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Social perception of the process of rural shrinkage: Application of loss mapping method in one of Hungary's inner peripheral regions

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Abstract. In our study, we examined six demographically declining and shrinking settlements in a traditional Hungarian cultural region, Greater Cumania, which is considered an internal peripheral region: we used statistical data and development documents, loss mapping and the Kruskal–Wallis test methodology. Analysis based on loss mapping of the six municipalities showed that, on average, municipalities rated their losses as slightly less severe than moderate.
The statistical test showed that, although their natural and demographic conditions are very similar, the municipalities have followed a markedly different development path, with differences in potential for emerging from their peripheral existence and in resilience to challenges.
In the light of these analyses, it can be concluded that the source of the problem is basically expressed in terms of qualities of the local society: the average is below the national average education level, and its level of cultural aspiration is very low. The decline of local societies is clear: the study does not predict development based on endogenous internal resources, but rather a slow decline, which is still slow today, but which is likely to accelerate in the light of global, national and local socio-economic, political and environmental processes.

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Contents:

1. Introduction

1.1. Demographic processes in the world and in Europe

Globally, our planet has been experiencing an era of demographic explosion for decades, but there are countries, regions and localities that have experienced the opposite population trends (based on trends over several decades), and can therefore be described as negative locii, i.e. the opposite of the mainstream (Tóth, 2007; Smith, 2007; Li et al., 2019). A significant part of Europe (including Hungary) is generally part of the latter trend, and for more than four decades we have been witnessing a demographic decline. However, mainly within Western Europe, there are also urban–suburban areas that are experiencing population growth (i.e., they can be characterised as positive locii, in line with global trends) (European Commission).

In parallel with the explosive growth of the world population, urban researchers have long focused on large (giant, mega) cities. However, in the shadow of the global trend in monitoring and analysis that expects large-scale analyses and big results, medium-sized and small cities undeservedly receive less attention: in other words, urbanisation research is "heavy-headed" – although there has been some shift in research towards smaller cities and in-depth spatial analyses at the neighbourhood level (Fejérdy & Karvalics, 2015; Kresl & Ietri, 2016; Hooton, 2019). A good example of the relative "disproportionality" of research is that, although, as mentioned above, the focus of interest is generally on large cities, about 60% of Europe's population and about two thirds of Hungary's population live in medium and small towns (Fejérdy & Karvalics, 2015; Kresl & Ietri, 2016).

In Europe, the process defined as demographic transition/crisis has therefore been a fundamental problem of the centre and the (semi-)periphery for decades: the birth rate has been falling for decades, the population is ageing, and society is shrinking and undergoing ethnic transformation (Bernt, 2018; Cutieru, 2021; Döringer et al., 2020).

The notion of semi-periphery goes beyond the dichotomy implied by the name of the concept, since semi-peripheral areas are not homogeneously located around core areas, and there can be significant differences in development between them (Morales Ruvalcaba, 2020). According to Taylor and Flint (2011), the concept of semi-periphery is best understood in terms of territories, regions and states and can therefore refer to both urban areas and larger territorial units, depending on the reference area. In Wallerstein's (1976) interpretation, semi-periphery can be understood in two possible ways: in the past, as areas that are within core regions but that have declined, or, conversely, as a beneficiary of globalizing economic processes, as a catching-up semi-periphery. However, a peripheral interpretation of rural shrinkage is that it is synonymous with a country's or region's detachment from its core. It is a description of the situation of stagnation, catching up, or accelerating drift away from the core, a so-called internal peripheral condition (Pugh & Dubois, 2021).

The main factors influencing the decline of regions or municipalities include de-industrialisation, even de-economisation, which is boosting weakening economic performance, declining attractiveness and shrinking socio-economic opportunities (while, in addition, the per capita maintenance costs of shrinking settlements are likely to rise). Among the factors most affecting the situation of declining settlements) (Hannemann, 2003; Pužulis & Küle, 2016; Frei & Rösel, 2018; Mansilla-Quiñones & Uribe-Sierra, 2023), i.e. overall, a "declining population – declining capacity" urban development model can be assumed/observed.

The phenomenon of shrinkage is the result of complex social-territorial processes, the impact of which is statistically well measured, but whose root

causes are complex. The components of shrinkage can vary greatly from one municipality or region to another, and even neighbouring regions or municipalities may have very different problems. To better understand the causes of territorial challenges and to get to the root of the problems in depth, we applied the loss mapping method (Susánszky, 1982; Susánszky, 1984; Bakos, 2001).

It is a soft and complex method of situation analysis that can reveal the deeper causes of hidden territorial problems, if stakeholders with information on the problem area are involved, thus providing a comprehensive analysis that reveals rural challenges in a different way from the traditional one. The so-called "traditional" approach was used by Mansilla-Quiñones and Uribe-Sierra (2023). They studied the issue of rural shrinkage in a basically agro-geographical context, while Uribe-Sierra et al. (2022) interpreted the phenomenon of shrinkage in terms of mining.

1.2. Demographic processes in Hungary

The country is also experiencing what can be described as a demographic shrinkage: since 1981, Hungary's population has been steadily declining (1981: 10,709,000 persons; 2023: 9,604,000 persons) (KSH, 2023). There are complex socio-economic reasons for this, some of which have "ancient" historical roots and are the consequences of the legacies of socialism, and the large-scale processes of globalisation that have been strongly influencing the country since 1990 and increasing territorial inequalities. Some of the reasons are the results and consequences of internal, settlement micro-social/economic events, which can result in significant regional-settlement differences even in a country with such a small territory as Hungary (Kovács, 2012; Káposzta, 2014; Dusek et al., 2014; OECD, 2020).

