

Covasna county in the mirror of economic, social, environmental factors

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Abstract

Globalisation means new challenges to Covasna County's economy, society and environment. We can observe regional disparities and unresolved economic and social problems in the region. Sectors, which represent the province's competitive advantage, such as a medical tourism, agricultural production, need further improvements in order to encourage real economic growth. For inducing development in the economic space the improvement of good quality infrastructure, businesses based on local resources and the innovation are essential. Covasna County is rich in environmental values, which are important to be managed in a more targeted way, due to the increasing value of untouched nature, clean air. The local initiatives increase the value of both rural and urban space and contribute to the increase of attraction of the space; however, in order to promote real economic development of the area, the needs and expectations of the region must be taken into account and competitive products must be created. Covasna County cities are now competing for investors, external resources and to obtain development resources. In this process the economic, social and environmental aspects of cities are very important. These factors greatly affect whether Covasna county cities get to the winning or the losing side of the competition. It is a great challenge to highlight the unique values of a region and further develop competitive advantages from them.

Keywords: regional disparities, sustainability, competition, local resources

JEL Classification: GE11

1. Introduction

The economic, social and environmental challenges of globalisation had a great impact on Covasna county in the 21st century. The current situation, since the economic crisis in 2008, can be characterised by **growing regional inequalities** and **unsolved economic problems**. In our opinion the path of development is determined by new conditions and challenges. One of the development opportunities of our society is the proper management of common financial and other types of resources (GYÖRGY, 2007; KÁPOSZTA-NAGY, 2014; KÁPOSZTA-NAGY, 2015).

The current topic was chosen for analysis due to the fact that a development process have started recently, which does not have the same impact on all the parts of Covasna county; there is a significant disparity among its settlements, and the reason behind this process is a complex interrelation of economic, social and environmental factors. During our investigation it was our goal to shed light on these processes in Covasna county, to analyse these economic, social and environmental factors and to investigate the development strategy of Covasna county. This way an objective side could be established about the development level of the county, and also about the trends and possible future changes.

1.1 The general introduction of Covasna county

The total area of Covasna county 3,705 km² and it lies in the mid-areas of Romania, being part of the Central Development Region. It is the smallest county in its region of Romania considering both its population number and size. There are five larger towns in the county:

two with the rank of municipality – Sepsiszentgyörgy and Kézdivásárhely –, and three others, namely Covasna, Barót és Bodzaforduló. There are 40 smaller towns and 122 villages in the county as well (BOTOS, 2005).

The county has a large agricultural area, which is more than half (50.3%) of the total area. The majority of the population (210,000 people based on data from the census of 2011) lives in rural or near-rural areas, and 109,366 of them live in rural areas. The population density of the county is 55.6 people per km², which is lower than the country average. From a nationality perspective 22.09% of the population are Romanians, 73.59% are Hungarians, 3.99% are roma, 0.05% is Germans and 0.1% has other nationality (insse.ro, 2015).

The economy of Covasna county is an open one with competition between the actors of the economic sphere. The amount of GDP produced in Covasna county fluctuated between 2007 and 2014, similarly to the economic situation of the whole regions.

Table 1: The amount of GDP produced in Romania, in its Central Development Region and in Covasna county LEU million

	2008	2009	2010	2011	2012	2013	2014
România	514700	501139	523693	556708	585239	623314	660568
Központi	57303	57100,9	59120,1	63669,2	67889,6	72266	76570,6
Covasna	4042,3	4030,3	3839,1	4068,4	4177,3	4451,6	4709,1

Source: National Institute of Statistics (INSE), 2014

The number of employed people was 45,858 in May 2014, from which 24,000 worked in the industry or services sectors, 20,000 in the field of construction and the rest in the agricultural sector. The net income in Covasna county was LEU 1,241 in May 2014, which is 26% less than the country level average net income (LEU 1.682). The total annual revenue of the companies found in Covasna county is EUR 1.1 billion based on data from the National Institute of Statistics (morfondir.ro, 2014). Land use categories of the county are divided as follows: arable land (22.5%), pasture (16.5%), meadows (11.0%), vineyards and orchards (0.3%), forests (44.5%), water surfaces 5.2% (2009) (insse.ro, 2014).

