

THE ANALYSIS OF THE RELATIONSHIP BETWEEN THE SUSTAINABLE DEVELOPMENT AND COMPETITIVENESS IN THE EUROPEAN COUNTRIES

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Abstract. Taking into account the current financial crisis, the European Commission has launched the new strategy “Europe 2020,” released as the follow up to the Lisbon strategy. Both strategies encourage the European Union countries to be competitive and to maintain the sustainable development in order to prosper in the dynamic knowledge-based economy. However, a question arises, how these two concepts interrelate and help a nation to create harmonious and balanced development. This research is based on the assumption that competitiveness is a cornerstone of a country’s growth, leading to its sustainable development. The research has confirmed that the rank assigned to the competitiveness of the country’s economy is related to sustainability indicators. It should be noted that, for the developing countries, GDP growth should be maintained to improve the sustainability. However, GDP growth cannot be assured for the infinity, because when the country reaches a high level of welfare its growth rate usually decreases, though the same high level of competitiveness and sustainable development is maintained at a slower but constant rate. Various rankings do not necessarily give the full view of the economic situation.

JEL classification:: O 01, O 02.

Keywords: sustainable development, competitiveness, European countries, indicators, ranking.

Reikšminiai žodžiai: darni plėtra, konkurencingumas, Europos valstybės, rodikliai, vertinimas.

1. Introduction

In March 2000, the EU formulated its strategy for the decade until 2010, which became known as Lisbon strategy and was aimed at developing “the most competitive and dynamic knowledge-based economy in the world, capable of sustainable growth with more and better jobs and greater social cohesion” (European Council 2000). Before the Lisbon Strategy had even reached the halfway, open discussions were initiated in which

it was stated that despite many clearly defined ambitious goals and policies the main aim had not been achieved (Kellermann C. et al. 2009; Petzold S et al. 2010). The Lisbon decade ended with the financial crisis and recession. Taking into account the changing economic realities and Europe's strengths and weaknesses, the EU commission launched the new strategy "Europe 2020" in March 2010, which was released as the follow up to the Lisbon strategy. "Europe 2020" puts forward three mutually reinforcing priorities: a smart (developing an economy based on knowledge and innovation), sustainable (promoting a more resource-efficient, greener and more competitive economy) and inclusive (fostering a high-employment economy delivering social and territorial cohesion) growth (European Commission 2010). Both strategies encourage the European Union countries to be competitive and to maintain sustainable development. This research is based on the assumption that competitiveness is a cornerstone of a country's growth, leading to its sustainable development. The aim of this article is to check if a high rank obtained based on one conception leads to the same results as those obtained with another. The pilot analysis is based on recent data including the Eurostat sustainable development indicators and the information from the World Competitiveness Report.

The paper has the following structure. Section 2 addresses some important theoretical issues of both concepts considered. Sections 3 and 4 provide a comparative analysis and describe the main findings of the research. The last section summarizes the results, providing the concluding remarks and possible benchmarks for future research.

2. Theoretical background

2.1. The key points of the concept of sustainable development

The concept of sustainable development has been used for more than 30 years. The growing tension between the development and nature and the increasing gap between the developed and developing world have suggested the main assumption for creating a complex theory.

The most resounding alarm was produced by the Club of Rome headed by the environmental economist Donella Meadows, the principal author of the book "The limits to growth," where the environment has also been considered as a new prerequisite for economic growth (1972). Since then, the world has recognized new challenges and responsibilities for changing the climate and diminishing natural resources. The idea has passed from academic and environmental activists to political handling. In 1972, the United Nations (UN) Conference on the Human Environment in Stockholm "considered the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment" (UN 1972). Further in 1987, the World Commission on the Environment and Development issued a report "Our Common Future." According to the full definition of the Brundtland Commission, "sustainable development is the development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs." It contains two key concepts:

- the concept of “needs,” in particular the essential needs of the world's poor, to which overriding priority should be given; and
- the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs (UN 1987).

