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Shrinking rural areas: demographic and broader interconnections of population decline in Hungary

Katalin Kovács

KRTK Institute for Regional Studies, Budapest, (Hungría)

kovacs@rkk.hu

<https://orcid.org/0000-0003-1690-2570>

Gergely Tagai

KRTK Institute for Regional Studies, Budapest, (Hungría)

tagai.gergely@krtk.hu

<https://orcid.org/0000-0003-4556-4355>



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SECCIÓN ARTÍCULOS

La contracción de los espacios rurales: interconexiones demográficas y territoriales del descenso de la población en Hungría

Resumen: este artículo explora la dinámica de la población en Hungría durante las últimas tres décadas a nivel de distrito. La cartografía de los distritos en crecimiento, estancamiento y contracción desde diversas perspectivas indica patrones previstos, como los polos de crecimiento de la población en la zona suburbana alrededor de la capital, las ciudades más grandes y a lo largo de las fronteras con Austria y Eslovaquia en el sur. El hecho de que la contracción de grado significativo o dramático sea más frecuente en los distritos rurales que en sus homólogos urbanos y suburbanos, caracterizando a casi la mitad de las unidades rurales de nivel LAU-1, también se encuentra entre los resultados esperados de la investigación. El crecimiento o el estancamiento de las zonas rurales, especialmente en las regiones más atrasadas, representa un patrón imprevisto de dinámica demográfica para el que una interpretación secundaria de dos estudios de caso proporciona antecedentes socioeconómicos, espaciales e históricos.

Palabras clave: periferización, marginación, dinámica demográfica, regiones atrasadas.

Shrinking rural areas: demographic and broader interconnections of population decline in Hungary

Abstract: this article explores population dynamics in Hungary over the last three decades at the district level. Mapping of growing, stagnating and shrinking districts from a variety of perspectives indicates anticipated patterns such as population growth poles in the suburbanised area around the capital city, larger cities and along the Austrian and Southern Slovakian borderlines. The fact that shrinking of significant or dramatic degree is more prevalent across rural districts than in their urban and suburban counterparts characterising almost half of rural LAU-1 level units is also among the expected research results. Growing or stagnating rural areas especially in lagging regions represent an unforeseen pattern of population dynamics for which a secondary interpretation of two case studies provides socio-economic, spatial and historical background.

Key words: peripherization, marginalisation, population dynamics, lagging regions.

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IDEAS CLAVE / HIGHLIGHTS / IDEES CLAU

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| <ol style="list-style-type: none">1. La disminución de la población es uno de los problemas sociales más importantes de Hungría, tanto en las zonas urbanas y suburbanas como en las rurales.2. Los acontecimientos históricos en la mayoría de los antiguos países socialistas afectaron a la mayoría de la población rural, cuando se colectivizó la propiedad campesina y se rompió así la columna vertebral de las sociedades rurales.3. Las comunidades rurales son extremadamente vulnerables a nuevas disposiciones políticas que den lugar a una compleja decadencia de las zonas rurales ampliadas.4. El estancamiento o incluso el crecimiento de la población en las zonas rurales no suele indicar progreso y avance económico o social, sino que tiende a enmascarar la prevalencia de grupos sociales y étnicos vulnerables, que necesitan una asistencia compleja.5. Se requiere más investigación cualitativa para explorar las complejas causalidades que subyacen a los fenómenos sociales y que podrían conducir a conceptos más adecuados y mejores intervenciones políticas. | <ol style="list-style-type: none">1. Population shrinkage is one of the outstanding social issues in Hungary experienced across urban, suburban as well as rural areas.2. Historical events in most former socialist countries hit the majority of the rural population, when peasant property was collectivised and thus the backbone of rural societies was broken.3. Rural communities are extremely vulnerable to further policy arrangements resulting in complex decay of extended rural areas.4. Stagnant or even growing population in rural areas does usually not indicate progress and economic or social advancement, rather, it tends to mask the prevalence of socially vulnerable social and ethnic groups, who are in need of complex assistance.5. More qualitative research is needed to explore the complex causalities underlying social phenomena that could lead to more appropriate concepts and better policy interventions. | <ol style="list-style-type: none">1. La disminució de la població és un dels problemes socials més importants d'Hongria, tant en les zones urbanes i suburbanes com en les rurals.2. Els esdeveniments històrics en la majoria dels antics països socialistes van afectar la majoria de la població rural, quan es va col·lectivitzar la propietat llaudadora i es va trencar així la columna vertebral de les societats rurals.3. Les comunitats rurals són extremadament vulnerables a noves disposicions polítiques que donen lloc a una complexa decadència de les zones rurals ampliades.4. L'estancament o fins i tot el creixement de la població en les zones rurals no sol indicar progrés i avanç econòmic o social, sinó que tendeix a emmascarar la prevalença de grups socials i ètnics vulnerables, que necessiten una assistència complexa.5. Es requereix més investigació qualitativa per a explorar les complexes causalitats que subjacent als fenòmens socials i que podrien conduir a conceptes més adequats i millors intervencions polítiques. |
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1. INTRODUCTION¹

Hungary's population has been declining since the early 1980s. As a consequence, the country's population has decreased by nearly one million, 10%, since the fall of state socialism in 1989. Population forecasts predict a further significant loss of population by the mid-21st century, as a result of which the population is likely to fall to below eight million by 2050-2060 (Földházi, 2015).

In light of the rate and durability of population decline in Hungary, we thought that interpreting this phenomenon through the concept '*shrinkage*' is a good starting point for an analysis of demographic trends. Since this article is based partially on evidence explored within an ESPON project on shrinking rural regions (ESPON, 2020; Copus et al., 2021), we have also adopted the concept of '*shrinkage*' after Grasland et al. (2008), as the ESPON ESCAPE project did, with the proviso that 'significant population decrease' means a population decline over a longer period i.e. for at least a whole generation.

