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Article

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THE SUSTAINABILITY-ADJUSTED GLOBAL COMPETITIVENESS INDEX

For over 30 years the World Economic Forum has published its annual *Global Competitiveness Report*, now ranking 144 countries by their global competitiveness index (GCI). The index is based on 12 different categories of indicators, which are sorted into the following three main classes: basic requirement, efficiency enhancers, and sophistication and innovation factors. Each class embodies the driving components for competitiveness for a different stage of economic development.

In 2011, the World Economic Forum added another section to the common GCI calculations: the *sustainability adjusted GCI* (SCI). This index combines a number of sustainability indicators with the original GCI in order to measure sustainable and high-quality growth. This new idea of competitiveness and prosperity has also been adopted by several international organisations. For example the EU included sustainable growth in the *EUROPE 2020 Strategy*.

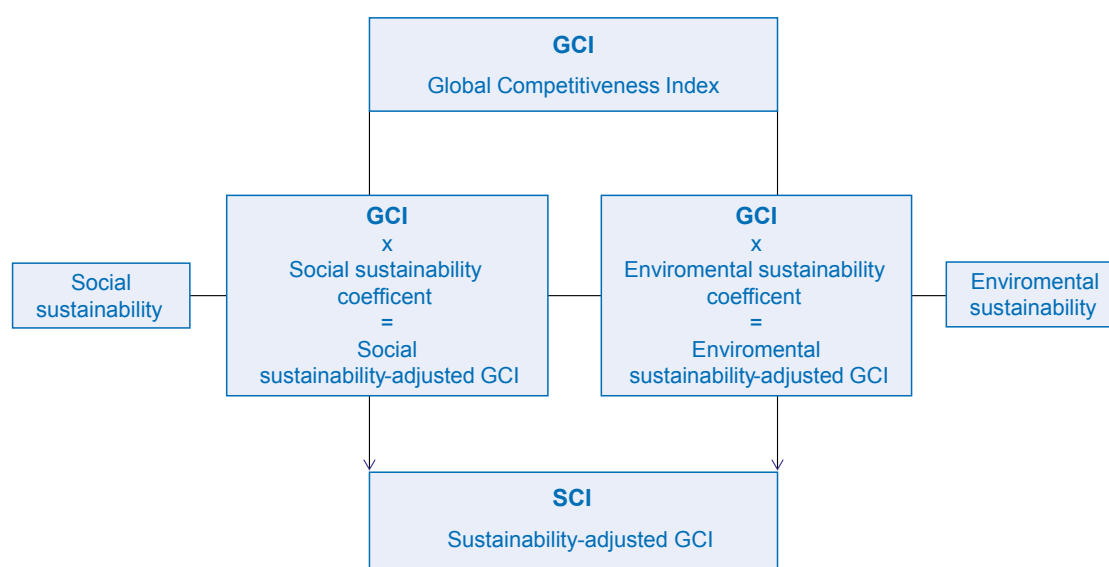
From then on, the *Global Competitiveness Report* included two different indices: the GCI and the SCI. While the former only measured short-term competitiveness, the later was meant to capture a middle and long-term perspective.

For the initial calculation of the SCI, new sustainability indicators were added to the components of the GCI calculation. Then all of the indicators were rearranged into 15 new categories, which now include social cohesion, environmental policy, resource efficiency, management of renewable resources, and environmental degradation. However, this method did not allow a proper comparison of the GCI and the SCI with respect to sustainability. It did not make it clear whether differences arose due to the newly added indicators, or only due to the reorganisation.

For this reason the next, and to date report of 2012–2013 used a different approach. Sustainable competitiveness was divided into environmental and social sustainability. Environmental sustainability is defined as: “*the institutions, policies, and factors that ensure an efficient management of resources to enable prosperity for present and future generations*” (WEF 2012). Its indicators are environmental policy, use of renewable resources and degradation of the environment. Social sustainability is defined as: “*the institutions, policies, and factors that enable all members of society to experience the best possible health, participation, and security; and that maximize their potential to contribute to and benefit from the economic prosperity of the country in which they live*” (WEF 2012). It is measured by access to basic necessities, vulnerability to shocks and social cohesion.¹

¹ There are still several aspects of sustainable competitiveness that are not captured in this analysis due to missing data problems. Water pollution and minority inclusion are just two of these aspects.

Figure 1: Composition of the sustainability-adjusted Global Competitiveness Index



Source: WEF (2012).

In this new approach, the indicators of the new categories were first converted into two coefficients between 0.8 and 1.2. In the next step, these coefficients were separately multiplied with the original GCI resulting in a social- and an environmental-adjusted GCI. The average of these two adjusted indexes represents the final SCI.

The GCI and SCI scores of a sample of 36 European and OECD countries in the report of 2012-2013 are compared and analysed below (see Table 1).² The leading country in both rankings is Switzerland with a value of 5.72/6.85 out of 7, closely followed by Finland, which is twice ranked with the second highest competitiveness in the sample (36 countries). The sustainability-adjusted competitiveness of Switzerland is rated more than one point higher than the original score. The same pattern can be found in Finland, where the SCI is 0.81 points higher than the GCI. The list of the ten best performing countries of both indexes varies only in two countries. While Canada and the US score the highest in the GCI, they are replaced by Norway and Austria when it comes to sustainability. The remaining countries that are represented in both top-10 lists are the Netherlands, Sweden, Germany, United Kingdom, Japan and Denmark.

