

SOME REMARKS REGARDING THE EVALUATION OF COMPETITIVENESS AT REGIONAL LEVEL. CASE OF ROMANIAN 5 WEST REGION

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Abstract: The New Lisbon's Agenda demands that "European Union must mobilises all national and communitarian resources- inclusive the police of social cohesion" and sustain that the objectives can be cached only by the implication of national and regional actors, and of social partners too (European Commission, 2005).

The work paper is a case study regarding the evaluation of the Index of Regional Competitiveness for the Romanian 5 West Region.

In the first part will be presented the concept of regional competitiveness and will be pointed out the main factors that influence the level of regional competitiveness. The methodology used will be those proposes by The Applied Economy Group, on the base of representative structural indicators, grouped by balanced method in three indexes (economical, social and technological indexes). Then, the Index of Regional Competitiveness was calculated by the aggregation of the three indexes.

THE CONCEPT OF REGIONAL COMPETITIVENESS

The regional competitiveness can be defined like the ability of a region, and thus, of its public authorities, to maintain the local firms and qualified labour force and to attract the foreign investments. In consequences, its competitive characteristics are based on the followings (not exclusively):

- ✓ The quality of infrastructure
- ✓ The general quality of the medium
- ✓ The quality of regional centers of research and innovation
- ✓ The capacity to retain and attract qualified human resources
- ✓ The fiscality
- ✓ The cost and quality of labour force

The success of regional competitiveness is based on factors like:

- Industrial agglomeration and the productivity
- Industrial agglomeration and innovation
- Industrial agglomeration and new firms' creation
- The cooperation and concurrence inside the industrial agglomeration

<i>Industrial agglomeration and productivity</i>	<i>Industrial agglomeration and innovation</i>	<i>Industrial agglomeration and the creation of new firms</i>	<i>Cooperation and concurrence inside the industrial agglomeration</i>
The access at inputs and specialised employees	The new needs of the buyers	The barriers at market's inputs are the lowest	Vertical relations (with suppliers and customers)
The access at information	The new technological possibilities, of production or distribution	The barriers at market's output can be lower, too	Horizontal relations (with direct competitors)
Complementarities	The capacity of rapid acting on base of these elements		

The access at institutions and public goods			
Stimulant and performance's measurement			

RESEARCH'S METHODOLOGY

The matrix of regional competitiveness is build by the structural indicators of Lisbon Agenda. These 125 indicators are grouped by Eurostat in the following categories:

- ✓ General economic medium
- ✓ The occupation of labour force
- ✓ Innovation and research
- ✓ Economic reform
- ✓ Social cohesion
- ✓ Medium

Using the GEA (Group of Applied Economics) methodology, was selected 13 structural indicators, relevant for regional competitiveness and measurable with available data at regional level. By weighting, these 13 indicators were grouped in three indexes, respectively:

- ✓ Economic Index (general economic medium and economic reform)
- ✓ Social Index (labour force occupation and social cohesion)
- ✓ Technological Index (innovation and research)

Regional Competitiveness Index was obtained by the aggregation of this three indexes.

Nr	<i>Economic Indicator (I_E)</i>	%	<i>Social Indicator (I_S)</i>	%	<i>Technological Indicator (I_T)</i>	%
1.	GDP/capita (E ₁)	10	The dispersion of regional occupation rate (S ₁)	30	Research and development expenditure like % of GDP (T ₁)	40
2	Increase rate of GDP (E ₂)	10	Occupation rate (total) (S ₂)	40	The access' grade at Internet network (T ₂)	30
3	Labour productivity (E ₃)	30	Occupation rate (women) (S ₃)	10	Tertiary education (T ₃)	30
4	Net exports (E ₄)	10	Average Index of life expectation (S ₄)	20		
5	Gross fixed capital formation, as % of GDP (E ₅)	20				
6.	Net income on capita (E ₆)	20				
$I_E = \frac{(10E_1 + 10E_2 + 30E_3 + 10E_4 + 20E_5 + 20E_6)}{100}$		$I_S = \frac{(30S_1 + 40S_2 + 10S_3 + 20S_4)}{100}$		$I_T = \frac{(40T_1 + 30T_2 + 30T_3)}{100}$		
<p>The Regional Competitiveness Index is computed as a weighted average of the three indexes, economic, social and technological :</p> $I_C = \frac{(40 \cdot I_E + 30 \cdot I_S + 30 \cdot I_T)}{100}$						