The main goal of this article is to achieve a deeper understanding of population dynamics in Hungary with the focus on rural areas and contribute with results to the broader academic discourse on the shrinking phenomenon². To realise this target, we used the opportunity of availability of district (LAU-1) level data³. In addition to analysis of statistical data at a relatively low territorial level, in the second part of this paper, a secondary and comparative interpretation of findings of two case studies is provided with the aim of a more nuanced understanding of population trends, either growth or decline through examples of two shrinking rural regions.

The structure of the article is as follows, the first subchapter provides a theoretical framework followed by a short description of methodology and case study features. Quantitative analysis of demographic processes and outcomes are put forward in the third chapter. Case study materials illustrating the complexity of socio-economic backgrounds, path dependencies and demographic impact of recent social changes come in the fourth subchapter. Finally, the paper is closed by a short conclusion.

1.1. Theoretical framework: peripherization

It is the centre-periphery relationship and the issues of the evolvement of peripheries that constitute the theoretical framework of our article. For decades, regional studies have placed a great emphasis on the in-depth analysis of social and spatial inequalities and on understanding the causes of and the factors that have contributed to their evolution. Early and recent theories about spatial polarisation were formulated as a criticism against the principles of neoclassical economics, which assumed regional convergence and equalisation in the longer run. These theories aimed to provide an explanation for the emergence and rise of inequalities through citing the drivers of economic growth and

¹ The authors have been honoured to participate in two ESPON projects, both of which included a Hungarian case study. We worked in these projects in cooperation with a research group at the University of Valencia which was headed by Joan Noguera until 2018. The authors express their particular gratitude to Joan Noguera and Andrew Copus for scientific guidance and inspirations provided during the course of the projects, PROFECY and ESCAPE respectively.

² We used the definition of rural areas by the National Development and Spatial Development Concept (OTFK 2013) to identify areas with a rural character.

³ LAU-1 that is upper local level according to the Nomenclature of Territorial Units for statistics. <https://ec.europa.eu/eurostat/web/nuts/local-administrative-units>

contraction (Friedmann, 1973; Hirschman, 1958; Krugman, 1991; Kühn, 2015; Myrdal, 1957).

Centre-periphery relations form the very core of the theories put forth by human geography and political economy. Papers addressing the evolution of inequalities, relations and dynamics between centres and peripheries have often proposed interregional mobility, differences in transportation costs, the historical course of development and innovation capacity as their explanatory principles. However, the theory of uneven development, which attributed polarisation to the operational mode of capitalism, considered inequalities to be an inseparable part of the system, and provided an explanation for the spatial trends shaping inequalities from the perspective of the logic of profit of capital (Hadjimichalis, 1987, 2011; Hadjimichalis & Hudson 2013; Hudson, 2015; Smith, 1984).

The dependence of peripheries on centres has always featured prominently in the interpretation of the centre-periphery relations. This is what comes to the fore in neomarxist explanations and Immanuel Wallerstein's world-systems theory, according to which the world economic system is divided into a hierarchy of three types of countries: core, semi-peripheral, and peripheral (Wallerstein, 1974, 1979). In a global economy, it is not the local characteristics of a given place that the social and economic processes affecting peripheries primarily depend on, but on their relationship with centres at various (even a global) levels and the nature of their integration into the system.

Peripherization means the process in which connections with a centre break, and an area (a periphery) becomes dependent on the centre emerges (Lang, 2012; Fischer-Tahir and Naumann, 2013; PoSCoPP, 2015; Görmar et al., 2019; ESPON, 2020). Peripherization in this sense is less related to purely economic circumstances; it can also be a consequence of social, political or communicative processes (Kühn, 2015; Mihály, 2018a). As peripherization stems from social relations, it is about the 'emergence' ('creation') and '(re)production' of peripheries rather than the operation of the influential forces arising from a peripheral geographical situation. Based on this, peripherization is akin to the concept of social exclusion and marginalisation because the latter also considers the dysfunction of social systems shaping the processes that keep the socially excluded on the periphery of societies (Madanipour et al., 2015; Nagy et al., 2014, 2015).

Similarly, to social exclusion and marginalisation, peripherization generally has a marked spatial appearance. It is not, however, limited to locations that are a long way from centres or isolated in terms of transport or geographically. What are termed 'internal peripheries' are places that, despite being relatively advantageously located and not a long way from a social and economic hub, face a number of social and economic challenges due to their insufficient global integration, weak political empowerment and weak ties with the centres (Copus 2001, Copus and Noguera, 2016; Copus et al., 2017; ESPON, 2017; Tagai, 2018; De Toni et al., 2020) or the exhaustion effect of nearby urban hubs. Our case studies exemplify inner peripheries in different spatial contexts.

Challenges associated with the peripherization of areas often lead to economic recession in the concerned regions and locations, an increase in and consistently high level of unemployment, and increasingly poor access to and availability of services (Kühn, 2015; Mihály, 2018b; Tagai et al., 2018; ESPON 2020). The literature reveals that these trends are closely related to the demographic problems of the peripheries, i.e. population decline, selective outmigration and ageing (Lang, 2015; Kühn, 2015; Leibert and Golinski, 2016; ESPON, 2020). Population decline in these geographic regions and the social and economic transformation related to it generate and sustain 'vicious circles' that aggravate

the problems facing these areas located typically on peripheries (Leibert, 2013; Tagai et al., 2018; Görmar et al., 2019). Nevertheless, demographic decline does not only characterise geographical peripheries, inner peripheries with more favourable locations might also face different socio-economic challenges due to consequences of their locations.

