GSCI**

Country	RANK	GSCI score	RANK	NC score	RANK	RI score	RANK	SC score	RANK	IC score	RANK	GE score
Sweden	1	60.6	5	63.7	5	63.8	4	58.3	2	66.1	70	51.1
Finland	2	59.5	8	62.3	31	55.6	1	58.8	12	59.3	11	61.3
Iceland	3	57.3	22	58.0	29	56.0	3	58.4	19	55.4	21	58.6
Denmark	4	57.0	70	46.8	13	59.8	11	55.3	5	63.6	18	59.3
Switzerland	5	56.9	67	47.0	25	57.4	5	57.8	8	62.1	16	60.5
Norway	6	56.9	19	59.1	73	50.3	2	58.6	3	64.3	62	52.3
Estonia	7	54.9	6	63.3	111	46.5	21	51.9	27	50.4	7	62.5
Luxembourg	8	54.5	109	40.2	6	63.5	6	57.2	30	49.7	9	61.6
Latvia	9	54.4	29	56.7	11	61.1	51	47.2	49	44.1	6	63.0
Croatia	10	54.2	28	57.0	14	59.8	53	47.2	33	48.5	22	58.5

Source: Adapted from (SolAbility, 2019)

In the 2019 ranking, the following conclusions can be noticeable:

- The first ten countries are from Europe with close enough scores between them;
- The region of northern Europe, Scandinavia, is showing its domination through Sweden (first in 2018 as well), Denmark (an increase from 2018 to the fourth spot) and Norway (a decrease from being second to the sixth position in the rank);

- Nordic countries are showing their dominance through Sweden, Finland (now second when compared to its 2018 position when it was fourth), Iceland (still third, the same as in the previous year), Denmark and Norway;

- Using the NC scores, we find only three countries from the top ten by GSCI: Sweden (fifth, as in 2018), Finland (eighth, an increase from its previous standing - sixteenth) and Estonia (an increase from its previous ninth position to being sixth). In 2019, the top ten countries by their NC score are: Guyana, Laos, Democratic Republic of Congo, Cameroon, Sweden, Estonia, Republic of Congo, Finland, Canada and Paraguay;

- Considering the RI score, only two countries from the first ten using the overall score criteria are placed amongst the first in the world: Sweden (fifth as opposed to ninth in 2018) followed by Luxembourg. Latvia and really close are Denmark and Croatia. Estonia was the underperformer (rank one hundred eleven). The RI top ten rank is: Kenya, Togo, Ethiopia, Nigeria, Sweden, Luxembourg, Benin, the United Kingdom, Tanzania and Democratic Republic of Congo;

- Concerning the SC score (and enumerating them in order), Finland, Norway, Iceland, Sweden, Switzerland and Luxembourg are present from ranking based on their overall score and occupy the first six positions, portraying another strong Nordic presence (Denmark falling short of the top ten). The least performant are Latvia and Croatia. The complete rank is: Finland, Norway, Iceland, Sweden, Switzerland, Luxembourg, Austria, the Netherlands, Germany and Belgium;

- Sweden, Norway (both maintaining their previous spots: second and, respectively, third), Denmark and Switzerland are present on the IC rank. The rank also shows South Korea, Singapore, Japan, the United Kingdom, China and Israel;

- There are three countries present in the top ten using the IC score that area also found in the GSCI score rank as well: Latvia, Estonia and Luxembourg. The rank is completed by Ireland, Czech Republic, Slovenia, Poland, Germany, Mauritius and New Zealand;

- Countries that appear within the top 10 countries in the world within the five sub-indexes: Sweden (four times - NC, RI, SC, IC), Finland (twice - NC, SC), Iceland (once - SC), Denmark (once - IC), Switzerland (twice - SC, IC), Norway (twice - SC, IC), Estonia (twice - NC, GE), Luxembourg (three times - RI, SC, GE), Latvia (once - GE) and Croatia (not within the top ten using the other scores).

The final year of the analysed period, 2020, displays some noticeable changes from the previous two years (table no. 3).

**Table no. 3. Top 10 countries in the world in 2020 by their GSCI**

Country	RANK	GSCI score	RANK	NC score	RANK	RI score	RANK	SC score	RANK	IC score	RANK	GE score
Sweden	1	62.1	14	63.1	9	63.7	3	61.6	2	69.5	77	52.5
Denmark	2	61.0	67	51.4	6	65.6	14	57.8	4	67.0	14	63.1
Iceland	3	60.7	13	63.8	75	52.0	1	65.4	13	61.3	19	61.2
Finland	4	60.4	27	60.5	50	55.3	4	61.6	10	64.3	24	60.3
Switzerland	5	59.4	87	47.6	11	63.1	5	61.0	9	64.7	22	60.7
Estonia	6	59.4	12	63.8	96	49.8	10	59.4	24	55.8	4	68.0
Latvia	7	58.2	17	62.1	15	61.5	40	51.8	42	49.4	7	66.1
Luxembourg	8	58.0	92	46.8	4	68.3	11	58.9	32	51.8	11	63.9

