

Erdélyi tanulmányok

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The competitiveness of companies in northern Transylvania – case study using the global utility theory

The present paper is trying to emphasize how local competitiveness is transmitted and taken at regional level, which are the determinants of these two concepts and which is the place of the counties in regional hierarchy and the place of the regions in national hierarchy. Studying the most important indicators that characterize the private business environment we were able to draw some conclusions regarding the most competitive counties from Northern Transylvania and which are the factors that contribute to these results.

Key words: local competitiveness, regional competitiveness, global utility theory, economic disparities, economic agents.

JEL-code: R11

Introduction

Our paper consists in the following four parts:

- in the first part are presented the main definitions of the local and regional competitiveness concept;
- in the second part is described the used Methodology, where we present the main theory that we will implement;
- in the third part is presented the analysis of the regions and counties from Northern Transylvania using global utility theory;
- the final part is reserved for the Main remarks and proposed measures.

General and theoretical remarks

The competitiveness concept tends to have a regional or even local approach, very much discussed in recent years. The importance of the competitiveness elements at regional and local level is an indicator for the interest of the policy makers in finding national and regional strategies that should be interrelated. Innovative regional strategies could have a significant contribution in the exploitation of the endogenous potential.

It is said that regional competitiveness represents an intermediary level between micro and macroeconomic levels. At micro level, regional competitiveness represents a sum of *firms'* competitive advantages, active in a specific region. At macroeconomic level, regional competitiveness has a series of limits (currency flexibility or prices flexibility), because of the fact that some laws do not have sub-national character and applicability.

The first cohesion report (1996) emphasizes that strengthening the economic competitiveness level of the regions left behind is very important in achieving the goal of social and economic cohesion. In this report, the main competitiveness element is represented by the *companies*, component which is influenced by social and institutional factors.

A first definition on regional competitiveness could be found in the Sixth Periodic Report on the regions (1999): “the ability of a region to generate, while being exposed to external competition, relatively high income and employment levels. In other words, for a region to be competitive, it is important to ensure both quality and quantity jobs”.¹ The report presents another facet of the regional competitiveness in connection with the objectives of social policies: “the ability of *firms*, industries, regions, countries to generate – being exposed to international competition – high levels of income and employment”.

The European Spatial Development Perspective (1999) notes that: “the regions [of the EU] can only be competitive and hence contribute to the reduction of unemployment if towns and cities, especially those outside the global integration zones and metropolitan regions, have enough economic potential”.² Cities and counties with a high level of financial and social welfare represent an important factor of economic and social development. Achieving a sustainable urban development requires policies that are dependent on the local and specific conditions, and also on national and regional conditions.

The welfare growth depends on the capacity of the *firms* from a region (county) or a country to obtain higher levels of productivity and to grow the level of the productivity in time, Porter states that a lot of political factors and decision makers from the *companies* don’t notify the sources of the real competitiveness in a correct way. Competitiveness is a function of dynamic progression, of innovation and of the ability to change and improve. Following the same alignment, there are a few determinants of productivity (Porter 1999), such as:

- healthy macroeconomic policies,
- stable political environment,
- reliable legal framework,
- social progress,
- Improvement of the competition at microeconomic level.³

The *business environment* productivity depends on the *firms*’ strategy, on the rivalry between these, on the input conditions, on the related industries or on the demand conditions. Porter says that the demand of a region’s products represents an important factor of the competitive advantage and the local demand needs to be stimulated through some specific actions. If the local demand has a low level the local competitiveness could be affected. In this case, the entrepreneurship is prevented because the qualified workers will start to find better jobs in other places. In the process of the demand stimulation, the existence of favorable political and macroeconomic conditions is necessary. Porter’s statement regarding the fact that comparative advantage is a precisely located process should be completed and detailed because it suggests that there are some distinct aspects of the regional and local economic development, namely the regional economy is more than a sum of the component parts.

Ecorys-NEI Team (2003), in the study on the factors of regional competitiveness, thinks that regional competitiveness represents “the ability to produce goods and services which meet the test of international markets, while at the same time maintaining high and sustainable levels of income or, more generally, the ability of regions to generate, while being exposed to external competition, relatively high income and employment levels”.⁴

Lengyel (2003) have built a pyramid-model which presents the factors that influence regional competitiveness, distinguishing three levels of factors:

¹ Sixth Periodic Report on the regions, Regional Policy and Cohesion, Fact Sheet 1999

² Prepared by the Committee on Spatial Development, *ESDP-European Spatial Development Perspective*, 1999, p.22

³ The first four factors are necessary, but not sufficient for the assurance of economic prosperity and the fifth factor is the one of which competitiveness depends.

