



COMPOSING SUSTAINABLE COMPETITIVENESS INDEX: PRACTICE AND DISCUSSIONS

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Abstract. The composite competitiveness indexes are useful communication tool for a comparison of the economies, awareness raising and in policy analysis. The benchmarking of economic outcomes as well as the potential serves as a basis for policy makers in setting policy agendas and investment priorities. Recent international discussions on further research avenue for composite index of competitiveness is driven by the approach that aims at ensuring a closer alignment between the measurement of competitiveness and sustainable development. Therefore, the article aims to contribute to (i) a better understanding of the complexity of the sustainable competitiveness; and (ii) the development of a theoretical framework for sustainable competitiveness index.

Keywords: sustainable competitiveness index, sustainable development, competitiveness, sustainable competitiveness, composite index, economic growth.

JEL classification: F6, O1, O11, O4, O47, Q01.

1. Introduction

After introduction of a new concept of “Sustainable competitiveness” by Balkytė and Tvaronavičienė (2010a; 2010b) in 2010, some further steps in the research word were made in defining the theoretical framework for measurement of sustainable competitiveness.

Moreover, recent international discussions on further research avenue for composing index of competitiveness approved the proposed approach that aims at ensuring a closer alignment between the measurement of competitiveness and sustainable development.

However, the progress in creating a commonly agreed definition and index of sustainable competitiveness is limited and the discussion by the researchers is still on-going.

Thus, it should be acknowledged that the composite indicators are increasingly widely recognised as a useful communication tool for a comparison of the economies, awareness raising and in policy analysis. The benchmarking of economic outcomes at international level generally serves as a basis for policy makers in setting policy agendas and investment priorities.

Although the evaluation and illustration of the past results of the competitiveness or sustainable development can be observed in a number of research papers and studies, less attention by the researchers was given to the evaluation of existing un-used potential for the long-term sustainable

competitiveness. However, the detailed analysis of the composition of the competitiveness indexes signals that the focus on a short-term competitiveness may lead to a non-sustainable economic development in the long run.

The article is structured as follows: after introduction of the policy context in Chapter 2, Chapter 3 provides the definition of the sustainable competitiveness and overviews the recent development. Chapter 4 discuss the different approaches on possible domains of the sustainable competitiveness index. First of all, it focuses on competitiveness dimension. Secondly, it looks at different sustainability dimensions, namely economic, environmental and social sustainability. Thirdly, it introduces an innovative proposal to measure the un-used potential of the sustainable competitiveness. Chapter 5 aims to combine all dimensions and to propose a meaningful framework for an integrated measurement of sustainable development and competitiveness. Chapter 6 concludes while acknowledging the limitations of the composite indexes.

2. Policy context

According to Balkytė and Tvaronavičienė (2010a), the European Union (EU) Strategy for Smart, Sustainable and Inclusive Growth – Europe 2020 (2010) created a need for researchers to develop a new concept of competitiveness, with much of the

research focusing on how sustainable development and competitiveness interact.

Sustainable development is a fundamental and overarching objective of the EU, enshrined in the Treaty. The EU Sustainable Development Strategy brings together the many strands of economic, social and environmental policy under one overarching objective – to continually improve the quality of life and well-being for present and future generations (Eurostat 2013).

Moreover, the world is currently debating the concrete agenda for the future (post 2015) Sustainable Development Goals. In 2013, the United Nations member states identified the following preliminary, globally relevant priority areas for Sustainable Development Goals: (i) Poverty eradication; (ii) Sustainable management of the resource base; (iii) Sustainable consumption and production; (iv) Access to basic goods and services for a decent life; (v) Productive employment; (vi) Health and education (Eurostat 2013).

According to the Annual Growth Survey (2014), the top priority now is to build growth and competitiveness (Communication from the Commission 2013).

Sustainable development is therefore a framework for the general global dialogue on growth and development, but also for the more specific discussion on enterprise development and, within that, it provides a sound framework for the debate on regulation and voluntary action in the sphere of business (ILO 2007).

3. Development of the competitiveness indexes: defining sustainable competitiveness

3.1. Definition of sustainable competitiveness

In 2010, a new concept of the “Sustainable competitiveness” and a need to create a Sustainable Competitiveness Index were introduced by Balkytė and Tvaronavičienė (2010a). The sustainable competitiveness was defined as an interaction between the competitiveness and sustainable development in the globalisation context.

The researchers (Balkytė, Peleckis 2010) highlighted that a focus on short term competitiveness may lead to a non-sustainable economic development in a long-term.

Moreover, since 2011, the World Economic Forum has embarked on an effort to deepen understanding of how sustainability relates to competitiveness and what this means for the development path of economies, resulting in a conceptual analysis and the calculation of the sustainability-adjusted Global Competitiveness Index (GCI). The central idea is to measure how sustainable is the

productivity level of an economy with respect to environmental stewardship and social sustainability (Schwab 2013).

