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An Overview on European Union Sustainable Competitiveness

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Abstract

The last few years have emphasized a continuing concern of many institutions, nations, companies for sustainable development. The recent literature brings into attention the concept of sustainable competitiveness beyond sustainable development. The main idea of sustainable competitiveness is reflected by the searching of a model that could balance economic prosperity, environmental issues and social sustainability. In this context, is shaping the sustainability-adjusted global competitiveness index that take into consideration two new dimensions – environmental and social. Practically, the triple bottom line concept will be extrapolated from the microeconomic level to the macroeconomic level. This paper tries to identify the most important factors/forces that will impact sustainable competitiveness, on one hand, and to analyze the sustainable competitiveness of European Union countries, on the other hand.

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1. Literature review – the concept of sustainable development

Competitiveness is not only about economic performance of a nation, it is also about the environmental and social performance. The synergy between them will create sustainable competitiveness. An environment that supports high levels of wellbeing is becoming an important driver, stronger and mutually supportive for overall performance (Balkyte, Tvaronaviciene, 2010). According to Europe 2020 “A European strategy for smart, sustainable and inclusive growth” (European Commission 2010), Europa must act: smart in innovation, education, training and lifelong learning, and digital society; sustainable in competitiveness, combating climate change and efficient energy;

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inclusive in employment, skills and fighting poverty. For achieving these goals countries must make some steps forward in order to evolve towards sustainable competitiveness.

The concept of competitiveness is an elusive one, with multiple facets, that has been developed over the years based on the sustainable development paradigms from responsible competitiveness (MacGillivray, Sabapathy, and Zadek, 2003) to sustainable competitiveness (WEF, 2009).

According to MacGillivray, Sabapathy and Zadek (2003), responsible competitiveness means that “an economy’s productivity is enhanced by business taking explicit account of their social, economic and environmental performance”. Since then, under new perspectives, the concept has evolved. Aiginger, Barenthaler-Sieber and Vogel (2013) used price competitiveness, quality competitiveness and outcome competitiveness to explain the changing process: from input-oriented evaluation to outcome-oriented evaluation (Figure 1.)

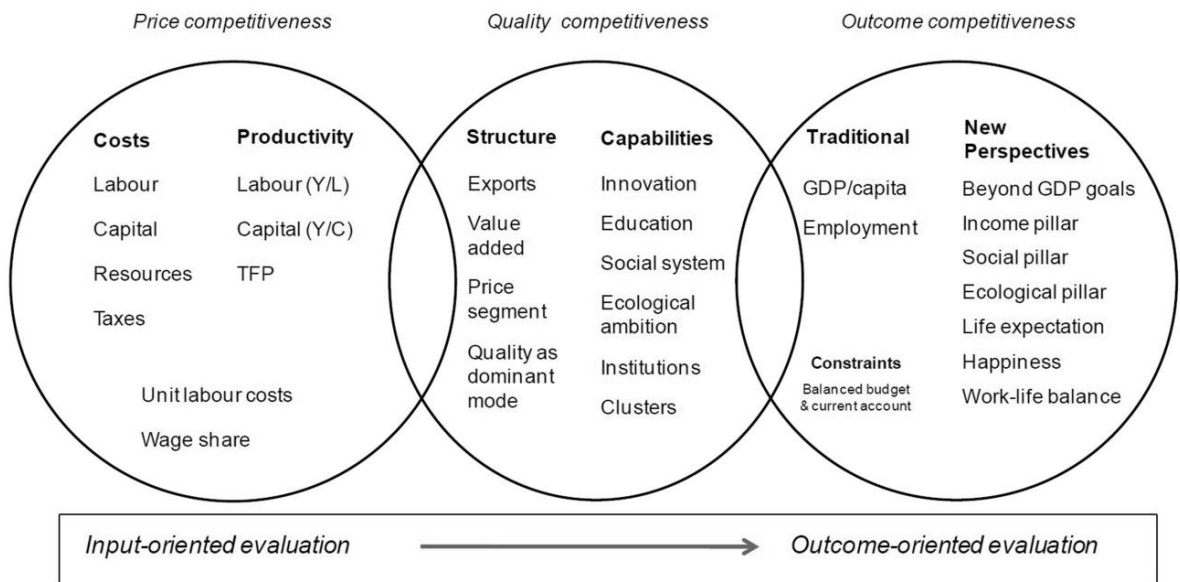


Fig. 1. Towards a concept of competitiveness under new perspectives, Source: Aiginger, Barenthaler-Sieber and Vogel, 2013.