This term, reflecting a holistic thinking, is now recognized to be the key expression. The next two core events in the evolution of sustainable development occurred at the 1992 UN Conference of Environment and Development and at the 2002 World Summit on Sustainable Development. According to P. Rogers and other scientists, “once a concern only to environmental specialists, sustainable development has become a concept that concerns everyone” (2008). Hence, a lot of studies have been based on the new philosophy in political and academic world. They started with determining the main aspects of sustainable development and interrelation among them, then going to a relevant measuring problem (Čiegis and Šimanskienė, 2010, Singh et al., 2009; Misiūnas and Balsytė, 2009). However, there were many critics alleging that to develop and sustain at the same time is an oxymoron. Not going into the details of other theoretical surveys, this research assumes the concept of sustainable development to be a vision of progress that links economic development, protection of the environment and social justice, while its values are recognized by democratic governments and political movements the world over (Tvaronavičienė and Grybaitė, 2008).

2.2. An overview of the evolution of the competitiveness concept

Another vast concept, included in the present research, is the theory of competitiveness. This theory originated with the ideas of Mercantilism in the 16-17 centuries. According to mercantilists, national competitiveness is linked with international trade, promoting export and preventing import, thereby the countries can increase their gold and silver resources. A classical economist A. Smith added the criterion of the country's productivity. Based on it, the range of goods and services could be determined for export or import. D. Ricardo expanded this theory, adding a new term of comparative advantage. In the 20th century, Swedish economists, Eli Heckcher and Bertil Ohlin, pointed out that a country should export products requiring the use of resources which are abundant in it. There are many other economists making their research on regions, nations or industry or firm competitiveness. The most famous is M. Porter from the Harvard Business School, the author of the book “Comparative Advantage of Nations,” widely discussed by many economists. J. Rojaka pointed out that M. Porter's national competitiveness is a complex concept, embracing a number of factors, and articulated that competitiveness stems from the county's ability to create favourable environment stimulating innovations and upgrading them at a more rapid pace compared to other countries (2008). A definition of the modern inclusive term “competitiveness” presented by a prestigious international organization World Economic Forum in its Global Competitiveness Report and describing competitiveness as ‘the set of institutions, policies, and factors that determine the level of productivity of a country’ is assumed in this research (2010). Other authors estimate competitiveness choosing different methods

(Onsel et al., 2008; Zanakis and Becerra- Fernandez, 2005). Hence, the key ingredient of this complex concept is the ability to maintain international and local markets sustained by favourable local conditions in order to increase the countries' wealth.

Both concepts widely encompass a number of scientific theories and strongly affect the performing of the political strategies. Neither concept can offer an optimal formula and a simple path, leading countries to harmonious development. Probably, in the future, these theories will be merged and the new concept of 'sustainable competitiveness' will rise. Such attempts could be observed in the article by Balkytė and Tvaronavičienė (2010). In similar manner Ulengin et al. analyse competitiveness in relation to human development indicators (2010).

3. Actual data analysis

3. 1. The selection of data

As mentioned above, theoretical strategy should be both competitive and sustainable, but a question remains how these two concepts interrelate in reality. In order to check the relationship, the analysis was made based on the actual data, using the Eurostat SD indicators and the information provided by the World Competitiveness Report (WCR). The area chosen in the research is Europe, the European Union countries in particular. The period chosen is the first half of the 21th century as it was assumed that this period could reflect the latest tendencies. The old members of the EU, which have been its original members since 1957, were excluded. The sample covers the Baltic countries (Lithuania, Latvia, Estonia); Nordic countries as the leading group (Denmark joined the EU in 1973, Finland and Sweden—in 1995); Ireland which joined it in 1973 is an astonishing success story of a small country achieving so much in a short period; other countries which entered the EU at the same time as the Baltic countries (Czech, Poland, Hungary, Slovakia, Slovenia) and Norway, which is not a EU member-state. Some peculiarities of sustainable development indicators and their relationship with economic growth in Central and Eastern Europe countries were analysed by (Tvaronavičienė et al, 2008, Lapinskienė and Tvaronavičienė, 2009, Lapinskienė and Peleckis, 2009).