Of the processes outlined, whether labour market mechanisms (selective migration, pressure to commute, weak absorption capacity and scarce access to work), accessibility and absorption capacity of service provisioning (changes in consumer habits and access and quality-related issues of services) or the creation of social peripheries as cumulative social impact of peripherization (social exclusion, stigmatisation and dependence) are both causes and consequences of the adverse trends affecting demographic processes and sustainability chances of rural local societies. The demographic challenges rural areas are currently facing cannot be understood in isolation. However, the factors mentioned and path dependencies (e.g. rural exodus, that is mass outflow of rural population to cities or post socialist transition and economic restructuring) exerting their impact may help in finding a sufficient explanation needed for a more complex interpretation of these issues.

2. METHODOLOGY

As mentioned in the Introduction, we studied population dynamics at district (LAU-1) level in a relatively long timespan from 1990, one year after the fall of state socialism, to 2017 our cut-off date. In our analyses all the 175 districts were included, thus differences between urban and rural districts could be monitored. We have more or less duplicated at a lower statistical scale and solely for Hungary the so-called ‘simply shrinkage’ approach that was used in the ESPON ESCAPE project under the guidance of Andrew Copus. One aspect was added, which allowed for extending our analysis towards complex shrinkage to some extent. Namely, we used the classification of districts by level of development issued by the Hungarian Statistical Office in 2014 most recently, within which 36 of the 175 districts were defined as most disadvantaged to be targeted by complex development measures⁴. This variable allowed us to find out if durable demographic decline is related to underdevelopment or not.

Concerning case studies, their selection was automatic, so to say, since they were prepared within the two ESPON projects this article is linked with to some extent. Their secondary interpretation enabled us to provide some background information of a social, spatial and economic nature in a historical perspective. The original case studies were conducted in 2017 (on the Tamási district) and in 2019 (on the Szentes district). Their similarities and differences equally called for a comparative interpretation. As for differences, they lie in regions of different character according to topography, natural conditions and settlement systems; the Tamási district is located in the hilly southern Transdanubia characterised by fragmented settlement system, the Szentes district lies in the southern Great Plain region where market towns and their surroundings dominate the landscape. The Tamási area is classified as a lagging district, while Szentes is not. As far as similarities are concerned, they are both rural districts, have been shrinking for the last three decades, and they indicate (inner) peripheral characteristics. They both belong to

⁴ Gov. Decree 290/2014 (XI.26).

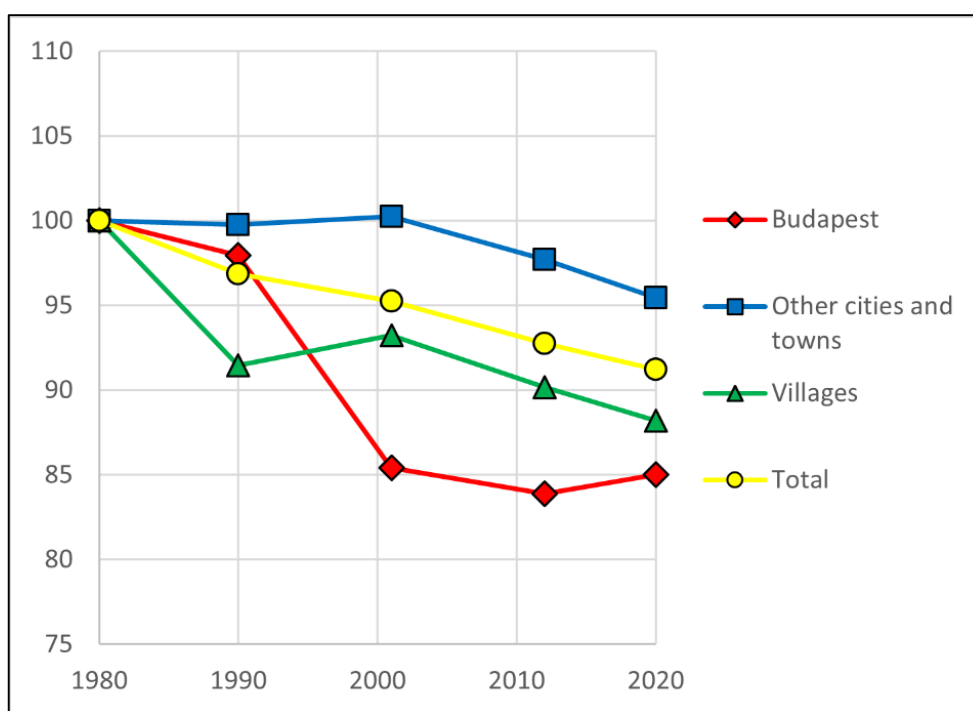
the worst shrinking category of ‘dramatically shrinking’ resulted from the statistical analysis of the next subchapter.

3. FINDINGS OF THE STATISTICAL ANALYSIS: TERRITORIAL PATTERNS OF POPULATION DECLINE IN HUNGARY

There are three fundamental components of the change in population: the number of births, the number of deaths (jointly: natural population increase or decrease) and the balance of emigration and immigration (i.e. net migration). In Hungary, the overall number of births has decreased significantly over the past few decades; in comparison, the rate of deaths has fallen much more slowly (it has remained consistently high). The positive net migration that generally characterises migration trends at a national level has only been able to moderate these demographic trends, which has led to population decline.

These factors stem from a number of social and economic phenomena and processes that affect Hungary’s population differently and in a spatially uneven way. Likewise, population decrease has also been spatially uneven, and future population processes are expected to exhibit major territorial differences, too (Tagai, 2015). Based on the distribution of characteristics of the individual settlements, it is safe to say that population decrease is a general trend in each settlement category, or at least it was in the 2000s (Figure 1).

