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Economic assessment of uniqueness of the regions in the context of the European Union

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Abstract

This paper aims at analysing the uniqueness of the regions in the context of the European Union and providing a tool for economic assessment of uniqueness. Uniqueness of the regions can be used to increase regional economic resilience and economic advantage. Economic and social challenges in the European Union member states encourage finding new tools for regional development that would lead to implementation of the Europe 2020 goals.
Economic assessment by using the uniqueness index was developed for the assessment of the uniqueness as economic advantage of the region. The results revealed that regional uniqueness index can be used for identification of typologies of the regions within a country that can serve as a basis for creation regional support strategy. Results can be used for recommendations for the regional policy to define important insights for next programming period 2014–2020 in the EU.

Keywords: economic assessment; uniqueness of the region; regional policy; regional development.

1. Introduction

Regions in the European Union is influenced by new emerging economic, social, cultural and other factors that have significant impact on the regional development of the regions. These processes brought new challenges also for the countries and citizens where all had to find new role in this environment that help to ensure successful implementation of regional development. That is why the delivery of the Europe 2020 relies heavily on the new governance structures and processes that the European Union has been putting in place since 2010. These cover

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employment, education, research and innovation, social inclusion and poverty reduction, climate and energy (Europe 2020 strategy paper, 2010). A strategy for smart, sustainable and inclusive growth should ensure possibility to increase economic advantages of the regions.

Regions can be listed as very important object influenced by these new social and economic challenges and the results of the globalization and regionalization. This impact is measured by increased significant economic, social and territorial disparities that still exist between Europe's regions. Disparities are apparent not only at the regions within one country but also between the European Union member states regions. These disparities would undermine some of the cornerstones of the European Union and the "Europe 2020" strategy which identifies the European Union to become a smart, sustainable and inclusive economy (Europe 2020 strategy, 2012; Baltic Sea region strategy, 2012; Gothenburg strategy for sustainable development, 2012). These three mutually reinforcing priorities should help the European Union and the Member states deliver high levels of employment, productivity and social cohesion (The Fifth Report on Economic, Social and Territorial Cohesion, 2010).

Regional development of the regions is usually affected by different socio-economic situation within the regions, different quality of infrastructure, remoteness of the regions, social and economic changes, social deprivation, high unemployment, the results of planned economy and other factors. These reasons explained why regional policy in the European Union played very important role from the establishment of the European Union. Regional policy paradigm had changed significantly in recent decades (Melnikiene, 2011). New paradigm is based on the concept that regional policy should assess new economic and social features of the 21st century that can have a significant influence on the further development of the region's leading to the successful development and reducing disparities of the regions (Bessaoud, 2006; Diakosavvas, 2006; Herrschel, 2005; O'Conner, 2006; OECD, 2006a and 2006b). New phase of regional policy at the European Union level have been implemented based on the principles of the post-industrial economy where knowledge is considered as the main resource (**Cooke, 2001;** Herrschel, 2005; Sepic, 2004). This paradigm emphasizes the importance of "learning region" concept, networking and cluster formation, innovation and the most importantly – *to support not the lagging regions but to exploit regions "basic skills" and to use "competitive advantage of the region*". State policy should attempt to mobilize the strengths of the region rather than trying to decrease only negative elements. Regions must be differentiated by the factors that enhance the region's competitiveness, and other important social-economic development criteria: level of education, level of innovation, entrepreneurship level, living standards, etc.

Recently many scientist and experts in regional policy in various international scientific conferences and meetings are discussing about possibility to use regional uniqueness as economic advantage rather that attempts to highlight the dimensions of competitiveness (OECD, 2007; OECD, 2009; The IMD's World Competitiveness Yearbook, 2011; World Economic Forum, 2010; 2nd Annual Forum of the EU Strategy for the Baltic Sea Region, 2011; Baltic Sea Region Programme Conference, 2010).