⁴ ECORYS –NEI, *A study on the factors of Regional Competitiveness*

- basic categories – includes the measurable indicators: GDP, labor productivity, employment, the openness of the economy;
- development categories – which influence the basic categories and are used for the improvement of a territory's competitiveness, also representing the regional policy's objectives: technological research and development, SMEs, FDI, infrastructure and human capital, institutions and social capital;
- successful categories – are developed in time and their influence is visible after long periods of time: economic structure, innovative activity, regional accessibility, workforce qualification, social structure, decision centers, environment and regional identity

Another factor whose role is crucial is represented by the effectiveness of public administrations from national, regional and local level, with a significant impact on the economic development and on the job creation.

Michael Storper (2005) believes that regional or local competitiveness represents the capacity of a region or county to attract and maintain *firms*' profitability while maintaining a high living standard of citizens from the region or county or even city. Therefore, the workforce and the investments will gravitate from the less competitive regions to those highly competitive.

The elaboration of policies that generate a positive impact on the level of competitiveness of a region implies the identification of the potential sources with a contribution to the development of the competitive advantage of the region. Therefore, we can take into account for the elaboration of a policy a series of factors: one of them have a national or international nature and do not enter in the objectives of a regional strategy, while for the others should be multiplied at regional level.

Sergio Berumen (2005) says that „local and regional competitiveness is identified as the essential element in any local competitiveness strategy that attempts to generate long-term competitiveness and ensure local rejuvenation and sustainability”. (*Berumen 2005*)

In the global competition context, most of the competitive advantages of *companies* are strictly related to the environment in which they act, namely regional and local. Consequently, which are the factors that influence the regional competitiveness? The Cambridge/ECORYS-NEI study takes into account elements such as: infrastructure, accessibility, human capital, research and development capacity, innovation capacity, demographic situation.

On the other hand, the Global Competitiveness Yearbook (2006) is focusing on the interactions of four global factors: economic performance, governmental efficiency, business efficiency and infrastructure.

Local and regional competitiveness depends not only on the physical externalities, but also on the relational capital and learning capacity of these two interrelated concepts.

During the presentation of the most important voices that have studied the regional competitiveness, we emphasized with *italic* the central core of the competitiveness at local and regional level in our perspective: *firms*, or in two words *economic agents*.

From the beginning, we would like to clarify that local competitiveness refers to county competitiveness, a determinant of regional competitiveness, due to the lack of more detailed official data that could have helped us to treat this subject at city level

Methodology

As we said before, the essence of regional or local competitiveness, at microeconomic level, is represented by the economic agents. The present paper is trying to analyze the competitiveness through the main indicators regarding the activity of the *private companies* located in the counties that constitute Northern Transylvania (Bihor, Bistrița-Năsăud, Cluj, Maramureș, Satu Mare, Sălaj).

Our intention in analyzing the private companies is based on the fact that these types of firms have a higher contribution and impact on the local and regional development, with few exceptions like services provided mostly by public administration (eg. Education and health and social assistance). Most of the small and medium enterprises are in the commercial services.

We took into account the local active units from the main NACE sections, Turnover of local active units, Investments of local active units and the personnel active in the local units from industry, construction and other services. The indicators (I_j) were calculated as follows:

$$\begin{aligned} I_1 &= LAU/P, \\ I_2 &= T_{LAU}/P, \\ I_3 &= I_{LAU}/P, \\ I_4 &= L/P \text{ personnel/population.} \end{aligned}$$

The notations used are:

P – Population (persons)

LAU – local active units (number of units)

T_{LAU} – Turnover of local active units (mill. RON)

I_{LAU} – Investments of local active units (mill. RON)

L – Personnel from local active units.

The analyzed NACE sections were:

1. Mining and quarrying - C1 (importance coefficient 1)
2. Manufacturing - C2
3. Electric and thermal energy, gas and water - C3
4. Construction - C4
5. Wholesale and retail - C5
6. Hotels and restaurants - C6
7. Transport, storage and communications - C7
8. Real estate transactions, renting and service activities mainly rendered to enterprises - C8
9. Information and communication - C9
10. Education and Health and social assistance - C10.

We must specify that the analysis does not include Agriculture as a section, due to lack of official data at local and regional level for the analyzed indicators. We can also mention the fact that most of the population working in this field are self-employed, the number of official employees being very low. Also most of the farms are subsistence farms and only a small number capitalize their production on the local markets.