The most important plants produced in the county are the following: cereals, sugarbeet, potato and vegetables. Compared to the country level, Covasna county produces 1.27% of cereals, 19.05% of sugarbeet, 9.25% of potatoes and 0.76% of the vegetables from the total production amount. The total production value in agriculture on country level is LEU 76.5 billion, from which the county produces 1.73%. From the total animal husbandry production value Covasna county accounts for 1.52%, and from the plant production this value is 1.83% (morfondir.ro, 2014).

The length of the road network in Covasna county is 840 km (road density: 22.6 km per 100 square kilometers). The length of the railway network is 116 km (insse.ro, 2014)...

Covasna county possesses 1.8% of the total tourism and catering units of Romania. 65.93% of its tourist accommodations are boarding house, 16.48% are hotels and 5.49% are motels. From all the accommodations in the country the county has 1.45%. The main forms of tourism are: medical tourism, rural tourism, mountain tourism, cultural- and free-time tourism.

2. Material and methods

The study deals with the complex space of Covasna county from economic, social and environmental perspectives; therefore, the spectrum of the analysis is very wide.

The basis of the study is the review of literature dealing with previous investigations in similar topics regarding to this region.

The other main source was the statistical data. The source of economic and social data was mainly the Romanian National Institute of Statistics. These factors were investigated from the time period between 2007 and 2014. Besides the statistical data we analysed literature about Covasna county and the Central Development Region. The development strategies prepared for the region, the county and the towns with special attributes got greater emphasis. To shed more light about the situation of the county, the situation of the whole region and the country was analysed too, to establish the background of the situation analysis.

We prepared and used questionnaires, as well as SWOT analysis for our regional analysis. From the data gathered the study focuses on those deemed the most relevant. Zipf formula (about the rank and size of settlements) analysis and Lettrich-type employment structure categorisation were also conducted to see interactions between towns inside the county.

3. Research results

The development level of a region is affected by complex economic social and environmental factors. During the investigation regarding to Covasna country we intended to find out more about these impacts.

3.1 In urban environment

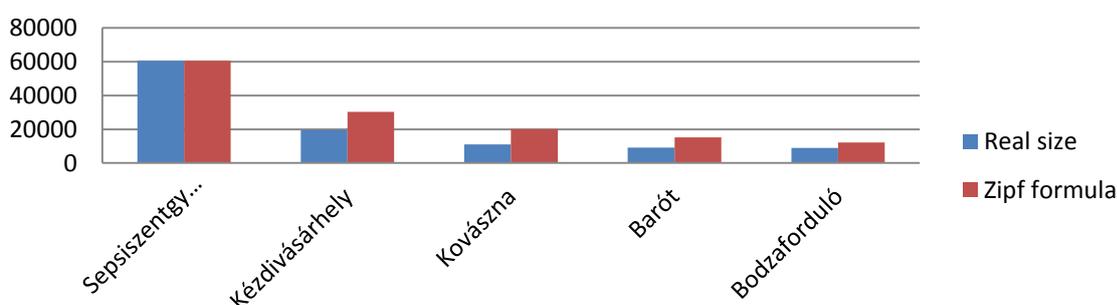
There are five towns inside Covasna county, from which two, Sepsiszentgyörgy and Kézdivásárhely, have municipality rank.

Judging by the economic characteristics of the towns we can establish that their economic roles and weights are changing. Industries employing significant amounts of people disappeared, became insignificant or transformed, which resulted a steep increase in the unemployment levels and economic development halted (RITTER, 2014).

By using the Lettrich formula we could see how the employment structure has changed and that which categories the local towns belong to according to their most important economic sectors. Based on the available data we can state that the tertiary sector took the leading role in the county, having more employed persons than industry.

There are 109,119 people living in towns in the county, which is 49.41% of its total population. The rank-size rule (Zipf-formula) was applied to these towns to investigate the relationship between their sizes and ranks (Figure 1).

Figure 1: The values and the values provided by the Zipf formula shown by the towns of Covasna county



Source: The authors' own editing based on data from National Institute of Statistics (2014), 2015

Based on the rank-size rule it can be established that the town structure of Covasna county is a primacy type network, because the real values stayed below the values the Zipf-formula produced.