Also, the concept of sustainable competitiveness has been defined by World Economic Forum (2013) as “the set of institutions, policies and factors that make a nation remain productive over the longer term while ensuring social and environmental sustainability”. The Sustainable Competitiveness Index developed by WEF is based on Global Competitiveness Index (GCI) with adjusted coefficients (from social sustainability and environmental sustainability pillars).

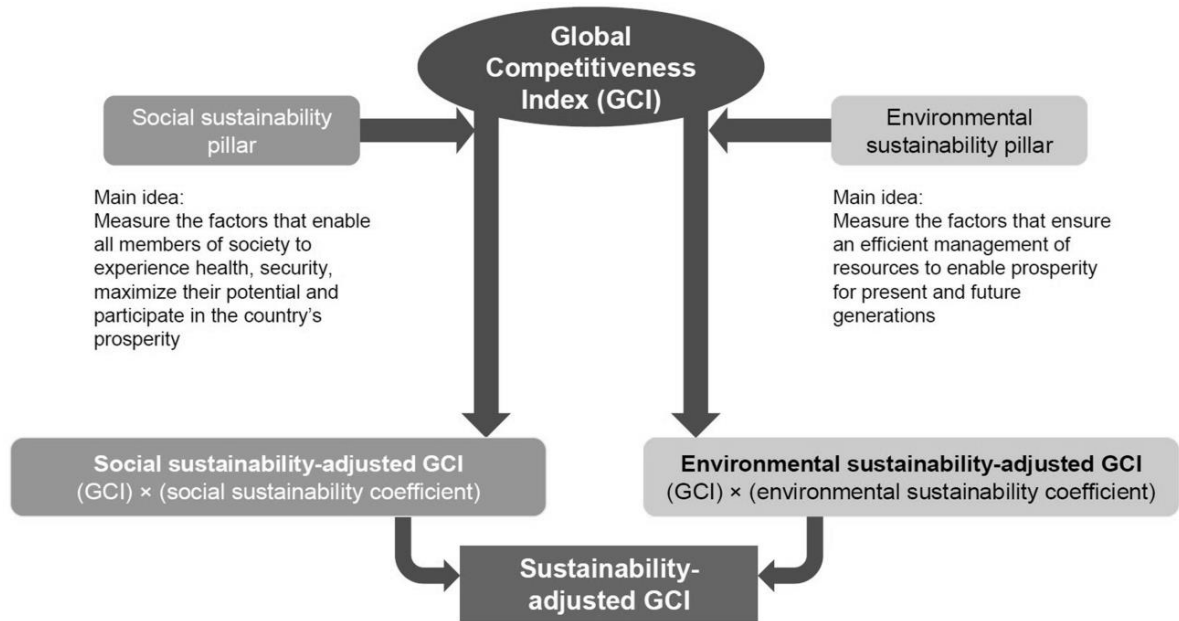


Fig. 2. Measuring sustainable competitiveness, Source: Crotti, 2012 and WEF 2012

The pillars and sub-pillars of Sustainable Competitiveness Index (Sustainability – adjusted GCI) are presented in Table 1.

Table 1. Components of Sustainable Competitiveness

GCI Pillar	Social sustainability pillar	Environmental sustainability pillar
Institutions	Income Gini index	Stringency of environmental regulation
Infrastructure	Youth unemployment	Enforcement of environmental regulation
Macroeconomic environment	Access to sanitation	Terrestrial biome protection
Health and primary education	Access to improved drinking water	No. of ratified international environmental treaties
Higher education and training	Social safety net protection	Agricultural water intensity
Goods market efficiency	Extent of informal economy	CO ₂ intensity
Labour market efficiency	Social mobility	Fish stocks overexploited
Financial market development	Vulnerable employment	Forest cover change
Technological readiness		Particulate matter (2.5) concentration
Market size		Quality of the natural environment
Business sophistication		
Innovation		

Source: WEF, Global Competitiveness Report 2012-2013

According to Report on The Global Sustainable Competitiveness Index 2013 edited by SolAbility, sustainable competitiveness represents “the ability of a country to meet the need and basic requirements of current generations while sustaining or growing the national and individual wealth without depleting natural and social capital”. The score for sustainable competitiveness index is calculated based on four pillars that are presented in the Table 2.

