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**ABSTRACT** – After determining the development index at commune level, we have managed to sketch 4 advantaged areas and 3 disadvantaged ones. The most advantaged area is individualized around the county seat Baia Mare, the rest of the advantaged areas revolving around Sighetu-Marmației, Borşa-Vişeu and Târgu Lapuş towns. The disadvantaged areas correspond mostly with the rural settlements situated afar from the high-polarizing centers at the county level (Baia Mare and Sighetu-Marmației). This study reiterates the enormous discrepancy between the rural and urban areas, but also between the county seat city and all the other urban settlements. Maramureş County is situated somewhere at the lowest point in the counties hierarchy, not only because of its limited extension and of the precarious condition of the physical and social infrastructure, but also because of the chronic lack of investment in this area. Economically, Maramureş is characterized by a domination of the population employed in agriculture (the number of which has grown between the years 1990 and 2007, from 5% to 38%), in conjunction with a decrease in the number of population employed in the secondary sector (from 60% to 27%).

Key words: Maramureş County, territorial disparities, advantaged, disadvantaged, development index.

#### **INTRODUCTION**

The regional geographic analysis highlights the territorial differences, whose characteristics are visible at different levels. Thus, this scale of analysis becomes essential in a scientific approach regarding the territorial disparities; what is not visible on a continental or national scale, can be extremely clear at a lower. When it comes to disparities, we must not have in mind the simple geographical differentiation encountered in a current analysis of the physical space, but the existence of some territorial deviations regarding some characteristics of social-economic and infrastructural constituents. If, in the first case, the boundaries are, as a rule, physiognomic, designating a limited line or a narrow area of interference, on the other hand, in the case of the territorial disparities these limits are mental, conventionally projected into space. Any analysis on disparities involves a detailed characterization at the lower entity levels. Most frequently, such entities are identified with the counties, for a substantial study at a national or commune level for the regional or county analyses. When referring to disparities, we must take into account the territorial deviations in the development level, demographic potential, economy, infrastructure or life standard/ the quality of life.

The present study deals with the individualization and the analysis of territorial disparities at the Maramureş County level, characterized by a natural and cultural variety, by the adaptability of human settlements to the environment, sometimes specific, so much that the conclusions of such an analysis could raise the interest of the local authorities. If at national level, the county averages blur the differences, at an inter-county level, the communities point out arrangements with the same developing level, laying down some foundations for future development of this space. The individualization of the advantaged and disadvantaged areas, the SWOT analysis applied at this level, as well as the presentation of the differences registered by some elementary indicators represent the result of some preoccupations and researches of our own.

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# METHODOLOGICAL ASPECTS

The methodology of the individualization of territorial disparities was mostly based upon the specialized literature in this field (Ianoş, 1997; Carta Verde privind definirea politicii de dezvoltare regională în România 1997<sup>3</sup>; Ancuța, 2006).

Assuming that the final objective of all these actions in implementing a regional policy is that of diminishing the differences, the disparities, between variable territorial entities considered to be relatively homogeneous, the following logical approach is obvious: the individualization of territorial disparities, their analyses at county level, defining intraregional development policies and the delineation of some recommendations for implementing such policies.

The system of indicators is fundamental for the individualization of territorial disparities. As for the Romanian statistics, the indicators for a precise measurement of the territorial development level, have incomplete data, are irrelevant and inconsistent (Ianoş, 1997).

As far as our objective goes, namely that of analyzing the territorial disparities at county level, the following steps have been taken: screening/tagging the relevant indicators, the individual analysis of the indicators, standardization of the data provided by the indicators, grouping individual indicators, setting thresholds, the cartographic transposition of associated or grouped territorial unities, analysis of advantaged and disadvantaged areas. The practical approach has targeted the selection of some indicators that would reflect as better as possible the following three fields: economy, demography and life standard. For the first category, four basic indicators have been selected: the average assessment on income/inhabitant, unemployment, number of employees in the active population, physiological density – inhabitant/ha agricultural land. For the second category, other four indicators have been taken in consideration: the intensity of the depopulation – population 2005/population 1992, population occupied in agriculture, the number of elderly population - people over 60 years old/total number of inhabitants, the number of high-school graduates over 20 years old. The differences in the quality of life level have been analyzed considering the values registered by two basic indicators: living floor and the number of telephones at 1000 inhabitants.

Since it is impossible to process these indicators, expressed in different measurement units, a method of standardization of values has been chosen so that they become operational.

The formula used for the standardization of each indicator was minMAX, respectively:

$$V_{M} - V_{r}$$
$$V_{S} = -----$$
$$V_{M} - V_{m}$$

where  $V_s$  represents the standard value of the administrative unit (commune/city),  $V_M$  is the maximal value of the analyzed data,  $V_m$  is the minimal value of the analyzed data, and  $V_r$  is the real value of the indicator for the considered administrative unit.