3.2. The review of the competitiveness ranking

The widely accepted and reliable measurement of competitiveness is defined by the World Economic Forum. It divides countries based on three different development stages (factor-driven, efficiency-driven, innovation-driven stages) according to the GDP per capita, in order to emphasize different factors (Global Competitiveness Report, 2010). Based on the given rankings, referring to the period from 2007 till 2011, the selected countries are presented in chart 1. A higher position in ranking indicates a weaker position in the competitive environment and, since they are interrelated, it means a lower level of achievement of key economic policy goals. Denmark, Sweden, Finland and Norway were stable leaders during the whole considered period. The countries joined the EU in

2004 and represent the Eastern Europe region. They may be divided into two groups. Estonia and Czech Republic were assigned high and stable ranks, while other countries had worse and more turbulent scores for the same position, with Latvia lagging behind in the entire group. Ireland is between these two main groups, representing quite a high rank. During 2008-2011, many Eastern Europe countries (especially Latvia) were heavily affected by the financial crisis, which may be clearly shown by the fluctuating (usually worsening) ranking. The variation could also show unstable managing of the important areas and it may be related to certain instability at the political level.

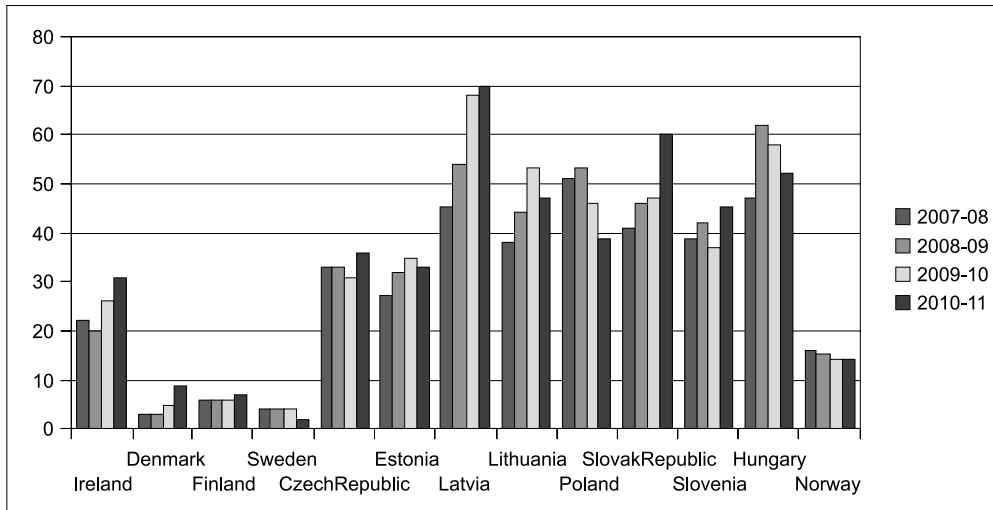


Fig 1. Global Competitiveness Index (GCI) rankings, 2007-2011

(Source: World Economic Forum, GCR 2007-2008; 2008-2009; 2009-2010; 2010-2011.)

3.3. The compound sustainability index of the European countries

The EU Sustainable Development Strategy was created to complement the Lisbon Strategy in order to track improvement of the well-being and standards of living of the present and future generations. The indicators presented by the Eurostat are used to monitor these goals. As the initial insight into this problem, the Eurostat sustainable development indicators (SDI) are used to evaluate the trends of sustainability. The data chosen satisfies the conditions:

- The same data sets cover the considered countries;
- The data covering the last five years was taken as the closest to the WEF data.

A compound index is derived by averaging the ranks of the headline SD indicators as it is assumed that these indicators can show a possible bias. The selected headline SD indicators are Real GDP per capita (Euro) % change in the previous year; Resource Productivity; Risk-of-poverty rate, by gender; Employment rate of older workers (the number of employed persons aged 55-64); Healthy Life Years (HLY) at birth; Greenhouse gas emissions, Share of renewables in gross inland energy consumption;

Energy consumption of transport relative to GDP; Official Development Assistance as a share of gross national income.

The selected countries are presented in chart 2 based on the rankings of sustainability index calculated from 2004 till 2008.