While competitiveness can be equated with productivity and economic performance, sustainable competitiveness can be linked to a broader concept that focuses on aspects that go beyond mere economic well-being to include other important elements that render societies sustainably prosperous by ensuring high-quality growth (Bilbao-Osorio *et al.* 2013).

The preliminary definition of the sustainable competitiveness, provided by the World Economic Forum in 2011, stated that sustainable competitiveness is a “*Development that satisfies the needs of the present without compromising the ability of future generations to meet their needs*”. A commonly used convention stipulates that being sustainable requires the ability to meet society’s economic, social, and environmental needs (Blanke *et al.* 2011).

According to the revised definition developed by the World Economic Forum, sustainable competitiveness is “*the set of institutions, policies and factors that make a nation remain productive over the longer term while ensuring social and environmental sustainability*” (Bilbao-Osorio *et al.* 2013).

The Sustainability advisory consultancy based in Korea (SolAbility) proposes that “*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 Global Sustainable Competitiveness Index 2013, SolAbility, South Korea 2013).

The European Commission (Joint Research Center) does not mention the term “sustainable competitiveness” but defines a regional competitiveness as “*the ability to offer an attractive and sustainable environment for firms and residents to live and work*” (Annoni, Dijkstra 2013).

According to MacGillivray, Begley and Zadek (2007), responsible competitiveness is the strategic alignment of business action, public policies and social enablers to make sustainable development count in global markets. Markets that do not value what counts in sustaining societies will continue to create negative outcomes on people and the environment.

However, a review of recent research papers brings to a conclusion that researchers mostly focus on competitiveness or sustainable development as separate research objects without trying to bring those two domains together.

3.2. Composing sustainable competitiveness index: current practice and discussions

It often seems easier for the general public to interpret composite indicators than to identify common trends across many separate indicators, and they have also proven useful in benchmarking country performance (Saltelli 2007).

However, the Eurostat doesn't provide one single index of competitiveness or index on sustainable development. A well-acknowledged common index on sustainable competitiveness is also not developed yet.

The Eurostat (2013) monitoring report, based on the EU set of sustainable development indicators, provides a statistical picture of progress towards the goals and objectives of the EU Sustainable Development Strategy (see Chapter "4.2. Sustainable development").

The international competitiveness indexes (the most cited ones are developed by the World Economic Forum and IMD World Competitiveness Centre) provide the rankings of the countries according to the competitiveness. The European Commission (The Joint Research Center) is developing an EU Regional Competitiveness Index (Annoni, Kozovska 2010; Annoni, Dijkstra 2013).

The variety of existing indexes with different policy focuses and sets of indicators creates a difficulty for understanding a correlation among those indexes and a "broad picture" of the economies in the context of sustainable competitiveness.

Economic competitiveness indicators alone are therefore a measurement of current wealth levels, but bear limited informative value for future developments due to the omission of key fundamentals required for the smooth functioning of economies (The Global Sustainable Competitiveness Index 2013; SolAbility, South Korea 2013).

Thus, there is a limited progress in research made in the development of a sustainable competitiveness framework. The international discussions on the meaningful composite indicator of the sustainable competitiveness have just started.

The changing political environment, globalization challenges, growing role of sustainable development and the transition to a "green" economy lead to the creation of the broad competitiveness definitions (Balkytė, Tvaronavičienė 2010b). Globalization challenges increase the need to evaluate the basic factors, such as land, capital and labour with a new approach (Balkytė, Peleckis 2010). Balkytė and Tvaronavičienė (2010a) highlighted a need to develop a new concept of "Sustainable competitiveness" in the context of globalization, with much of the research focusing on

how sustainable development and competitiveness interact.

Later, some aspects of the relationship between the sustainable development and competitiveness were analysed by a number of authors (Balkytė, Peleckis 2010; Bojnec, Papler 2011; Lapinskienė 2011; Balkytė, Tvaronavičienė 2011b; Lankauskienė, Tvaronavičienė 2012; Makštutis *et al.* 2012; Kasimovskaya, Didenko 2013; Rakauskienė, Tamošiūnienė 2013; *etc.*).

The Responsible Competitiveness Index, proposed by MacGillivray, Begley and Zadek (2007), looks at how 108 countries are performing in their efforts to promote responsible business practices.

While some limited and fragmented perceptions on importance of the integrated approach to competitiveness and sustainable development can be found also in the earlier research papers, more concrete proposals on frameworks for possible composite index of the sustainable competitiveness were introduced only recently by Bilbao-Osorio *et al.* (2013); Schwab (2013); the Sustainability advisory consultancy based in Korea (SolAbility) (2013).

