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Measuring sustainable competitiveness of autonomous regions

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Abstract: Nowadays, the issue of sustainability becomes an important topic not only for countries, but also regions. A specific example is a group autonomous regions located in strategic areas and influencing countries' economic and political performance. The research problem discussed in this paper is the influence and measurement of sustainable development on competitiveness of autonomous regions. The author focuses on the application of sustainable development in autonomous regions, factors influencing their performance, and the impact of sustainability on these factors. Based on literature review regarding competitiveness indicators with the reference to sustainability suggestions are made for new competitiveness indicators for these regions. In the paper, the author first examines sustainable conflict resolution schemes for autonomous regions at war. Then, aspects of Sustainable Competitiveness Index by World Economic Forum are presented and analyzed with regard to autonomous regions. The paper finishes with a proposal of new indicators.

Keywords: *Factors of regional competitiveness, autonomous regions, sustainable development, indicators of sustainable development*

1. Introduction

In the 21st century, competitiveness has become one of the key variables in defining economies' position in the world. This statement is valid for both countries and regions. Autonomous regions constitute a specific sub-group of regions, located in litigious areas, often in strategic places, that attract investors (Konarski, 2007: 1081). There is an increasing importance of appropriate use of the regional economic potential which can contribute to creating a competitive advantage for them and their mother countries. A large number of autonomous regions accompanied by the wide range of political and economic relations they maintain with

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their macro regions and mother country (Rykiel, 2000: 42-43) also contribute to the competitive advantage. Through this, they influence their political and economic situation in the surrounding area as well as the global security system (Armstrong and Read, 1995: 1229).

The research problem of this paper is how to measure influence of sustainable competitiveness in autonomous regions. To achieve the aim, the following questions are addressed:

- How can sustainable development support conflict resolution in autonomous regions?
- Which factors influence sustainable competitiveness?
- Are autonomous regions similar to micro-states?
- Which indicators can be used to measure sustainable competitiveness for autonomous regions?

The author presents a literature review of competitiveness indicators with the reference to sustainability. Additionally, some new indicators of competitiveness are suggested. In the paper, the author examines aspects of sustainability in autonomous regions. Next, the performance of autonomous regions is shown through the analysis of their competitive advantages and disadvantages (Armstrong and Read, 1995: 1229-1245). Then, the most important factor of competitiveness and their usefulness, when taking sustainability into consideration are presented. The paper finishes with the proposal of new indicators.

There are several key terms used in this paper. Sustainable development is defined, according to the Brundtland Report, as

> development which meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987: 27).

Regional or territorial autonomy is a term from the fields of law and politics. It can be defined as the limitation of the influence of the central administration on a certain territory. Chosen power areas are handed over to the local executive and legislative authorities, which are elected and controlled by local inhabitants. Often, they define themselves as a separate nation (Otok, 2003: 65), a minority (Błuszkowski, 2007: 181) or an ethnic group. This situation leads to creating an entity with a quasi-state character. The element that differentiates autonomous regions from micro-states is the level of sovereignty. The administration of autonomous regions reports to a country-wide government or ruling body. Examples are Northern Ireland, the Basque Country or Jeju island. Micro-states are independent countries, although, because of their size, they are often

closely affiliated with larger neighbors. Finally, the micro-state is defined by key criteria, population and geographic area (Armstrong and Read, 1995: 1231). The population varies from 0.5 to 1 million citizens. The territory is not clearly defined, but usually measures between 0.5 and 1000 square kilometers. Examples are Liechtenstein, Andorra, San Marino, and Singapore.

Nowadays, as the world's economy has become more and more global, hidden tendencies of regions to become autonomous increase (Konarski, 2007: 1081). Territories whose residents decided to become autonomous are present in a growing number of countries. What is more, nationalistic tendencies are described as a cultural phenomenon having an exceptional influence on politics (Garvin, 1990: 21). It leads to regionalism which is a direction of modern state development based on decentralization and distillation of the power on lower levels of administration (Antoszewski et al., 1999: 498). An active approach of administration is essential to leverage the competitiveness of autonomous regions (Januszkiewicz, 2000: 113). Most often it takes the form of social movements which can be named as regionalist movements (Tomasiewicz, 1997: 295).

