

Dragomir, Vili; Dragomir, Nela; Ursu, Ana

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## Mitigation scenarios inequalities in rural West Region of Romania

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# MITIGATION SCENARIOS INEQUALITIES IN RURAL WEST REGION OF ROMANIA

DRAGOMIR VILI<sup>1</sup>, DRAGOMIR NELA<sup>2</sup>, URSU ANA<sup>3</sup>

## Abstract

*In this paper we present two scenarios to mitigate inequalities in rural Western region of Romania. The two scenarios are: a) **Scenario "Convergence and Territorial Cohesion – CCT"** Which assumes that the dependence decreases as circumstantial situations, the degree of homogeneity of economic performance and social and economic plans and social complementarity increases, the greater the impact of rural inequality combat scenarios. b) **Scenario "Competitiveness and social efficiency - CES"** Assumes that achieving economic growth and mitigates default does social inequality. Reducing inequalities requires specific growth factors inter-conditionality equipping and specific material wealth. Also, the higher the quality of demographic processes is greatly increased chance of reducing inequalities. In addition, reducing inequalities can be done by increasing the sustainability of investments.*

**Key words:** scenario, competitiveness, convergence

## INTRODUCTION

West Development Region is located in the western part of Romania's border with Hungary and Serbia, consisting of territorial administrative point of view of four counties: Arad, Caras-Severin, Hunedoara and Timis. The region has an area of 32 034 km<sup>2</sup>, accounting for 13.4% of the country and is comparable with Moldova and Belgium.

West Region includes all forms of relief its territory of Romania, which gives different living conditions and life for residents of the region, especially in rural areas. In rural West Region lives about 36% of the total population of the region. The rural population is facing a demographic aging due to massive migration of young people from villages to cities, which took place during the period 1960-1985 forced industrialization and the low birth rate recorded in recent years. However, the rural population of the West Region recorded increases, the largest migratory balance being Timis, Arad followed.

## MATERIALS AND METHODS

Economic activities taking place in rural areas are very poorly diversified economic life of the village in the West Region is dominated by agriculture. Industry sector is economically less developed rural areas. Thus, recently, an alternative source of income to obtain employment and represent rural tourism and agro tourism.

Also, rural entrepreneurship is little developed. Fields of business, mainly micro-enterprises, are restricted main economic activity which is carried out by trade. Also, bear in mind that the development of industrial and service activities in rural areas requires prior development of access infrastructure and utilities necessary for both economic activities and to provide a comfortable living population in these areas.

## RESULTS AND DISCUSSIONS

Scenario CES is based on strategic choices:

A. **economic development** increasing competitiveness;

B. **social development through** social welfare growth;

C. **development of utilities by** increasing material wealth.

The indicators selected to influence these options are:

<sup>1</sup> Dr. eng. Scientific Researcher III - Research Institute for Agrarian Economy and Rural Development

<sup>2</sup> Dr. eng. Lector - University of Agronomic Sciences and Veterinary Medicine – Bucharest

<sup>3</sup> Dr. eng. Scientific Researcher II - Research Institute for Agrarian Economy and Rural Development

### 1. Indicators for "competitiveness"

- number of employees / 1000 inhabitants
- average number of accommodation / accommodation

### 2. Indicators for Social Development

- number of dwellings completed in 2008/1000 existing housing
- Residence/1000 balance changes people.
- enrolled students / teacher
- population / physician

### 3. Development Indicators of utilities

- amount of drinking water supplied to domestic consumers
- Length of sewerage network

Mitigation strategy for inequalities in rural Western region was based on an extensive analysis of indicators needed to achieve this. Following this analysis was performed and framing rural localities in clusters.