Source: GEA - *Manual de evaluare a competitivitatii regionale*, research realised by the project "Romania - Building Regional Assessment Capacity in Line with the Lisbon Agenda", www.org.com.ro

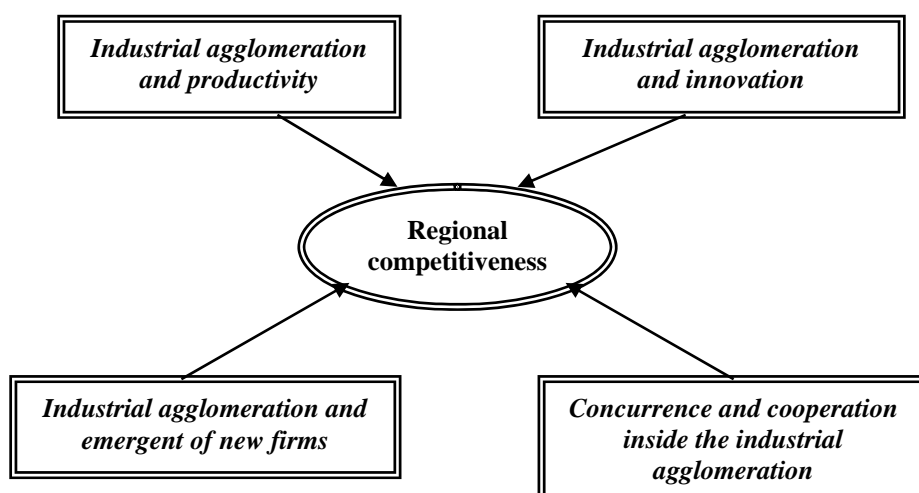


Figure 1: The determinant factors that influence the level of regional competitiveness

Source: Adaptation after the European Competitiveness Report, 2007

CONCLUSIONS OF THE RESEARCH

Applying the mentioned methodology, was determined the values for sub-components of the three indicators, for the West 5 Region, but also the average at national level. The results obtained are presented in the following tables

Table 2.: Economic Indicator and its components

Indicator's components	West 5 Region	Romania's average
GDP/capita (E_1)	0.83	1.042
Increase rate of GDP (E_2)	0.63	0.931
Labour productivity (E_3)	1.21	1.040
Net exports (E_4)	0.18	-0.213
Net income on capita (E_6)	0.99	0.981
Economic Aggregate Indicator	West 5 Region	Romania's average
$I_E = \frac{(10E_1+10E_2+30E_3+10E_4+20E_5+20E_6)}{100}$	1.06	0.915

Source: Calculation using GEA methodology

Table 3.: Social Indicator and its components

Indicator's components	West 5 Region	Romania's average
The dispersion of regional occupation rate (S_1)	0.975	1.002
Occupation rate (total) (S_2)	1.018	0.997
Occupation rate (women) (S_3)	0.969	0.995
Average Index of life expectation (S_4)	0.988	1.002
Social Aggregate Indicator	West 5 Region	Romania's average
$I_S = \frac{(30S_1+40S_2+10S_3+20S_4)}{100}$	0.990	0.998

Source: Calculation using GEA methodology

Table 4.: Technological Indicator and its components

Indicator's components	West 5 Region	Romania's Average
Research and development expenditure like % of GDP (T_1)	0.590	0.811
The access' grade at Internet network (T_2)	1.477	1.101
Tertiary education (T_3)	0.660	0.937
Technological Aggregate Indicator	West 5 Region	Romania's Average
$I_T = \frac{(40T_1 + 30T_2 + 30T_3)}{100}$	0.883	0.936

Source: Calculation using GEA methodology

The values obtained point out that the Economic Indicator for West 5 Region is greater than the national average level; the Social Indicator registers quasi-equal values, while the Technological Indicator for analysed region is smaller then the national average.