2. A sustainable development approach to conflict resolution

Sustainability is the ability to sustain, endure, or last. In green economics,[1] it is understood as the ability to sustain human presence on Earth with responsibility for resource use. Three pillars of sustainability defined during the World Summit in 2005 include economy, society and environment. These three domains often are problematic for autonomous regions. The litigious points leading to conflicts between a region and a mother country lay in these areas. It can be argued that a lack of equilibrium within one or more pillars in certain region leads to rising aspirations to create an autonomous region and / or increases possibility of the appearance of conflicts .

Sustainable development derives from long term perspective thinking and highlights the need to cooperate to reach a common goal. Among numerous trends within it, the concept of

[1] A green economy is "a way of realising that development at the national, regional and global levels and in ways that resonate with and amplify the implementation of Agenda 21(UNEP, 2011:7)."

Strategic Sustainable Development is a useful approach for conflict solving. The most important elements of this concept are (Holmberg et al., 2000: 25-38):

- a broad systemic perspective,
- a structured approach to information,
- use of basic principles of sustainable development,
- use the method of back-casting[2] from the visualization of success based on previous assumptions,
- the priority of quick and effective problem-solving,
- selection of tools required for the transformation towards a more sustainable situation.

The general term 'sustainable development' is often regarded as a theory biased by certain (e.g., left wing) political affiliation, whereas Strategic Sustainable Development sets a framework for organization, evaluation and information regarding the tools and has been successfully used to cope fruitfully with sustainability-related issues. It is also helpful regarding issues of structural violence, i.e., violence integrated in political, social, and economic systems stemming from the different allocation of goods, resources, power and opportunities built into the structure governing their relationship (Brand-Jacobsen, 2003). It also serves a platform to link the ecological perspective with the human dimension of sustainable and peaceful society which can be achieved if people fulfill their needs.

In many cases, autonomous regions are places of long-lasting conflicts. Application of the ideas of Strategic Sustainable Development can be a tool to establish peace, transform the situation of conflict into a state of political and economic stability. This approach seems to be appropriate due to the lack of political boundaries, its long-term perspective, local and non-governmental participation and community building (Conca, 2007: 6). It can be used during the first phases of conflict as well as during post-conflict procedures. The second option is more widely-known and practiced.

Due to the nature of competitiveness and its linkages to conflict situations in the autonomous territories, the application of the Strategic Sustainable Development framework can be based on similar assumptions as in processes of conflict resolution (Bitterman et al., 2007: 6). These regions struggle to become not only self-sufficient but also competitive. To meet this goal,

[2]A method in which the future desired situation is envisioned and steps are then defined to attain this situation. (Holmberg, Robèrt, 2000: 291–308).

a local governing body should take the following principles derived from the Strategic Sustainable Development into consideration (Bitterman et al., 2007: 58):

- civil participation and ownership in creating competitive advantages,
- commitment and involvement of main actors: governing bodies, local population, NGOs,
- maximum effort of all parties involved,
- early implementation,
- economic justification (it should be financially sustainable for the region),
- policy should be in line with international agreements and conventions.

These principles are general recommendations for creating competitiveness indicators for autonomous regions The Strategic Sustainable Development approach encourages competitiveness by (Bitterman et al., 2007: 59-62):

- creating a politically stable environment,
- encouraging the spirit of ownership and responsibility for the own region,
- identifying the causes of lowered level of competitiveness, socio-ecological sustainability issues, as well as direct and indirect environmental concerns influencing the situation in a given region,
- making the sustainable development of the region and the welfare of its inhabitants the ultimate goal regardless of parties' political affiliation,
- using the strategic and holistic approach to competitiveness.