Looking at the overall sample, it is notable that almost all the countries of the upper-half score higher when sustainability indicators are adjusted. One exception are the United States. While the country obtains the seventh place in the general GCI ranking with 5.47 points, it drops by 11 places when ranked by the SCI with a score of only 5.31. Looking at the sustainable-adjusted indexes individually reveals that it is environmental sustainability which biases the US SCI downwards.

The other end of the sample shows, that the countries with the lowest GCI value, namely Romania, Macedonia, Croatia and Greece, have an even lower SCI. The same applies to the southern European countries of Spain, Italy, and Portugal as well as Turkey, Hungary and Bulgaria.

There are also nations that perform badly in terms of sustainability in one category but are able to compensate for this by the other category. This is the case in Australia, Cyprus, and Denmark. In each case it is the environmental component that shifts the competitiveness score downwards and the social component that help to compensate for the failure. The same pattern can be found in the average score values: The average of the SCI is 5.07, which is 0.26 points higher than the GCI.

² The analysis below refers to the ranking of 36 countries in Table 1.

But taking a closer look into the individual components, we see that the average environmental sustainability-adjusted GCI only reaches a score of 4.95, whereas the average social sustainability-adjusted GCI is 5.18.

To sum up, adding sustainability shifts the score of competitive countries upwards and that of countries with a relatively weak competitiveness downwards. In addition, environmental sustainability is realised to a lesser degree than social sustainability.

Esther Heesemann

References

World Economic Forum (2012), "The Global Competitiveness Report 2012-2013", Geneva.

World Economic Forum (2011), "The Global Competitiveness Report 2011-2012", Geneva.

Table 1

Adjustment to the GCI scores by sustainability indicators								
	GCI		SCI		Social sustainability–adjusted GCI		Environmental sustainability–adjusted GCI	
	Score	Rank	Score		Score		Score	
Switzerland	5.72	1	6.85	↑	6.83	↑	6.87	↑
Finland	5.55	2	6.36	↑	6.45	↑	6.26	↑
Sweden	5.53	3	6.16	↑	6.17	↑	6.15	↑
Netherlands	5.50	4	6.21	↑	6.54	↑	5.88	↑
Germany	5.48	5	6.14	↑	6.37	↑	5.92	↑
United States	5.47	6	5.31	↓	5.63	↑	5.00	↓
United Kingdom	5.45	7	5.82	↑	6.03	↑	5.62	↑
Japan	5.40	8	5.76	↑	6.10	↑	5.42	↑
Denmark	5.29	9	5.73	↑	6.21	↑	5.25	↓
Canada	5.27	10	5.63	↑	5.93	↑	5.33	↑
Norway	5.27	11	6.15	↑	6.32	↑	5.98	↑
Austria	5.22	12	6.02	↑	6.17	↑	5.86	↑
Belgium	5.21	13	5.68	↑	5.90	↑	5.46	↑
Australia	5.12	14	5.46	↑	5.83	↑	5.08	↓
France	5.11	15	5.5	↑	5.59	↑	5.40	↑
New Zealand	5.09	16	5.68	↑	5.82	↑	5.53	↑
Ireland	4.91	17	5.18	↑	5.26	↑	5.11	↑
Iceland	4.74	18	5.44	↑	5.45	↑	5.43	↑
Estonia	4.64	19	4.83	↑	4.82	↑	4.85	↑
Spain	4.60	20	4.55	↓	4.66	↑	4.45	↓
Czech Republic	4.51	21	4.77	↑	4.89	↑	4.66	↑
Poland	4.46	22	4.37	↓	4.32	↓	4.42	↓
Italy	4.46	23	4.39	↓	4.38	↓	4.40	↓
Turkey	4.45	24	4.04	↓	4.24	↓	3.84	↓
Lithuania	4.41	25	4.61	↑	4.52	↑	4.71	↑
Portugal	4.40	26	4.36	↓	4.58	↑	4.15	↓
Latvia	4.35	27	4.62	↑	4.55	↑	4.69	↑
Slovenia	4.34	28	4.66	↑	4.76	↑	4.56	↑
Cyprus	4.32	29	4.34	↑	4.63	↑	4.05	↓
Hungary	4.30	30	4.30	→	4.29	↓	4.32	↑
Bulgaria	4.27	31	4.07	↓	4.17	↓	3.97	↓
Slovak Republic	4.14	32	4.27	↑	4.18	↑	4.36	↑
Romania	4.07	33	3.72	↓	3.71	↓	3.73	↓
Macedonia	4.04	34	3.65	↓	3.66	↓	3.64	↓
Croatia	4.04	35	4.02	↓	3.84	↓	4.20	↑
Greece	3.86	36	3.71	↓	3.59	↓	3.82	↓
Average	4.81		5.07		5.18		4.95	

The arrows indicate a higher/lower value than the GCI.

Source: WEF 2012.