The World Economic Forum acknowledged also that, despite mounting interest in sustainable development, the relationship between environmental or social sustainability and national competitiveness has been only marginally explored (Bilbao-Osorio *et al.* 2013). The World Economic Forum has started to include sustainability aspects in its Global Competitiveness Report (beginning with the 2011-2012 edition) (2011). Figure 1 illustrates the conceptual model which presents a theoretical framework of the sustainability-adjusted Global Competitiveness Index (GCI) proposed by the World Economic Forum (Schwab 2013). The composition of the GCI (non-sustainability-adjusted) is illustrated in Figure 6.

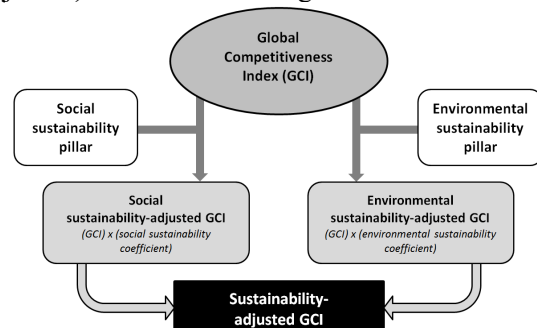


Fig. 1. Framework of the sustainability-adjusted Global Competitiveness Index (source: Bilbao-Osorio, Blanke *et al.* 2013)

This framework highlights the central position of competitiveness as the key driver of prosperity in society. However, the authors

acknowledge that competitiveness on its own may not lead to sustainable levels of prosperity. Competitiveness is necessary but not sufficient condition for continued prosperity.

As sufficient evidence does not yet exist that would lead to a solid functional relationship among three dimensions, the authors propose a linear relationship among the three dimensions. The final overall sustainability-adjusted GCI is an average of the two sustainability-adjusted indexes: the Social sustainability-adjusted GCI and the Environmental sustainability-adjusted GCI (Bilbao-Osorio *et al.* 2013).

While the World Economic Forum puts the competitiveness to a central position, other researchers propose that sustainable development and competitiveness should be analysed as equally important dimensions, for example, as illustrated in the Figure 2 which presents the principle scheme of sustainable competitiveness developed by Balkytė and Peleckis (2010).

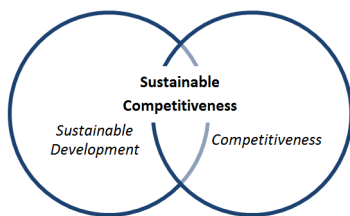


Fig. 2. The principal scheme of sustainable competitiveness (source: Balkytė, Peleckis 2010)

Bojnec and Papler (2011) analysed the links between economic efficiency, energy consumption and sustainable development in 33 countries.

Makštutis *et al.* (2012) proposed a concept of “Secure and sustainable competitiveness” that shows the importance of the development of the society, as well as the measurement of this development, in the context of security, sustainability and competitiveness (Figure 3).

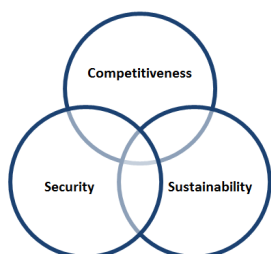


Fig. 3. The principle scheme of “Secure and sustainable competitiveness” (source: Makštutis *et al.* 2012)

However, Berger (2010) points out that in becoming broader and wider, competitiveness indices in some cases appear to be turning into catch-all barometers. Their “big picture” results may invite

users, especially policy-makers, to draw simplistic analytical or policy conclusions (OECD 2008).

While some indices are published by certain private focus groups, trying to push forward their specific agenda (Berger 2010), it might also be useful to analyse different views.

For example, another approach to the sustainable competitiveness was developed in the South Korea by the Sustainability advisory consultancy “SolAbility” (*The Global Sustainable Competitiveness index 2013*). The introduced Sustainable Competitiveness model (Figure 4) is based on four fundamental pillars that together from the base capability of a country to generate and sustain sustainable wealth, i.e. wealth that is not in danger of being reduced or diminished through overexploitation of resources (natural and human), the lack of innovative edge required to compete in the globalised markets, or the exploitation of segments of a society. These four pillars are:

- 1) Natural capital: the given natural environment within the frontiers of a country, including availability of resources, and the level of the depletion of those resources;
- 2) Resource intensity: the efficiency of using available resources (domestic or imported) as a measurement of operational competitiveness in a resource-constraint World;
- 3) Sustainable innovation: the capability of a country to generate wealth and jobs through innovation and value-added industries in the globalised markets;
- 4) Social cohesion: the health of populations, equality, security and freedom within a country.