In the context of the demographic changes and transformations outlined in the previous two sub-chapters, we sought to answer the following questions in our Hungarian, inner peripheral research sample area described below:

A. Although the initial natural and socio-geographical bases of the settlements under study are very similar, how similar or different a developmental path have the settlements followed in recent decades (especially in the decades after the change of regime)?
B. What are the ways in which the possibility of emerging from their peripheral existence is presented; how similar or different are they in the municipalities studied?
C. If, despite a very similar natural and socio-geographical starting point, there are significant differences in the possibilities for recovery, where and in which areas are these differences most marked?

2. Introduction to the examined region

Our chosen research area meets the negative criteria in several respects: it is an internal peripheral agricultural region with long-standing demographic problems, where the economic structure is also lagging behind the Hungarian average. Therefore, in order to illustrate the marked spatial-settlement differences, we chose the area of Greater Cumania in Hungary, which is a pure example of the inner periphery.

2.1. Selection of the municipalities included in the study

As the study area, we chose a particular traditional region of Hungary, the historical Greater Cumania, with its original six settlements, which has been a peripheral region for a long time and is still a peripheral region; therefore, the settlements of Karcag, Kisújszállás, Kunmadaras, Kunhegyes, Kunszentmárton and Túrkeve were included in the sample (Fig. 1).

The selection of the sample area was based on cultural-historical and traditional grounds. Until the introduction of the modern civil administration in 1876, the six settlements in question formed the traditional "Six Cumania" (i.e., the historical Greater Cumania).

At present, several administrative districts share the territory of the cultural region, but after the fall of the artificial, egalitarian-equalising internationalist ideology of socialism, a revived/revitalised Greater Cumanian consciousness was revived after the regime change. The historical consciousness of ethno-cultural belonging (and its reinforcement through scientific research) justifies and necessitates making this region, which is unique within Hungary, the subject of socio-geographical-urban studies, especially in the light of demographic-based social transformations.