After reckoning the average standard value for each territorial-administrative unit for all 10 elementary indicators, the global development factor is obtained by using the following formula:

INDEZV= 50+14\*(-average assessment of income- living floor- number of high school graduates- number of telephones 1000/inhabitant- physiological density- number of employees+ intensity of depopulation+ number of elderly population+ number of employed population in agriculture+ unemployment)/10

The complex index of development has been reckoned as a Hull score (I. Ianoş, 1997), with variations between the maximum of 58.4 and the minimum of 44.4, therefore a gauge between the maximal and minimal of 14 unites. The direct or indirect appreciation rapport of every partial indicator

<sup>&</sup>lt;sup>3</sup> Green Paper regarding the definition of the regional development policy in Romania.

with the development measurement is very important in determining this index. Thus, for the indicators considered as having a direct and positive influence, their values have been subtracted, and those whose influence is considered as being negative have been added. The logic of this mathematics is as follows: as the maximum values of the average standard value (vsm) is 1, for "penalizing" the administrative units that register a high percentage of the occupied population in agriculture or a high rate of the unemployment it is consequential/ logical and correct that that precise value should be subtracted, so as the value of the development index should be smaller, in accordance with the weaker level of development.

# THE INDIVIDUALIZATION AND ANALYSIS OF INTRA-COUNTY DISPARITIES

The advantaged areas have been individualized by means of the territorial reunion of all the administrative unities with development indicators over the threshold of 49.5. For the tightness of the areas, there have seldom been included communes with lower values. As a result, we can identify three areas with average values of the development index over 50 and an area with an average value of 49.6 (Tab. 1).

Area	Number of communes	Number of cities	Development index
F1	6	5	50.9
F2	5	1	50.1
F3	2	2	50.1
F4	10	2	49.6
D1	16	0	48.4
D2	5	2	48.6
D3	12	1	49.3

### **Table 1.** Development index according to individualized areas.

(Source: calculated data)

According to the value gaps out of the data chain, as well as to the grouping of the territorial administrative units, we could individualize 4 advantaged areas and 3 disadvantaged areas (see Fig. 1).

# ADVANTAGED AREAS

The four advantaged areas have been developing around urban centers, including mostly settlements with high accessibility, with a demographic potential partially protected by the existence of the means of transport for commuting and with an economic power influenced by the income of the population occupied in industrial or urban activities.

# Advantaged area 1 Baia Mare

This area is composed of 11 administrative territorial units (Tab. 2), 5 (Baia Mare, Baia Sprie, Seini, Şomcuta Mare, Tăuții-Măgherăuş - the last two declared in 2004) and 6 communes. They are characterized by a diversified economy, which still bear the consequences of the intense industrial restructuring; the economic profile suffering obvious transformations, from an economy based on the extraction and manufacturing of non-ferrous metals and heavy industry (especially mechanic engineering) to an economy where services rate is taking proportions. Over the last period of time, the rate of the light industry has shown visible increase (Habitex, Relotex, Italsofa, Confstar and many more), but whose future has become insecure once the global crisis has become a more visible threat.

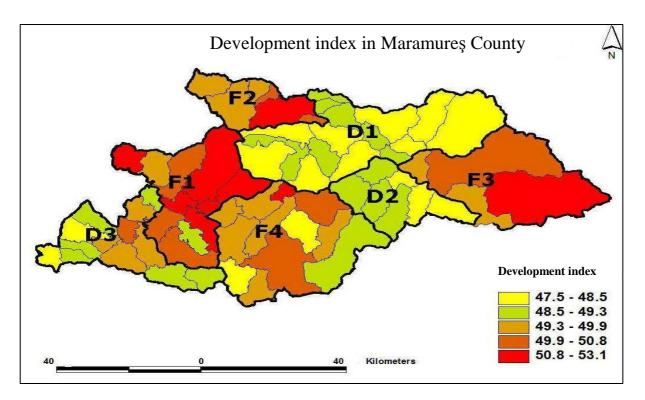


Figure 1. Territorial distribution of the development index and the individualization of the advantaged and disadvantaged areas.

Advantaged area Baia Mare holds 75% of the average assessment of incoming per inhabitant in Maramureş (the capital town of the county producing 68% by itself), being by far the principal area of income generator. There can be noticed the high accessibility of the inhabitants of the neighboring administrative units towards the economic and administrative center of the county, being facilitated by the existence of the European road 58 and of the railway Dej - Baia Mare – Satu Mare.

	Advantaged area 1 (F1)	Development index
1	Baia Mare	53.1
2	Baia Sprie	51.5
3	Tăuții-Măgherăuș	50.8
4	Seini	51.1
5	Şomcuta Mare	50.2
6	Cicârlău	49.9
7	Recea	51.2
8	Groși	51.4
9	Satulung	50.6
10	Remetea Chioarului	49.3
11	Săcălăieni	51.2
	Average of the advantaged area 1	50.9
	City average	51.4
	Communes average	50.5

**Table 2.** The values of the development index for the administrative units in the advantage area 1 (F1)
 Image: F1

(Source: Calculated data)

The depopulation process is relatively low; there can be noticed the most compact area in population growth in Maramureş County: Săcălăşeni, Satulung, Recea, Tăuții-Măgherăuş and Seini registering growth ranging between the values of 5% to 13% (the growth is related to the years 1992/2005). The only administrative units that have lost population in the period between 1992 and 2005 are Baia Mare, Şomcuta Mare, Remetea Chioarului; these decreases have diminished, ranging between the values of 0-5%.