It is typical for primacy type networks that:

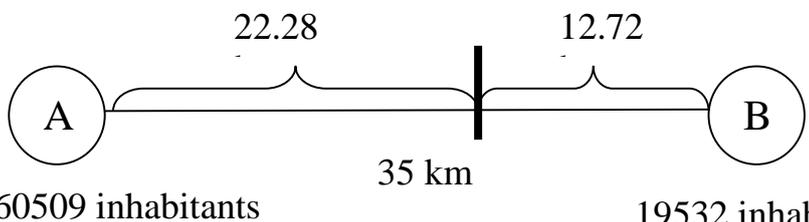
- settlements of such networks have not been urbanised for long,
- they have relatively simple political and economic structures,
- the past their dominant settlements are very significant (NAGYNÉ MOLNÁR, 2014).

The towns of Covasna county are also historical micro-regional centres (Sepsiszek – Alsóháromszék – Sepsiszentgyörgy, Kézdiszek-Felsőháromszék – Kézdivásárhely, Orbaiszek – Covasna, Erdővidék – Barót), where the administrative and economic functions are focused. These towns, being part of the same settlement-network, have strong relationships with each other and with the smaller settlements in their environment, but also with settlements outside the border of the county.

Every settlement has a certain gravitation power based on their resources. The towns of the county differ judging by their economic development levels and population numbers as well. With the help of a gravitation model we could analyse the gravitation power of the county seat and the other towns. In the current study the gravitation effects between Sepsiszentgyörgy and Kézdivásárhely, and between Sepsiszentgyörgy and Barót, are demonstrated.

A- Sepsiszentgyörgy

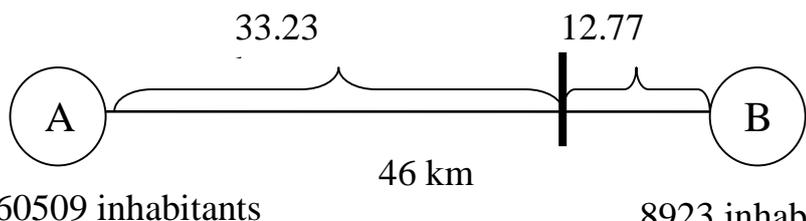
B- Kézdivásárhely



The distance of the threshold from town B = $\frac{\text{distance between towns A and B}}{1 + \sqrt{\frac{\text{The population number of settlement A}}{\text{The population number of settlement B}}}} = \frac{35 \text{ km}}{1 + \sqrt{\frac{60509}{19532}}} = \frac{35}{2,75} = 12,72$

A – Sepsiszentgyörgy

B - Barót



The distance of the threshold from town B = $\frac{\text{distance between towns A and B}}{1 + \sqrt{\frac{\text{The population number of settlement A}}{\text{The population number of settlement B}}}} = \frac{46 \text{ km}}{1 + \sqrt{\frac{60509}{8923}}} = \frac{46}{3,60} = 12,77$

By observing the results of the gravitation model it can be seen how the population number (social factor) and the geographic position (environmental factor) of a settlement affects its gravitation power. Based on the calculations, Sepsiszentgyörgy has the largest gravitational power in Covasna county. The town is at the top of the settlement hierarchy of Covasna county – the county level administrative institutions, the majority of workplaces, the highest level of infrastructure and the greatest attractive power for investors can be found here. The town has a very advantageous geographical situation – it lies 34 km from Brasov, one of the most dynamically developing city of the Central Development Region. The towns of Covasna county compete for investors, for gaining new (financial) resources. The economic, social and environmental factors are very important in this process. These factors have a great impact on whether the towns of Covasna county get to the winner side of the competition, or become losers.

According to György Enyedi (1997), a successful city is able to change its economic structure, it is based on knowledge-based production and high innovative abilities, it provides technologically advanced environment. It is also a place for decision-making and it possesses a large external network.

3.2 The evaluation of the questionnaires

The questionnaire contained 21 questions. We gathered six types of information, which were categorised as follows: personal data, jobs, employment opportunities, commuting, satisfaction with life quality, development opportunities, the openness of locals and their involvement in development processes.