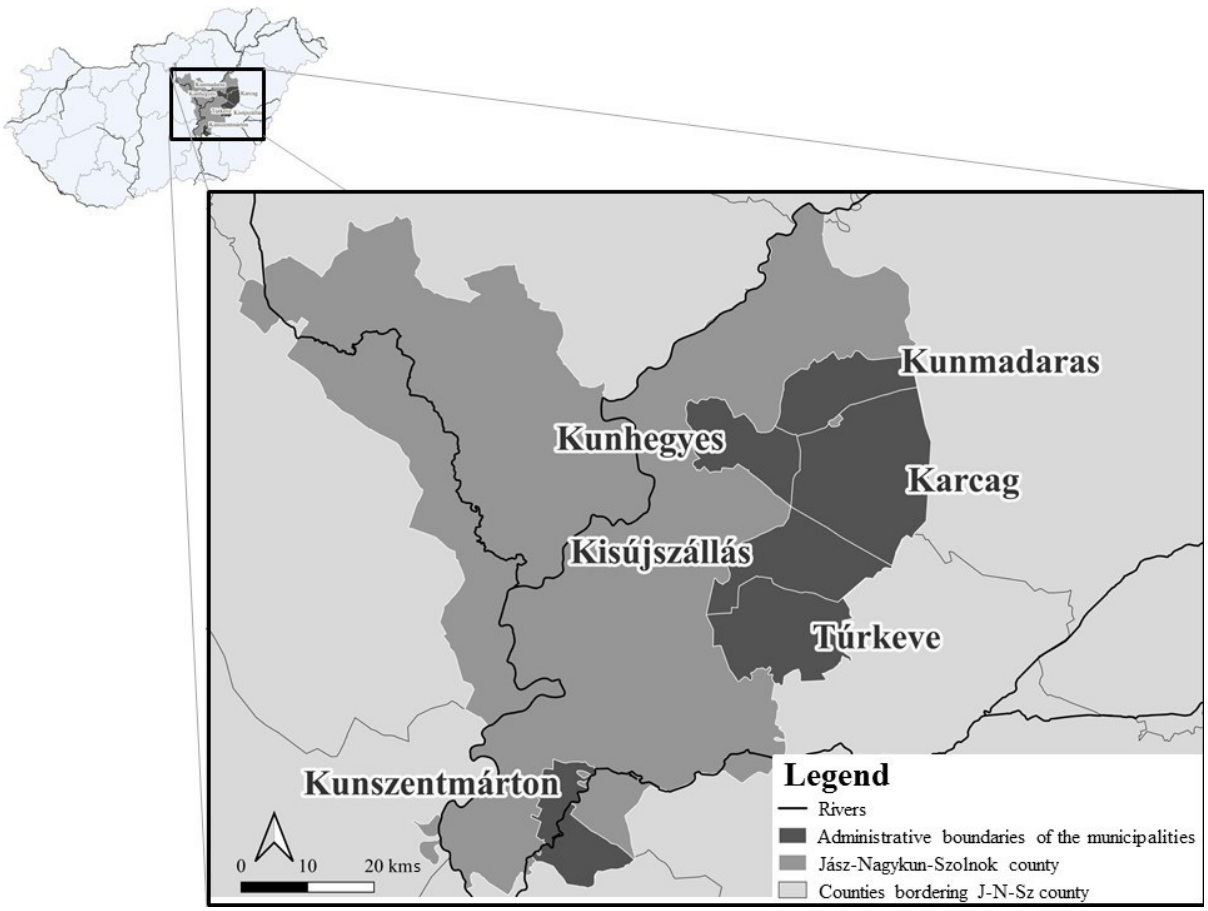


Fig. 1. Presentation of the investigated area
Source: authors' elaboration

2.2. The past and present of settlements: or, the common roots

Greater Cumania is a natural geographic region situated between the middle reaches of the Tisza River and the Hortobágy. Before the great river regulation works of the 19th century (and, of course, even since then), life in the region was practically entirely determined by water, its abundance or lack. It is one of the oldest of Hungary's landscapes, whose name and area have weathered the storms of the centuries relatively unchanged. It takes its name from the Cumans who settled in the area after the Tatar invasion (1241) and from the "Jászkun triple district", a superficially feudalised, peasant-civilian district with a special legal status, which was organised after the Turkish occupation (1526–1686) (Bartha, 2018). The original Cuman herdsman population of Greater Cumania and its settlements settled in the 13th century, changed their way of life, became farmers and became Hungarianised until the beginning of the 16th century, then mixed with refugees from southern Hungary and temporarily moved north to escape the Turks in the second half of the 17th century. The people of Greater Cumania still identify themselves as Cuman, although this group consciousness does not necessarily mean that the average person knows that the Cumans belong to the Kipchak-Turkic family. Although the mortgaging of the area to the Teutonic Knights in 1702 disturbed the demographic and economic reconstruction of the area, the development of the rural towns accelerated after the self-redemption and the collective reacquisition of the old liberties (Jászkun redemptio, 1745). At the beginning of the 19th century, Karcag, Kisújszállás, Kunhegyes, Kunmadaras, Túrkeve and Kunszentmárton (this last one settled from Roman Catholics), formed the municipalities of Greater Cumania (Örsi, 1998).

It is also worth emphasising that the initial natural conditions and demographic factors of the settlements studied are very similar.

2.3. Specific characteristics of the municipalities

However, there are also differences between the settlements: one of the most notable is Kunszentmárton, which was resettled after the Turkish occupation, mostly by the Jász ethnic group (which, being of Iranian language origin, is different from the Cumans), who took their Catholic faith with them (the other settlements of Greater Cumania were predominantly Reformed). This settlement is also "out of the ordinary" in that it is not geographically linked to the other five settlements on the eastern border of the county (part of the Tiszazug region) but is separated from them by a micro-region which is not originally part of Greater Cumania (Örsi, 1998; Bartha, 2018).

There is also a dichotomy in the central roles of the municipalities (and thus probably in their advocacy capacities): while Karcag, Kunhegyes and Kunszentmárton are district seats, Kisújszállás, Kunmadaras and Túrkeve do not have this status. The present Greater Cumanian municipalities also show differences in the proportion of national minorities (Kunmadaras is an extreme outlier), in educational attainment and unemployment rates, and in population decline rates.

2.4. Demographic characteristics of the settlements

Today, the demographic decline of our study area is a fact; (this is by no means a novelty, however, as there were already writings about these negative demographic processes, their causes and possible consequences during the socialist era) (Kőszegfalvi, 1968).

According to the database of the Hungarian Central Statistical Office (KSH), all settlements have a *decreasing population* (Fig. 2). The largest population decrease occurred in Kunszentmárton: by 2022, the population had decreased by 26.3% compared to the 1990s. The smallest decrease occurred in Kunhegyes, with a decrease of 7.1% over the period.

The demographic data clearly show that the age structure of the settlements is urn-shaped, with an almost equal proportion of men and women up to the age of 65, while above 65 years the proportion of women dominates (15–20%). In Kunmadaras, the proportion of women aged 15–19 years is particularly high.

Ethnic data show that 81–85% of the inhabitants of the settlements are Hungarian, with a higher proportion of Roma nationality/ethnicity in Kunmadaras (18.8%) and Karcag (7.2%), and only 1–4% of the population in the other settlements declaring themselves as Roma (but based on