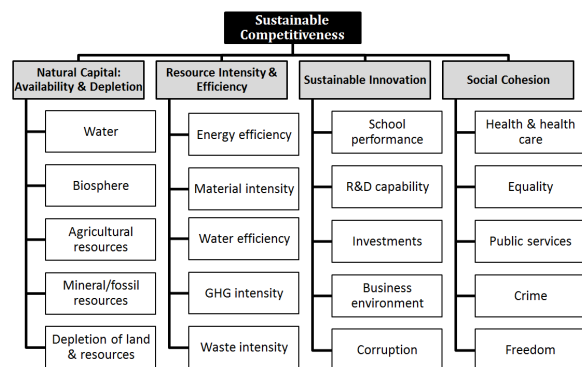


Fig. 4. The Global Sustainable Competitiveness Index (source: The Global Sustainable Competitiveness Index 2013, SolAbility, South Korea 2013)

Generally, composite indicators provide a starting point for analysis. In fact, composite indicators must be seen as a means of initiating discussion and stimulating public interest. The relevance of the composite indicators should be gauged with respect to constituencies affected by the composite index (OECD 2008).

4. Possible domains of Sustainable Competitiveness Index

Sustainable competitiveness is a multi-dimensional concept that cannot be captured by a single indicator. This creates a need to develop a composite indicator – Sustainable Competitiveness Index. This confirms the importance of identifying the meaningful domains of the Sustainable Competitiveness Index.

While composite indicators can be used as summary indicators to guide policy and data work, they can also be decomposed such that the contribution of sub-components and individual indicators can be identified and the analysis of country performance extended (OECD 2008).

4.1. Competitiveness

A number of competitiveness models (Porter’s Diamond model, the Double–Diamond model, the Generalized Double-Diamond (GDD) model, the Nine–Factor model, TOWS Matrix, Competitiveness Pyramid, etc.) were trying to define competitiveness (Balkytė, Tvaronavičienė 2010a).

According to the OECD (2013), competitiveness is “a measure of a country’s advantages or disadvantages in selling its products in international markets”.

The Strategy Europe 2020 (2010) announces that smart growth means developing the economy based on knowledge and innovation.

Berger (2008) proposes 4 concepts of national competitiveness: ability to sell, ability to earn, ability to adjust and ability to attract (Figure 5).

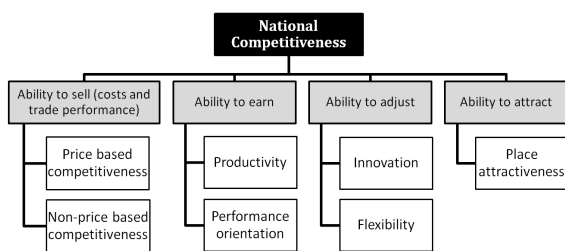


Fig. 5. National competitiveness: 4 concepts (source: Berger 2008, illustrated by authors)

According to Lankauskienė and Tvaronavičienė (2012), in the oldest theories the production factors could be preferred to be the ones, by which a country is abundant or have the comparative advantage. Moreover, investments were considered to be of vital importance. Later on the following factors of production can be distinguished: savings accumulation and reinvestment, capital accumulation (both human and physical),

productivity, technical change, innovation and knowledge.

The Global Competitiveness Report 2013–2014, published by the World Economic Forum, defines competitiveness as “the set of institutions, policies, and factors that determine the level of productivity of a country” (Schwab 2013). The 12 pillars (Figure 6) are organized into three sub-indexes, each critical to a particular stage of development: the basic requirements sub-index groups are those pillars most critical for countries in the factor-driven stage, the efficiency enhancers sub-index includes those pillars critical for countries in the efficiency-driven stage, and the innovation and sophistication factors sub-index includes the pillars critical to countries in the innovation-driven stage (Schwab 2013). The World Economic Forum evaluates 148 economies according to 113 indicators.

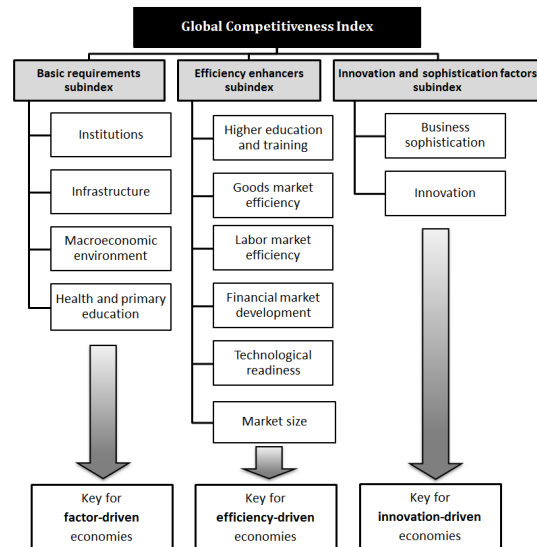


Fig. 6. The Global Competitiveness Index framework: 12 pillars (source: Schwab 2013)

According to Garelli (2013), world competitiveness is “a field of economic theory, which analyzes the facts and policies that shape the ability of a nation to create and maintain an environment that sustains more value creation for its enterprises and more prosperity for its people”.