Norway	9 : 57.7	40 : 57.5	122 : 46.4	2 : 65.0	5 : 66.7	71 : 52.8
Croatia	10 : 57.2	21 : 61.1	30 : 57.7	37 : 52.3	37 : 50.9	12 : 63.9

Source: Adapted from (SolAbility, 2020)

Within the 2020 ranking, the following remarks can be drawn:

- The first ten countries in the 2020 ranking are from Europe and are having significantly close scores;

- Scandinavia, yet again, has the strongest representation: Sweden (first in 2018, 2019 and 2020), Denmark (fifth in 2018, fourth in 2019 and second in 2020) and Norway (from the follower's position in 2018, down to sixth in 2019 and now on the ninth spot);

- Nordic countries are again represented by Sweden, Denmark, Iceland (maintaining its third spot from the previous two years, Finland (now being fourth, just as it was in 2018; it decreased from its previous placement when it was the follower) and Norway.

- Taking into consideration the NC criteria, we notice that in 2020, there is no country to be found from the GSCI rank. The rank from 2020 is as follows: Laos, Guyana, Paraguay, Bhutan, Democratic Republic of Congo, Cameroon, Brazil, Papua New Guinea, Suriname and Venezuela;

- Sweden (back to being ninth just as it was in 2018), Denmark (constant improvement throughout the period) and Luxembourg (the best position out of the three, improving its previous standing) are the only ones present in the top ten RI rank as well. The leading countries for this criterion are Democratic Republic of Congo, Ethiopia, Kenya, Luxembourg, the United Kingdom, Denmark, Ireland, Ghana, Sweden and Uruguay.

- Based on the SC score, Iceland, Norway, Sweden, Finland, Switzerland and Estonia are present from the GSCI score rank, the first five also constituting the top five of this specific rank. The rank is completed by (from the sixth to the ninth) Austria, Belgium, Maldives and Slovenia;

- Keeping the second place is Sweden (referring to the IC score), followed by Denmark, Switzerland, Norway and Finland. The other five countries are: South Korea (that keeps its first place), Singapore, the United Kingdom, China and Japan;

- There are only two countries common with the overall criteria found using the GE score: Estonia and Latvia. The list also displays the Czech Republic, Ireland, Slovenia, Slovakia, Germany, Liechtenstein, Poland and Mauritius;

- Based on the number of times each country is present on the ranks specific to the sub-indexes, this situation is shown: once - Iceland (SC), Estonia (GE), Latvia (GE), Luxembourg (RI), twice - Denmark (RI, IC), Finland (SC, IC), Switzerland (SC, IC), Estonia (SC, GE), Norway (SC, IC), three times - Sweden (RI, SC, IC) and Croatia had the closest positioning at the twelfth position for its GE score.

Common countries for the analysed period (present in 2018, 2019 and 2020 as leading countries in the world by their GSCI score) are: Sweden (the leader every year), Norway (starting second but finishing ninth), Iceland (maintaining its third position), Finland (navigating from fourth to second), Denmark (initially fifth but reaching the follower's position in 2020), Switzerland (seventh in 2018 and fifth the following years), Latvia (ninth in 2018 and 2019 and seventh in 2020) and Estonia (from the last spot to being seventh and then sixth). Luxemburg (eighth) and Croatia (tenth) have been twice on the rank, in 2019 and 2020, maintaining their placement. Ireland and Austria are the countries with only one occurrence within the top ten (this happened in 2018).

## 5. Conclusions

Competition between companies is fierce in the global economy that we are living in. Nowadays companies tend to align their strategic thinking to the best context available for them and, thus, conduct business in a country that is able to provide sustainable competitiveness. From this point of view, looking at the top ten countries in the world according to the Global Sustainable Competitiveness Index for the 2018-2020 period, it is clear that Europe has an edge, fully occupying the rank. Moreover, a region sets itself apart: the one belonging to the Nordic countries (Sweden, Denmark, Iceland, Finland and Norway) with power display in the hands of Scandinavia (Sweden - the constant leader, Denmark - a steady growth and a strong challenger for Sweden, having only a difference of only 1.1 in their 2020 scores and Norway - the one that fell from its second position in 2018 to being ninth in 2020).

Future research can be directed towards a comparison between similar or linked ranks such as the Sustainable Development Goals Index (Sachs et al., 2020), the Global Competitiveness Index (Schwab, 2019) or the Sustainable Brand Index (SB Insight AB, 2021).

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