The new regional policy paradigm will lead to the necessity to develop new assessment methods that would help regions to shift their activities for creation of economic advantages by using "basic skills" of the region instead of eliminating negative impacts that exist within the region. Various unique features of the region can be taken as a new way for developing economic activities in the region and the use of this for the economic advantage. Uniqueness becomes important element for creation of regional prosperity. Use of uniqueness of the region can lead to regional economic benefit using new success factors. Additionally to this uniqueness itself can be named as a reason that can help to get an economic advantage by using special features of the region, the strengths of the regions that exist at the moment or region basic skills which can also be unique. Secondly, these unique elements of the region used in the economic activities can make the region very specific and thus reaching its competitive advantage not in a reckless way but based on sustainable development, cooperation and responsible environment principles (Gedminaite–Raudone, 2013).

Measures used for the implementation of the regional policy within the European Union in some cases lack to reflect adequately the above mentioned elements. In most cases regional policy is used to reach a certain level of infrastructure, investments and indicators for the regions that might be not the most important to get the best results for the region and can be not important that the certain level of economic results would be reached or in order to increase the region's economic strengths. In some cases there might be needed different types of investments or indicators for the region to have economic advantage and not by reaching the indicators set up from outside.

2. Methodology

Economic assessment tool by using the uniqueness index was developed for the assessment of the various types of uniqueness as economic advantage of the region (for example, economic assessment of cultural uniqueness, geographical uniqueness, etc.). In this part of the paper methodology of uniqueness index and economic assessment tool is provided.

According to the needs of the institutions assessment can be implemented by 2 levels (see Figure1):

- Assessment of the chosen type of uniqueness of the regions at the country or union level (for example, the European Union level) by ranking regions from the highest to the lowest ranking points given for the region by this type of uniqueness for creation economic advantage of the region.
- Assessment of the different type of uniqueness within one region with the aim to rank various uniqueness types by highest to the lowest points given for each uniqueness type for creation economic advantage of the region.

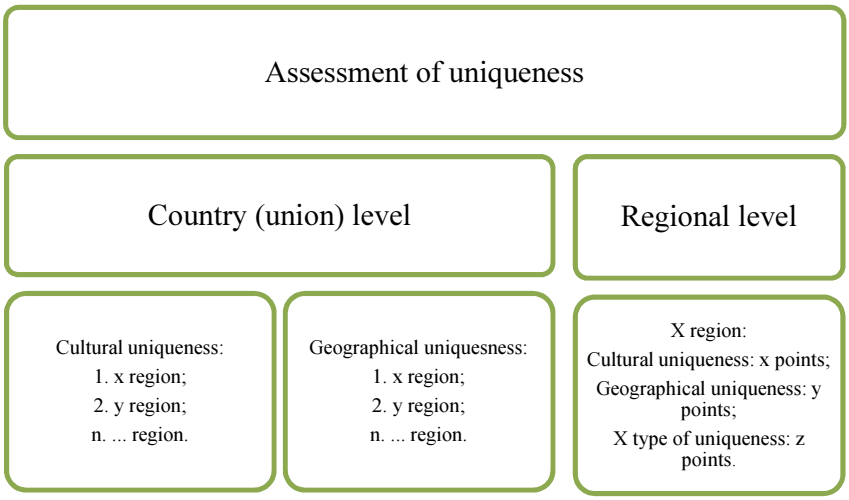

Fig. 1. Levels of assessment of uniqueness

Economic assessment is based on 2 steps:

- Uniqueness index calculation.
- Economic assessment of the region groups based on the results of uniqueness index (assessment of each region group with the highest resources of uniqueness, region group with moderate resources and region group with insignificant resources of uniqueness).

In the first step the uniqueness index was created by using SAW (Simple Additive Weighting) multicriteria evaluation method. Multicriteria evaluation methods have been increasingly used in theoretical research and practical decision making as it helps evaluate quantitatively any complicated phenomenon described by a set of criteria Ginevicius, Podviezko, 2008; Hwang, Yoon, 1981; Figueira, Greco, Ehrgott, 2005).

Assessment of the uniqueness of the regions:

1. Setting of the components for the chosen type of uniqueness:
    1.1. Groups of components are defined including all dimensions needed for the assessment of this type of uniqueness.
    1.2. Indicators are defined for each component.

Developing the groups of components for the uniqueness index the holistic approach was applied to ensure that all dimensions and indicators would operate as a system rather than a set of its components. Supply and demand side should reflect the set of components (see Figure 2).