The World Competitiveness Centre of The Institute for Management Development (IMD), based in Switzerland, publishes the annual IMD World Competitiveness Yearbook, which provides coverage of 60 economies. The IMD aims to analyze how nations and enterprises manage the totality of their competencies to achieve increased prosperity. The yearbook benchmarks the performance of the countries based on 333 criteria measuring different facets of competitiveness, of which 246 are used to calculate the overall com-

petitiveness rankings. The remaining 87 criteria are presented as background information only (Garelli 2013). Four competitiveness factors are proposed (Figure 7).

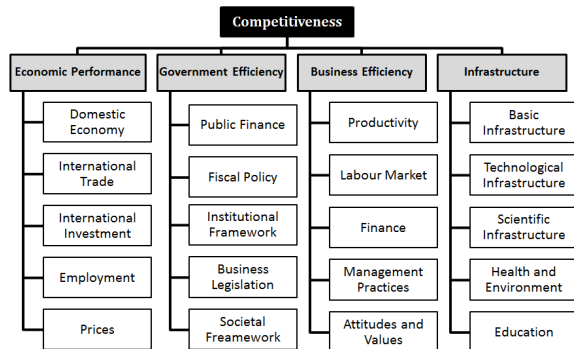


Fig. 7. The breakdown of competitiveness factors (source: Garelli 2013)

The EU Regional Competitiveness Index developed by the Joint Research Center (European Commission) (Figure 8) is based on eleven pillars describing both inputs and outputs of territorial competitiveness, grouped into three sets describing basic, efficiency and innovative factors of competitiveness (Annoni, Dijkstra 2013).

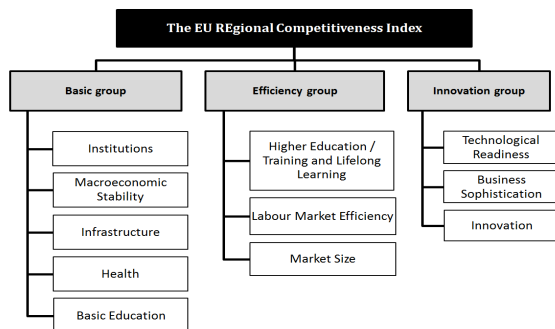


Fig. 8. The EU Regional Competitiveness Index framework: 11 pillars (source: Annoni, Dijkstra 2013)

The EU Regional Competitiveness Index puts aside most natural differences between regions such as raw materials, geographical specificities or climate and targets the result of human actions, modifications and improvements (Annoni, Dijkstra 2013). It aims to improve the understanding of territorial competitiveness at the regional level and shows the strengths and weaknesses of each of the EU NUTS 2 regions.

Researchers and international organisations propose also other composite indexes and measurements related to various aspects of competitiveness which differ in terms of their policy focus and scope. Thus, they are significant contribution and background information in explaining countries' ranking positions according to the competitiveness indexes. For example, the UNIDO Com-

petitive Industrial Performance (CIP) index is a composite index designed to compare the competitiveness of the national industries across countries (UNIDO 2013). The World Bank publishes the report on *Doing Business* (2013) that ranks countries according to the ease of doing business in their economies (Nallari, Griffith 2013).

4.2. Sustainable development

The EU Sustainable Development Strategy brings together the many strands of economic, social and environmental policy under one overarching objective – to continually improve the quality of life and well-being for present and future generations (Eurostat 2013).

It is important to identify the most powerful factors both for the economic growth and the living standards (Balkytė, Valentinavičius 2006).

According to the Strategy Europe 2020 (2010), sustainable growth means building a resource efficient, sustainable and competitive economy, exploiting Europe's leadership in the race to develop new processes and technologies, including green technologies, accelerating the roll out of smart grids, exploiting EU-scale networks, and reinforcing the competitive advantages of the businesses, particularly in manufacturing, as well through assisting consumers to value resource efficiency.

There are common structural change patterns of development that each country has to overcome in order to reach sustainable development (Lankauskienė, Tvaronavičienė 2012).

As high GDP growth does not necessarily translate to progress in human development, it is important to look at the set of indicators.