Regarding the other studied elementary indicators, we can remark some important territorial differences. Thus, most of the administrative units enclose values of over 80 employees to 1000/inhabitants, excepting the communes of Remetea Chioarului (35) and Cicârlău (67). Analyzing the territorial distribution of the population occupied in agriculture, a growth of the forementioned can be noticed from north to south, therefore, at the foothill of the Ignis-Gutâi mountains it is of maximum 10%, meanwhile, in the settlements situated in the hill and plain area, values between 20-50% have been registered (Săcălășeni, Remetea Chioarului, Șomcuta Mare). The high percentage of the high school graduates (over 30%) is a result of the presence of the city of Baia Mare (13 high schools) in this area, as well as of the presence of high schools in other settlements (Baia Sprie, Seini, Somcuta Mare). The active population rate is higher in Baia Mare (44%) and ranges between 30-40% in the rest of the administrative units. Life standard is high in all the administrative units; potable water supply, sewer system and gas pipes can be noticed. The number of doctors per 1000 inhabitants, regarding the communes, is on average over 0.7, that generally means over 2-3 doctors per commune, in the cities, the average being of over 1.5 doctors/1000 inhabitants. In other words, there is the premise for developing a proper medical service, mostly because Baia Mare is localized within this area, with specialized medical services.

Despite the fact that this area belongs to the developed category, nonetheless, it points out an important number of problems, among which we can identify the following:

- The deficiency in infrastructure that seems to have become chronic. At first sight, the area is well endowed: here is the only airport of the county (at Tăuții-Măgherăuş); 7 out of 11 administrative units (Seini, Cicârlău, Tăuții-Măgherăuş, Baia Mare, Recea, Satulung, Şomcuta Mare) are crossed by European road 58 (E58 Satu Mare-Dej-Vatra Dornei-Suceava-Botoşani-Iaşi); main railway 4 (Bucureşti- Toplița- Baia Mare- Satu Mare) crossing 6 administrative units. As a matter of fact, the European road is of precarious quality, in many sections there is only one way road. Moreover, the railway is unimproved, the gouge from Jibou to Baia Mare and then, further to Satu Mare, is simple and not electrified. This explains why a 60 km-ride from Baia Mare to Satu Mare, in a plain area, lasts for one hour by express train (rapid) and up to 1:40 or 2 hours by slow train (personal). The airport is ranked at an international level from 2008, with direct connection to two cities: Vienna and Bucharest, but with a low volume of transported passengers and goods: 56 international landings and 58 international take offs on a yearly basis (www.mai.gov.ro). As result of the recent economic situation, the Austrian Airlines has abandoned all the flights to the international airport Baia Mare.

- The frailty of the environment, defined by a "historic" pollution, is a consequence of the mining activities in almost all the administrative units in this area. The frequency of the air plumb (lead) concentration in Baia Mare, for the year 2007, was exceeded in 70% out of the monitored cases (in the areas located in the neighboring areas of the industrial economic agents Romplumb and Cupron, former Phoenix) and for cadmium, in the same conditions, the frequency of exceeding the admissible limits is of 40% (according to The Report Regarding the State of the Environment in Maramureş). The rivers: Lăpuş, Someş, Săsar, and the right-bank tributaries of the latter (Firiza, Valea Borcutului, Băița and Nistru) are indexed in the 4<sup>th</sup> and 5<sup>th</sup> category (www.apmbm.ro). The soil is intensely polluted, at least in the surrounding areas of the Baia Mare town, which register transgressions of the maximum admissible concentration of heavy metals. The very fragile state of environment is highlighted by the presence of mud-settling ponds and of the dumps from Baia Mare, Baia Sprie, Bozânta (commune of Recea), Tăuții-Măgherăuş, Cicârlău and Nistru. The effects of the

pollution are noticed through a lower life expectancy, frequent acid rains and the acid pH of the soil, as well as other effects upon the vegetation.

- **The demographic aging.** Excepting the communes near the volcanic mountains area, those from Țara Chioarului, that are included, in most of the cases, in the advantaged area 1, register a permanent growing tendency in the population over 60 years old, with values ranging between 19% to 22% (Recea, Groși, Săcălășeni, Remetea Chioarului, Șomcuta Mare, Satulung).

- The absence of development alternatives. Considering the fact that tourism has been regarded for about two decades as the main development engine, the following question comes naturally: could there be a transition from the potential status to that of touristic offer? If yes, when? For the time being, we notice that the administrative units localized in the mountain areas (Baia Mare, Baia Sprie, Tăuții-Măgherăuş) have a high natural potential in comparison to those localized in the hills and plains areas (Şomcuta Mare, Satulung, Remetea Chioarului, Săcălășeni, Groși, Recea). Even if these communes from the hilly areas are focused upon the Țara Chioarului ethno-folkloric zone, the traditions and customs, strongly affected by other lifestyles and cultural behavior (authentic folk characteristics are to be found in the Finteuşu Mic and the Finteuşu Mare villages, with difficult accessibility). Practicing hunting and fishing, visiting memorial houses (Petöfi Sándor, considered to be the greatest Hungarian writer, who lived for a short period of time in Coltău; Ion Şiugariu, poet born in the village of Băița, affiliated to the town of Tăuții-Măgherăuş) could promote the weekend tourism, accidentally, sporadic and, in exceptionally cases, organized tourism. Baia Mare is identified in this context as the arrival/departure terminal (hub) towards the historic Maramureş.