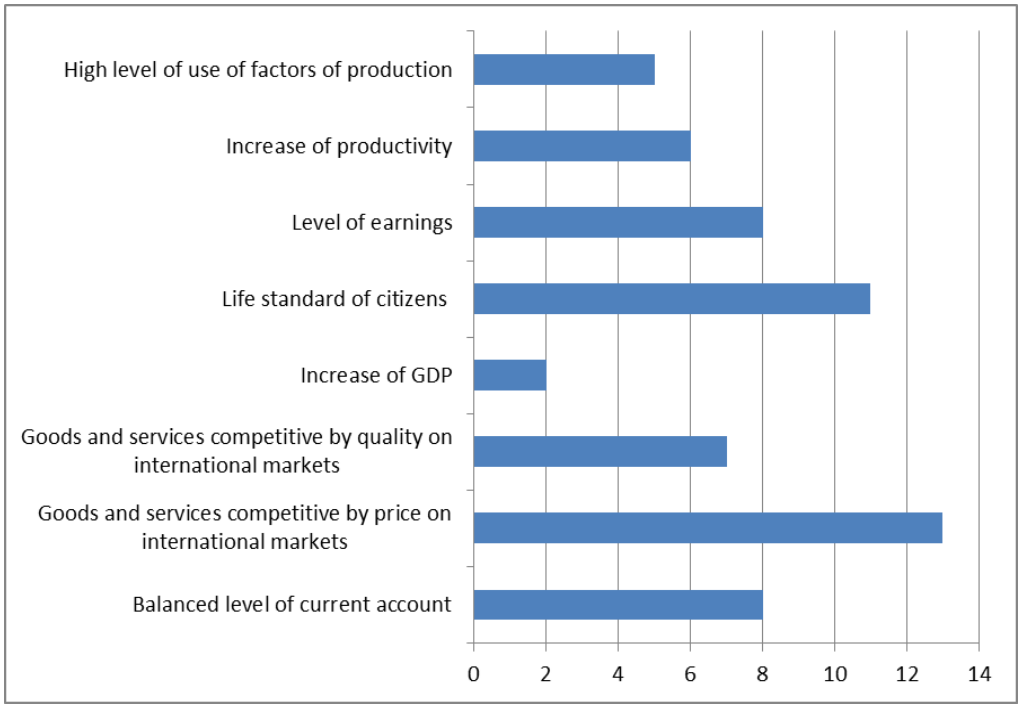
Being often unsustainable and unstable territories, autonomous regions may adopt a two phase approach: stabilizing the political situation and then building their economic power. Due to the arguments mentioned above, the Strategic Sustainable Development approach allows to introduce these goals in a way beneficial for economic, social and environmental sustainability.

3. Classic and sustainable competitiveness

The classic definition of competitiveness was formulated by the US Presidential Commission on Industrial Competitiveness. It is defined as the level in which the nation, under the conditions of the free market, can produce goods and services which fulfill the requirements of international markets while at the same time increasing the real income of citizens, in turn

raising their standard of living (Misala, 2007). Many researchers have developed numerous definitions and indicators over the last decades. The frequency in which they appear in literature of the subject is shown in Figure 1.

Figure 1. Competitiveness indicators according to their appearance in literature (number of theories mentioning the respective indicator)



Source: Author's own elaboration based on (Bieńkowski et al., 2010: 21).