The Eurostat (2013) monitoring report provides a statistical picture of progress towards the goals and objectives of the EU Sustainable Development Strategy. The ten themes of the Sustainable Development Indicators framework follow a gradient from the economic, through the social and environmental to the global and institutional dimensions (Table 1). Each theme is further divided into subthemes and includes three levels of indicators. Of more than 100 indicators, eleven have been identified as headline indicators.

The World Bank proposes to focus on 3 dimensions of sustainable development: economic sustainability, environmental sustainability and social sustainability (Inclusive Green Growth 2012).

Table 1. The main themes, operational objectives and targets of the EU Sustainable Development Strategy (source: Eurostat 2013, illustrated by authors)

| Operational objectives and targets Themes | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--|--|----------------------------|--|------------------|---------------------|---------------|---------------------------|-----------------------|-------------------|--------------------|-----------------|
| | | Socio-economic development | Sustainable consumption and production | Social inclusion | Demographic changes | Public health | Climate change and energy | Sustainable transport | Natural resources | Global partnership | Good governance |
| 1 | Economic development | * | | | | | | | | | |
| 2 | Innovation, competitiveness and eco-efficiency | * | | | | | | | | | |
| 3 | Employment | * | | | | | | | | | |
| 4 | Resource use and waste | | * | | | | | | | | |
| 5 | Consumption patterns | | * | | | | | | | | |
| 6 | Production patterns | | * | | | | | | | | |
| 7 | Monetary poverty and living conditions | | | * | | | | | | | |
| 8 | Access to labour market | | | * | | | | | | | |
| 9 | Education | | | * | | | | | | | |
| 10 | Demography | | | | * | | | | | | |
| 11 | Old-age income adequacy | | | | * | | | | | | |
| 12 | Public finance sustainability | | | | * | | | | | | |
| 13 | Health and health inequalities | | | | | * | | | | | |
| 14 | Determinants of health | | | | | * | | | | | |
| 15 | Climate change | | | | | | * | | | | |
| 16 | Energy | | | | | | * | | | | |
| 17 | Transport and mobility | | | | | | | * | | | |
| 18 | Transport impacts | | | | | | | * | | | |
| 19 | Biodiversity | | | | | | | | * | | |
| 20 | Fresh water resources | | | | | | | | * | | |
| 21 | Marine ecosystems | | | | | | | | * | | |
| 22 | Land use | | | | | | | | * | | |
| 23 | Globalisation of trade | | | | | | | | | * | |
| 24 | Financing for sustainable development | | | | | | | | | * | |
| 25 | Global resource management | | | | | | | | | * | |
| 26 | Policy coherence and effectiveness | | | | | | | | | | * |
| 27 | Openness and participation | | | | | | | | | | * |
| 28 | Economic instruments | | | | | | | | | | * |

Environmental sustainability. According to Bilbao-Osorio *et al.* (2013), the relationship between environmental sustainability and competitiveness is multifaceted and affects an economy in different ways. Multiple channels support a positive relationship between environmentally sustainable practices and productivity gains.

The World Economic Forum (Schwab 2013) introduced the environmental sustainability pillar which measures “the institutions, policies and factors that ensure an efficient management of resources to enable prosperity for present and future generations”.

According to the Europe 2020 flagship initiative “A resource-efficient Europe” (European Commission 2011), increasing resource efficiency will be key to securing growth and jobs for Europe. The shift towards a resource-efficient and low-carbon economy should help to boost economic performance while reducing resource use; identify and create new opportunities for economic growth and greater innovation and boost the EU's competitiveness; ensure security of supply of essential resources; fight against climate change and limit the environmental impacts of resource use.

The term “green growth” was previously used by the OECD (2011) and the World Bank (2011).

According to the OECD (2011), green growth is about fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies. It is also about fostering investment and innovation which will underpin sustained growth and give rise to new economic opportunities. Four areas have been chosen by the OECD (2011) to capture the main features of green growth:

1) Environmental and resource productivity, to capture the need for efficient use of natural capital and aspects of production which are rarely quantified in economic models and accounting frameworks;

2) Economic and environmental assets, to reflect the fact that a declining asset base presents risks to growth and because sustained growth requires the asset base to be kept intact;

3) Environmental quality of life, capturing the direct impacts of the environment on people's lives, through e.g. access to water or the damaging effects of air pollution;

4) Economic opportunities and policy responses, which can be used to help discern the effectiveness of policy in delivering green growth and where the effects are most marked.

Social sustainability. Overall, there is no commonly agreed definition of social sustainability.

According to the ILO (2007), the social dimension of sustainable development typically includes “a commitment to promote social integration by fostering societies that are stable, safe and just and which are based on the promotion and protection of all human rights and on non-discrimination, tolerance, respect for diversity, equality of opportunity, security and participation of all people including the disadvantaged and vulnerable groups and persons”. A central tenet of the social pillar of sustainable development is the generation of secure livelihoods through freely chosen productive employment.