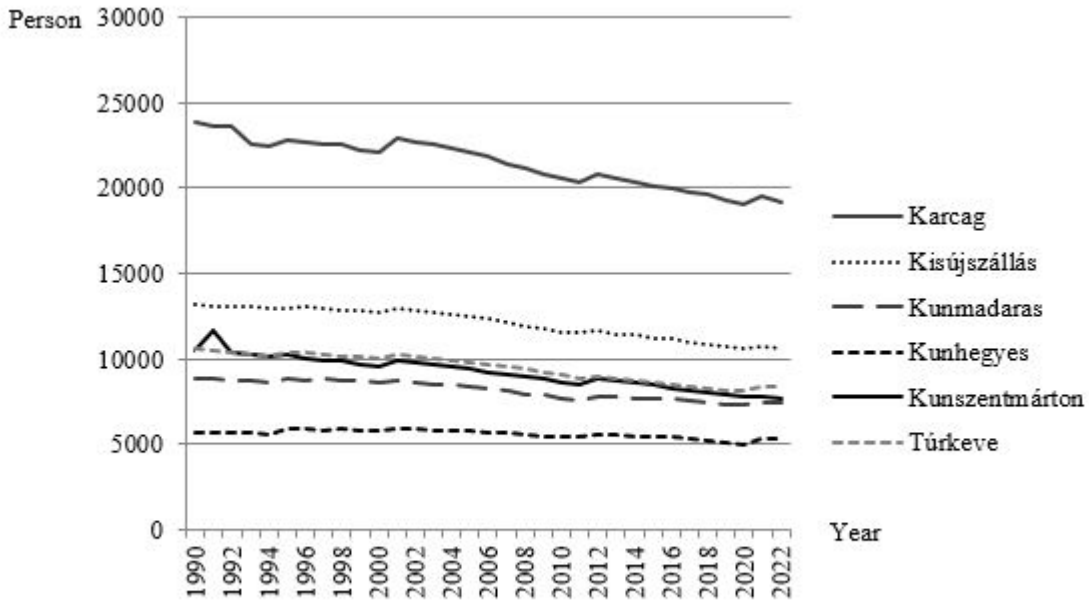


Fig. 2. Population trends in settlements 1990–2022 (persons)
Source: KSH, 2024a

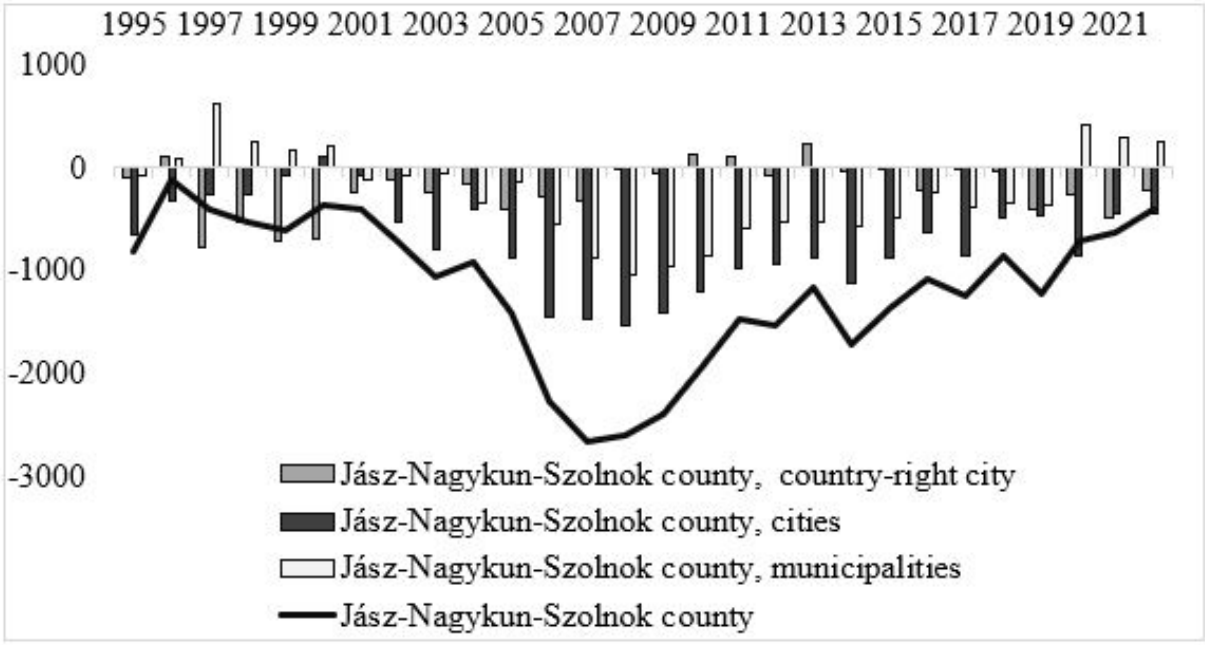


Fig. 3. Migration margin 1995–2022 (persons)
Source: KSH, 2024b

practical experience, municipal informations and "lived geography", this is noticeably higher in all municipalities).

Our data on emigration were available only at the county level, and we were able to examine the county-rights city (Szolnok), the county cities and the municipalities in the county as a whole. A negative migration margin was already observed before the 2000s, with a steep decline in all three categories from 2004 onwards (Fig. 3), with a turning point in 2007. The upward trend is that, by 2017, the figures had returned to pre-2000 levels. By age breakdown, the majority of emigrants are in the 15–39 age group.

In terms of their *religious affiliation*, the majority of the population in the surveyed settlements declared themselves as non-denominational, according to the 2011 census, with only the majority of Kunszentmárton residents declaring themselves Roman Catholic. In the other settlements, the Reformed religion is predominant, followed by Roman Catholicism, and in Karcag and Kunmadaras by Greek Catholicism, while in Kunszentmárton Evangelicalism is also present.

The *unemployment* indicators of the municipalities show upward trends from 2010 onwards, both in terms of registered jobseekers and the number of registered jobseekers beyond 180 days, with a slight increase in 2012 alone, but a steady improvement thereafter until 2018. The educational attainment of registered jobseekers (persons) is detailed in Figure 4.

Based on the available data, the share of people with primary education in 2020 will exceed 40% of all registered jobseekers in Karcag, Kunhegyes and Túrkeve, with Kunmadaras having a particularly high share (56%); however, all municipalities have a significant improvement in the number of registered jobseekers compared to 2015 and 2010.