The survey was conducted in two of the towns: Barót and Kézdivásárhely. 33 questionnaires were filled out in Kézdivásárhely and 23 in Barót.

The distribution of the responders by gender: 57% female and 43% male in Barót, 64% female and 36% male in Kézdivásárhely.

Table 2: The distribution of the population based on education levels

Education level	Barót	Kézdivásárhely
Primary school or lower	4%	
Secondary school	39%	30%
Non-technical secondary school	26%	46%
Higher education	31%	24%

Source: Own data collection via questionnaires, 2015

Table 3: The income levels of the households investigated

Income levels	Barót	Kézdivásárhely
No income	-	-
Below LEU 500	4%	3%
Between LEU 500 and 700	9%	15%
Between LEU 700 and 1000	31%	22%
Above LEU 1000	56%	60%

Source: Own data collection via questionnaires, 2015

From the responders 68% works in the settlement and 32% works in other areas in the case of Barót. In Kézdivásárhely 64% works in the settlement, the rest is 36%. From the ones employed in Barót think that they have a chance to change jobs; in Kézdivásárhely the result was 63%.

When discussing the development opportunities the economic and infrastructural development projects were held the most important ones by the locals.

3.3 In rural environment

The majority, 87.02% of the total area of Covasna county belongs to the countryside (with its 40 smaller towns and 122 villages). We can observe the impact of economic, social and environmental factors at every element of the rural space.

The majority of the active population of the rural areas commutes to the nearby towns, while the ones working at home work in the agricultural sector (animal husbandry, plant production), and only a very few people try to make a living from operating an enterprise. The human capital of the rural areas is very poor, because people with higher education leave the region to find better jobs and wages. The population of the rural areas is aging.

The natural values are plentiful in the rural space. Biodiversity is high; there are large forests with unique, protected animal and plant species. Many protected natural areas can be found in Covasna county, such as the Rétyi Nyíri Nature Conservation Reserve (which is called the Sahara of Háromszék by Balázs Orbán). Well springs and unique natural landscape elements are not unusual either (such as the Almás cave in Vargyas).

There is a large extent of built cultural values in the region as well, such as mansions in Bikkfalva and Réty, szekler gates, monuments and churches (for example, the church of Gelence with paintings about Saint László; the church of Szacsva from the 14th century; the castle-church of Illyefalva and the church of Vargyas).

The values and opportunities of the rural areas in Covasna county are not utilised properly by the local communities. Although these elements would provide perfect basis for rural- or medical tourism, the locals are not prepared to use them appropriately due to the lack of expertise and capital.

3.4 The evaluation of the questionnaires

From the rural settlements 20 questionnaires were filled out in Előpatak 20, 15 in Kézdiálmás, 12 in Réty and 11 in Szacsva. The reason why these settlements were surveyed is the following: Előpatak, Réty and Szacsva belong to the gravitational area of Sepsiszentgyörgy, and Kézdiálmás belongs to Kézdivásárhely's (which are the two most developed settlements in the county).

The surveyed settlements have unique resources. Előpatak is famous for its excellent well springs, which were famous even in the 19th century of Europe. This fame has faded since then, however, because the current political system moved the medical institution from this settlement to some other place.

4. Conclusions

During the investigation of the urban and rural areas of Covasna county our aim was to analyse the complex impacts of the economic, social and environmental factors.

The level of economic development is affected by the social problems, and this process is further affected by environmental characteristics (NAGY, 2009). Economic, social and

environmental factors of the settlements also have great impact on their abilities to compete for financial resources. The **success of the settlements** of Covasna county depends on their ability to utilise **local resources**, the way they can develop their natural and built environment, their ability to improve their **human resource**, and the way they utilise European Union and national financial resources for local development. Local governments.

The county has towns being more disadvantageous than the others. One of them is Barót, which faced unemployment and decreasing economy after its coal mine was closed. This resulted its separation from more developed towns and cities (Sepsiszentgyörgy, Brassó) and worsening infrastructural endowment. Measures to attract and create new enterprises brought success initially, but economic units not preferred by the European Union (especially in the field of meat production) closed. Kézdivásárhely has better economic endowments, but a large scale economic reconstruction was brought about here, which resulted better infrastructural endowment by now, more openness from the people and better environment. However, we can find significant problems due to the emigration of youth (especially well-educated ones) in both investigated economic spaces.