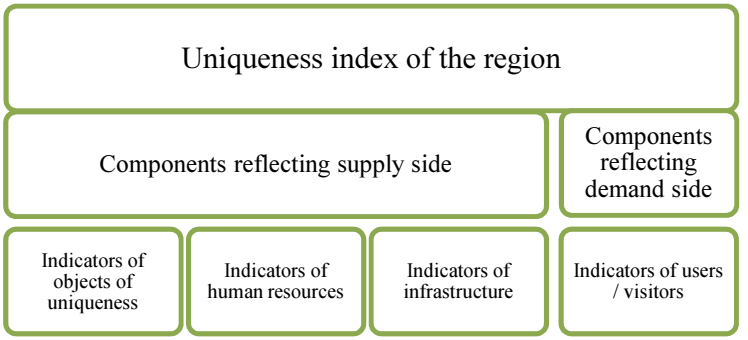

Fig. 2. Components of uniqueness index

Indicators of first three components (objects of uniqueness, human resources and infrastructure) reflect to the *supply side* and indicators of the last visitors' component reflect to the *demand side*. The system is based on four dimensions essential for the creation of economic advantage of uniqueness of the region: base of uniqueness (for example, cultural uniqueness objects), human resources, infrastructure and the users of these services.

2. Calculation of uniqueness index for each region for the chosen type of uniqueness by using SAW (Simple Additive Weighting) multicriteria evaluation method:

$$S_j = \sum \omega_i \tilde{r}_{ij}, \tag{1}$$

S_j – index value for j type of uniqueness; ω_i – weight of component *i* group; $\tilde{r}_{ij}$ – normalized value of component i for j type of uniqueness.

2.1. Firstly normalization of each indicator was applied where actual value of indicator and minimum and maximum values of the regions within a country (union) are required:

$$r_{ij} = \frac{r_f - r_{min}}{r_{max} - r_{min}} \tag{2}$$

r_f – the actual value of the indicator, $r_{\max}$ – maximum value of the indicator of the regions within a country (union), $r_{\min}$ – minimum value of the indicator of the regions within a country (union).

2.1. Secondly a value of each component group is calculated by using normalized values of indicators of this group.

$$S_{1,\ldots,k} = \sum \omega_y \tilde{r}_{ij}, \tag{3}$$

Weight (ω_y) for each indicator was equal.

2.2. Value of all components is calculated by using each component group values.

$$S_j = \sum \omega_i S_k, \tag{4}$$

Weight (ω_i) of each component group was equal (1/4) for the cultural uniqueness index calculation, *k* – number of components.

2.3. Value of uniqueness index (UI) of the region:

$$UI_{\mathrm{t}} = \frac{S_j}{k}, \tag{5}$$

UI_t – value of uniqueness index, S_j – value of all components, k – number of components.

3. Ranking of the regions by chosen uniqueness type:
   3.1. *At state level*: regions of the state (union) are ranked by chosen uniqueness type ranking regions from the highest to the lowest index rate.
   3.2. *At region level*: index values of various types of the region uniqueness are ranked from the highest to the lowest index rate.
4. Economic assessment of the region groups based on the results of uniqueness index.

The logic of grouping regions to the groups by having significant, moderate and insignificant unique resources based on the results of the uniqueness index is confirmed or denied when all region groups' economic assessment for selected type of uniqueness is completed. The results of economic assessment enable to compare results of economic indicators between the groups and results in dynamics – changes that have occurred over a period of time. Set of indicators for economic assessment was created in the way that ensure the aim to assess economic advantage of the groups of the regions resulted by using unique resources in economic activity. For example, the set of indicators to perform economic assessment of the cultural uniqueness of the regions were created by using macroeconomic indicators reflecting the cultural and tourism infrastructure sectors.

Economic assessment of cultural uniqueness of the regions is based on the following indicators:

1. Variation of economic entities in operation in accommodation and food service activities.
2. Variation of employees in accommodation and food service activities.
3. Variation of turnover in accommodation and food service activities.
4. Variation of value added at factor cost in accommodation and food service activities.
5. Variation of investments in fixed tangible assets in accommodation and food service activities.
6. Number of implemented projects from the EU structural funds for the tourism development.