In summary, Greater Cumania is a distinctive, traditional cultural region of Hungary, which has distinguished itself from the nearer and more distant regions and their societies since its inception, first on the basis of ethnicity (Cumans) and later on the basis of the rights and privileges that were redeemed and regained. This region also differed from many other Hungarian regions in that its society was characterised by a kind of duality, with a less developed economy than the Hungarian average, but at the same time a more advanced, peasant-civil culture and consciousness of local society.

3. Materials and methods

In order to better understand the spatial structure and settlement processes of the shrinking population, two approaches were used: loss mapping, which is a complex method of analysis

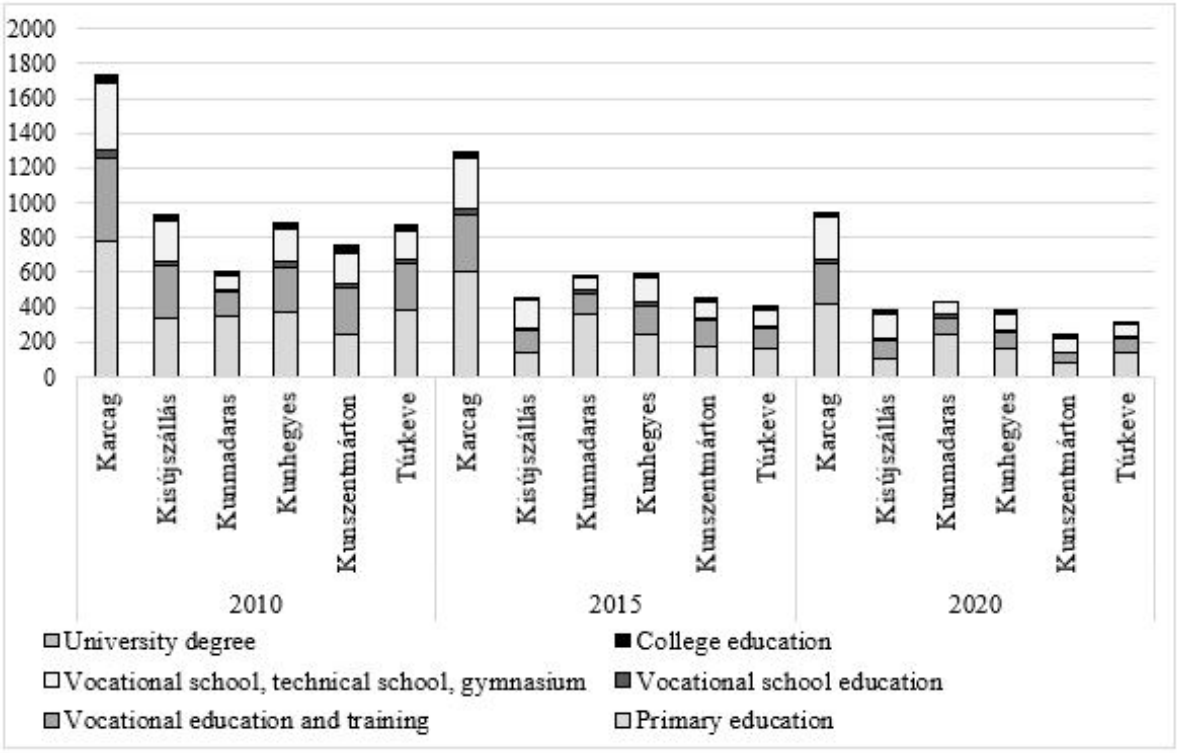


Fig. 4. Registered jobseekers by educational level (persons)
Source: KSH, 2024a

for the multi-layered exploration of spatial endowments, and the Kruskal–Wallis test for the exploration of the functional range differences of loss mapping.

The survey was carried out through a series of enquiries between summer 2022 and January 2023. The aim was to invite all key local stakeholders to contribute to the success of our work, on paper, online and by telephone. Stakeholders were contacted: mayors, vice-mayors, notaries, minority representatives, chief architects, heads of NGOs, school directors, cultural organisers, local clergy, entrepreneurs, and members of the Greater Cumanian Heritage Society – so, based on our field knowledge, "local opinion leaders". In total, 79 respondents with a prominent role in local communities were sought to be included in our survey; the three-round outreach exercise ended up with a 41.8% response rate.

3.1. Method of loss mapping

The method of loss mapping was basically created in Hungary to increase the efficiency of production process management for state-owned enterprises and their employees, as the workers' opinions provided valuable information for understanding operational anomalies and thus – in theory – avoided wasteful processes and wasteful production (Susánszky, 1982, 1984).

Based on this approach, István Bakos (2001) created the method of regional loss mapping, which can be an effective tool for identifying the crisis phenomena and development hindering factors of a given region or settlement. The method is composed of three parts, based on (1) thematic areas (functional areas), (2) the elements of analysis of the thematic areas and (3) a scoring system ranging from zero to eight points.

Functional domains are thematic units related to the mapping of a given municipality or region: a total of 12 predefined functional domains can be used to perform a "loss mapping" of a given territorial unit. The ranges can be extended or deleted as required, and the 12 assessment ranges are not a hard-and-fast rule, as the parameters can be freely varied. The assessment elements of the function ranges are short, headword-based statements whose evaluation is an important aspect for the analysis of the selected geographical area. The latter also means that each region or municipality requires a specific domain definition, as they have different social, economic and environmental characteristics. Naturally, the elements of analysis can also be varied as required.