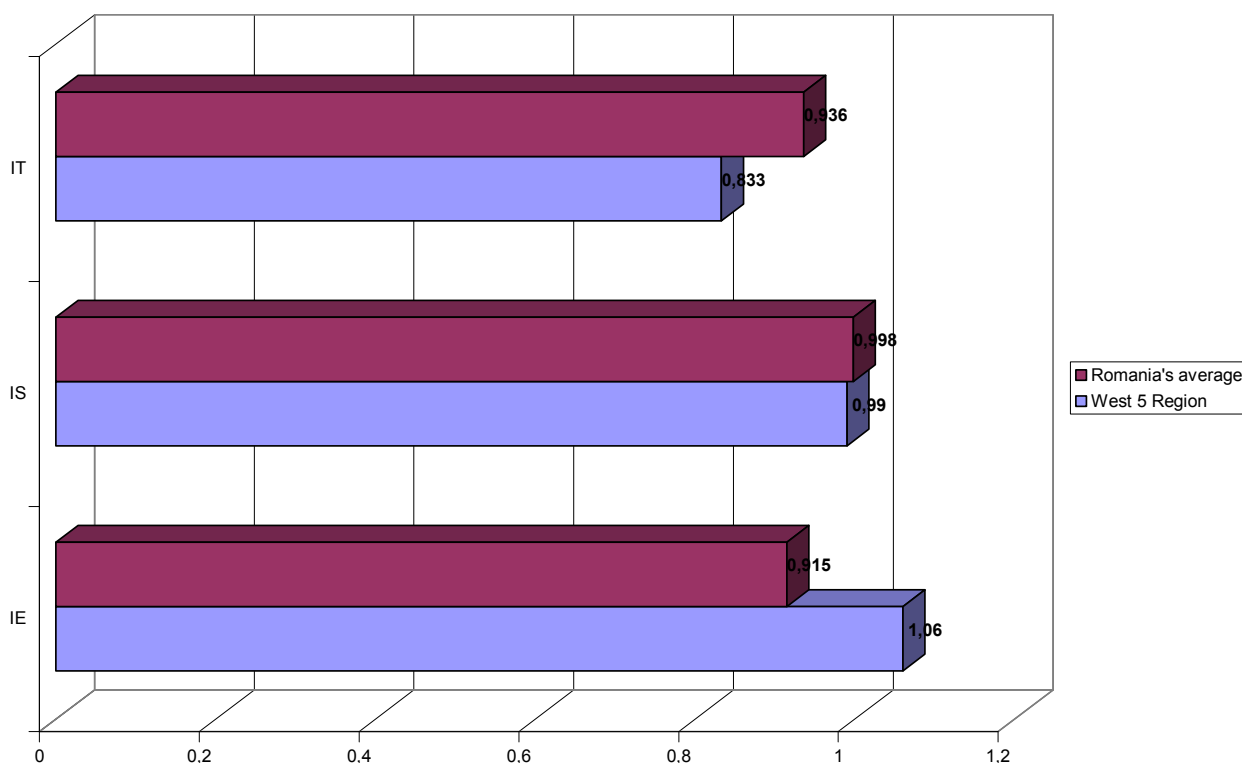


Fig.2.: The economic, social and technological indicators for West 5 Region

Regarding the Economic Indicator, the greater positive influence is done by net exports that have a positive evolution for West 5 Region, while at national level the volume of imports are greater then the exports one.

Analysing the Social Indicator, the weakness is represented by the dispersion of regional occupation rate component. The dispersion of regional occupation rate puts in evidence the regional differences regarding the occupation inside the development regions and at national level. If the unit of analyse is the country, than the development regions represents the analyse's components. If the unit of analyse is the region, the investigation refers to its different significant components (urban-rural, occupation women-men), in function of available data. The occupation rate is greater at regional level as the national level because the increasing tendency for investments in this part of the country.

Regarding the Technological Indicator, the small value obtained at regional level in comparison with the national average was determined by the two components, respectively research and development expenditure like % of GDP and tertiary education .

The sub-indicator research and development expenditure like % of GDP underlines the retaining of the research-development activities, the development's potential for knowledge economy and represents an essential objective for Lisbon Agenda (the target for 2013 is 3% of GDP). Many studies show that the level of public research-development expenditures is correlates with the private ones. There are important disparities between regions and between West 5 Region and national average.

The sub-indicator tertiary education includes the students with advanced specialisation in research from public and private universities. The small value obtained for the region puts in evidence that the offer of qualified human capital which could participated at research activities is low in comparison with the demand.

The Regional Competitiveness Index for West 5 Region is 0.99, greater then the Romania's average (0.94 - calculated like arithmetic media of the 8 regional competitiveness indexes), and for improving the situation, at regional level is recommended the action for canceling the weaknesses pointed out by the sub-indicators.

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