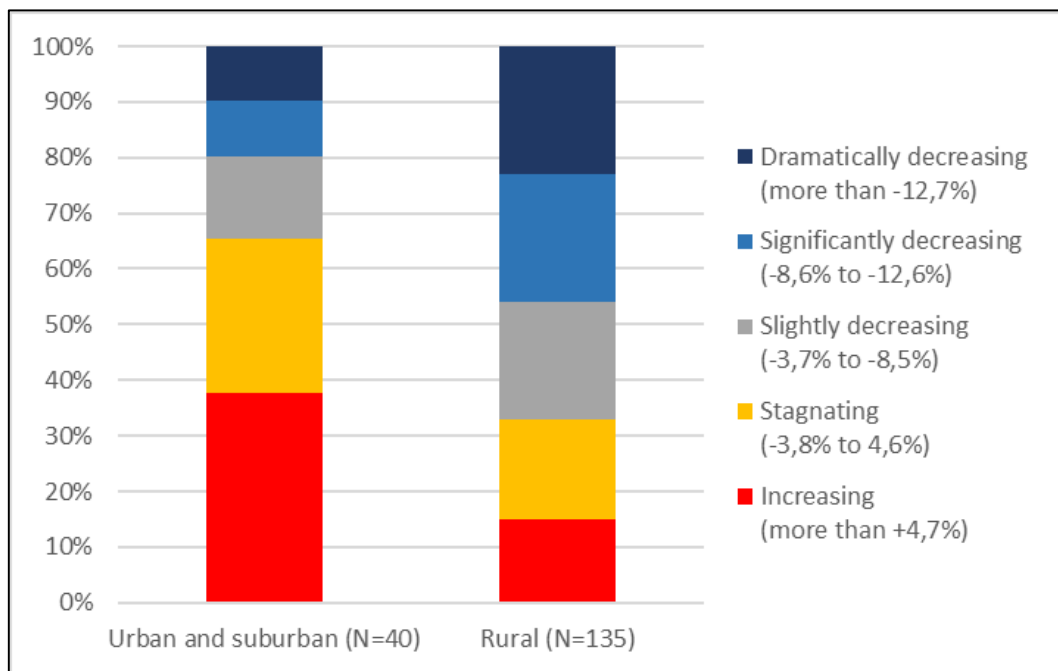
Figure 1. Change in population by main categories of settlements in Hungary, 1980-2020 (1980=100%)



Source: Hungarian Central Statistical Office (HCSO), Summary tables (STADAT), https://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_wdsd001.html.

Budapest has experienced the largest population decline since the 1980s (15%), owing mainly to suburbanisation, which sucked people out of the capital city to the metropolitan area surrounding it (Timár and Váradi, 2001). The same reason of suburbanisation with some time lag appeared in some of other Hungarian towns and cities after the 2000s, while in other parts of urban centres still ongoing economic transformation has triggered economic and population decline. In the 1980s, there was a decrease in population of nearly 10% in villages, then in the 1990s, there was some temporary increase mostly in suburban areas. The degree of shrinkage of villages was similar to that of cities after the turn of the millennium, though it was steeper in the former.

Figure 2. Proportion of population decrease/increase in districts of Hungary by urban/rural classification 1990–2017



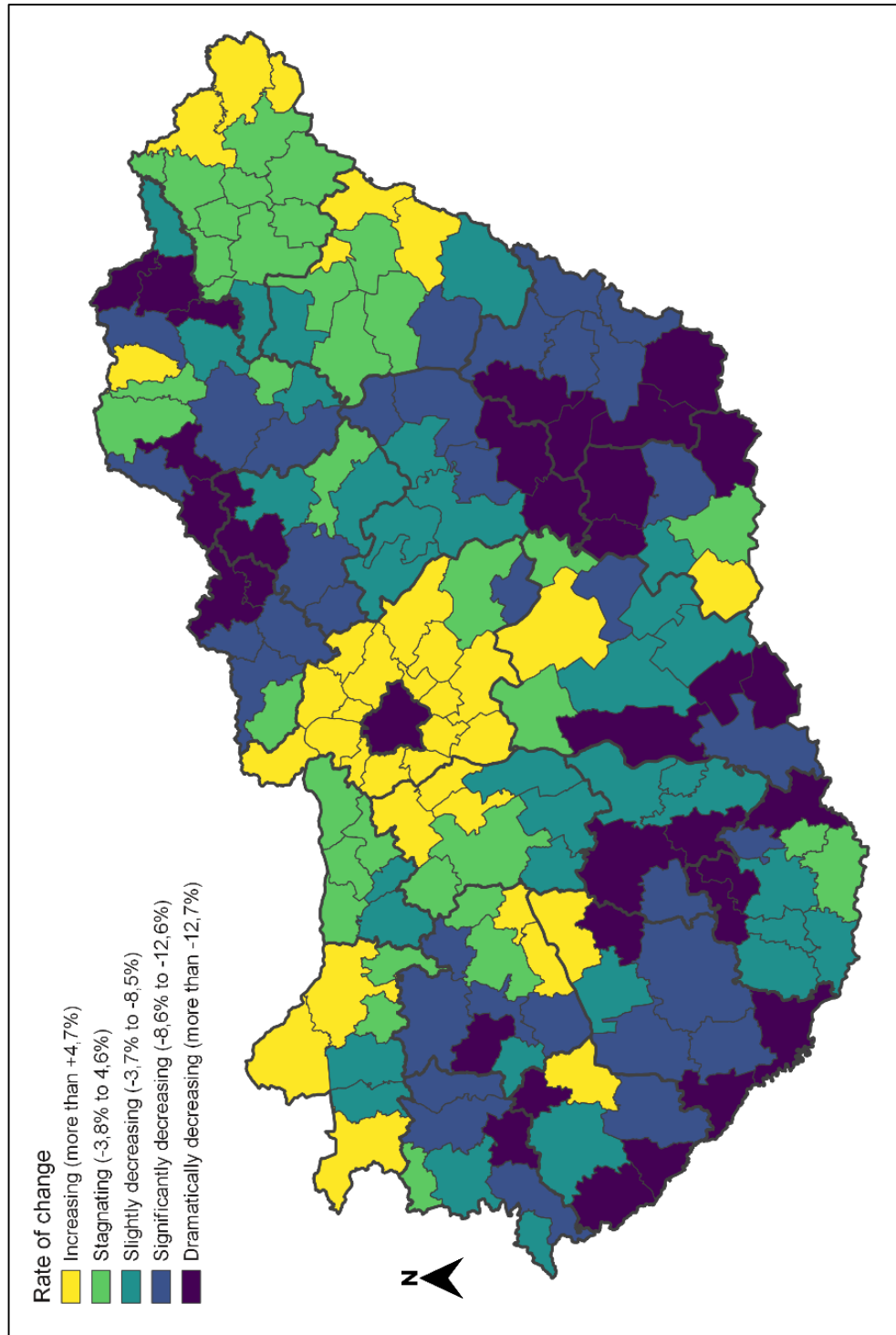
Source: Hungarian Central Statistical Office (HCSO), Municipality Statistics Database (T-STAR).