The assessment of the test items in the function domains is done using *a scale of 0 to 8, where 0 is negligible and 8 is critical*. The higher the score for a test item and hence a feature area, the more significant the problem area that spatial planning needs to address. The negative factors identified by loss mapping can significantly improve the quality of the SWOT analysis to be carried out for a given territorial unit, and the two are therefore usually used together. It is important to note, however, that the analysis elements are always intended to target a broader set of problems and are not used for absolute analysis. By its very nature, the loss mapping method is limited in its ability to provide in-depth analyses, but it does draw attention to those spatial factors that require more detailed analysis (Bakos, 2001).

Interviews, questionnaires or brainstorming sessions can be used to collect the survey elements of the functional areas, involving local actors who may have relevant information in the field (Susánszky, 1984; Bakos, 2001).

In our case, using the methodology described above, we asked the stakeholders of the six municipalities surveyed to fill in a loss map of the regional and municipal potential of their municipality. The loss map consisted of the 12 functional areas indicated above (assessment of natural assets, environmental protection, demographic conditions, employment situation, health situation, education and training situation, culture and recreation, built environment and housing conditions, capital absorption capacity, economic situation, technical infrastructure and settlement management). Within the functional areas, respondents rated the quality of their municipality on a five-point scale (0, 2, 4, 6, 8), based on a total of 196 different indicators. A score of *8 indicates critical problems, 6 indicates severe problems, 4 indicates moderate problems, 2 indicates minor problems and 0 indicates negligible/ not typical problems*.

3.2. Kruskal–Wallis test

The Kruskal–Wallis test was performed to test for significant differences between the categories of each of the functional domains of the municipalities studied, using SPSS software. The formula of the test in equivalent form is as follows (Ostertagova et al., 2014):

$$H = \frac{12}{n(n+1)} \sum_{i=1}^{p} \frac{T_i^2}{n_i} - 3(n+1)$$

The Kruskal–Wallis test aims to compare a sample of three or more independent groups (in our case, municipalities). These samples are measurements of the same dependent variable on several groups. The test requires that the samples be non-normally distributed, and therefore the dependent (test) variable must be measured either on a metric scale or on an ordinal scale.

The Kruskal–Wallis test gives significant differences between samples. H0: population medians are equal. H1: the medians are not all equal. The following hypothesis is tested: H0: $p<\alpha$; $p=0.05$.

4. Results

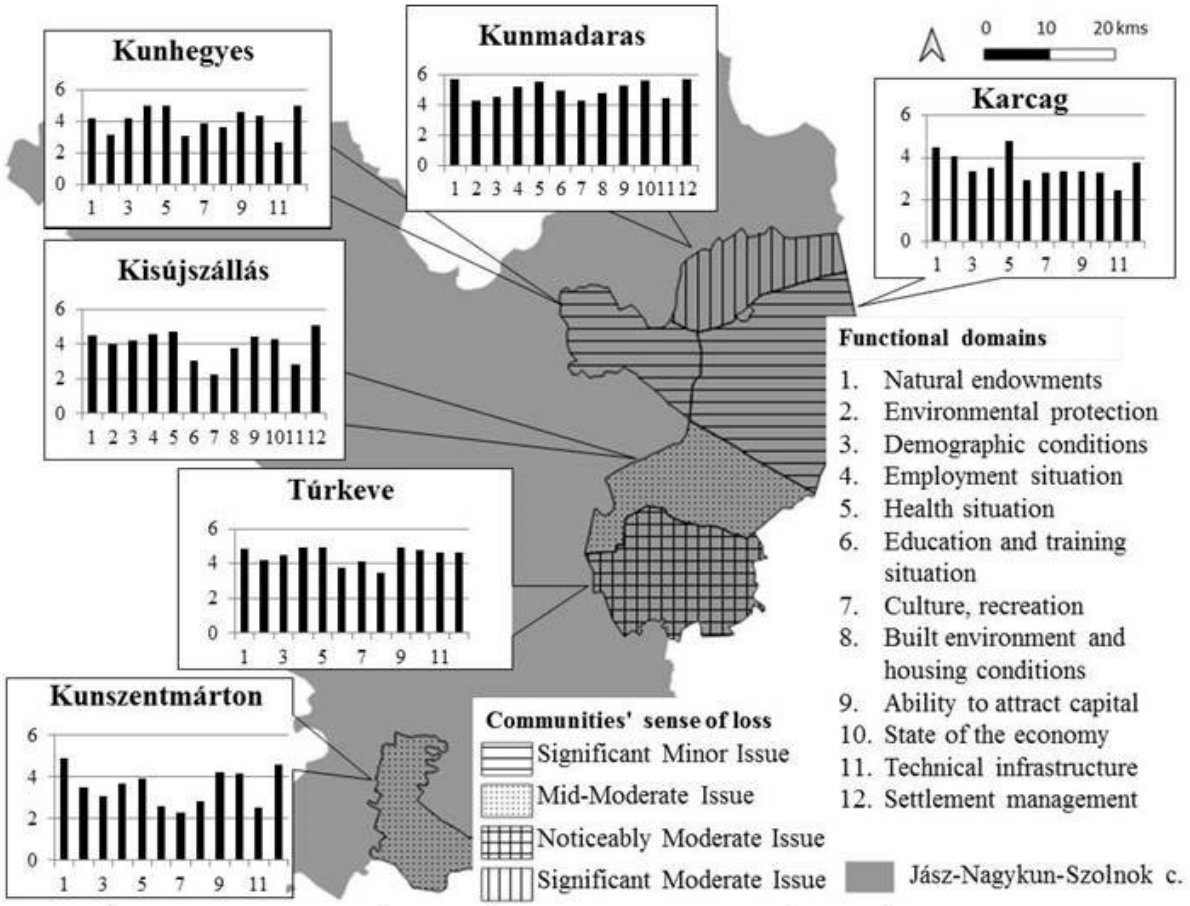
4.1. Results of the municipalities' loss mapping