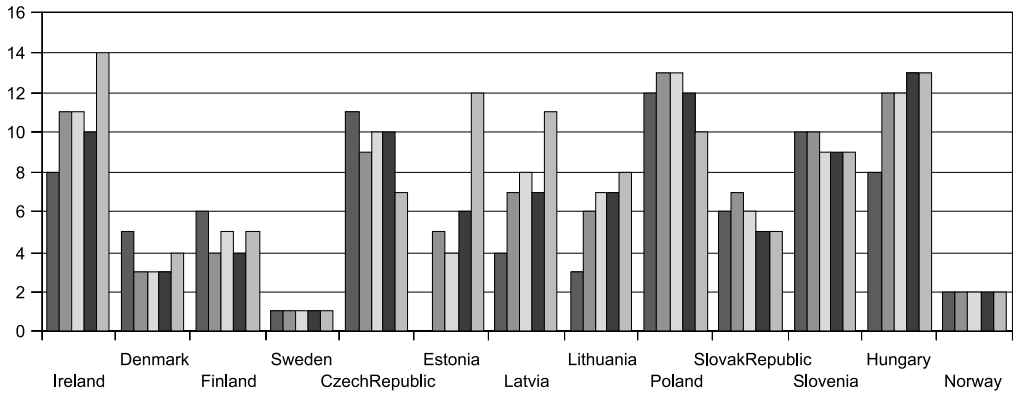


Fig 2. Sustainable development ranking, 2004-2008
 (Source: Eurostat, Sustainable development indicators
 <<http://epp.eurostat.ec.europa.eu/portal/page/portal/sdi/indicators>>)

A higher position in ranking indicates a weaker position in maintaining the sustainable environment. Sweden and Norway are stable leaders. They are followed by Denmark, Finland. Ireland, Poland and Hungary demonstrate the worst results. Estonia, Latvia and Ireland had poor results in 2008. As GDP is among the considered indicators, its fall affects the compound index. Other countries, including Lithuania, demonstrate similar results.

Hence, ranking of the countries according to the results obtained allow us to draw a conclusion. As mentioned above, the competitive environment leads to the growth, helping us to achieve the sustainable welfare. Sweden, Denmark, Finland and Norway, demonstrating high ranks in competitiveness, show good results in sustainable development, while Poland and Hungary lack behind in competitiveness and sustainability. The pilot research demonstrates strong correlation between these two concepts. In order to deepen some underway foresight, more control indicators are included in the analysis and the results obtained are presented in the next section.

4. Modelling the potential trends

The comparative analysis of two datasets indicates that high competitiveness creates the conditions to improve the quality of life and maintain environmentally-friendly development.

Therefore, in order to detect the biases, the survey is expanded by including more indicators, such as GDP per capita in Purchasing Power Standards as the standard measurement of a country's wealth, Real GDP growth rate - percentage change in the

previous year as a volatile indicator, impacting the composed sustainability index and Foreign Direct Investments (FDI) as an alternative indicator of the country's competitiveness. To get a clearer view, the number of the countries is reduced to five: Lithuania and Estonia, presenting the Baltic region, Sweden, showing the leader's position and the Nordic region, as well as Poland, representing an Eastern European country and Ireland, demonstrating a successful growth model. Two years, 2007 (before the crisis) and 2008 (the beginning of the crisis) are considered. MS Excel Radar chart is taken as an instrument to reflect possible development trends. The changes shown with respect to the central point demonstrate the interconnection among all the indicators considered. The points, which are farther from the central position, show worse results. GCI was regrouped to include only the European countries.

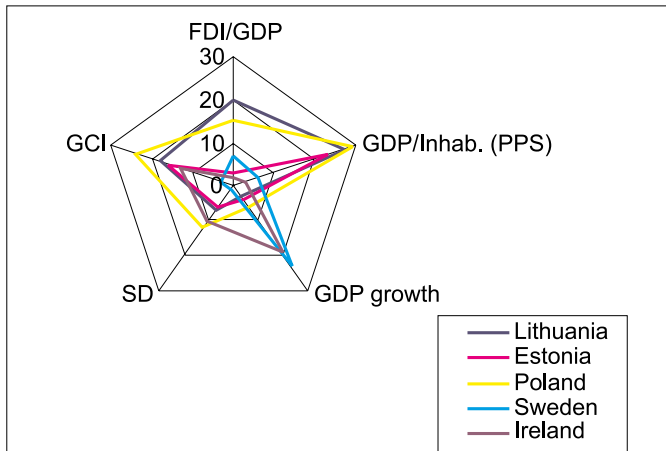


Fig 3. Interrelation among the variables: SD, GCI FDI/GDP, GDP/Inhab. (PPS), GDP growth
(Source: Eurostat, Statistics <http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/a_to_z>)