That Hungary is a country with a ‘rural’ character is appropriately reflected in its categorisation by the Central Statistical Office, according to which the number of rural districts (135) is more than four times higher than that of their urban and suburban counterparts (40). The fact that the number and proportion of rural districts where population decrease was either relevant or dramatic were much higher than those of urban districts (23 and 23% compared to 10 and 10%) fell in line with our forecasts. The chart above shows the full picture of the relevant percentages (Figure 2).

The following map illustrates spatial differences in population dynamics across Hungary by the quintiles of districts, ranked from the significantly growing to the dramatically shrinking categories (Figure 3). The paradoxical feature of the shrinking phenomenon can be captured by the composition of the latter group, which comprises largely rural districts, but the capital city, Budapest, also belongs to the dramatically shrinking localities. The map indicates that the suburbanised zone experiencing population growth (or possibly stagnation) is rather extensive in its westward and southward sprawl. In the west, it connects to the area undergoing agglomeration in the

environs of Lake Balaton, while in the south it spreads as far as Kecskemét, a dynamically developing county seat where a Mercedes plant operates. The plant represents another force in attracting population.

Figure 3. Population dynamics in Hungarian districts, 1990–2017



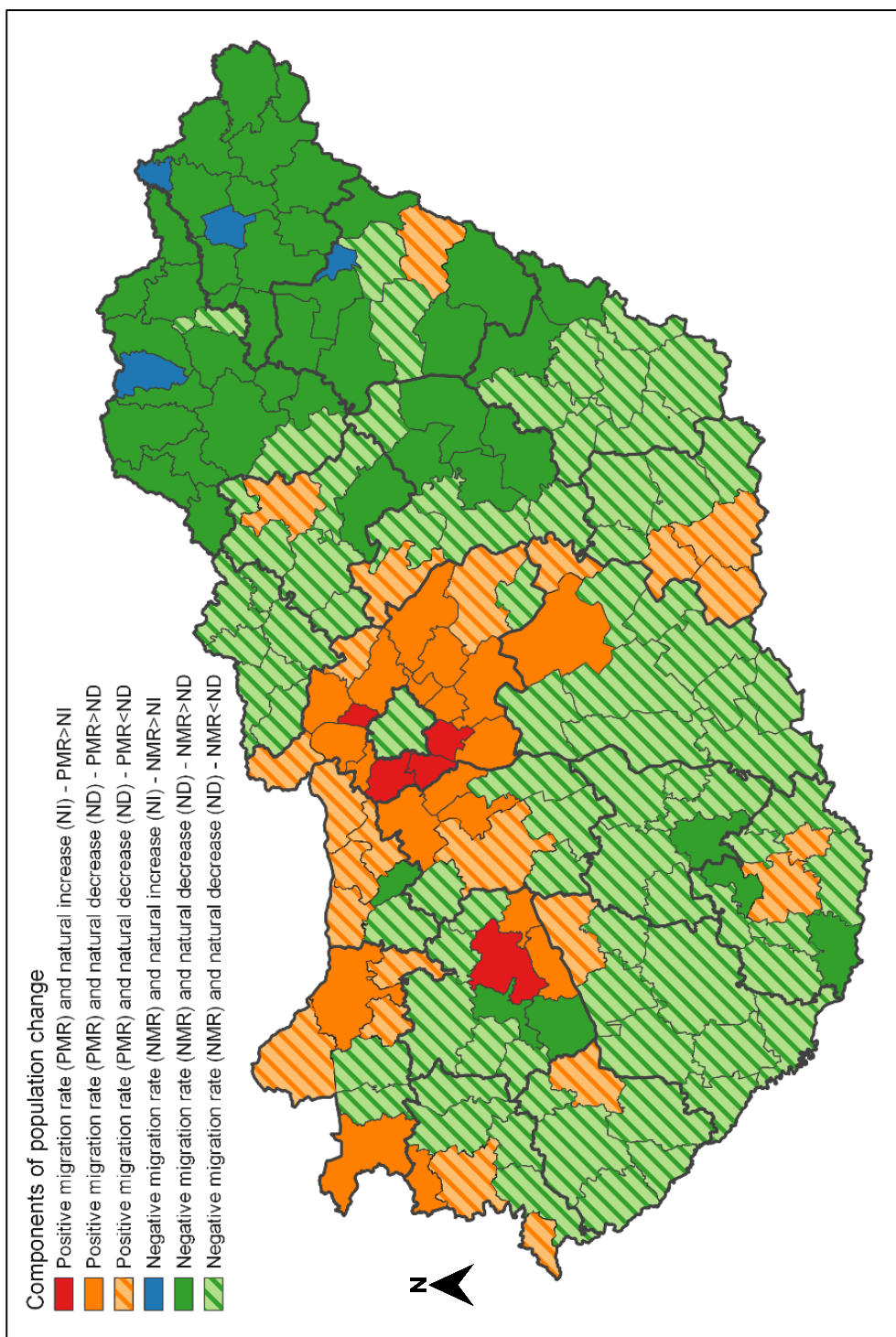
Source: Hungarian Central Statistical Office (HCSO), Municipality Statistics Database (T-STAR).