# Advantaged area 2 Sighetu-Marmației

Localized in the northern part of the county, this area is composed of 6 administrativeterritorial units (Vadu Izei, Sarasău, Câmpulung la Tisa, Săpânța, Remeți), grouped around the seattown Sighetu Marmației (Tab.3)

	Advantaged area 2 (F2)	Development index
1	Sighetu Marmației	51.4
2	Vadu Izei	50.2
3	Sarasău	50.2
4	Câmpulung la Tisa	49.8
5	Săpânța	49.7
6	Remeți	49.5
	Average of the advantaged area 2	50.1
	Communes average (5)	49.9

Table 3. The values of the development index for the administrative units	
in the advantaged area 2 (F2).	

(Source: calculated data)

Some of the benefits of this area are:

The direct access to DN 19 (Satu Mare – Negrești Oaș – Sighetu Marmației), of all the settlements belonging to the rural space, and also the high number of high school graduates, over 40% in Sighet, and between 20-40% in the neighboring area.

Tourism could represent a viable alternative for the local development. Not only the natural potential (the settlements are situated at the foothill of the north side of Igniş volcanic mountain), but also the ancient traditions and customs are very well preserved, suffice it to remember Săpânța, with its Merry Cemetery, registered in UNESCO World Heritage list, and the Săpânța-Peri Monastery, recently built, representing the highest wooden construction in Europe. In addition to these, there are counterpanes, "pălincă", and milliner customs that characterize this rural area.

Sighetu-Marmației could play an important role through its position but especially through the tourist attractions and accommodation facilities that it posses. We can mention the jail "Memorialul Durerii" ("The Memory of Pain" Jail), the Maramureş Village Museum, The Elie Wiesel Memorial House – a Jew born in Maramureş, winner of the Nobel Prize for Peace. The privileged positioning in the Maramureş basin, could transform Sighetu-Marmației from a transition center into one of recreation (Ilieş Gabriela, 2007) for routes of at least 2 days. The tourist accommodation is extending, the tourist characteristics are also outlined by the existence of the numerous rural and agro-tourist guest-houses in Săpânța and Vadu Izei (apart from the extraordinary natural and anthropic potential). Clearly, aside from these advantages that could be transformed into benefits for a complex, sustainable development, there are also a series of issues, this area confronts with. Some of these are the following:

-The agricultural dominance of the active population structure. The number of the active population in agriculture exceeding, in some settlements, the limit of 65% (Remeți and Săpânța);

-The low level of taxes/inhabitant, meaning an emphasized poverty level, in the rural area, the taxes do not exceed 30 lei/inhabitant;

-The accented depopulation tendency. Even if the values of depopulation are not very high until the present moment, framing a range between 5-10%, the emphasized tendency raises concern (the only commune that registered a growth in the number of inhabitants in the period of 1992-2002 was Sarasău, with about 5%);

-The precarious quality of the transport infrastructure, represented not only by the DN19, but also by routes of secondary importance;

-The "impenetrable" border with Ukraine (Boar, 2005), makes this area be considered avoided by economic and population flows;

-The lack of minimal equipments in some communes. Thereby, the communes of Câmpulung la Tisa, Sarasău and Vadu Izei do not benefit, in any way, from drinkable water network, sewage and rock gases, although a gas pipeline is crossing the Oaş Mountains from Negreşti-Oaş to Sighetu Marmației;

-The high level of isolation in the case of Sighetu Marmației, which is not connected to European roads or to main railway network, the lack of a direct railway connection to Baia Mare, can be noticed, although the distance between the two towns is only of 60 km.

## Advantaged area 3 Vișeu-Borșa

Advantaged area 3 average

**Communes average** 

It is composed out of 4 administrative-territorial units: Borşa, Vişeu de Sus, Moisei and Vişeu de Jos (see Table 4), registering an average development index of 50.1. In a paradoxical way, this advantaged area overlies to a great extent the disfavored area of Borşa-Vişeu, decreed by government though the Government Emergency Ordinance O.U.G no.24 of 1998.

in the davantaged dred 5 (F5).			
Advantaged area (F3)	Development index		
Borşa	51.1		
Vișeu de Sus	50.3		

49.4

49.8

50.1

49.6

Table 4. The values of the development index for the administra	tive units
in the advantaged area $3$ (F3).	

(Source: calculated data)

Moisei

Vișeu de Jos

 $\frac{1}{2}$ 

3

Considering the system of indicators taken into account when calculating the development index, this area appears as an advantaged one, in comparison to the other administrative units. Even though the rate of unemployment has a high value, and the average assessment on income is very low

(this fact denotes a lack of assessable revenues, thus a financial deficiency), this area finds its strong points in:

- A high percentage of employees in the total active population (30-60%), a low percentage of population over 60 years (up to 15%), a low number in the population occupied in agriculture (up to 20%). The strong points continue with a high percentage of population that graduated high-school (25-37%); all administrative-territorial units benefit by sewage and potable water networks, the network being extended; in Borşa and in Vişeu there are hospitals with 405 beds and 236 beds, respectively.

- The highly valuable natural and anthropic tourist potential (Mocănița- narrow gauge railway, the Rodna and the Maramureș Mountains, Moisei Monastery, the Heroes Monument in Moisei, etc.) materializes through an ever bigger accommodation units: 7 in Vișeu, 10 in Borșa and 2 in Moisei (data from 2005, according to the statistical register of these administrative units). Tourism can be in this case a viable opportunity of income growth and elevation in the quality of life.

Problems this area confronts with:

- Highly undeveloped infrastructure: a functional railroad transits only Vişeu de Jos, more than 20 Km away from Borşa (Borşa Tourist Complex), a resort with a high potential of development (the railroad infrastructure was built up to Borşa, but it is not operable).