Since each functional domain includes a different number of indicators, weighted averages were used to estimate the total loss. The weighted overall average of the loss maps for the six municipalities is 3.8, so on average the municipalities rated their losses as slightly less severe than moderate severity problems. The *weighted overall average for each municipality shows differentiated values* (Fig. 5).

Based on *Kunhegyes* (3.2) and *Karcag* (3.2), the overall losses in the municipalities were rated as *significant minor issues* by respondents. In *Kunszentmárton* (3.63) and *Kisújszállás* (3.78), the municipalities have *mid-moderate issues* to be addressed by the municipalities' communities. In *Túrkeve* (4.42), the values for the completed loss maps show *noticeable moderate issues*, and in *Kunmadaras* (4.77), the values show *significant moderate issues*.

4.2. Results of Kruskal–Wallis test

The results in Table 1 clearly show where the 12 feature ranges show significant differences – these are marked in grey. The main differences are highlighted in detail in the section on the results of the municipality loss mapping. In the presentation of the municipalities, we have seen that there are a number of common points in the development history of the Greater Cumanian municipalities. Out of six parameters (which do not show significant differences), three are indicators that determine the basis of socio-economic development (natural conditions,



Value categories					
0-1	Negligible Issue	3.01-3.5	Significant Minor Issue	5.01-5.5	Slightly Severe Issue
1.01-1.5	Slightly Minor Issue	3.51-4	Mid-Moderate Issue	5.51-6	Moderately Severe Issue
1.51-2	Moderately Minor Issue	4.01-4.5	Noticeably Moderate Issue	6.01-6.5	Noticeably Severe Issue
2.01-2.5	Noticeable Minor Issue	4.51-5	Significant Moderate Issue	6.51-7	Severe Issue
2.51-3	Significant Minor Issue			7-8	Critical Issue

Fig. 5. Total weighted average of function ranges and values per municipality
Source: own elaboration

demography, built environment and housing) and three are factors that are significantly determined by the first (health, environment, settlement management). These are the six indicators that can be considered as common root causes in the sample area municipalities.

4.3. Overall results

The statistical test carried out confirmed and showed the following, in answer to our research questions. A. Although their natural and socio-geographical foundations are very similar, the settlements have followed markedly different development paths. B. Their abilities to emerge from their peripheral existence and their resiliences to challenges are quite different. C. This diversity is reflected in employment, education and training, culture, recreation, capital attractiveness, economic situation and technical infrastructure.

The region we are studying represents a particular pathway between West and East in Europe and the European Union: there are similarities in terms of emigration, ageing, deteriorating health and social conditions, economic decline, increasing numbers of empty properties, and the cost of maintaining settlements, which are becoming increasingly difficult. However, there are significant differences in the way local societies operate

Table 1. Group variable: municipalities

	Natural endowments	Environmental protection	Demographic conditions	Employment situation	Health situation	Education and training situation	Culture, recreation	Built environment and housing conditions	Ability to attract capital	State of the economy	Technical infrastructure	Settlement management
H	0,813	0,393	0,739	1,804	0,698	1,169	1,738	0,449	1,133	0,983	1,463	0,950
df	5	5	5	5	5	5	5	5	5	5	5	5
chidist	0,976	0,996	0,981	0,876	0,983	0,948	0,884	0,994	0,951	0,964	0,917	0,966

Source: own editing

compared to Western European patterns: little or no cooperation between local authorities and the population; it is very difficult to involve local people in planning and implementation, and the lack of interest of residents is astonishing (at the same time, municipal leaders are constantly and intensively criticised on social media platforms). Experience shows very low levels of environmental and health awareness, willingness to learn and need for self-empowerment. (A continued reliance on external, EU and government assistance has been a feature for decades, with low levels of judicious use of internal resources.) Overall, an important difference compared to the West is the gambling of chances after the regime change, the lack of civilisation, the emergence of a new agrarian-proletarian way of life and lifestyle, the "proliferation" of declassified social strata unable to rise (perhaps not even wanting to rise).

5. Discussion

In our study, we attempted to apply the loss mapping method in a novel way, to explore the situation of shrinking areas from a sociological perspective, including the perception of local decision-makers and key stakeholders in relation to the processes of shrinking spatial structure. Our analysis showed that the local actors determining the municipalities under study perceive spatial problems differently, in contrast to the statistical reality, in certain functional areas, despite the fact that the selected municipalities are part of the same internal periphery.