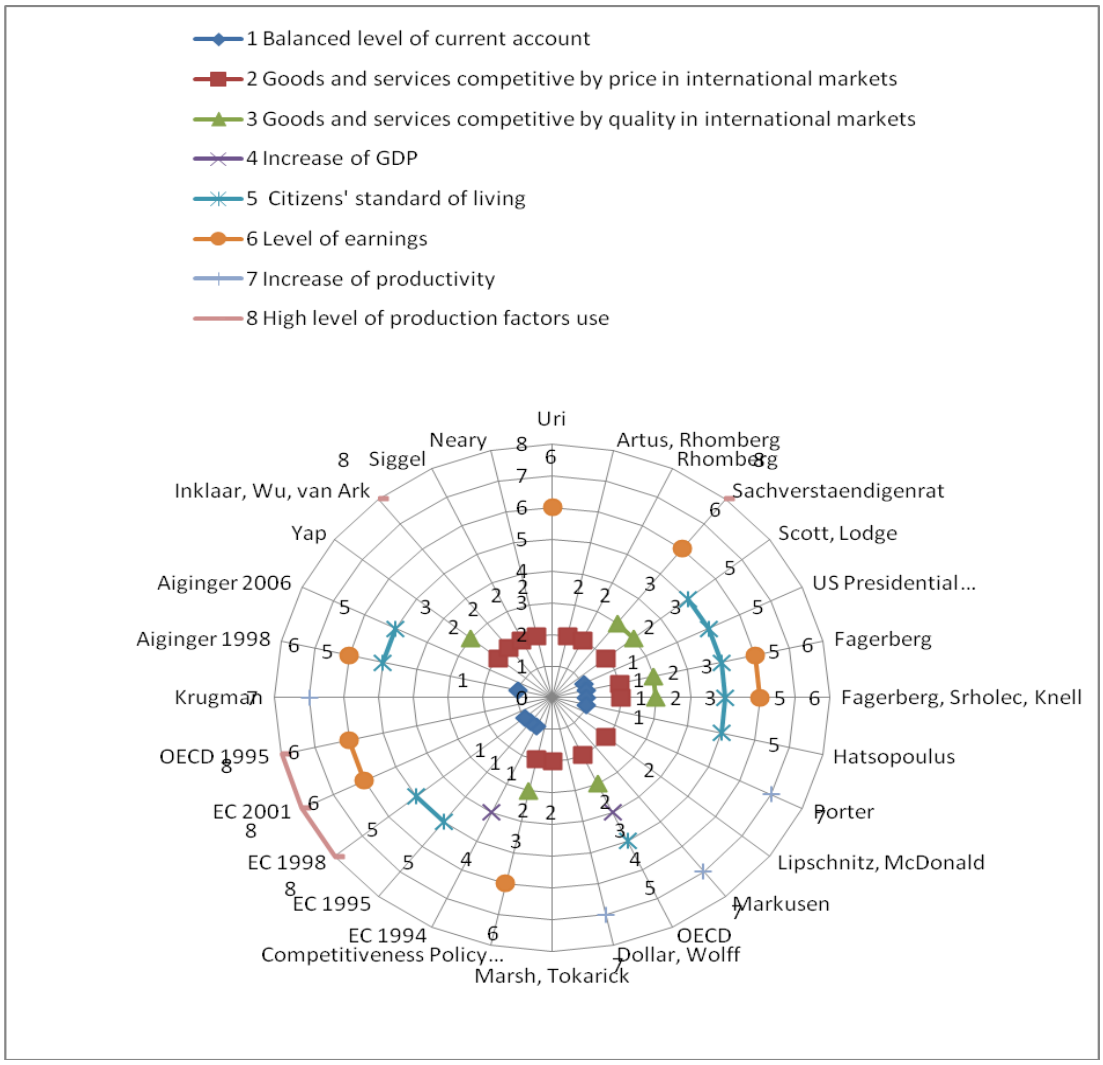
The chronological order of indicators in respective theories is illustrated on Figure 2. The graph shows the indicators appearing in different theories, ranging from Uri in 1971 to Neary in 2006. Each circle illustrates one indicator. The theories analyzed were selected based on earlier work of Bieńkowski et al. (2010).

One of the most renowned indicators of national competitiveness was given by R.B. Reich. According to him, the most important long-term indicator of national competitiveness is the input of a national economy into the world economy, impleading to an increase in the citizens' welfare without putting a burden on future generations. This is a reference to sustainable development. Next, R.J. Carbaugh claims that competitiveness on the level of the national economy depends on its ability to benefit from the possibilities created by the global market (Zawiślińska, 2003: 12-13.). A similar approach is presented by R.B. Scott who regards economic competitiveness as the ability to meet the needs of international competitiveness. The

results should be an increase in the standard of living, not necessarily a positive balance of trade or balance of payments or monetary reserves. The countries of the OECD as well as the European Commission highlight three key factors (Misala, 2007):

- the ability to create and maintain high income from production factors through productivity increase,
- the potential to create and increase employment and maintain a high level of competition within the country,
- rapid and sustainable development of the country in line with the development of the international economic system.

Figure 2. Competitiveness indicators in theories



Source: Author's own elaboration based on (Bieńkowski et al., 2010: 22).

Competitiveness may be analyzed at various levels. While M. Porter focuses on the competitiveness of nations, J. Fagerberg indicates the division of structural and technological competitiveness. He includes institutional, social and economic conditionings. With reference to this division, Porter distinguishes competitiveness based on production factors, investments and innovations. Currently, many research analyze a 'soft factors' of competitiveness and the origin of competitive advantage of certain countries or regions (Dołęgowski, 2006).

Recent years brought a dramatic rise in the number of definitions of competitiveness, from an estimated 40 to 400 (Bieńkowski, 2010: 13). This may be related to the increasing interest in the issue, as well as many research centers dealing with the issue, such as the Institute for Management Development[3] in Switzerland analyzing 321 variables for 59 regions. Another renowned platform for discussion on the issue is the World Economic Forum[4] in Davos which formulated the Global Competitiveness Index (GCI) (Radomski, 2000: 8-9).