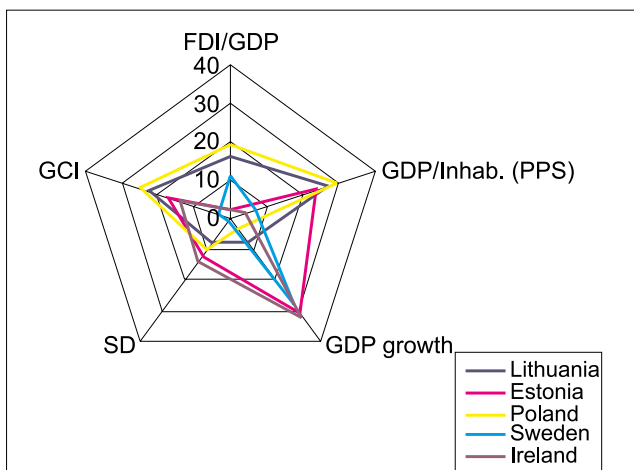


Fig 4. Interrelation among the variables: SD, GCI FDI/GDP, GDP/Inhab. (PPS), GDP growth
(Source: Eurostat, Statistics <http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/a_to_z>)

The expanded survey confirms the findings presented in the previous section which state that the level of competitiveness is related to the state of sustainability. Figures 3 and 4 clearly differentiate between two groups of countries. Lithuania and Poland show the worst results in GCI, FDI, GDP/inhab. but have a high GDP growth rate. Lithuania had relatively higher sustainability and a higher GDP growth rate in 2007 (as mentioned above, GDP growth rate is included in the compound sustainability index, so these two indices impact each other). Sweden and Ireland represent the countries with a high development level (expressed as high GDP per capita) and show good results in all areas, but they have a much lower GDP growth rate. Estonia represents an intermediate position as most of its indicators are similar to those of Lithuania and Poland, but it was able to obtain the best FDI ranking. The indicators of Estonia and Ireland also demonstrate that a high GCI does not necessarily lead to a high FDI. This is an important observation which shows that various rankings (GCI, in this case) are not always directly related to the economic situation in the same field (the fact that was also mentioned by J. Rojaka (2008, 2009)).

Considering the situation in 2008, several changes can be observed. Since 2008 was the first year of the financial crisis, different countries were affected to various degrees. It can be seen that Estonia was the most heavily affected country and had the dramatic fall of GDP caused by the beginning of the economic slowdown. Similar trends can be seen in Lithuania, though on a smaller scale. The positions of Sweden and Ireland were not affected so strongly.

The overall analysis helps to identify the main trends of development. Firstly, it is confirmed that the rank of competitiveness is related to the state of sustainability. Secondly, for the developing countries (the countries having a lower GDP per capita), GDP growth should be maintained to improve the sustainability level (Estonia and Lithuania are an example given in Figure 4). Thirdly, after reaching a certain level of competitiveness and sustainable development, further growth of a high GDP is hardly possible (Sweden is given as an example on charts 3, 4). Therefore, high GDP growth cannot be assured for infinity, because when the country reaches a high level of welfare its growth rate has to decrease. However, the same high level of competitiveness and sustainable development is maintained with a slower but constant growth. Fourthly, GCI ranking does not necessarily show the country's attractiveness to foreigners which is expressed by other economic variables (such as FDI flows).

5. Conclusions

In the context of the current crisis, the European Commission has launched the new strategy 'Europe 2020' released as the follow up to the Lisbon strategy, despite many criticisms overwhelming the achievements of Lisbon's goals. Both strategies encourage the member-states of the European Union to be competitive and to maintain the sustainable development. Two above described concepts encompass a number of scientific theories and are widely discussed at an international level. International

competitiveness indicators reflect the key economic aspects and strongly influence the managing of national policies all over the world. On the other hand, sustainable development strategies help to set the priorities in designing the welfare of individual nations and the entire regions. However, neither concept can offer an optimal formula and a simple path, leading the countries to balanced development.