- There is a very high rate of migration. Even though the authors did not manage to access official data, it is known that every family has at least a member who has gone to work in foreign countries, especially in Italy (Hotea, 2008), creating, thus, the premises of a community whose working force lacks, endangering the capacity of the community to develop by maintaining the young working force. The criminality rate is raised, especially during the summer months.

- The environment finds itself in a very fragile state, considering the effects of mining and intensive wood exploitation.

- Negative natural balance sheet. The population finds no reasons to have more children. The sock of disposability, the restructuring of industry and mining, the lack of alternatives led to a decrease in the natality rate, fact doubled by a massive migration in search of a better life. It remains to be seen whether these young people gone to work in foreign countries will return, but most of all it they have acquired the entrepreneurial spirit.

- The necessity of massive investments is acute if the development of Borşa resort is desired. The buildings erected in the last years in the resort make almost impossible an expansion; moreover, the difficulty with which tourists arrive at Borşa, considering the long way from the main urban emitters (Cluj-Napoca, Baia Mare, Satu Mare), and the quality of the infrastructure demonstrate the lack of potential of development. To all these problems, a low accommodation capacity is added, both in the resort and town, as well as a lack of leisure activities. All of these factors transform a resort of national and international interest into one of local interest.

#### Advantaged area 4 Târgu Lăpuş

It is an area with a development index under the level of 50 (see Table 5), being situated, on a hierarchical scale, between the advantaged and disadvantaged areas.

This area coagulates around the town of Târgu Lăpuş, but the main place of economic growth is Cavnic, that despite the total shutdown of the activity which has characterized its existence in the last 6 centuries (the mining), Cavnic finds the power to provide the second largest income tax per capita in the county, right after the capital town of the county (150 lei/inhabitant, more than the second largest town of the county). The rural areas are characterized by a level of income tax per capita of up to 20 lei, except for Băiuț and Groșii-Țibleşului – a newly declared commune; the town of Târgu Lăpuş charges an income tax of 60 lei/inhabitant.

These are some of the advantages that this area has:

- A high number of administrative units benefiting by a gas distribution network: Târgu Lăpuş, Dumbrăvița, Copalnic-Mănăştur, Cerneşti, Cavnic. Almost all the settlements are connected to the potable water network, but a few of them also have a sewage system.

- This area is characterized by average values for all the other indicators considered, but this average is a result of very strong dynamics, thus, in this area we find extreme values, from maximum to minimum. The depopulation intensity ranges between 10-15%, with a maximum of -18.9% in the Băiuț commune; moreover, this area registers extreme values in the number of employees per 1000 inhabitants, from 288 in Cavnic and Băiuț to 24 employees per 1000 of inhabitants in Şişeşti, Cerneşti, Cupşeni, Lăpuş. The percentage of high-school graduates ranges within the county average levels (18-25%).

- The percentage of the population occupied in agriculture shows a considerable gap, from 5% in Cavnic and Băiuț to over 85% in Cupșeni and Vima Mică.

- The proportion of employees in the total number of active population also shows an intense contrast, from 120% in Cavnic and Băiuț to 50% in Târgu Lăpuş, and to under 15% in all the other administrative units.

	Advantaged area 4 (F4)	Development index
1	Târgu Lăpuș	50.5
2	Cavnic	51.3
3	Băiuț	50.6
4	Şiseşti	49.7
5	Dumbrăvița	49.8
6	Copalnic-Mănăștur	49.5
7	Vima Mică	48.0
8	Coroieni	49.5
9	Suciu de Sus	49.0
10	Lăpuș	49.8
11	Cupșeni	47.9
12	Cernești	49.5
	Advantaged area 4 average	49.6
	Town average (2)	50.9
	Communes average(10)	49.3

**Table 5.** The values of the development index for the administrative units in the advantaged area 4 (F4).

(Source: calculated data)

Some of the severe problems the advantaged area 4 encounters are the following:

- The entire advantaged area 4 (which includes Țara Lăpuşului) is crossed neither by national roads, nor by railway, the communication with the neighbouring areas being made by means of county roads, whose quality is within the national limits. Thus, it results the isolation character of this area.

- A modest tourist potential, only the Rohia monastery and the wooden churches in Şurdeşti and Rogoz are noticeable. The Țibleş and the Lăpuş gorges present a low interest. Lately, Cavnic has started to develop as a ski resort, appreciated at a national level.

#### **DISADVANTAGED AREAS**

The disadvantaged area have been individualized through the territorial reunion of all the administrative units with a development index lower than 49.5. For the tightness of the area, areas with values exceeding this level have been rarely introduced. As result, we can identify three areas with average values of the development index lower than 49.5 (see Tab. 1). These are located in the south-western extremity of the county, based mostly on Țara Codrului, and on the eastern slope of the Gutâi-Țibleş volcanic mountains and in the northern part of the Maramureş Mountains.

### Disadvantaged area 1 Ocna-Şugatag – Ruscova

This area is the most disadvantaged, having the lowest average development indicator: 48.4. It is entirely composed of communes (16 communes).