Competitiveness is most often considered from the point of view of a country. The most renowned models are: a model of competitiveness factors of the World Economic Forum, a model of the International Institute for Management Development in Lausanne, a World Bank model, a model of the competitiveness pyramid, a model of indicators linked to the Lisbon Strategy, as well as the model of systemic analysis of competitiveness of Ester, Hildebrand, Messenger and Meyer-Stamer.[5]

The level of autonomous regions' competitiveness depends on processes between the region and the mother country as well as between the region and neighboring countries. While the subject concerns countries, regions, transnational companies and enterprises, most often competitiveness is tried to be measured for countries and companies. The World Economic Forum's Global Competitiveness Report defined competitiveness as "the set of institutions, policies, and factors that determine the level of productivity of a country (WEF, 2009: 3)." The increasing interest in the topic of sustainable competitiveness in recent years signalized in the preface of the Global Competitiveness Report for the years 2010-2012 (WEF, 2010: xiii), stating that in recent years many efforts have been made to integrate the concept sustainability into assessing country performance. The starting point was triple bottom line accounting in the 1980s.

[3]More information can be obtained on http://www.imd.ch/.
[4]More information can be obtained on http://www.weforum.org/en/index.htm.
[5] For more in-depth studies please see Bieńkowski et al.(2010).

Later, major work was done by the Commission on the Measurement of Economic Performance and Social Progress to assess the economic performance "beyond measures of market activity to measure well-being (Stiglitz et al., 2009: 3)."

There has also been considerable progress in capturing environmental elements of sustainability in economic performance indexes. Examples are net domestic product, which includes consumed capital and net savings rate calculated by the World Bank and taking into account education spending and depletion of resources (WEF, 2010: 52.). Some other indexes which assess economic performance with regard to resource use are:

- Environmental Performance Index (a more advance version of the Environmental Sustainability Index) from Yale and Columbia University,
- The Ecological Footprint by the Global Footprint Network.

Many notable institutions developed research on the social and economic aspects of sustainability, among others (WEF, 2010: 52):

- Sustainability Report by the European Commission (sustainability of public finance),
- Worldwide Governance Indicators by the World Bank (governance and political instability, political voice and accountability),
- Global Financial Stability Report by the IMF (financial performance of developed economies),
- Development Report by the UNDP (environmental sustainability and equity in measuring level of human development).

The general conclusion from the latter is that a lack of environmental sustainability will affect country's level of human development. The other reports also emphasize that shortages in fulfilling basic requirements of social and economic sustainability have considerable effect on the country's population standard of living.

According to the Global Competitiveness Report, the literature on connections between productivity and sustainability is still not developed in a sufficient degree. However, experts agree that this relationship exists and is crucial (WEF, 2010: 52). It is mostly because of the long time perspective captured by the sustainability. The GCI includes factors influencing productivity in the short and medium term. Nevertheless, some indicators which show improvement in the shorter term may lead to unsustainable and negative effects in the future. Furthermore, countries

are prone to many vulnerabilities coming from future environmental, social and economic shocks. Some of the areas of vulnerability are shown in Table 1.

Table 1. Vulnerability areas for a country's economy

No	Vulnerability area	Factors
1	Human capital	Demographic changes, social cohesion, degree of political freedom in the country
2	Market	Unsustainable private debt, speculative bubbles
3	Physical environment	Pollution, lack of protection of natural resource

Source: Author's own elaboration based on: (WEF, 2010: 54).

With regard to the autonomous regions, vulnerability areas often appear in their mother countries and regions as such. For example, lack of civil and political rights led to the creation of the unofficial autonomous region of Nagorny Karabakh (Azerbaijan, created in 1923 – Cornell, 2001: 77) or Naddniestrze (Moldavia, 1990 - Lubicz-Miszewski, 2012:127), or the official autonomous region Tibet (China, 1965 – Barnett, 1996: 297). In most cases the structure of autonomous regions economy differs from the rest of country while the region is either particularly unprivileged or, on the contrary, more developed. Environment issues related to overuse of resources, pollution, etc., appearing in those regions are linked to their level and way of development.

The Advisory Board on Sustainable Competitiveness works on including vulnerability areas into the GCI. In the context of the definition of sustainable competitiveness it uses

> the set of institutions, policies, and factors that determine the level of productivity of a country while ensuring the ability of future generations to meet their own needs (WEF, 2010: 54).