According to Bilbao-Osorio *et al.* (2013), human rights, equity, and social justice are among the most recurring themes of social sustainability. The social sustainability pillar proposed by the World Economic Forum (Schwab 2013) measures “the set of institutions, policies and factors that enable all members of society to experience the best possible health, participation and security; and to maximize their potential to contribute to and benefit from the economic prosperity of the country in which they live”.

Better Life Index developed by the OECD (2013a) allows us to compare well-being across countries, based on 11 topics the OECD has identi-

fied as essential, in the areas of material living conditions and quality of life (Figure 9). OECD (2013a) argues that sustainability of well-being needs to be measured separately from current well-being outcomes, and should focus on the long-term drivers of well-being. Current well-being is measured in terms of outcomes achieved in the two broad domains: material living conditions and quality of life. Future well-being is assessed by looking at some of the key resources that drive well-being over time and that are persistently affected by today's actions: these resources are measured through indicators of different types of capital (OECD 2013a).

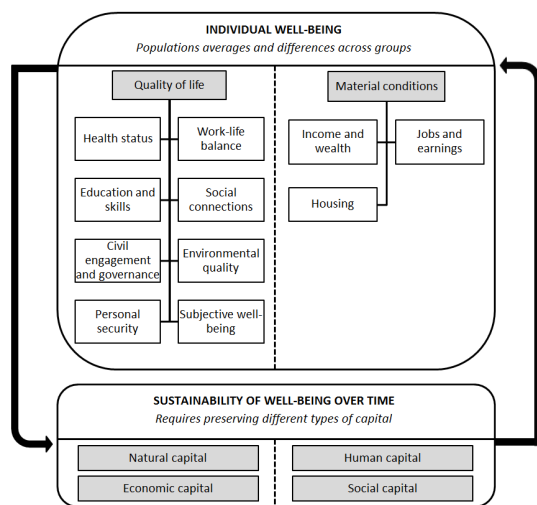


Fig. 9. Better Life Index: the OECD well-being conceptual framework (source: OECD 2013a)

The Human Development Report, developed by the United Nations Development Programme (2013), introduced a way of measuring development by combining indicators of life expectancy, educational attainment and income into a composite Human development index (HDI).

Economic sustainability. A special focus on the economic sustainability is necessary, as economic sustainability is a background for environmental and social sustainability.

4.3. Un-used potential for the long-term sustainable competitiveness

Generally, the previous competitiveness indexes and models were focused mostly on short-term evaluation of the past results of the economies. They did not provide evaluation of the existing or un-used potential of competitiveness in a selected country for the long-term.

National accounting indicators like GDP measure only short-term economic growth, whereas indicators like comprehensive wealth –including natural capital – help us determine if growth is sus-

tainable in the long run (Inclusive Green Growth 2012).

While Garelli (2013) introduced the the “Competitiveness Roadmap” – an attempt to describe and assess the main issues that will affect the world competitiveness landscape over the next four decades, there is no common assessment of un-used potential of the sustainable competitiveness.

In principle, the un-used potential is a reason of the lower current position of the country in the benchmarking list of sustainable competitiveness. However, the remaining potential that exists but is not or cannot be used at the moment might play a significant role in the long-term and should be reflected in the structure of the composite index of the sustainable competitiveness.

Moreover, the illustration of the existing potential that could influence the competitiveness and sustainable development of the country in a long run would allow policy makers to understand its level and to identify areas that require an early intervention and additional investments.

The OECD (2013a) signals that through the accumulation or depletion of capital stocks, the choices made by one generation can influence the opportunities available to the next generation. Policy-makers and citizens need to know how actions taken today might affect future.

Sustainable economic growth is impossible without sustainable developing of human capital. The inclusion of every person in the economy is particularly crucial in the context of globalization, knowledge based economy and demographical changes (Balkytė, Tvaronavičienė 2011a). For example, the Annual Growth Survey (2014) points out that, according to the OECD, 20% of the EU workforce still has a serious lack of skills, including low literacy and low numeracy skills. This reduces the capacity of the EU labour force to progress in the labour market (Communication from the Commission 2013).

The competitiveness indexes were previously criticized because of their limitations in identifying the reasons of the certain positions of the countries in the ranking lists. Thus, the inclusion of a new dimension on “un-used potential” would be a significant improvement of the competitiveness indexes. Moreover, an independent index of the potential of long-term sustainable competitiveness could be also created.

5. Integrated measurement of sustainable development and competitiveness: towards theoretical framework

The sustainable competitiveness index should aim to compare and rank country performance in the

areas of competitiveness and sustainable development in integrated way.