We used the following notations for the counties after the method:

1. Bihor (BH) - U1
2. Bistrița-Năsăud (BN) - U2
3. Cluj (CJ) - U3
4. Maramureș (MM) - U4
5. Satu Mare (SM) - U5
6. Sălaj (SJ) - U6

The Regions will have the following abbreviation:

1. North-West (NW) - U1
2. Center (C) - U2
3. North-East (NE) - U3
4. South-East (SE) - U4
5. South-Muntenia (SM) - U5
6. Bucharest-Ilfov (BI) - U6
7. South-West Oltenia (SW) - U7

8. West (W) - U8

After that, we proceed by implementing a well-known method for decision making under conditions of certainty used in Management. The method is called “The global utility theory” and after all the involved calculations we will find which county is the most competitive at regional level and also how is our region placed in the national hierarchy.

This method solves the problem of typological diversity of characteristics by turning them all into a single one. The utility has values between zero and one and convert different units of characteristics measurement in order to ease their comparison to facilitate the decision.

The first step is to replace the decision-making table with the utility matrix, converting each C_{ij} value in the corresponding utility value U_{ij} .

$$U_{ij} = \frac{C_{ij} - \min C_{ij}}{\max C_{ij} - \min C_{ij}}, \text{ for } j=1, n$$

The second step is represented by the calculation of the global utility for each decision alternative. Global utility is a utility that takes into account all characteristics of the decision alternative. It can be determined in two ways:

Option 1: the arithmetic mean of the utilities of each decision alternative

$$UG_i = \frac{1}{m} \sum_{j=1}^n U_{ij}, \text{ for } i=1, m$$

Option 2: weighted average of the utilities of each decision alternative. For this, the decision maker must determine weights of importance for each characteristic, depending on the decision specific.

$$UG_i = \sum_{j=1}^n p_j U_{ij}, \text{ for } i=1, m$$

The optimal decision is the one that has the highest global utility.

We would like to mention that there were some other studies that analyzed regional competitiveness of the firms using this model: “Regional Competitiveness evaluation for Romania” (2008) and “Regional Competitiveness evaluation for Romania” (2011). We tried to realize a deeper analysis taking into consideration also the competitiveness of firms at local (county) level and coming closer to present - the time period being 2008-2010 – so that we could also underline, if the case, the differences in competitiveness comparing the results for 2005 (Strauti, 2008) and the results for 2010 (this paper). The last year for the analysis is 2010 due to the fact that this is the last year for which official data is available.

When calculating the final global utility, we gave each sector a certain percentage depending on its contribution to the total turnover (eg. For 2010, the importance coefficients for each sector at regional level are: C1 - 1%, C2 - 27%, C3 - 6%, C4 - 7%, C5 - 42%, C6 - 1%, C7 - 5%, C8 - 6%, C9 - 4%, C10 - 1%). The paper contains two types of analysis: first, which compares regions and the second, which compares counties from North-West Region.

The results of the analysis

Regional competitiveness

This section of the paper presents the results that we have obtained for each of the regions from Romania. Using the global utility theory and apply it for all the Romanian regions, we could place our region in comparison to the others and draw the conclusion that the lack of development equilibrium between the counties that we have analyzed is reflected in the position which our region occupies: fourth place at national level in all three analyzed years.

The final results based on the calculation of global utility are presented in the next table (*table 1.*):

Table 1.: Global utility of the Romanian regions

	2008	2009	2010
U1(North-West)	0,281	0,270	0,290
U2(Center)	0,323	0,329	0,324
U3(North-East)	0,023	0,009	0,009
U4(South-East)	0,197	0,195	0,206
U5(South-Muntenia)	0,187	0,170	0,209
U6(Bucuresti-Ilfov)	0,968	0,927	0,926
U7(South-West Oltenia)	0,093	0,097	0,118
U8(West)	0,314	0,295	0,336

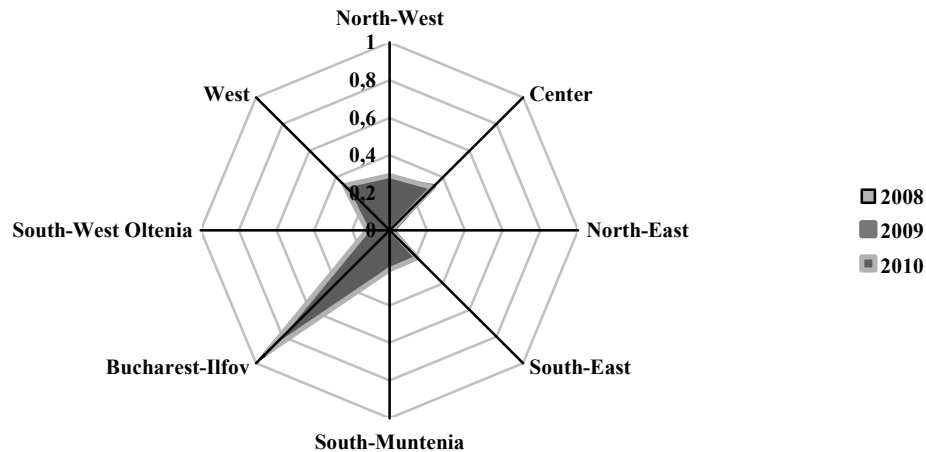


Figure 1.: Global utility of the Romanian regions

Source: Own calculation.