	Disadvantaged area 1 (D1)	Developing index
1 1	Bocicoiu Mare	49.3
2 1	Petrova	49.0
3 1	Rona de Jos	49.0
4 (	Ocna Şugatag	49.0
5 (	Călinești	48.8
6 l	Leordina	48.8
7 1	Rona de Sus	48.7
8 (	Giulești	48.5
9 1	Desești	48.4
10 l	Poienile de sub Munte	48.2
11 I	Bârsana	48.1
12 l	Repedea	48.0
13 I	Ruscova	47.9
14 l	Budești	47.9
15 l	Bistra	47.6
16 \$	Strâmtura	47.6
1	Average of the disadvantaged area	48.4
1	Average of the communes (16)	48.4

**Table 6.** The values of the development index for the administrative units in the disadvantaged area 1 (D1).

(Source: calculated data)

The disadvantaged area spreads from the eastern slope of the Gutai Mountains – the Mara Piedmont – the Iza Valley – the Iza-Vişeu interfluve – the Pop Ivan-Farcău Mountains (the northern part of the Maramureş Mountains).

The advantages which the authors have managed to identify are as follows:

- The tourist potential, natural and anthropic, are notably valuable: the Ocna-Şugatag spa, numerous wooden churches registered in the UNESCO World Heritage (Bârsana, Oncești, Budești, Giulești, Desești), the wooden gates specific to Maramures, the outstanding originality of the ethno-folkloric traditions, folk performances, folk art and traditional architecture, natural springs, winter sports resorts (Izvoarele, belongs to the commune of Desești) and other numerous natural objectives in the Gutâi Mountains (Creasta Cocoșului – the Rooster Crest, the Tătar Gorges, Tăul lui Dumitru – Dumitru's Pond) and in the Maramureș Mountains.

- Very high ratio of active population: over 50%, in some communes even over 60% (Bârsana, Strâmtura), this ratio being the result of a very high natural balance in the past (the 70s and 80s). This fact is shadowed by the high rate of population occupied in agriculture, over 80%. Almost all the communes have potable water supply facilities (excepting for Onceşti and Călineşti, which, in 2005, did not have such facilities).

Some of the problems this area confronts with are:

- The total balance sheet of the population is negative due to a natural deficit and also to a negative migration balance sheet. The affinity towards labor in foreign countries is very well known, especially in Italy, but also in Spain and in Portugal (Hotea, 2008).

- The depopulation intensity is highly emphasized, this phenomena has multiple causes: a negative natural balance sheet (due to the aging and high mortality of the population), as well as a negative migratory balance sheet.

- A very low number of employees per 1000 inhabitants, 45 on average, with maximum values in Ocna Şugatag, 105 employees/1000 inhabitants, and a minimum of 24/1000, in Strâmtura.

The number of high school graduates is very low due to the lack of financial income of the parents, elementary school graduates preferring to work in agriculture to help their parents. In conclusion, the labor force is poorly trained. The proportion of population occupied in agriculture constantly exceeds 65%, in some communes this share reaching the level of 90%: Giulești, Budești, Strâmtura, Repedea. The localities situated in the Mara Piedmont, on the Iza and the Vișeu Valleys, register a strong

process of population aging, the share of population over 60 years ranging between 19-26%. The housing stock corresponds to the county average, between 12-14 sqm/inhabitant, excepting the communes with Ukrainian majority, which register an average of 8 sqm/inhabitant, the lowest level in the county.

The share of employees in the total number of active population is the lowest in the county, excepting for Deseşti, with a rate of 17%; all the other communes have a share of under 15%, highlighting an acute lack of secondary and tertiary activities, but also a reduced entrepreneurial sprit.

The number of phone subscriptions is also one of the lowest in the county, 60 subscriptions per 1000 inhabitants on average; the low quality of live being emphasized by a chronic lack of communication ways (quality roads and railways). The poor state of the public infrastructure emphasizes the state of isolation and puts in danger the aggregate development of the community (and also the loss of tourist interest for this area); out of 16 administrative-territorial units, only 4 of them are connected to the railway system (without taking in consideration its quality).

# Disadvantaged area 2 Dragomirești- Săliștea de Sus

It is centered on the upper hydrographic basin of the Iza (see Figure 1), it is composed of 7 administrative territorial units (see Table 7), two of which are recently-declared towns: Dragomirești and Săliștea de Sus.

	Disadvantaged area 2 (D2)	Development index
1	Rozavlea	49.3
2	Botiza	49.2
3	Dragomirești	49.1
4	Ieud	48.7
5	Bogdan Vodă	48.3
6	Săliștea de Sus	48.1
7	Săcel	47.9
	Average of the disadvantaged area 2	48.6
	Average of towns (2)	48.6
	Communes average (5)	48.5

**Table 7.** The values of the development index for the administrative units in the disadvantaged area 2 (D2).

(Source: calculated data)

This area has also a valuable tourist potential, with the distinction that this potential is being capitalized, fact demonstrated by the presence of numerous guest-houses and agro guest-houses; the anthropic tourist potential is present through wooden churches, registered on the UNESCO World Heritage List (Bogdan Vodă, Ieud, Botiza), traditional wooden architecture, folk craftsmen centres and folk artists (Ieud, Săcel). Besides the town of Dragomirești, which did not record any accommodation facilities in 2005, all the other administrative territorial units register accommodation units as follows:

Săcel- 1 accommodation unit (a.u) with 8 beds, Rozavlea- 3 a.u with 30 beds, Ieud- 1 a.u with 5 beds, Poienile Izei- 27 a.u with 167 beds, Botiza- 17 a.u with 107 beds, Bogdan Vodă- 4 a.u with 24 beds, Săliștea de Sus- 5 a.u with 54 beds, Șieu (detached from Rozavlea)- 2 a.u with 8 beds. The data is taken from the statistical registers of the respective administrative territorial units in 2005. It seems that the inhabitants from this area realize the importance of tourism and capitalize the remarkable tourist potential they have. The development of tourism is encouraged by the investments in potable water supply networks (all the localities benefit by such facilities, and more than that, there are projects to extend them) and in sewage system.