This research is based on the assumption that competitiveness is a cornerstone of a country's growth, leading to its sustainable development. The analysis performed demonstrates strong correlation between these two concepts. Sweden, Denmark, Finland and Norway, demonstrating high competitiveness ranks show good results in sustainable development. Poland and Hungary lag behind in competitiveness and sustainability. In order to deepen some underway foresight, such indicators as GDP per capita in Purchasing Power Standards, Real GDP growth rate and Foreign direct investments are also involved in the analysis.

The findings of the research highlight several tendencies. Firstly, it is confirmed that the rank assigned to competitiveness is related to the position of sustainability. Secondly, for the developing countries (the countries having a lower GDP per capita), GDP growth should be maintained to improve their sustainability. Thirdly, when a certain level of competitiveness and sustainability is reached, further growth of a high GDP is not possible. Therefore, a high GDP growth cannot be assured for the infinity, because when the country reaches a high level of welfare, its growth rate has to diminish, but the same high level of competitiveness and sustainable development is maintained with a slower but constant growth. Fourthly, GCI ranking does not necessarily represent the country's attractiveness to foreigners as it is expressed by other economic variables (such as FDI flows).

References

1. Balkytė, A., Tvaronavičienė, M. 2010. Perception of competitiveness in the context of sustainable development: facets of "Sustainable competitiveness." *Journal of Business Economics and Management* .11(2): 341–365.
2. Čiegis, R., Šimanskienė, L. 2010. The concept of sustainable economic development and indicators assessment. *Management Theory & Studies for Rural Business & Infrastructure Development*. Vol. 21 Issue 2, p34-42, 9 p.
3. Commission of European Communities. 2009. *Mainstreaming sustainable development into EU policies: Review of the European Union Strategy for Sustainable Development*. Available from Internet: <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0400:FIN:EN:PDF>>. [Cited 2010 10 01]
4. European Commission. 2020. *A strategy for smart, sustainable and inclusive growth*. Available from Internet: <http://europa.eu/press_room/pdf/complet_en_barroso__007_-_europe_2020_-_en_version.pdf> [accessed 2010-10-07].
5. European Council. 2000. *Presidency Conclusions. Lisbon, 23 and 24 March 2000*. Available from Internet: <http://www.europarl.europa.eu/summits/lis1_en.htm>. [accessed 2010-10-15].