It is worth mentioning that north-western and north-eastern districts of Hungary seem to be similar in terms of population dynamics, however, this similarity masks different causalities. In the former sub-region, the likely underlying reasons behind relatively good demographic indicators are economic growth and proximity to Hungary's western border, which turn the districts concerned into a target area of migration: The Austrian border area attracts Hungarian immigrants from all over the country who earn their living in the other side of the border, whilst they live on the Hungarian side. Part of the western border zone with Slovakia connects Bratislava, the capital city of Slovakia and the north-western Hungarian regional centre, Győr, therefore this zone is attracting people from both sides of the border. In contrast, it is underdevelopment, unfavourable social and economic trends coupled with peripherization that have led to similarly positive demographic outcomes in the north-eastern border region. Population decline in these peripheral areas is prevented by two factors, natural increase, which is higher than average among marginalised social (ethnic) groups and new arrivals from abroad, i.e. from Ukraine, Romania and Slovakia. These examples underlie that divergent causalities, development and dynamism, on the one hand, and lagging, on the other hand, can equally result in stagnating or increasing population numbers.

Natural population growth has occurred in a number of districts in Hungary during the analysed period since 1990. This has been accompanied by a positive migration balance in some districts of the Budapest agglomeration and in the district of Veszprém, one of the county seats in North-West Transdanubia (Figure 4). The contrast is represented by four rural districts in the north-east, where natural population increase is due to higher birth rates of the population and migration has been fuelled by cross border flow of the dominantly Hungarian minority from Slovakia, Ukraine and Romania. We highlight again the paradoxical outcome here indicating that reproductive attitudes of the middle classes and marginalised social strata can follow similar patterns despite the wide social gap between them. The common ground of the similar outcome is the extremely young age structure of the concerned districts, which is also rooted in sharply divergent social, economic and spatial conditions.

Natural population decline has been offset by immigration in districts undergoing suburbanisation or agglomeration out of which eleven districts are located within the metropolitan area, and six districts outside of it. In southern and eastern regions of Hungary, positive migration rates are rare, occur in and around districts of regional centres and some county seats (e.g. Eger, Pécs, Székesfehérvár and Szeged) but negative natural change exceeds migration rates and turns the balance into population decline.

Figure 4. Role of the components of population change in Hungarian districts, 1990–2017