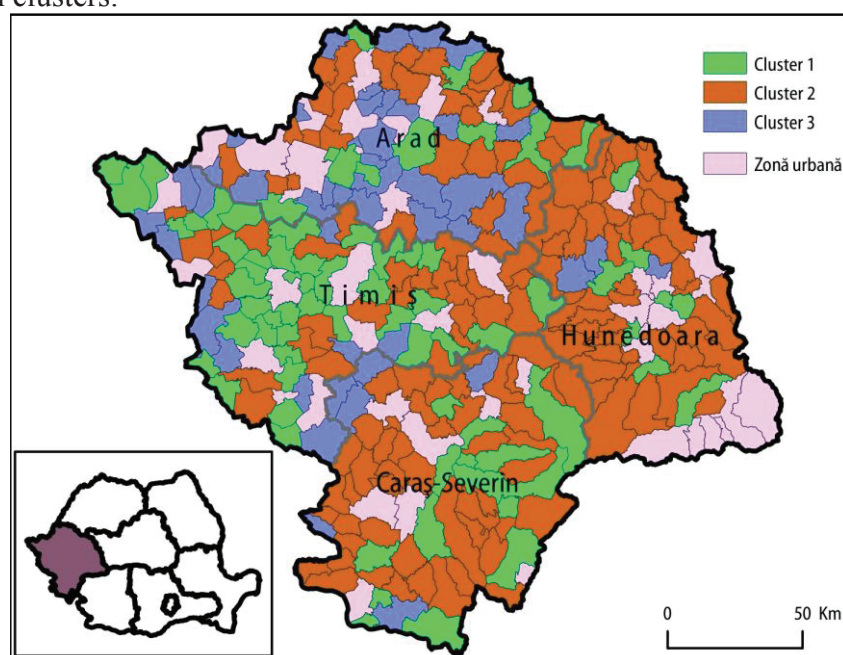


Figure 1 – Cluster classification in Western Region

Table 1 - Average values indicators and clusters

	No. salariati/1000 people	No. environment places / accommodation	No. localities
Cluster 1	159.4	15.0	78
Cluster 2	85.0	1.2	156
Cluster 3	94.9	3.6	45

Analysis of the number of local clusters, shows that, out of 279 villages in the region, 78 are found in cluster 1 (28%), 156 localities in cluster 2 (56%) and 45 towns in cluster 3 (16%).

#### 1. Economic development - indicators:

- a) Number of inhabitants salariati/1000
- b) Average number of accommodation / accommodation

#### a) Number of inhabitants salariati/1000

In 2008, the number of employees in the Western region was 105.7 inhabitants salariati/1000, 34.8 (49%) employed more than the national. However, this indicator is very low, indicating high unemployment, and a large number of people with social income, or income from

agriculture (subsistence), with serious implications for living standards and purchasing power of the rural population. It is however noted that the analysis region have resulted in 2008 localities with zero value of this indicator. The highest value was found in the town Buchin, Caras Severin, with 931.5 salariati/1000 inhabitants, while the minimum value is found in the town Luncavita, also Caras Severin and 18.6 salariati/1000 people.

#### **b) Average number of accommodation / accommodation**

Tourism capacity region is given by the average number of indicator analysis places / accommodation, which is very close to the national value respectively to 5.1 and 5.3 to the national average regional average. Analyzing more detail this indicator, it was found that the total number of 279 cities, 230 of them have tourist accommodation units, which is approximately 82%. Percentage is quite high, given that there is huge tourism potential in the region, the potential is not exploited and that could improve the incomes and therefore the purchasing power of the rural population and the manner and quality of life.

### **Specific objective - development of economic activities in rural areas**

**Priority** - *Superior capitalization of tourism potential of rural areas and support rural entrepreneurship*

Development and diversification of economic activities in rural areas and increasing employment through enterprise development and job creation is the key to maintaining and rural welfare.

One of the fundamental problems facing the rural economy is the impact of the restructuring of agriculture and the need to diversify default and rural economic growth in non-agricultural sector. Farm diversification and local economic orientation towards non-agricultural sector is not only a logical response to market demand, which is changing, but will also help to absorb surplus labor released from economic sectors become inactive (eg mining) or returned labor resources in rural areas.

Supporting entrepreneurship in rural areas will aim high and balanced exploitation of tourism potential through service professionalization and development especially the types of tourism in the area considered, namely agro-tourism, mountain tourism, cultural tourism and historic etc. and all their components. Tourism is an important economic sector in rural areas, the complexity and the potential to support other economic sectors and local culture by making specific local products and services and promoting opportunities for rural areas.

**Table 2 - Average values indicators and clusters**

	<b>Balance changes of residence / 1000 inhabitants</b>	<b>Houses completed in 2008 / 1000 existing housing</b>	<b>No. localities</b>
Cluster 1	23.2	12.7	78
Cluster 2	8.3	1.6	156
Cluster 3	8.5	1.6	45

#### **2. Development social - indicators:**

- Number of dwellings completed in 2008/1000 existing housing
- Balance changes domiciliu/1000 people

- **Number of dwellings completed in 2008/1000 existing housing**

Number of dwellings completed in 2008 was 4.6 residential /1000 existing housing with 2 existing dwellings locuințe/1000 less than the national value. Of intra-regional analysis revealed that a number of 131 municipalities (47%) did not complete any home in 2008, the remaining localities ranging from 1 to 182, resulting in a series of differences from one place to another, in the same county as well as the total region.