These factors, while disturbing current development, pose serious threats for long term sustainability of an autonomous region. The Sustainable Competitiveness Index (SCI) index constructed by the Advisory Board on Sustainable Competitiveness include five pillars (WEF, 2010: 55):

- Human capital: health and primary education, higher education and training, social cohesion.
- Market conditions: labor market efficiency, financial market development, market size, market efficiency, fair trade.

- Technology and innovation: technological readiness,[6] business sophistication, innovation.
- Policy environment: institutions, infrastructure, macroeconomic environment, environmental policy.
- Physical environment: resource efficiency, management of renewable resources, environmental degradation.

All factors are critical for a long term development and competitiveness. However, it needs to be taken into consideration that they are calculated for a country. The question is whether the same SCI may be used for different autonomous regions to measure their long term perspectives and competitiveness, as the political, economic, social and natural conditions differ.

Human capital. All factors included in the SCI may be problematic in an autonomous region. These factors are often heavily influenced by the situation in the mother country, while economic development of the region itself may differ from the rest of the country. Health and primary education as well as access to higher education are problematic for less developed regions. Social cohesion[7] is a challenge in all autonomous regions. Most often the Gini coefficient is also higher, implying larger income disparities, while visible privileged groups (e.g., ethnic, economic or religious) exist. This situation appeared, for example, in Northern Ireland.[8] An increasingly important issue is youth unemployment, which can lead to waves of social discontent which, fuelled by other political and autonomic issues, may transform into riots. Therefore, employment of young people is crucial to ensure future productivity and political stability. Differences between country and an autonomous region in this field mainly seem to concern social cohesion. If the region is threated as unprivileged, the differences can be also observed in human capital and market development. Research of the IMF shows that inequality has strong impact on long-term growth (Berg and Ostry, 2011: 3).

Market conditions. Market conditions embrace crucial elements for regions such as a fair level of competition as well as efficiency and flexibility of workers. The role of the central administration is here to avoid protectionism of chosen products and services in order not to create competitive distortions. The second task is creating a system of effective labour allocation.

[6] It is "the agility with which an economy adopts existing technologies to enhance the productivity (WEF, 2010: 7)."
[7] Defined as "the capacity of a society to ensure the well-being of all its members, minimizing disparities and avoiding marginalization (WEF, 2011: 56)."
[8] Historically, from the 16th century, the catholic population of the Northern Ireland had significantly different civic and economic rights compared to the protestants, which was a form of discrimination. Later, the supporters of the republic were discriminated by law, especially regarding elections, labour, education and, real estate.

A problem is that increasing returns to scale are difficult to achieve in the case of smaller regions. In this case, a policy of fair trade[9] may be required in order to ensure sustainable growth of production (Renard, 2003).

Technology and innovation. Although technology and innovations are key drivers of competitiveness, the creators of SCI decided to omit the factor of use of green energy.[10] This was justified by the idea that innovative economies will use most advanced and prospective technologies, which include sustainable ones. In the author's opinion it may be worth to include this factor separately in order to measure sustainability more direct by measuring its implementation and enable comparison between countries.

Technology and science may be addressed in various ways within the sustainable development framework. One of the organizational perspectives that implements the idea of strategic sustainable development is Sustainable Technology Development, dedicated to the analysis of technology contributions to sustainable development (Robert et al., 2002).

Policy environment. This pillar may be especially useful to measure autonomous regions sustainability. Not only because it is a determinant of the capacity of political governance to create policy for sustainable development, but also while quite often physical infrastructure is not well developed in these territories. This in particular concerns regions in developing countries with autonomy receiving less funds for infrastructure, and as a consequence their connection to other regions pose a problem (e.g., in China). Macroeconomic indicators such as real national income per capita, inflation and unemployment may vary significantly between autonomous regions and countries because of different economic and social structures, while different level of support received from central administration. The WEF report mentions that there is no statistical correlation between competitiveness and the level of environmental regulation. However, it is indicated that the indirect effects on health and ecology may be difficult to measure. Furthermore, environmental regulations on the one hand may have an effect on the cost structure of companies, negatively influencing competitiveness.[11] On the other hand, it may support technological innovations, in turn improving competitiveness. As discussed below, there is an indirect relation with competitiveness when environmental regulation influences the physical environment.

[9] In this context fair trade means trade justice which is a movement for fair prices and working conditions for producers of primary goods, especially from developing countries.
[10] Green energy is understood as renewable energy sources and technologies that increase energy efficiency.
[11] For more in-depth studies please see (Pakulska, 2009: 37-45).