Thus, the purpose of the proposed Sustainable Competitiveness Index is to measure the multi-dimensional concept of the sustainable competitiveness and to illustrate if a Member State of the EU has a potential to sustainable growth over the long-term. A possible theoretical framework for the Sustainable Competitiveness Index (SCI) is illustrated in the Figure 10.

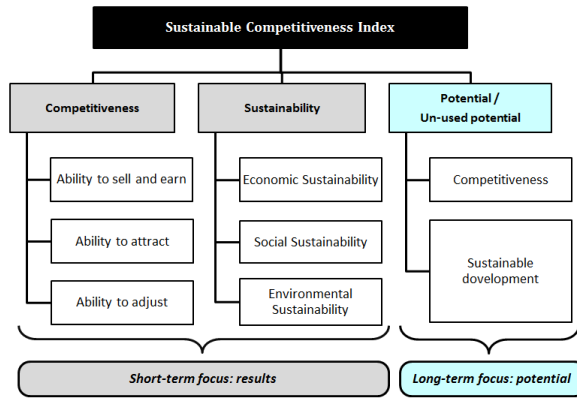


Fig. 10. The Sustainable Competitiveness Index (SCI): towards a theoretical framework (source: authors 2014)

The introduction of the domain on un-used potential of the sustainable competitiveness makes the proposed composite index different from already existing indexes of the competitiveness. However, further steps are required regarding the selection of the representative sets of indicators.

Moreover, it should be pointed out that one formula doesn't exist for building a sustainable competitiveness index. The result depends on policy focus, theoretical framework and methods used.

The following limitations of the composite index that will be a basis for criticism will always remain and existing difficulties should be taken into consideration:

- 1) The agreement on common framework for sustainable competitiveness index, its scope and domains.
- 2) Reflection of limited number of policy concerns that change over the time.
- 3) Selection of indicators, data availability and its limitation: not all aspects of sustainable competitiveness can be easily quantifiable; statistical data usually have a time lag and show a result of the past.
- 4) Composite index methodology. Composite indicators can send misleading policy messages if they are poorly constructed or misinterpreted (OECD 2008).
- 5) Transparency and limitations of data born from surveys and opinions.

6) Coverage. For example, 60 economies are covered by competitiveness index developed by Garelli (2013), 148 countries are evaluated according to Global Competitiveness Index and the sustainability-adjusted Global Competitiveness Index proposed by Schwab (2013). The Regional Competitiveness Index developed by the Joint Research Center (The European Commission) focuses on the EU NUTS 2 regions. The Eurostat (2013) provides the Sustainable Development Indicators for the EU.

7) Acknowledgement. Despite the expected limitations of the composite sustainable competitiveness index, different research approaches and broad discussions on the theoretical framework for sustainable competitiveness are necessary. The variety of the critical approaches could lead to the common agreement on the measurement of the sustainable competitiveness worldwide and acknowledgement of the importance to evaluate the existing un-used potential for the future.

6. Conclusions

First of all, the research findings confirm that the concept “Sustainable competitiveness”, proposed by Balkytė and Tvaronavičienė (2010a), was acknowledged by the researches at international level.

Secondly, the overview of recent research tendencies and ongoing discussions on the possible development of the (sustainable) competitiveness indexes contributes to a better understanding of the complexity of the sustainable competitiveness. It was agreed that sustainable competitiveness is a multi-dimensional concept that cannot be captured by a single indicator. This creates a need to develop a composite indicator – the Sustainable Competitiveness Index – that would allow to compare and to rank country performance in the areas of competitiveness and sustainable development in integrated way.

Thirdly, the proposals provided contribute to a development of a theoretical framework for the Sustainable Competitiveness Index. According to an innovative approach introduced, a new domain on “un-used potential for the sustainable competitiveness in the long-term” was proposed.

Thus, the purpose of the Sustainable Competitiveness Index was defined, i.e. to measure the multi-dimensional concept of the sustainable competitiveness and to illustrate if a Member State of the EU has a potential to sustainable growth over the long-term.

Additionally, a new independent index of the (un-used) potential of the long-term sustainable competitiveness could be developed. The meas-

urement of the existing potential that could influence the competitiveness and sustainable development of the country in a long run would allow policy makers to understand its level and to identify areas which require an early intervention and additional investments.

Furthermore, the existing limitations of the composite index were reflected and should be acknowledged: 1) The agreement on common framework for sustainable competitiveness index, its scope and domains; 2) Reflection of limited number of policy concerns that change over the time; 3) Selection of indicators, data availability and its limitation; 4) Methodology; 5) Transparency and limitations of surveys' data; 6) Coverage; 7) Acknowledgement.

The choice of the representative sets of indicators for the agreed domains of the new Sustainable Competitiveness Index requires further research and broad discussion at international level.

Note

This article does not represent the position of the European Commission.

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