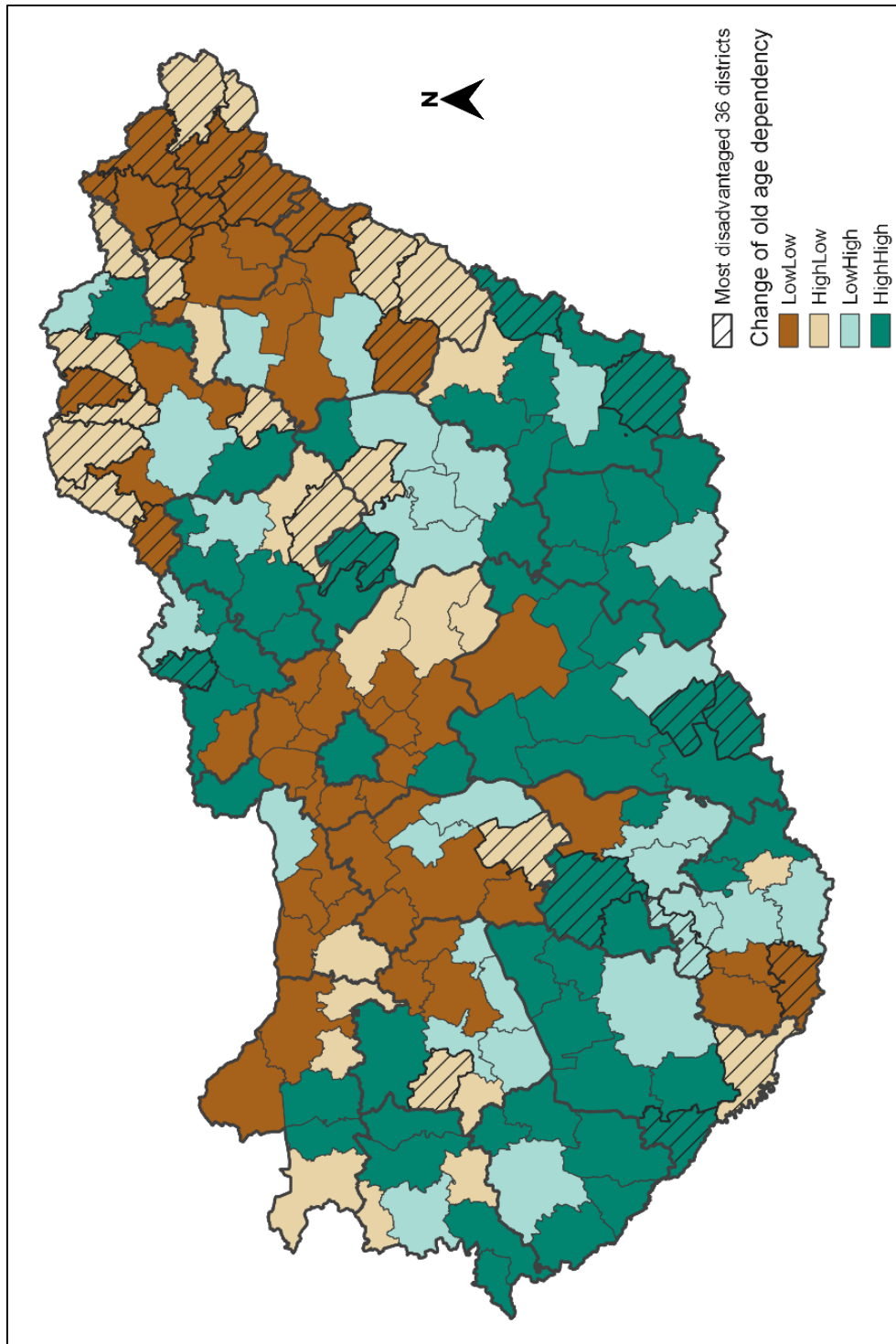


Source: Hungarian Central Statistical Office (HCSO), Municipality Statistics Database (T-STAR).

Both the rate of emigration and natural decline have contributed to depopulation in most Hungarian districts during the period surveyed. It has been natural decline that has played the most important role in depopulation in the majority of these districts. Nevertheless, negative migration rate is the dominant component of population decline in the north-eastern part of the country and several inner peripheries from the Hungarian Great Plain and Southern Transdanubia. These areas are often locations of advanced peripherization

in which locational disadvantages are coupled with multiple socio-economic challenges and the marginalisation of the population.

Figure 5. Changes in the old age dependency ratio in Hungary's districts relative to the national average, 1990–2017



Source: Hungarian Central Statistical Office (HCSO), Municipality Statistics Database (T-STAR), Gov. Decree 290/2014 (XI.26.).

One of the consequences of demographic decline is ageing of the population in the areas concerned. The underlying reason is, in part, massive ongoing selective outmigration, which mainly involves the younger working-age population, and thus brings about a shift in age structure towards a higher rate of older age groups. Furthermore, legacy distortions in the age structure generated by past negative trends in migration termed ‘legacy shrinking’ by ESPON 2020 also eventuate ageing of the population.

As a measurement of assessing the degree of ageing in districts, we used the old-age dependency ratio (the ratio of the number of people in the (65+) age group per the number of people of working age, i.e. 15-64 years old), which was already high in the early 1990s in most districts in the Great Hungarian Plain, West Transdanubia (with the exception of the environs of cities) and in regions of fragmented settlement systems dominated by small villages in South Transdanubia and North Hungary (Figure 5). Ageing has accelerated (exceeding the national average) over the past 30 years in most of the districts that were already affected by this trend in the past. At the same time, ageing has not applied in districts where e.g. suburbanisation or marginalisation continuously secured a supply of young age cohorts.

The variable of most disadvantaged districts appearing on the above map is aimed at assessing the extent of overlap between lagging and ageing (and shrinking) districts. Districts of Hungary are classified by using a complex indicator calculated from 24 variables in four dimensions (demography and society, living conditions, local economy and labour market, infrastructure). The 290/2014 (XI.26.) Government Decree which forms the basis of this classification refers to the 27. par. of XXI. / 1996. Act on Territorial Development, which stipulates that the group of the most disadvantaged districts should cover 10% of the Hungarian population. According to the latest classification having been in force since January 2015, there are 36 districts within this group.

The above map indicates that districts where the old-age dependency ratio has become lower than the national average over the past 30 years or was already low in 1990 belong to two groups, that of the dynamically developing urban and suburban areas, on the one hand, and the other extreme, rural districts located typically in the east, north-east periphery and in patches along the south-western border line, on the other hand. In other words, no proof of strong correlation between lagging and ageing (thus shrinking) is indicated by Figure 5. The map also illustrates that those cases where young age structure is coupled with underdeveloped (lagging) status of complex nature are accumulating in eastern, north-eastern border districts also appearing in patches elsewhere (mainly along county or country borders, inner and geographical peripheries). In such cases we can assume that in addition to cross-border immigration, social marginalisation and the stemming consequences of high birth rate and low outmigration rate are triggering young age structure.

4. A CLOSER VIEW ON CAUSALITIES: EXAMPLES OF TWO SHRINKING RURAL REGIONS

As mentioned earlier, a secondary interpretation and comparison of the findings of two case studies will follow in this subchapter. The two dramatically shrinking rural districts are the Tamási district studied in 2017 within the PROFECY project and the Szentes district, the study of which was conducted in 2019 within the ESCAPE project.

The two regions have much in common considering their spatial and economic position: in the Hungarian context and at the level of district both can be classified as inner peripheries. Both are disadvantageous in terms of transport, i.e. no motorways or main railway lines cross them. The reason why Szentes district is classified as inner periphery despite it does not meet the criteria set by the PROPHECY project is that it lies between two dynamically developing cities, Kecskemét and Szeged, roughly 100 kms from each, exerting a significant drain effect in terms of both labour and population. Also, both districts are located along county boundaries, a situation aggravated in Tamási's case by the fact that there are also districts qualifying as inner peripheries on the other side of its frontier. There are five districts there forming a sprawling contiguous inner periphery with no larger cities in the vicinity and poor access to transport. As a result, their peripheral character is more obvious and more pronounced than their Szentes counterpart.