The showed data represents the values for global utility and reflects a big difference in the level of competitiveness between Bucharest-Ilfov region and all the other regions, including North-West. As we can see, the most competitive region is Bucharest-Ilfov, followed by Center, West and then North-West.

Making the connection with the mentioned study (Negru-Străuți – Tăucean 2008) that tried to classify the regions from Romania using data from 2005, the results do not differ, especially in the case of the first and fourth place, occupied by Bucharest-Ilfov and North-West. The study stated that the obtained results demonstrate “which are the development regions with high entrepreneurial spirit”.

Clearly, the gap between Bucharest-Ilfov and the rest of the regions is significant and it could take years for the other regions to catch up. The results showed that Bucharest-Ilfov registered the best results for most of the NACE sections, except for *Mining and Quarrying*.

In the next chart we choose to represent the contribution at the formation of global utility of each sector at regional level, for 2010.

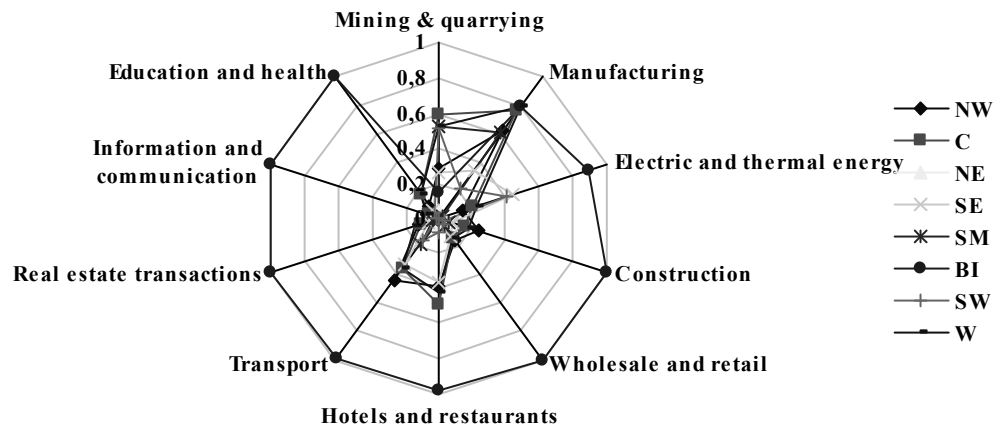


Figure 2.: Contribution to global utility of sectors at regional level.

Source: Own calculation.

For North-West Region, the highest value was registered in *Manufacturing*, with the help of the local active units' turnover. Still, another important factor in this sector is the number of employees, and the region occupies the second place at national level from this indicator point of view. Another relevant sector, that has registered a significant value, is represented by *Transport*. The North-West region occupies the second place at national level, after Bucharest-Ilfov, due to the high value registered in this sector. The highest contribution came from the number of local active units and the situation was similar for the years 2008 and 2009. Of course, in the future, this sector should be one of the most sustained sectors from our region. The third sector registering a high value was represented by *Hotels and restaurants*, with an important contribution from the number of local active units (second place after Center region in terms of number of local active units). Still, this sector regardless the obtained utility value, is not very competitive because it generates low levels of turnover and engage a low number of employees.

As a conclusion, we can say that especially in the first two mentioned sectors, the entrepreneurial spirit is relevant in the North-West region.

But the question still remains: “how can we amplify and grow regional competitiveness?”. Why is the situation still in the same stage of development as it was in 2005 for our region? Let's see how the counties are contributing at increasing the level of regional competitiveness.

Following the same global utility method, we were able to decide which county registers the highest values and which one is the most competitive from Northern Transylvania. The next results were obtained (*figure 3.*):

Table 2.: Global utility of counties from Northern Transylvania

	2008	2009	2010
U1(Bihor)	0,52	0,54	0,62
U2(Bistrița-Năsăud)	0,23	0,17	0,16
U3(Cluj)	0,92	0,91	0,87
U4(Maramureș)	0,14	0,19	0,20
U5(Satu Mare)	0,25	0,31	0,31
U6(Salaj)	0,16	0,05	0,09

Source: Own calculation.