Physical environment. Maintaining good quality of the physical environment directly influences competitiveness. Efficient energy and resources consumption has an impact on productivity. A healthy environment for the workforce improves human capital, in turn creating opportunities for increasing production. Environmental pollution directly influences agriculture. The report also takes water use, efficient energy use, and CO_2 emissions into consideration. Most often the level of physical environment protection in an autonomous region is correlated with the general level of environmental protection in the country. Differences are more often visible in unofficial autonomous regions where central authorities do not control their territory. An example is highly polluted areas where the land is used without any moderation and environmental regulations (Taylor, 2011: Chap. 3). This is often the result of the poverty and armed conflicts which endure or have finished recently on these territories.

With regard to autonomous regions, one measure not included in SCI is of particular importance. This is the incidence of political violence and civil war, which has an impact both on the social and economic aspects of competitiveness. Data collection is still a problem in this area.

Among the countries ranked in the SCI report, those with autonomous regions most often received a worse position than in the GCI report (e.g., Canada and Belgium). Some countries from this group remain on the same position in both the SCI and GCI index (UK). Two perform better than in the GCI index (Cyprus and Philippines). Although the UK has done much to balance autonomy within its regions, Philippines did not introduce major policy measures. Therefore, there is no direct evidence that inclusion of autonomous regions influences sustainable competitiveness, though there may be some indirect effects.[12]

4. Comparison of autonomous regions and micro-states

There are numerous similarities between micro states and autonomous regions. In this paper, an autonomous region is defined by its key features which are degree of sovereignty (unusual level of autonomy from central authorities) and size (assessed by area, population and GDP). Economic performance of micro-states and regions with a high degree of autonomy shows

[12] The effects depend on the nature of autonomy. In case of Canada and Belgium one of the primary differences are language and culture. However, it may be difficult to compare given examples on this basis as their level of autonomy within countries differs.

certain differences in comparison to the performance of well-established, officially sovereign and larger states. This is closely linked to the development of certain sectors of the economy such as financial services, tourism and sometimes access to natural resources (Armstrong and Read, 1995: 1229). In each of these sectors, the sustainability approach should play a major role in order not only to lead to short time, but also long time (intergenerational) efficient use of the regions' potential.

Armstrong conducted in-depth research in this field. Having compared GDP per capita and unemployment rates of regions with autonomy and regions fully integrated within the state, he examined differences between these two groups. The analysis of GDP and unemployment rates showed that the autonomy is no impediment for autonomous regions. In particular, they often demonstrate low unemployment rates[13] (Armstrong and Read, 1995: 1236). This observation shows that the basic social need of employment is fulfilled and long term competitiveness perspectives are promising. However, autonomous regions show a great variety in their performance. The most important factors influencing their level of socio-economic development are advantages and disadvantages of size and level of sovereignty.

Table 2. Disadvantages of autonomous regions

No	Description of disadvantage	Sustainability aspect
1	Small amount of natural resources, lack of diversification of economic sectors	Need of preservation of limited resources, import dependency, challenge of efficient use, increased threat of economic turbulence
2	Undiversified export and production, risk linked to the lack of diversification	Volatility of income earnings, need to balance imports and exports
3	Small domestic market and its consequences, higher costs, reduced competitiveness	Lack of flexible supply and workforce, threat of unemployment and economic stagnation
4	Islands and land-locked territories	Environmental protection
5	Risk of incorporation into a larger entity by economic or monetary dependence	Political instability, wars

Source: Author's own elaboration based on: (Armstrong, Read, 1995: 1230-1231).

Theoretical analysis of micro-states was prepared in 1960 by Robinson (Armstrong and Read, 1995: 1230). The key disadvantages were pointed out by many researchers such as Kuznets (1960), Selwyn (1980) and Streeten (1993). Their arguments, which can be transferred to the

[13] In some cases, regions express the will to become autonomous due to their higher development in comparison to the mother country. By doing this, they try to prevent paying for the poorer regions.

weaknesses of autonomous regions, are summarized in Table 2.[14] The first column, a description of disadvantages, is based on the points mentioned by H. Armstrong. The second is added by the author of this paper based on threats linked to sustainable development resulting from the enlisted disadvantages.

To sum up, according to most economic theories, the size of autonomous regions is regarded as a threat to further development. However, there are many regions which show or showed superb economic performance and features of sustainable development despite their small sizes (e.g., the Basque Country[15]). There is empirical evidence against the theories mentioned above (Milner et al., 1993: 203-212).