Correlation, variation and cluster analysis was used to assess results of economic activity of the groups of the regions.

3. Empirical results

Economic assessment of using the uniqueness index methodology was applied for the assessment of the cultural uniqueness as economic advantage of the regions. This analysis has been conducted *at national level* to calculate uniqueness index for the Lithuanian regions with the aim to rank regions into 3 groups by its potential in cultural uniqueness: in 1st group having regions with highest resources in cultural uniqueness as region economic advantage, in second group having regions with moderate resources and 3rd group – with the lowest resources in cultural uniqueness.

Statistical data published by Department of the Statistics of the Republic of Lithuania, Ministry of Culture of the Republic of Lithuania and official data published by the Lithuanian tourism information offices had been used. Data is used of the year of 2011.

Results are provided in the table below.

Table 1. Grouping of Lithuanian regions by cultural uniqueness

Grouping of Lithuanian regions by cultural uniqueness potential	Number of Lithuanian regions in the group (ranking place and index value)
Significant resources	8 regions Ranking place from 1 to 8 Ranking values from 9.10 to 0.91

Grouping of Lithuanian regions by cultural uniqueness potential	Number of Lithuanian regions in the group (ranking place and index value)
Moderate resources	31 region Ranking place from 9 to 39 Ranking values from 0.81 to 0.42
Insignificant resources	21 region Ranking place from 40 to 60 Ranking values from 0.39 to 0.04

Ranking results of cultural uniqueness of the Lithuanian regions we used for dividing regions into 3 groups by having significant, moderate and insignificant resources of the cultural uniqueness. Territorial distribution of Lithuanian regions into these 3 groups is shown in Figure 3.

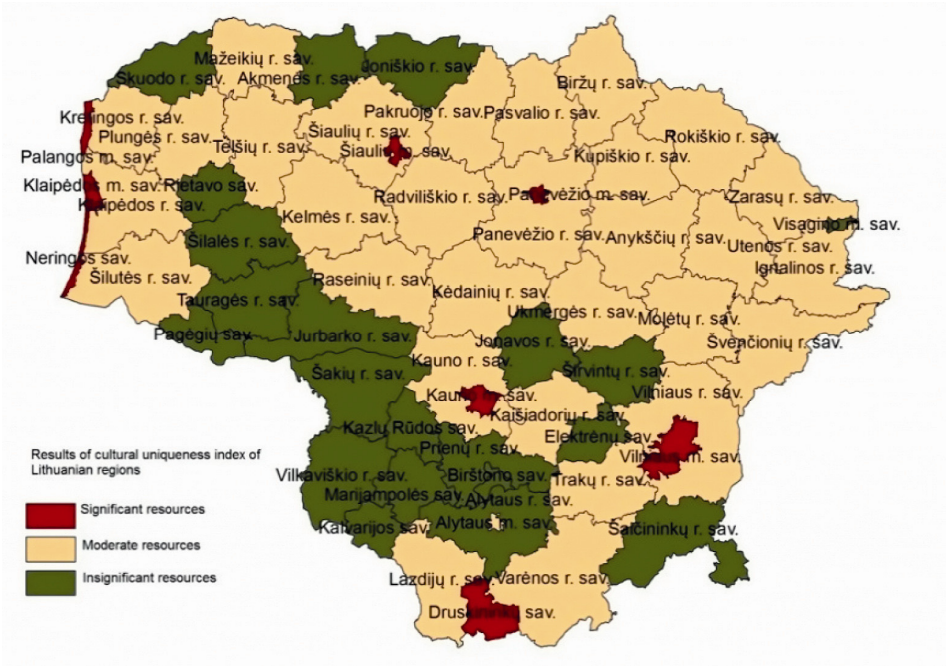

Fig. 3. Mapping of Lithuanian regions by cultural uniqueness index

Significant cultural uniqueness resources that can give economic advantage for the region are placed in the Vilnius and Kaunas city regions where two largest Lithuanians cities are located as cultural uniqueness value of these regions enormously differs from the remaining regions of Lithuania (5 to 9 times). Other regions of Lithuania that have big cities and resort status cities also have a great potential successfully utilize unique cultural resources of the region for increasing economic benefits (in the table marked as regions having significant resources: Klaipeda city region, Panevezys city region, Siauliai city region, Palanga region, Druskininkai region and Neringa region). 51,6 percent of Lithuanian regions have moderate cultural uniqueness resources that can be used for increasing economic advantage of the region. 5 percent of Lithuanian regions have insignificant cultural uniqueness resources. Territorial distribution of Lithuanian regions that have significant, moderate and insignificant cultural uniqueness resources is uneven.