Table 2. Pillars of Sustainable Competitiveness Index

Natural capital: availability & depletion	Resource intensity & efficiency	Sustainable innovation	Social cohesion
Water	Energy efficiency	School performance	Health & health care
Biosphere	Material intensity	R&D capability	Equality
Agricultural resources	Water efficiency	Investments	Public services
Depletion of land & resources	GHG intensity	Business environment	Crime
	Waste intensity	Corruption	Freedom

Source: SolAbility

Are competitiveness and sustainable development apart or together? (Kasimovskaya and Didenko, 2013). National competitiveness should be seen as a relative rather than an absolute concept that allows for a benchmarking of nations (Berger, 2008). In terms of sustainable competitiveness the economy dependent on society and both dependent on the environment. (Giddings, Hopwood, O'Brien, 2002).

Suzanne Rosselet (2011) from Institute for Management Development has “built” the house of sustainable development based on: *enabling factors* like macroeconomy and openness; *pillars* like institutions & legal framework, infrastructure – basic, financial & social, culture – national & corporate; *tipping factors* like technology and innovation. The synergy between them will drive the national economy to sustainable competitiveness.

2. Analysis of European Union countries sustainable competitiveness

In order to analyze the sustainable competitiveness of EU and EU countries it will be used data from World Economic Forum, Global Competitiveness Report 2013-2014 and from SolAbility, The Global Sustainable Competitiveness Index 2013.

Table 3. Sustainability – adjusted GCI (SAGCI)

Country/Economy	SAGCI	Score GCI	SSAGCI	ESAGCI	SS	ES
Austria	5.98	5.15	6.06	5.90	1.18	1.15
Belgium	5.67	5.13	5.81	5.54	1.13	1.08
Bulgaria	4.25	4.31	4.32	4.18	1.00	0.97
Croatia	4.24	4.13	4.09	4.39	0.99	1.06
Cyprus	4.42	4.30	4.66	4.19	1.08	0.97
Czech Republic	4.77	4.43	4.84	4.69	1.09	1.06
Denmark	5.66	5.18	6.03	5.29	1.16	1.02
Estonia	4.93	4.65	4.93	4.93	1.06	1.06
Finland	6.40	5.54	6.43	6.36	1.16	1.15
France	5.56	5.05	5.57	5.57	1.10	1.10
Germany	6.23	5.51	6.41	6.05	1.16	1.10
Greece	3.94	3.93	3.79	4.08	0.96	1.04
Hungary	4.37	4.25	4.34	4.40	1.02	1.04
Ireland	5.32	4.92	5.33	5.31	1.08	1.08
Italy	4.50	4.41	4.44	4.55	1.01	1.03
Latvia	4.80	4.40	4.67	4.92	1.06	1.12
Lithuania	4.76	4.41	4.68	4.85	1.06	1.10
Luxembourg	na	5.09	na	na	na	na
Malta	na	4.50	na	na	na	na
Netherlands	6.13	5.42	6.40	5.85	1.18	1.08
Poland	4.50	4.46	4.45	4.54	1.00	1.02
Portugal	4.53	4.40	4.65	4.41	1.06	1.00
Romania	3.97	4.13	3.97	3.98	0.96	0.96
Slovak Republic	4.33	4.10	4.21	4.45	1.03	1.09
Slovenia	4.64	4.25	4.68	4.60	1.10	1.08
Spain	4.71	4.57	4.74	4.69	1.04	1.03

Sweden	6.21	5.48	6.18	6.23	1.13	1.14
United Kingdom	5.85	5.37	5.96	5.73	1.11	1.07
EU 28 Average	4.67	4.70	4.70	4.63	1.07	1.06