6. Eurostat. *Statistics*. Available from internet: <http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/a_to_z>.[accessed 2010-09-15].
7. Eurostat. *Sustainable development indicators*. Available from internet: <<http://epp.eurostat.ec.europa.eu/portal/page/portal/sdi/indicators>>. [accessed 2010-09-11].
8. Kellermann, C., Ecke, M., Petzold., S. 2009. *A New Growth Strategy for Europe beyond 2010*. Available from Internet: <<http://library.fes.de/pdf-files/id/ipa/06219.pdf>>. [accessed 2010-11-15].
9. Lapinskienė, G., Tvaronavičienė, M.. 2009, Sustainable development across Central and Eastern Europe: key factors driving the economic growth of the countries. *Business: Theory & Practice*, 2009, Vol. 10 Issue 3, p204-213, 10 p, 2 Charts, 3 Graphs.
10. Lapinskienė, G.; Peleckis, K. 2009, Impact of sustainable development indicators on economic growth: Baltic countries in the context of developed Europe. *Business: Theory & Practice*, 2009, Vol. 10 Issue 2, p107-117, 11p, 2 Charts, 1 Graph; DOI: 10.3846/1648-0627.2009.10.107-117.
11. Meadows, D., H. 1972. *The Limits of Growth*. A Report for The Club of Rome's Project on the Predicament of Mankind. New York: Universe Books, 205 p.
12. Misiūnas, A., Balsytė, I. 2009. Tvarios socialinės raidos esmė ir vertinimo galimybės. *Intelektinė ekonomika..* Vilnius. MRU Leidybos centras. Nr. 1(5), p. 61–71).
13. Onsel, S., Ulengin, F., Ulusoy, G., Aktas, E., Kabak, O., Topcu, Y. 2008. A new perspective on the competitiveness of nations. *Socio-Economic planning science*. 42, 221-246
14. Petzold, S.; Pusch, T., Steinberg, P. 2010. "Europe 2020" – *Proposals for the Post-Lisbon Strategy*. Available from Internet: <<http://library.fes.de/pdf-files/id/ipa/07218.pdf>>.[accessed 2010-10-15].
15. Porter, M. E. 1992. *Competitive Advantage of Nations*. London: Macmillan Press Ltd., 855 p.
16. Rogers, P., Jalal, K., Boyd, J. 2008. *An introduction to sustainable development*. Earthscan. 416 p.
17. Rojaka, J. 2008. Lithuania's competitiveness: myths, realities and perspectives. *Ekonomika* 84.
18. Rojaka, J. 2009. Baltic states' competitiveness: before and after the global crisis. *Taikomoji ekonomika: sisteminiai tyrimai*: 2009.3/1.
19. Singh, R.,K., Murty, H.,R., Gupta, S.,K., Dikshit, A.,K. 2009. An overview of sustainability assessment methodologies. *Ecological Indicators*, Volume 9, Issue 2, March 2009, Pages 189-212.
20. Tvaronavičienė, M., Ginevičius, R., Grybaitė, V. 2008. Baltijos šalių išsivystymo palyginimas: praktiniai kompleksinio požiūrio taikymo aspektai. *Verslas: teorija ir praktika* . 9(1): 51–64.
21. Tvaronavičienė, M., Grybaitė, V. 2008. Estimation of sustainable development: germination on institutional level. *Journal of Business Economics and Management* 9(4):327-334.
22. Ulengin, F., Kabak, O., Onsel, S., Aktas, E., Parker, B. R. 2010. The competitiveness of nations and implications for human development. *Socio-Economic planning sciences*.1-12.
23. United Nations Documents. 1987. *Our Common Future, Chapter 2: Towards Sustainable Development*. Available from Internet: <<http://www.un-documents.net/ocf-02.htm>>.[accessed 2010-10-02]
24. United Nations Environment Programme. 1972. *Declaration of the United Nations Conference on the Human Environment*. Available from Internet: <<http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503>>. [accessed 2010-10-02].

25. World Economic Forum. *Global Competitiveness Reports*. 2007-2008; 2008-2009; 2009-2010; 2010-2011. Available from Internet: <<http://www.weforum.org/issues/global-competitiveness>>. [accessed 2010-09-18].
26. Zanakis, S., H.; Becerra-Fernandez, I. 2005. Competitiveness of nations: a knowledge discovery examination. *European journal of operational research* 166, 185-211.

KONKURENCINGUMO IR DARNIOS PLĖTROS RYŠIO EUROPOS VALSTYBĖSE ANALIZĖ

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Santrauka. Dabartinės finansinės krizės akivaizdoje Europos Komisija priėmė naują strategiją „Europa 2020“, kuri tęsia Lisabonoje iškeltas idėjas. Abi strategijos ragina Europos valstybes didinti konkurencingumą ir užtikrinti darnų augimą. Kyla klausimas, kaip šios dvi koncepcijos yra susijusios ir padeda valstybėms sukurti harmoningą plėtrą. Tyrimas remiasi prielaida, kad konkurencingumas yra vienas svarbiausių veiksnių, užtikrinančių ekonomikos augimą ir darnią plėtrą. Tyrimas patvirtino, kad aukštas konkurencingumas susijęs su darnia plėtra. Tačiau besivystančių šalių BVP augimas turi būti darnios plėtros gerinimo prielaida. BVP augimas negali būti begalinis. Kai šalis pasiekia aukštą gerovės lygį, jos augimo tempai sulėtėja, bet tas pats aukštas konkurencingumo lygis ir darni plėtra palaikoma ir esant mažesniau augimo tempui. Atliekant tyrimą pastebėta, kad įvairūs vertinimai nebūtinai atspindi konkrečios šalies tikrąją ekonominę padėtį.

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Mokslinių interesų sritis: darni plėtra, darnus (socialiai atsakingas) verslas.