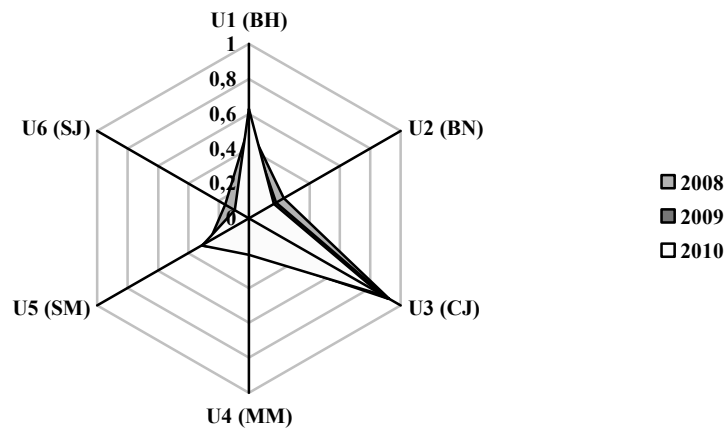


Figure 3.: Global utility of counties from Northern Transylvania

Source: Own calculation.

The table helps us establish which county was the most competitive from Northern Transylvania. As we can see, Cluj county registers the highest values and has the highest value for the global utility in all three analyzed years.

A huge gap between the first two places occupied by Cluj and Bihor counties and the rest of the counties can be noticed which represent a significant interregional disparities that should be reduced in order to gain a plus for the whole regional competitiveness.

From the author's point of view, the situation is not favorable, because it can be seen that in most of the counties the values are decreasing, which could be a sign of losing the competitive edge. This situation should be a warning sign for the decision-makers to elaborate strategies and policies that stimulate and encourage the sources of competitiveness in the analyzed counties.

Local competitiveness

This section of the paper presents the results that we have obtained for each of the six member counties of Northern Transylvania region. The values could help us sustain what is the most competitive county and which sector has a significant contribution at the county's development.

BIHOR County

Bihor County has occupied the second place in all three analyzed years from the global utility point of view, recording significant values at regional level, far from the rest of the counties, except Cluj. Its competitive position has increased significantly especially between the years 2009 and 2010, despite the outbreak of economic crisis.

Table 3.: Sectoral utilities in Bihor county for 2008-2010

Nr.	Sectors	BIHOR		
		2008	2009	2010
1.	Mining and quarrying	0,88	0,70	0,81
2.	Manufacturing	0,41	0,52	0,66
3.	Electric energy	0,53	0,54	0,50
4.	Construction	0,25	0,22	0,34
5.	Wholesale and retail	0,64	0,63	0,69
6.	Hotels and restaurants	0,84	0,87	0,74
7.	Transport	0,76	0,79	0,78
8.	Real estate transactions	0,59	0,39	0,35
9.	Information and communication	0,18	0,19	0,20
10.	Education and health and social assistance	0,52	0,38	0,61
Global utility		0,52	0,54	0,62

Source: Own calculation based on the data from NIS

The highest utility was registered in *Mining and quarrying* and the most important factors which contributed to this result were: turnover of the local active units, especially in 2008, investments and personnel, with the highest participation. We observed that in 2009 the number of the local active units in this field have increased, but the turnover decreased significantly, and an explanation to that could be represented by the increased number of small enterprises with few employees and a short life span. Another optimistic result was registered in *Hotels and restaurants*, undoubtedly because of the importance of tourism in Bihor county and *Transport*, due to the position of the county at the border with Hungary. The factor with the highest input was represented by the investments, which are occupying the first position in all three years. The lowest value was registered in the sector *Information and communication*, where there is a high number of local units but with a low contribution to the county's turnover, investments and personnel.

BISTRITA-NASAUD County

Bistrița-Năsăud county obtained the highest utility value in *Electric energy* due to the investments contribution which were made in this sector. In the case of certain indicators, the county was placed in the second position, after Cluj, surpassing Bihor county. An example in this regard is the number of local active units compared to population, especially in the year 2010. Despite this situation, the factor whose involution is visible is the turnover of the local active units. From this point of view we can conclude that despite the utility significant result, firms operating in this field from Bistrița-Năsăud county are not profitable and therefore, could not generate in the

future high levels of competitiveness. Also, the sector does not involve a significant number of employees.