- **Balance changes domiciliu/1000 people**

Changes in socio-economic structure of Romania led to an intense territorial mobility of population, with direct consequences in changing the number and socio-demographic structure of

the population in territorial. Regarding changes balance domiciliu/1000 people in the western region it is found that their number is nearly 2.7 times higher than the national average, with a figure of 12.3 %. On the segment of the population that is willing to change his domicile, there is a young population migration to areas with higher potential, especially in terms of the labor market. This phenomenon is due to factors such as greater labor market opportunities in other areas (especially urban) attractive salary level, schools etc concentration.

**Specific objective - sustainable rural development by improving social and infrastructure development**

**Priority - *Creating new housing, to improve the quality of life of rural population***

The measures will focus on creating new housing, to increase the comfort of living of the rural population, which, in conjunction with other actions in the economic development and create new jobs, will decrease the migration of the rural population.

**Table 3 - Average values indicators and clusters**

	<b>Enrolled students / teacher</b>	<b>No. population / 1 doctor</b>	<b>No. localities</b>
Cluster 1	9.4	1237.7	78
Cluster 2	8.2	1323.3	156
Cluster 3	10.2	1493.9	45

**3. Social efficiency**

• **Students enrolled /teacher**

The analysis of this indicator quite important, given that it is one of the indicators of system resources for education and vocational training shows that the regional average is lower than the national one, which is not a bad thing, but rather , given the fact that the higher this value is lower, the more increase the quality of education. Regarding the distribution of rural communities as number of students enrolled / teacher, they note that the total of 279 communities, only 3 of them are equipped with schools, or about 1%, these being found in counties Hunedoara (2 locations) and Caras Severin (one location), and the maximum value is 18.36, the common Biled, Timis County.

• **Number of inhabitants / doctor**

National average for the number of inhabitants is 1947 inhabitants doctor / physician, while the regional average is 1,313 inhabitants / doctor, with 634 less. In 80% of the total common people per one physician exceeds the national average is 18% of the joint is below the regional average. Extremely disadvantaged communes are grouped in Caras-Severin, Hunedoara and the eastern counties of Timis and Arad. Number of locations that do not have hospitals is 42, or about 15%, and valaorea highest is found in town Satchinez, in Timis County with 4751 inhabitants / doctor 2.4 times higher than the national average and 3.6 times higher than the regional average.

**Specific Objective - Improve the quality of life in rural areas through targeted assistance**

**Priority - *Provision of access to rural health services and education level of the urban***

**Measures:**

- Provision of access to health services through the creation and modernization of rural clinics and providing medical facilities;
- Provision of access to education services

**Table 4 - Average values indicators and clusters**

	<b>Quantity of drinking water delivered to consumers household mc / place</b>	<b>Long of simple distribution drinking water network - km</b>	<b>No. localities</b>
Cluster 1	37.2	19.3	78
Cluster 2	11.3	8.6	156
Cluster 3	8.8	7.3	45



#### 4. Development of utilities

- **The amount of household drinking water supplied to consumers (m<sup>3</sup> / capita)**

In terms of access to the water for domestic, rural population of western region has benefited from a better supply, the average amount of water being supplied to consumers in 2008 of 17.7 m<sup>3</sup> / capita in this region compared to only 14.8 m<sup>3</sup> / capita at the national rural assembly. Although the whole Western region, the amount of drinking water supplied to households is higher than the national level, however, only 34.8% of the communes have managed to achieve an overall water supply above the national average. Housing facilities with plumbing is relevant in assessing their comfort level, the existence of these facilities allowing civilized lifestyle that offers a quality guarantee proper water and the possibility of modern spatial dependencies (bathroom, toilet, kitchen with water current). Problem running water for rural communities is not only a comfort factor but also a safety factor of health. Whose rural public water networks fail to provide the highest level of water supply to residents are: Zerind (140.3 m<sup>3</sup> / capita), Ghioroc (90.1 m<sup>3</sup> / capita), Brebu New (263, 1 m<sup>3</sup> / capita) Santamaria Orlea (42.4 m<sup>3</sup> / capita) and is located in Arad, Caras-Severin and Hunedoara. Highest risk of access to sources of drinking water household is recorded in Teregova communes, Sopotu New Vermes (located in Caras-Severin) the amount of drinking water supplied is very small or lacking supply drinking water.