The results revealed that regional uniqueness index can be used for identification typologies of regions within a country that can serve as a basis for creation regional support strategy that can be applied by various governmental institutions.

Economic assessment results of cultural uniqueness of three Lithuanian regional groups, having significant, moderate and insignificant resources, are provided in table 2. In this assessment, the results of the average value of the indicators in the period from 2005 to 2010 for each group of the region were conducted. Results of relative values of indicators are presented in the table with total indicator value in this economic activity.

Table 2. Results of economic assessment of the groups of Lithuanian regions

Results of economic assessment	I group of the regions*	II groups of the regions*	III group of the regions*
Proportional part of economic entities in operation in accommodation and food service activities comparing with economic entities in operation in all economic activities, from 2009 to 2013, group average, in percent.	8,3	3,6	3,2
Proportional part of employees in accommodation and food service activities comparing with employees in all economic activities, from 2005 to 2010, group average, in percent.	10,5	3,2	2,6
Proportional part of turnover in accommodation and food service activities comparing with turnover in all economic activities, from 2005 to 2010, group average, in percent.	5,0	0,8	0,6
Proportional part of value added at factor cost in accommodation and food service activities comparing with turnover in all economic activities, from 2005 to 2010, group average, in percent.	6,7	1,3	1,0
Proportional part of investments in fixed tangible assets in accommodation and food service activities comparing with turnover in all economic activities, from 2005 to 2010, group average, in percent	4,6	1,0	0,5
Number of implemented projects from the EU structural funds for the tourism development from 2007 to 2013**	42	46	32
Support size from the EU structural funds for the tourism development from 2007 to 2013**, million Litas.	127,8	93,8	42,3

* Lithuanian regions having significant resources of cultural uniqueness belong to the 1st group of regions. Lithuanian regions having moderate resources of cultural uniqueness belong to the 2nd group of regions. Lithuanian regions having insignificant resources of cultural uniqueness belong to the 3rd group of regions.

** Assessment of the projects for tourism development and support size from the EU structural funds in based on the results from 2007 to 20 March 2013.

The results in the table confirms that the highest value of economic indicators and biggest use of the European Union support for tourism development depends to the first Lithuanian region group having significant resources of cultural uniqueness. This group performs highest value added from this activity comparing with other 2 groups of the regions. Lower position belongs to the second group of the regions of Lithuania having moderate resources of cultural uniqueness. In the last place is 3rd group of the regions having insignificant resources of cultural uniqueness. Aggregated economic assessment results of cultural uniqueness confirm that distribution of regions into three groups was correct as each group of regions shows not only by proportion of the available resources in the cultural uniqueness but also economic potential in this sector.

4. Conclusions and policy implications

Usage of unique resources of the regions in regional development should become an important element in the 21st century in the implementation of new regional policy paradigm by using unique features and strengths of the region to achieve competitive advantage rather than supporting lagging activities within the region. Unique resources of the

region can be used as a tool to help the region to create economic advantage. The unique features of the region can exist at the time of assessment or the unique elements can be constructed.

Economic assessment of uniqueness of the regions methodology by using uniqueness index can help for the region to identify existing or potential unique elements.

Regional uniqueness index can be used for identification typologies of regions within a country that can serve as a basis for creation regional support strategy. From a policy perspective, recommendations for the regional policy to define important insights for the next programming period 2014–2020 in the EU can be applied.

Ranking of the regions by the cultural uniqueness index can serve as an additional tool for the setting of priorities to the measures of cultural activities development. Ranking results can help to identify regions that have significant resources and potential in this area rather than distributing resources to all regions. This assessment can increase effectiveness and give additional synergy effects.

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