One of the primary problems of the **rural space** is the lack of great volume investments (due to low-level infrastructure); therefore the local financial resources are not abundant. In the case of rural settlements along international roads and railways we can observe more activities aiming to stimulate the economy. The level of expertise, their knowledge and enthusiasm to develop local communities of settlement leaders contribute a great deal to the development of settlements and to achieve sustainable development.

Kézdialmás is a positive example for the previous phenomenon. Thanks to the cooperation of the management and the civilians the settlement could initiate proper development activities.

Measures aiming to support local farmers were carried out, beside the creation of local enterprises. Also, the built environment and infrastructure have also been improved recently, thanks to mainly EU and national financial support.

One of the negative examples is Előpatak, which used to be famous for its medical tourism, having a fully equipped and renovated medical center; however, due to higher level political decisions the institution has been moved to another place. The current (much smaller) medical center was built as part of the Borvizek (wine-waters) project which included many settlements from Hargita and Covasna counties. The local environmental endowments are advantageous, but there is no sufficient economic and social capital for settlement development. The other great challenge is a social one; namely, the integration of roma people, who are usually either unemployed or have little to no qualification in the settlement. The revival of medical tourism and establishment of new accommodations could be one of the possible ways to revitalise the settlement. By the initiation of EU funded trainings the local roma people could also be involved in the production of crafter products, which would result an increase in their life quality as well.

Réty is a very advantageous settlement regarding its geographic position and natural values (Nyír Natural Reserve of Réty, touristic attractions); however, it cannot be characterised by economic development, because the locals are not open to tourism as much as it was needed. The settlement is very close to the county seat, the population in active age commutes there.

Szacsva has very weak social and economic indicators, but it also has great environmental potential. It would be suitable for establishing processing and production plants, which could provide jobs for locals with lower education levels.

It was usual during the investigation to see how low the economic performance and how high the unemployment is in Covasna county. Inequality occurs not only between counties, but

between settlements as well. It can be observed on county and regional levels that more developed areas, such as Sibiu, Brasov and Mures counties have higher level infrastructure network than others, which is an advantage in finding investors and capital. The infrastructure in Covasna county is very lacking; it is satisfactory only in Sepsiszentgyörgy and Kézdivásárhely, but even they require improvement. The infrastructure of smaller towns, such as Barót, Covasna, Bodzaforduló and rural settlements is urgently in need for improvement to be more attractive for investors. Social capital is decreasing due to the fact the youth with higher education leaving the area, which means it is one of the most important tasks to keep them in the county by making it more attractive for them. This way, settlements would be even more attractive for investors and new kinds of jobs could be created besides the ones using workforce with low qualification (with lower wages). That would eventually lead to an increase in the **welfare of the population**.

There has been only very few **research and development** activities in the county in the investigated time period. This topic must be focused on in order to make rural areas more attractive for highly qualified people. The IT sector must be emphasised as well, since it is not yet significant in Covasna county, but it proved in other regions that it could bring about robust growth. The natural values of the county get increasing appreciation as well from the locals, which process is supported by non-governmental organisations as well, which can carry out small-scale programmes with EU support. One of these programmes is the Sepsis Green Way programme, which ties together 19 settlements in Covasna county in order to encourage the locals and tourists as well to visit and appreciate natural and cultural values in the area.

Beside the negative results, it was found that the county has many strong sides as well. These elements were the agriculture (with competitive potato and sugarbeet production) and tourism (medical tourism, the cardiology institute in Covasna, Sepsiszentgyörgy with its rich cultural programmes, such as the annually organised and internationally famous Saint George days, exhibitions and theatrical performances, etc.).

The **local initiatives** increase the value of both rural and urban spaces. Also, they contribute to the attractiveness of regions. However, to support economic development the needs of the region must be observed as well, and competitive products must be created as well.

The effects of economic, social and environmental factors of settlements can only lead to development if utilised properly, rationally and efficiently.

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