Table 4.: Sectoral utilities in Bistrita-Nasaud county for 2008-2010

Nr.	Sectors	BISTRITA-NĂSĂUD		
		2008	2009	2010
1.	Mining and quarrying	0,18	0,038	0,01
2.	Manufacturing	0,65	0,41	0,33
3.	Electric energy	0,69	0,57	0,62
4.	Construction	0,08	0,02	0,043
5.	Wholesale and retail	0,02	0,04	0,039
6.	Hotels and restaurants	0,21	0,13	0,041
7.	Transport	0	0,09	0,06
8.	Real estate transactions	0,0007	0,04	0,07
9.	Information and communication	0	0	0
10.	Education and health and social assistance	0,14	0,08	0,10
Global utility		0,23	0,17	0,16

Source: own calculation based on the data from NIS

From the above table, we could reflect upon the decreasing trend that governs the majority of the sectors. Therefore, Bistrița-Năsăud County is one of the “needy” counties from Northern Transylvania and it will require more support in order to gain in terms of competitiveness and to reduce the development gap compared to the other counties.

CLUJ County

Cluj county is distinguished as the region’s most competitive county, but not only through the highest results obtained for the global utility. Following the results, in all three analyzed years, Cluj occupied the first position from the North-West Region. In other words, this county contributes the most at acquiring a high level of regional competitiveness.

Table 5.: Sectoral utilities in Cluj county for 2008-2010

Nr.	Sectors	CLUJ		
		2008	2009	2010
1.	Mining and quarrying	0,47	0,51	0,47
2.	Manufacturing	0,70	0,78	0,70
3.	Electric energy	0,84	0,82	0,84
4.	Construction	1	1	1
5.	Wholesale and retail	1	1	1
6.	Hotels and restaurants	0,88	0,89	0,81
7.	Transport	0,85	0,91	0,95
8.	Real estate transactions	0,98	1	0,83
9.	Information and communication	1	1	1
10.	Education and health and social assistance	1	1	1
Global utility		0,92	0,91	0,87

Source: Own calculation based on the data from NIS.

The analysis showed some interesting results in terms of specialization. Cluj County registered the highest values for almost all sections, except *Mining and quarrying*. But still the highest result are obtained in *Construction, Wholesale and retail, Information and communication* and *Education, health and social assistance*. Even though, the *Construction* sector was the most affected by the economic crisis, its contribution to the county's competitiveness is noticeable. All four indicators are very important for the development of the sector, but the highest values are registered by the employees from this field, whose number is twice bigger compared with the rest of the counties. Although, the negative effects of economic crisis are observed especially in investments, within one year its value has decreased by six times. In the coming years, this sector should be supported because it represents a reliable source of competitiveness.

Wholesale and retail is, undoubtedly, one of the main pillars of the county's economy. This sector generates almost the highest turnover (in 2010, after Manufacturing) and absorbs most of the workforce. What characterizes this sector is the large number of small firms that do not have a high number of employees. In the future, this sector is one with potential and could contribute to increasing local and regional competitiveness.

The element of novelty is represented by *Information and communication*. This sector characterizes in particular Cluj county and brings it a competitive advantage and a specific nature compared with the other counties. The firms activating in this domain are profitable and the number of employees shows a positive trend. It's a certain fact that the firms from this area are a source of competitiveness and should be promoted in the future.

The maximum value registered by the county in these sections represents a high level of concentration of the investments from the mentioned sectors. As we specified in the theoretical part, especially "investments will gravitate from the less competitive regions to those highly competitive", which is the case of Sălaj County and Cluj. In other words, we could say that companies active in these areas should be sustained and encouraged, but definitely there is a need for distribution of investments between the counties. We observed that the highest difference in terms of utility was registered in *Information and communication* for all three years in Cluj County. The results are similar to reality especially taking into consideration this emerging sector.

MARAMUREȘ County

As opposed to the situation of declining recorded by Bistrița-Năsăud county, in Maramureș case was registered an increase in the value of utility, so that in 2010, this county was situated on the fourth place in the regional hierarchy.

Table 6.: Sectoral utilities in Maramureș county for 2008-2010

Nr.	Sectors	MARAMUREȘ		
		2008	2009	2010
1.	Mining and quarrying	0,38	0,38	0,43
2.	Manufacturing	0,15	0,36	0,26
3.	Electric energy	0,01	0,09	0
4.	Construction	0,19	0,15	0,26
5.	Wholesale and retail	0,12	0,08	0,15
6.	Hotels and restaurants	0,23	0,086	0,163
7.	Transport	0,21	0,197	0,164
8.	Real estate transactions	0,08	0,07	0,31
9.	Information and communication	0,12	0,11	0,10
10.	Education and health and social assistance	0,06	0,009	0,02
Global utility		0,14	0,19	0,20

Source: Own calculation based on the data from NIS.

Despite the fact that none of the results does not exceed the middle of the interval (which is 0,5), Maramureș has obtained the highest values in *Mining and quarrying*, *Manufacturing* and *Construction*. Of these three, *Manufacturing* registered a noticeable decrease between 2009 and 2010 which can be attributed to the decrease in the number of local active units. The factor with the highest contribution is represented by the employees.