Looking at the specificities of each Greater Cumanian settlement, the following conclusions can be drawn: in terms of population loss/shrinkage, Kunszentmárton's situation is quantitatively the most serious – and therefore the most worrying and least resilient – having lost more than a quarter of its population in the last three and a half decades. In terms of the social basis for socio-economic development, Kunmadaras is in the worst position: although it is also experiencing a population decline, it has the highest proportion of Roma ethnicity and, closely related to this, the highest proportion of women aged 15–19 in the region (indicating high natural reproduction and its future potential): in the short term, this destabilises local society (due to the differences in cultural norms between majority and minority societies and the resulting tensions). An interesting approach, however, is the idea that in the long term it can also represent a strong demographic resilience of the settlement (which, at the same time, risks creating an ethnic ghetto).

In the authors' opinion, Karcag and Kisújszállás municipalities are theoretically the most resilient settlements in the region. In terms of the central functions of the settlements and their ability to assert their interests, Karcag is the most significant settlement in the region, with the largest population (in addition to which, the current Member of Parliament for the region comes from here, plus the current Minister of Finance and the former

Minister of Agriculture), so in this respect it is probably the most representative and resilient settlement. If the cultural/educational foundations are considered (see, e.g., Kovács and Vasvári, 2024), the future situation of Kisújszállás can be considered the "most promising and resilient" – if (and only if), of course, the newly elected leadership of the municipality succeeds in the future in taking advantage of its unique potential.

Our work has shown that the phenomenon of rural shrinkage is a more complex process than can be explored using only primary statistical methods, i.e. traditional situation analysis. The components of shrinkage can vary significantly even between municipalities in the same geographical region. The areas of study of loss mapping, their components and their weighting create a new way of exploring the phenomenon of shrinkage that goes beyond traditional, mostly sectoral, approaches.

The in-depth understanding of the phenomenon was not the focus of the research at this stage; rather, the study basically shed light on the dimensions of the perception of the development situation as assessed by stakeholders. We believe that the phenomenon identified may allow for the development of a new approach in the toolbox of spatial and urban development, i.e. the attitudes of local decision-makers and key actors have a specific influence on the interpretation of socio-economic resilience and the related local decisions. According to G. Pirisi (2019), resilience is seen as a property of complex (spatial) systems, which provides an excellent theoretical framework for analysing territorial processes and planning interventions in these processes. It is in this light that we intend to continue the research described above on the resilience of individual municipalities.

6. Conclusion

The Greater Cumania demographically has long been one of the "losers", losing more inhabitants than it has gained for decades. In addition to quantitative displacement, Greater Cumania is also characterised by qualitative problems, with out-migrants coming mostly from younger, more educated and mobile groups, and a strong ethnic shift further destabilising local societies.

The 1990 regime change caused a major disruption in the life of the region: even during the socialist era, its industry, which was not very significant compared to other Hungarian regions, partly disappeared, was partly shrunk/rationalised, or was partly taken over by foreigners (a significant consequence was the reduction in labour demand). Agriculture has become more concentrated, and EU funds have significantly improved mechanisation, but production still tends to be monocultural, with large-scale cereal crops (wheat, maize, sunflower) (the region also has a low share of agro-processing, which reduces its value added). There are no institutions of higher education and research in Greater Cumania – with the exception of one in Karcag, which is an outsourced institute of the University of Debrecen. The society is characterised by a strong ethnic transformation, with significant cultural differences between the current majority and minority societies, which, below the surface and without any cooperation, make the socio-economic rise of the region very difficult. All this is a clear disincentive to the young(er), (more) educated and more mobile, and a further problem is the acceptance and perception of "peripherisation in the mind" that has been passed down from generation to generation.

The complex shrinkage in the region under study could be counteracted by the specific identity of Greater Cumania, the exploitation of its unique traditions and cultural assets, and its sale for tourism purposes. Bringing the municipalities together, building, strengthening and sustaining the Greater Cumanian partnership could contribute to its success. Moreover, as an agricultural region, biomass has great potential, which would also allow the development of a self-sufficient bioenergy region (especially if research and development activities could be organised in the region). In addition, the fact that the region is the centre of rice production in Hungary, with Kisújszállás as its centre, provides an opportunity to develop – as confirmed by the fact that Indian rice (wild rice) is grown in three places in the world: the USA, Canada and Kisújszállás. Rice is also an important raw material in the reform nutrition and cosmetics industry, so local processing could significantly strengthen the region's retention capacity. If regional strengths were complemented by a professional marketing activity, Greater Cumania could have a long-term future. (Unfortunately, however, here comes the incomprehensible "But" for European cultural nations …)

In the light of the analyses, it can generally be concluded that the quality of the local society is the source of the problem: the Greater Cumanians are less educated than the national average, and according to the research, have very low levels of cultural aspiration.

In the six settlements studied, it can be generally stated that the necessary infrastructure is available

(of course, with the respective development and maintenance needs) and local governments often outperform in development (relying almost exclusively on EU and state co-financing and tenders), but local society itself does not have sufficient financial and human capital to maintain the settlements.

Following on from the previous analyses and the diagnosis, the most important research task is to identify the strengths of each settlement, to identify the points of resilience, and based on these to formulate the breakout opportunities and to communicate them to the decision-makers of the Greater Cumanian settlements.

Against this backdrop, the decline of local societies is palpable: the study does not predict development based on endogenous internal resources, but rather a slow but accelerating decline in the face of global, national and local socio-economic, political and environmental trends in the once more-prosperous historic Greater Cumania.

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