- **Length of the drinking water distribution network - km**

In Romania mains drinking water in rural areas is much less extensive. The data analysis revealed that the vast majority of the rural population is supplied with water from individual sources (wells and groundwater wells), which in most cases is not adequate water quality with high concentrations of nitrates and organic matter, well above the norms for drinking. Length of the drinking water distribution network in the Western region is located above the average national level, ie 12.3 km. Following this analysis, it was found that about 56% of the total of 279 municipalities analyzed in the West do not have drinking water distribution network, which adversely affect quality of life in rural areas. Thus, Arad County, in 2008 there were a total of 12 communes, in Caras-Severin 35 common 29-common in Florida and in Timis County, a total of 83 communes not connected to the water supply network.

#### **Specific objective - rehabilitation and development of rural basic public**

**Priority** - *Modernization, expansion or establishment of public utility networks basic physical infrastructure of public services and cultural infrastructure*

Modernization and expansion of basic rural physical infrastructure directly affects the development of the social, cultural and economic and thus creating employment opportunities. Existence and good technical condition of road infrastructure are essential for socio-economic development of rural areas. They can decisively influence the development of new investment and local economic development.

It also provides municipal infrastructure, in addition to more attractive economic environment, a high quality of living in rural areas.

Will develop drinking water distribution networks will be rehabilitated and / or resize water production facilities will extend public sewer network will be built wastewater treatment plants, will expand natural gas distribution network and so on

By developing cultural infrastructure creates the potential development of the tourism sector, improves natural and anthropogenic landscapes and contribute to an overall picture of the countryside attractive for potential investors and young people.

#### **Scenario 2 CCT**

Scenario CCT is based on the following policy options:

**A. Territorial convergence** - to reduce gaps and discrepancies preventing intraregional.

**B. Territorial Cohesion** - to ensure equal opportunities, ensuring polycentric development and the emergence of secondary poles, ensuring balanced and sustainable development of rural areas with different characteristics and specificities, allowing their diversity conservation.

The indicators selected to influence these options are:

**1. Territorial convergence indicators:**

- salariați/1000 number of inhabitants
- % Area covered by vineyards and orchards in the total agricultural area
- PC/1000 inhabitants

**2. Indicators for Territorial Cohesion:**

- residence/1000 balance changes people
- migration balance externe/1000 people

**1. Territorial convergence**

**Table 6 - Average values indicators and clusters**

	<b>PC/1000 place.</b>	<b>No. employees / 1000 inhabitants</b>	<b>% Area vineyards and orchards in total agricultural area</b>	<b>No. localities</b>
Cluster 1	8.1	159.4	1.9	78
Cluster 2	8.7	85.0	1.6	156
Cluster 3	7.8	94.9	1.7	45

• **PC/1000 inhabitants**

Because rural areas, population density is low, the cost of information infrastructure is high and purchasing power is very low, the number PC/1000 inhabitants is relatively low, only 8.3 Western region, with approximately 5 % higher than the national average. However, only 18 of rural Western region do not have any PC (2 locations in Caras Severin, 4 cities in Arad, 5 cities in 7 localities in Timis and Hunedoara). The highest value of this indicator can be found in town Gurahonț, Arad County, 27 PC/1000 capita (3.4 times higher than the national average)

• **Number of inhabitants salariați/1000**

In 2008, the number of employees in the Western region was 105.7 inhabitants salariați/1000, 34.8 (49%) employed more than the national

However, this indicator is very low, indicating high unemployment, and a large number of people with social income, or income from agriculture (subsistence), with serious implications for living standards and purchasing power rural population. Note, however, that the analysis region have resulted in 2008 localities with zero value of this indicator. The highest value was found in the town Buchin, Caras Severin, with 931.5 salariați/1000 inhabitants, while the minimum value is found in the town Luncavita, also Caras Severin and 18.6 salariați/1000 people

• **Percentage of area occupied by vineyards and orchards in the total agricultural area**

As expected, and this indicator is closely related to the percentage of arable farmland in the region, following the same path, meaning that the regional average is less than the national average of 1.7% respectively compared to 3 4%. In the distribution of rural communities as percentage of area occupied by vineyards and orchards, only 27.2% of them are found above the regional average and 81% below the national average.