Mining and quarrying confers the first place in terms of number of local active units and in terms of employment, but due to the fact that these firms generate an insignificant turnover and the sector does not benefit from a significant amount of investments, we could not say that in the future the sector will contribute at increasing the level of competitiveness of the Maramureș county.

Construction became a strategic sector especially in 2010, due to its increase in terms of utility. The most important factor which favored obtaining such a result was represented by the employees.

SATU MARE County

The third place in terms of utility is occupied by Satu Mare. The sectors registering a high value of utility are: *Manufacturing* and *Construction*. The factor with the highest input in the case of Manufacturing is represented by the number of employees, in all analyzed years. Also, we notice that despite the number of local active units, which registered a decrease between 2009 and 2010, the turnover grew. Due to the fact that this sector registers a significant number of employees and a number of profitable companies, we could say that in the future it should be supported.

Table 7.: Sectoral utilities in Satu Mare county for 2008-2010

Nr.	Sectors	SATU MARE		
		2008	2009	2010
1.	Mining and quarrying	0,003	0	0,085594
2.	Manufacturing	0,55	0,59	0,45
3.	Electric energy	0,03	0,14	0,15
4.	Construction	0,35	0,34	0,55
5.	Wholesale and retail	0,08	0,144	0,19
6.	Hotels and restaurants	0,32	0,31	0,11
7.	Transport	0,14	0,15	0,07
8.	Real estate transactions	0,09	0,13	0,15
9.	Information and communication	0,048	0,02	0,037
10.	Education and health and social assistance	0,045	0,047	0,038
Global utility		0,25	0,311	0,310

Source: Own calculation based on the data from NIS.

The *Construction* sector does not have sustainable evolution in terms of contribution of factors in its development. So, if in 2008, the most important factor was the number of local active units, in 2009 the number of employees contributed the most, and in 2010 the investments had the highest contribution. This sector could contribute at the improvement of the level of local competitiveness if it will manage to reunite all the mentioned characteristics at once. Currently, its evolution is confusing.

SĂLAJ County

In all three years, the last position was occupied by Sălaj. Unfortunately, we weren't able to identify the sources of competitiveness in this county, due to its disordered development. Still, there are some sectors for which the utility registered positive results.

Table 8.: Sectoral utilities in Salaj county for 2008-2010

Nr.	Sectors	SĂLAJ		
		2008	2009	2010
1.	Mining and quarrying	0,12	0,43	0,012
2.	Manufacturing	0,269805	0	0
3.	Electric energy	0,21	0,11	0,19
4.	Construction	0,04	0,037	0,039
5.	Wholesale and retail	0,05	0,07	0,15
6.	Hotels and restaurants	0,014	0,076	0,036
7.	Transport	0,72	0,299	0,429
8.	Real estate transactions	0,042	0,003	0,015
9.	Information and communication	0,028	0,024	0,017
10.	Education and health and social assistance	0,161	0,103	0,20
Global utility		0,15	0,05	0,09

Source: Own calculation based on the data from NIS.

From our point of view the only sector which deserves to be discussed is *Transport*. In 2008, the turnover of the companies and the investments made in this sector helped its development. A different situation was registered in 2009 when the only contribution came from the number of local active units and its turnover. In 2010, all four factors started to contribute at the development of this sector. But, still, the highest contribution was supported by the turnover. Regardless the utility values obtained, the development of this sector, from our point of view is uncertain because none of the factors has reported high levels. Sălaj county, along with Bistrița-Năsăud, represents the least competitive counties, and in order to contribute at increasing the level of regional competitiveness, development strategies that rely on the resources and strengths of these counties should be designed and implemented. As The first cohesion report (1996) emphasizes "strengthening the economic competitiveness level of the regions (or in our case, counties) left behind is very important in achieving the goal of social and economic cohesion". This is the case of Sălaj and Bistrița-Năsăud counties.

Final remarks and recommendations

Local and regional competitiveness are two interrelated concepts which have a contribution on the development growth, improving the access to public and private resources and a sustainable and safe presence on markets. A properly competitiveness promotion strategy could generate an increase in the level of development, which in turn can lead to an increase in the level of competitiveness.

The result of local and regional actions and processes should be coordinated in order to generate the maximum beneficial. Also, because of the fact that local and regional markets are characterized by different levels of imperfect competition, the forms of government intervention should be correlated. Regional competitiveness, as a "sum of local competitiveness", has an unbalanced structure due to the existence of counties inequalities, which are the result of the development differences among economic agents.