Advantages of small regions, which are often intangible and impossible or hard to measure, are presented in Table 3. The descriptors are based on the work of Armstrong and read (1995), while the author of this paper presents opportunities created by these advantages.

Table 3. Advantages of small size micro-states and autonomous regions

No	Description	Sustainability aspects
1	often a highly homogenous society and a high level of cohesion	social cohesion, improvement of the peace aspect
2	social flexibility and openness to change	openness to accept innovative sustainable solutions, openness for new technologies
3	proactive approach to economic policy and fast reply to external changes	ability to adapt quickly to market distortions
4	open orientation on trade policy due to high dependency on international trade	ability to proactively shape the balance of trade
5	Economies of scale and specialization in niche production	possible inclusion of traditional industries and cultural heritage

Source: Author's own elaboration based on (Armstrong and Read, 1995: 1230-1231).

To conclude, it is hard to treat competitiveness of autonomous regions and microstates in the same manner, as a lack of sustainability highly influences the region's ability to create and implement the right strategies to grow sustainably. When facing a situation of political instability, this makes it more difficult to change in a sustainable direction than in the case of peace and a well developed and stable political system. Secondly, a major issue remains data collection for these regions as well as analysis of factors having indirect effects on sustainability.

[14]The term that should be defined is the small size. It is difficult to assess by geographical measures which regions should be regarded as small. From the economic point of view, the definition should include the structure of output and domestic market.

[15] The Basque Country is an example of successful implementation of Local Agenda 21 (Barrutia, 2007: 33).

5. Conclusion - sustainable competitiveness indicators for autonomous regions

Measuring sustainable competitiveness for autonomous regions requires the construction of additional indexes. The starting point may be adaptation of the SCI created by WEF, as well as factors mentioned most often in competitiveness theories. However, most of them are created for national economies. Most of the SCI indicators could be translated into sustainable equivalents for autonomous regions which are presented in Table 4.

Table 4. Proposal of competitiveness indicators transformed into sustainable competitiveness indicators

Section	Indicator
Social aspect	Social cohesion, level of health, level of education[16]
Economic aspect	efficiency of labor market, Gini index for the region, ISEW[17] (Brennan , 2008: 1-19) for the region
Political aspect	Political rights, presence of conflicts, institutional environment for the region
Environmental aspect	Environmental protection and regulations specific for region, energy and resource use, use of green technologies

Source: Author's own elaboration based on Sustainable Competitiveness Index by WEF.

To conclude, sustainable development can be applied to conflict resolution and sustainable competitiveness measurement. In the specific setting of autonomous regions, the process can start from the reconciliation and lead to increasing competitiveness of these places. The analysis of most often used competitiveness indicators and SCI reveals that an alternative approach should be adopted for regions with autonomy. Some indicators can be translated into measures of sustainability competitiveness, which should be the topic of further studies.

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[16]The author means mutually beneficial trade relations based on the macroeconomic fair trade approach.
[1717] Index of Sustainable Economic Welfare.

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Pomiar konkurencyjności regionów autonomicznych w aspekcie zrównoważonego rozwoju

Streszczenie

W ostatnich latach zrównoważony rozwój stał się ważnym tematem nie tylko na szczeblu krajowym, ale i regionalnym. Szczególnym przypadkiem są regiony autonomiczne zlokalizowane w strategicznych miejscach, które mają wpływ na politykę i gospodarkę krajów, do których przynależą. Problemem badawczym podjętym w pracy jest wpływ zrównoważonego rozwoju na konkurencyjność regionów autonomicznych, czynniki wpływające na ich wyniki oraz wpływ zrównoważonego rozwoju na te czynniki. Na podstawie przeglądu literatury dotyczącej konkurencyjności w aspekcie zrównoważonego rozwoju zaproponowano nowe wskaźniki dla regionów autonomicznych. W artykule autorka najpierw omawia schemat procesu pokojowego dla regionów w stanie wojny, następnie analizuje wskaźnik zrównoważonej konkurencyjność Światowego Forum Gospodarczego w odniesieniu do tych regionów. Artykuł kończy propozycja nowych wskaźników.

Słowa kluczowe: czynniki konkurencyjności regionalnej, region autonomiczne, zrównoważony rozwój, wskaźniki zrównoważonego rozwoju