Disadvantaged Area 2 faces the following problems:

- Population's low level of education is given by the extremely low share of college graduates, 15% on average (in 2002); moreover, the number of employees reported to 1000 inhabitants, except for Poienile Izei and Dragomirești- 100 employees/1000 inhabitants, demonstrates a poor use of human resource.

The intensity of depopulation is quite pronounced, -155 on average, with a maximum of -19% in Bogdan Vodă; the birth rate is very low, 7-8‰ on average, on the basis of a massive youth migration in search of a job in foreign countries, this fact being doubled by the population aging and thus, by the reduction of the fertility rate.

A very low rate of wage-earners in the active population, conjunction with a very high share of population occupied in agriculture, over 70%, with a maximum of 89% in Bogdan Vodă, shows the high rate of non-usage of labor force. The vast majority of the population occupied in agriculture is included in the statistical records under the form of *own courtyard worker*.

The precarious state of the infrastructure seems to be the constant characteristic of the county. This area is crossed only by a county road (DJ 186) along the Iza River. In Săcel, the national road 17C branches towards the Şetref pass and towards Moisei, respectively. In the commune of Săcel, there is one of the two railway stations in this area, Săcel detaching as a local communication hub.

#### Disadvantaged area 3 Ulmeni-Fărcașa

It lies in the south-western extremity of the county, including the entire part of Țara Codrului that belongs to Maramureş County and the southern part of Țara Chioarului (see Figure 1). This disfavored area (see Table 8) is composed of 14 administrative territorial units (if we take in consideration the newly declared commune of Gârdani) and includes a single town: Ulmeni (a recently declared town).

By-passed by important ways of communication, holding a peripheral position in physicalgeographical plan, but most of all in economic and human plan (economic and human flows), the disadvantaged area 3 Ulmeni-Fărcașa seems to have more weaknesses than strengths. If in the case of other disadvantaged areas tourism seemed a viable solution of development, in this case it does not seem that evident. This disadvantaged area is characterized by the existence of an intense depopulation phenomena (with county maximums) Băișa de sub Codru -31,6%, Bicaz -23,9%, Ariniş -19%, Oarța de Jos -17,8%, Boiu Mare -18,7%, Valea Chioarului -15%, other county maximums are reached in the share of elderly population, but also at the partial natural balance indicator: -19,6‰ in Bicaz, -18,8‰ in Boiu Mare, -17,5‰ in Ariniş, etc. The negative records continue also in the case of active population (under 30%, excluding the administrative territorial units along the Someş Valley).

The proportion of population occupied in agriculture exceeds 50% in the communes of Asuaju de Sus, Băița de sub Codru, Băsești, Bicaz, Valea Chioarului, Boiu Mare. This rate is very low in the case of Fărcașa, where the industrial activities are well represented, mostly because of the presence of Moeller factory (electrical components).

The share of employees ranges on average between 15-30%, in the case of the communes of Ariniş and Valea Chioarului, and 40%, in the case of the town of Ulmeni. A particular case is registered in the commune of Fărcaşa, with a strong representation of industry, where the percentage exceeds 100%, especially due to the opening of Moeller factory, which led to the creation of over 1000 jobs, attracting labor force from the neighboring communes and even from Baia Mare. This fact is

reflected very well through the growth of income of the population, as well as through a higher income tax paid, 120 lei, just like in the case of the second largest town in the county: Sighetu-Marmatiei.

	Disadvantaged area 3 (D3)	Development index
1	Sălsig	50.8
2	Ulmeni	49.9
3	Fărcașa	49.5
4	Ariniş	49.8
5	Mireşu Mare	49.5
6	Băsești	49.3
7	Valea Chioarului	49.3
8	Oarța de Jos	49.2
9	Boiu Mare	49.2
10	Ardusat	49.1
11	Asuaju de Sus	49.1
12	Bicaz	48.2
13	Băița de sub Codru	48.0
	Average of Disadvantaged area 3	49.3
	Towns average (Ulmeni)	49.9
	Communes average (12)	49.2

**Table 8.** The values of the development index for the administrative unitsin the disadvantaged area 3 (D3).

(Source: calculated data)

The housing stock is high, over 16 sqm/inhabitant on average, distinguishing Asuaju de Sus, Ariniş, Bicaz, Boiu Mare, with over 18 sqm/inhabitant, the county average being of 14 sqm/inhabitant. The villages from this region are endowed with potable water supply (except for the communes of Bicaz and Ariniş); Fărcaşa, Boiu Mare, Ulmeni, Valea Chioarului, Sălsig, Mireşu Mare, and Gârdani are connected to the natural gas network.

This area confronts an underdevelopment of infrastructure, being crossed only by the county road 108A, road that branches from Ariniş towards Cehu Silvaniei and towards Ulmeni-Benesat-Jibou.