A conclusion that can be drawn from the obtained data is that Bucharest-Ilfov region is by far and not surprisingly in front of the classification with the highest results for almost all indicators in all analyzed years. North-West Region has maintained the fourth place at national level, a similar place with the one obtained in 2005.

Another conclusion that can be drawn is that North-West region has a moderate level of entrepreneurial spirit and from the author's point of view all businesses, especially those from the sectors in which we obtained favorable results, should be supported (*Manufacturing, Transport, Hotels and restaurants*).

The situation is not favorable for the following sectors: *Information and communication, Real estate transactions* and *Education and Health and social assistance*. Although, *Information and communication* is a developed sector in Cluj County, does not represent a priority for the rest of the counties due to the traditional economic structure. *Real estate transactions* is the sector that suffered the most from the outbreak of the economic crisis in all six counties, which is why, in all three years, does not represent a source of competitiveness.

Another conclusion that emerges from the analysis is that most of the economic activities with high global utility are from industry sector.

Also, the present study makes a review of the most competitive counties from Northern Transylvania taking into consideration some relevant indicators that characterize the business environment (number of local active units, investments, turnover, and personnel). The processed data showed that Cluj County is by far the most competitive county from the region and has a series of competitive advantages especially in sectors such as: *Information and Communication, Wholesale and retail, Construction* and so on. Another demonstrated statement is regarding investments, indicator which register the highest value in the most competitive county meaning Cluj (in 2011 the existing sold of FDI in Cluj was 1.768.588 thou. RON, Bihor= 1.252.847 thou. RON etc)⁵.

During the analysis, we observed that most of the counties have registered high values for *Transport* sector which can represent the premise of infrastructure development in the future for generating a high level of local and regional competitiveness (infrastructure was mention as a key factor that influence the regional competitiveness in the Cambridge/Ecorys-NEI study and also in the Global Competitiveness Yearbook).

Also, *Construction* and *Manufacturing* are strategic sectors for almost all counties. Despite the fact that *Mining and quarrying* and *Electric energy* have the highest global utility in Bihor, Sălaj, Bistrița-Năsăud they are not representative either from number of local units or turnover point of view.

Another conclusion refers to the fact that the highest utility is registered especially in the services sectors for the most developed counties. An example in this regard is the importance of *Information and communication* in Cluj county.

From the policy point of view we propose the following measures:

- Stimulating entrepreneurial culture;
- Promoting technological modernization and innovation in Manufacturing industry;
- Promoting the investments in the sectors that are able to generate high levels of competitiveness;
- Identifying the competitiveness strengths and perspective in the region;
- Stimulating the creation of new units in the sectors with high competitiveness potential;
- Supporting the adoption of international standards in order to increase international competitiveness of the region and local main sectors.

⁵ <http://www.nord-vest.ro/SERVICIIPentru-Dezvoltare-Regionala/PLANIFICARE-REGIONALA/Planul-de-dezvoltare-regionala-2014-2020/3-Competitivitate-economica--eID1310.html>

Bibliography

- Berumen, S. A. (2005): *An approach to local and regional competitiveness*, Cuad.Ad.Bogota, 18 (29)
- Comisia Europeană (1993): *White paper on Growth, Competitiveness and Employment: the challenges and Ways Forward into the 21st century*, Luxembourg
- Comisia Europeană (2006): *European Competitiveness Report 2009*, Commission staff working document, SEC (2009) 1657 final
- Committee on Spatial Development (1999): *ESDP-European Spatial Development Perspective*
- Lengyel, I. (2003): *Economic Growth and Competitiveness of Hungarian Region*, "Reinventing Regions in the Global Economy" Regional Studies Association Conference, 12-15th April, Pisa, Italy p.19.
- Negru-Străuți, G. – Sorin, M. – Mocan, M. – Pugna, A (2011): *Regional Competitiveness evaluation in Romania*, Annals of DAAAM for 2011 & Proceedings of the 22nd International DAAAM Symposium, Volume 22, No. 1, Published by DAAAM International, Vienna, Austria, EU, 2011
- Negru-Străuți, G. – Tăucean, I. M (2008): *Regional Competitiveness evaluation for Romania*, Annals of the Oradea University, Fascicle of Management and Technological Engineering, Volume VII (XVII)
- Porter, M. E. (2008): *Regional Competitiveness in a Global Economy*, The Summit for American Prosperity, The Brookings Institution, Washington, DC
- Regional Development plan 2014-2020, www.nord-vest.ro
- Sixth Periodic Report on the regions (1999): Regional Policy and Cohesion, Fact Sheet
- Storper, M. (2005): Society, Community and Economic Development, Studies in Comparative International Development, 39 (4) pp. 30-57