Source: WEF, GCR 2013-2014

$$\text{SAGCI} = (\text{SSAGCI} + \text{ESAGCI}) / 2 = [(\text{GCI} \times \text{SS}) + (\text{GCI} \times \text{ES})] / 2$$

Where,

SAGCI: Sustainability – adjusted GCI

Score GCI: Score Global Competitiveness Index

SSAGCI: Social Sustainability – adjusted GCI

ESAGCI: Environmental Sustainability-adjusted GCI

SS: Social Sustainability

ES: Environmental Sustainability

From Table 3 it can be observed that only Bulgaria and Romania have SAGCI score lower than GCI score. The social and environmental pillars have a negative impact on SAGCI. The EU Average for SAGCI is 4.67 lower than GCI average (4.70). Still 15 countries are ranked over the average and 11 are under the average. But the Sustainable Competitiveness Index proposed and calculated by WEF is an index that is based first of all on economic performance, on national competitiveness.

The Global Sustainable Competitiveness Index calculated/measured by Solability is an average between natural capital, resource intensity, sustainable innovation and social cohesion.

Table 4. Sustainable Competitiveness Index

Country/Economy	Sustainable Competitiveness	Natural Capital	Resource Intensity	Sustainable Innovation	Social Cohesion
Austria	56.70	36.90	52.80	61.80	71.80
Belgium	51.50	37.50	46.90	56.20	61.70
Bulgaria	46.30	38.40	43.60	45.40	57.90
Croatia	48.30	40.10	53.00	43.40	60.20
Cyprus	44.60	26.90	40.50	48.10	60.20
Czech Republic	53.00	41.80	42.50	60.20	61.30
Denmark	62.80	55.30	51.20	66.10	74.60
Estonia	52.60	50.20	30.00	63.70	55.80
Finland	60.90	50.80	50.80	64.20	73.90
France	54.30	49.20	47.10	56.80	61.40
Germany	59.70	41.90	50.70	68.80	70.30
Greece	45.30	38.30	47.20	44.10	52.50
Hungary	50.40	40.40	52.20	51.00	58.10
Ireland	57.10	51.80	49.70	55.50	71.30
Italy	52.00	39.70	57.50	55.10	54.70
Latvia	48.30	53.90	43.90	46.00	50.10
Lithuania	51.90	46.60	62.00	51.00	50.00
Luxembourg	56.30	42.70	51.00	62.50	64.10

Malta	46.90	35.60	45.00	47.10	59.50
Netherlands	55.90	44.80	43.70	59.50	71.40
Poland	49.90	35.60	46.30	52.80	62.60
Portugal	52.20	38.00	51.70	57.20	58.70
Romania	49.60	37.80	53.90	49.90	57.20
Slovak Republic	48.50	34.60	52.70	47.70	60.20
Slovenia	54.00	39.80	41.10	60.40	68.50
Spain	52.50	34.70	58.20	54.00	63.00
Sweden	61.60	51.50	55.30	63.40	74.00
United Kingdom	51.60	31.80	56.10	53.20	64.90
EU 28 Average	51.60	41.66	49.16	55.18	67.30

Source: SolAbility, 2013

One of the most important aspects of this index is the link between the pillars of sustainable competitiveness. For developed countries (innovation-based economy), pillars like sustainable innovation and social cohesion have a huge impact on sustainable competitiveness index. Instead, for developing countries (efficiency-based economy) natural capital and resource intensity are most important pillars.

3. Conclusions

The sustainable competitiveness represents an important goal for every economy. In order to achieve the priorities assumed by European Commission by Europe 2020 Strategy, the developed countries must continually improve their “soft” pillars like innovation, business sophistication, social cohesion, while developing countries must improve their “hard” pillars, on one hand, and their “soft” pillars, on the other hand. For reducing the gaps between EU countries and for increasing the average the European Commission have to encourage the developing countries to do more than waiting from other (Bobica, Miclaus, 2013). They have to identify institutions, policies and factors that make a nation productive in correlation with social and environmental development. Some of the most important factors that drive to sustainable competitiveness can be: productive capital, human capital, social-institutional capital, cultural/natural capital, infrastructural capital, knowledge/creative capital (Martin, Kitson, Tyler, 2006).

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