There are two railway stations in this area: Ulmeni, railway station both for the express train and for the slow train (personal) and Mireşu Mare, railway station only for the slow train (personal). Railway infrastructure was built also between Ulmeni and Cehu Silvaniei, but it is not used. Some of the more isolated communes are Boiu Mare, Bicaz, Oarța de Jos, Băseşti, Băița de sub Codru, Asuaju de Sus.

# CONCLUSION

This study reiterates the enormous discrepancy between the rural and urban areas, but also between the county seat city and all the other urban settlements. Maramureş County is situated among the lowest points in the counties hierarchy, not only because of its limited extension and of the precarious condition of the physical and social infrastructure, but also because of the chronic lack of investment in this area. Economically, Maramureş is characterized by a domination of the population employed in agriculture (the number of which has increased from 5% to 38% between 1990 and 2007), in conjunction with a decrease in the number of population employed in the secondary sector (from 60% to 27%). Besides the agricultural peculiarity of the county, the extremely fragile economic peculiarity is also highlighted by one of the lowest nominal salary (lower by 40% than the national maximum, being situated in the antepenultimate position in the counties hierarchy; the last position is occupied by Covasna County, according to The Statistical Yearbook of Romania, 2007). In order to prove the enormous gap between the county seat city and the rest of the settlements in Maramureş, it is more than enough to say that Baia Mare produces 68% of the income tax in Maramureş. The degree of the aging population, over 20%, characterizes most of the county, the maximum of over 26% being

registered in Țara Codrului, while the youngest population is registered at the foot of the Maramureş Mountains (especially in the Ukrainian-majority settlements).

After determining the development index at commune level, we have managed to sketch 4 advantaged and 3 disadvantaged areas. The most advantaged area is individualized around the county seat Baia Mare, the rest of the advantaged areas being formed around the towns of Sighetu-Marmației, Borşa-Vişeu and Târgu Lapuş. The disadvantaged areas correspond mostly to the rural settlements, situated afar from the high-polarizing centers at the county level (Baia Mare and Sighetu-Marmației). These areas are situated in the Mara, Botiza, Iza and Moisei piedmonts (on the Iza upper valley), in the Maramureş Mountains and in the hilly areas of Codru and Preluca. In these disadvantaged areas, the isolation of many settlements, the extremely precarious technical and social infrastructure, as well as a serious lack in the quality and quantity of human resources (as we refer to demographically aged areas, intensely affected by migration and, generally, by an acute depopulation) stand out.

## REFERENCES

- ANCUȚA, CĂTĂLINA (2008), *Studiul geografic al disparităților teritoriale din Banatul românesc* [The Geographical Study of Territorial Disparities in the Romanian Banat], Editura Mirton, Timișoara.
- BOAR, N., (2005), *Regiunea transfrontalieră româno-ucraineană a Maramureșului* [The Romanian-Ukrainian Cross-border Region of Maramureș], Editura Presa Universitară Clujeană, Cluj-Napoca.
- BRAGHINĂ, C., PEPTENATU, D., DRĂGHICI, C., (2008), *The role of polycentric development in the management of severely disadvantaged areas*, in Revista Geographica Timisiensis, Timişoara.
- DEZSI, ŞT., (2006), *Țara Lăpuşului. Studiu de geografie regională* [The Lăpuş Land. Regional Geography Study], Editura Presa Universitară Clujeană, Cluj-Napoca.
- HOTEA, M., (2008), *Munții Maramureșului. Studiu de geografie umană* [The Maramureș Mountains. Human Geography Study], teză de doctorat, Cluj-Napoca.
- IANOȘ, I., (2001), Ariile profund dezavantajate din Romania. Considerații preliminare [Profoundly Disadvantaged Areas in Romania. Preliminary Issues], in Terra, București.
- IANOȘ, I., (1997), *Individualizarea și analiza disparităților intraregionale. Aplicație la județul Alba* [Particularization and Analysis of the Intra-region Disparities. Application to Alba County], in Comunicări de Geografie, București.
- IANOȘ, I., (2000), *Sisteme teritoriale, o abordare geografică* [Territorial Systems, a Geographical Approach], Editura Tehnică, București.
- IANOŞ, I., (2007), *Romanian experience in the defining of regional development policy*, in Prvi Kongres Srpskih Geografa, I, Beograd.
- ILIEȘ, GABRIELA (2007), *Țara Maramureșului. Studiu de geografie regională* [The Land of Maramureș. Regional Geography Study], Editura Presa Universitară Clujeană, Cluj-Napoca.
- PEPTENATU, D. (2005), *Studiul disparităților teritoriale în perspectiva descentralizării și dezvoltării regionale în Podișul Getic* [The Study of Territorial Disparities in the Perspective of Decentralization and Regional Development în the Getic Plateau], în Revista de Politică a Științei și Scientometrie, București.
- PEPTENATU, D., TĂLÂNGĂ, C., PINTILII, R., (2008), *Rolul sectorului antreprenorial în tratamentul ariilor profund dezavantajate* [The Role of Entrepreneurial Sector in the Treatment of Profoundly Disadvantaged Areas], in Comunicări de Geografie, București.
- PINTILII, R., PEPTENATU, D., DRĂGHICI, C., (2008), Rolul infrastructurii de transport a zonei de influență a municipiului București în dezvoltarea locală și regională [The Role of Transport Infrastructure of the Influence Area of București in Local and Regional Development], in Comunicări de Geografie, București.