There are a total of 85 municipalities that have no areas with vineyards and orchards, most of them being found in Hunedoara County (37 locations), followed by Arad (29 cities), Timis (10 localities) and Caras Severin (9 locations).

**Specific objective - economic potential by improving the business environment and develop a sustainable agriculture based on modern technology**

**Priority - Business development and agriculture**

- support existing operators and attract new investors;
- Development of services;

- Computerization of local public services in order to increase the efficiency of the administrative and create complete database, which will be made available to potential investors;
- Encouraging farmers to form association of medium-sized agricultural associations, in order to increase the efficiency of agricultural activity;
- Supporting local producers who want founded agricultural products processing units.

## 2. Territorial cohesion

**Table 7 - Average values indicators and clusters**

	<b>Balance changes of residence / 1000 inhabitants</b>	<b>Balance change of residence / 1000 inhabitants</b>	<b>No. localities</b>
Cluster 1	23.2	7.0	78
Cluster 2	8.3	-1.8	156
Cluster 3	8.5	-0.7	45

- **Balance changes domiciliu/1000 people**

Changes in socio-economic structure of Romania led to an intense territorial mobility of population, with direct consequences in changing the number and socio-demographic structure of the population in territorial. Regarding changes balance domiciliu/1000 people in the western region it is found that their number is nearly 2.7 times higher than the national average, with a figure of 12.3 ‰. On the segment of the population that is willing to change his domicile, there is a young population migration to areas with higher potential, especially in terms of the labor market. This phenomenon is due to factors such as greater labor market opportunities in other areas (especially urban) attractive salary level, schools etc concentration. Analyzing the data by county is found that the maximum value was reached in 2008 in Timis county, city Secas, with 220 inhabitants domiciliu/1000 changes and the number of localities where there were no changes of residence was only 7 localities (one in Timis county, one-Severin county cars, one in four localities in the county of Arad and Hunedoara).

- **Reședință/1000 changes balance inhabitants**

Changes of residence in the West have a positive balance of 0.7 ‰, Approximately 5 times higher than the national average, negative otherwise. Analyzing in detail the indicator stem a series of intra-regional disparities, with large differences between maximum and minimum limits. Thus, the minimum value of this indicator is -31.02 ‰ in town Sopotu New Caras Severin county, while the maximum value is 247.3 ‰ and is found in the same county, New Brebu town. In the entire region, only six municipalities have a balance of zero change of residence.

### **Specific objective - development of human resources**

**Priority -** Supporting the adaptability of the workforce to current demands of the rural economy

Need training activities occur in the context of related products and increasing competitiveness and diversifying economic activities in rural areas, agriculture, restructuring and modernization of the agricultural sector of the processing and marketing of agricultural products by encouraging market-oriented business, the requirements for a wide range of economic and management skills, as well as achieving the objective of sustainable land management and environmental protection, the application of environmentally friendly technologies and practices and the use of renewable energy.

Therefore, it is necessary that training activities, information and diffusion of knowledge to be extended to adults who are involved in areas related to agriculture and food industry. Training activities, information and diffusion of knowledge are also needed in disadvantaged areas naturally, where continued agricultural activity contributes significantly to maintaining the viability of rural areas.



Labor resources made available from other economic restructuring, are a special case, and their adjustment problems need to be addressed specifically and with priority.

## CONCLUSIONS

After analyzing indicators presented have synthesized several conclusions:

**a) in terms of territorial equipment:**

- In the region of the comfort of living is higher, the higher regional average of 2.9 m / capita compared to the national average;
- Houses constructed from durable materials with adequate facilities are above the national average;
- The relatively small number of localities that have drinking water and natural gas;
- Inadequate water treatment systems, collection and recycling of waste;
- Inadequacy of utility infrastructure needs and standards required by the population

**b) In terms of economic size:**

- Region has four airports, two of which are international
- Railway density is higher, the region being second in the country after Bucharest - Ilfov, being crossed by three international railway lines;
- The existence of five European roads of strategic importance
- Areas with high tourism potential (especially in mountain areas), the region accounting for a high proportion of business tourism market and transit;
- Various forms of relief, allowing practicing all forms of economic activity;
- Farming tradition;
- Good quality land in the lowlands;

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