The Szentes district lies in the Southern Great Plain, which is typically a flat area with a settlement structure rooted in the history of the region and characterised by relatively populous market towns with surrounding settlements of a smaller size. There are villages in the vicinity of the market towns and inhabited areas in the outskirts of both market towns and villages working as farming and/or residential settlements of about 9% of the population across the NUTS-3 region of Csongrád County⁵. The district of Tamási lies in a hilly area, common in Transdanubia and belongs as an administrative unit to Tolna County. Accommodating the topography of the area, the settlement structure comprises the centre of Tamási and two small towns, Gyöng and Simontornya surrounded by villages and the remainders of former manors.

The number of the inhabitants in Szentes was 27,820 in 2017, and that of the seven villages in the district of Szentes totalled 12,313, less than half of the town. In contrast, the number of the inhabitants in the town of Tamási, the centre of the Tamási district, was only 8,160 in 2017, one third of that of Szentes. The number of inhabitants in the rural hinterland of the district totalled 23,856. This number comprises inhabitants of Simontornya and Gyöng, rural towns with 3,951 and 1,813 people, respectively. The ratio of town to village dwellers in this region is approximately the opposite of the ratio in the district of Szentes, and its settlement structure is also more fragmented than its counterparts in the Southern Great Plain, or rather, fragmented in a different manner.

From social history, it is worth recalling the duality of manorial and peasant dwelling places that prevailed until the communist take-over in 1949 and beyond; there was hardly any communication between manorial labourers (*cselédek*), who lived and worked in the manors and the peasant population of the villages. Paradoxically, this duality had survived during the forty years of socialism and beyond owing to the fact that nationalised manors operated from the time of the communist takeover up until the collapse of the regime as state farms, and employed the same manorial labour force initially and then mostly their descendants. Although the terms and conditions of accommodation and work were more equitable in state farms than those offered by manors, state farm workers remained heavily dependent on their employers and socio-spatial disconnection of former manorial dwelling places continued to exist for decades.

Another important historical event that impacted rural demographic processes is that of collectivisation of the peasant property, which was completed all over the country by the mid-1960s. Since then, the forcefully established collective farms and the state farms worked side by side in rural Hungary until the 1990s when privatisation/decollectivisation

⁵ The Szentes district as a unit of state administration belongs to Csongrád county.

shaped new economic and spatial structures but still with a lot of continuities with the former ones. In addition to spatial and economic patterns, path dependency has been noticeable with regard to the different attitudes of descendents of manorial/state farm workes in comparison with inhabitants of peasant origin in both districts identified in less entrepreneurial ambitions and ability among the former than the latter group of people. Similar attitudes were attributed to wage labourers by the mayor of a small town of the Tamási district, Simontornya, where more than one thousand labourers were sacked when the Leather Factory was wound up in 1997. “In Simontornya everybody was attached to the factory, generations grew up and worked there. Their mentality did not change overnight, and they were too many” – the mayor of the town said when she was explaining the reasons of massive and long-term unemployment in the town after the closure of the factory (ESPON, 2017, p. 18).

However, manorial past shaped the social history of the Szentes district and the broader Great Plain region less than in the Tamási district and South Transdanubia where spatial and social disconnections of depleted former manors from inner town areas are still existing. This was illustrated by a case study conducted in the Tamási district in 2012 as follows: “The disappearance of traditional local and regional employment (agricultural and industrial) capacities affected the Roma population particularly severely, among them especially those who live on the outskirts of the settlements in a segregated environment with multiple forms of exclusion. The jobs available within public work programmes offer the primary possibility of legal employment. (...) In addition to public work and social transfers occasional income is secured from informal work and activities, such as the collection of herbs, selling used articles, temporary work in the building industry or agriculture.(...) Among those Roma who lived in villages it was also witnessed that some families tried to endeavour into farming at least for subsistence” (Váradi, 2012. p. 1)

By contrast, although “dependency-ridden attitudes” exist in the Szentes district as well, especially in two villages with manorial past, the emblematic figure of the area is a gardener engaging in market-oriented small scale enterprise of 0,5 - 3 hectares on average who might pursue horticulture on arable land, under heated or unheated plastic tunnel or greenhouse, work during the long season day and night but s/he is fascinated by success of gardening despite challenges. The horticulturing tradition of the Szentes area is rooted in the past, going back to Bulgarian settlers at the end of the nineteenth century. Continuity was provided here by large-scale cooperative farms that relied on traditional horticulture partly out of necessity. Even more importantly, plot-farming was permitted and integrated by these agricultural co-operatives and spread fast in 1970s. In fact, what happened was that this labour intensive activity was outsourced by the co-operatives to individual plot farmers, whilst provisioning inputs and marketing was kept in the hands of the co-operatives. Integrated plot farming generated knowledge and skills as well as significant income for many households during and after socialism. By nowadays an entrepreneurial class of gardeners has developed, which, through the absorption of unskilled labour force contributed to preventing mass pauperisation of the area (ESPON, 2020).

Revisiting differences between the two rural districts, we should mention that the district of Tamási has been adversely hit by the rounds of public administration reform between 1971 and 1990, when consistent population shrinkage led to most of those places losing their institutions: four-fifths of the small villages lost their public administrative independence during this era. Primary schools, post offices and medical districts were merged or closed down. The district of Szentes took longer to undergo

the same process due to the larger sizes of the settlements there, and the process affected fewer settlements (three out of seven). To see the outcome of these processes, jumping to the year of 2017, investigating access to eight different kinds of public service⁶ in the two districts, we found that all eight were available in district centres. People in the two small towns in the district of Tamási had access to seven services, those of villages in the district of Szentes had access to five services on average, while those in the district of Tamási had access to only three services on average (six small villages had access to only one service).

The loss of public and private services, which occurred on a territorial scale in the Tamási district can be interpreted as advancing peripherization, which shaped the local communities. The resulting conquest of vulnerable social groups in small villages can be attributed to the outflow of the offspring of the peasant society from villages and the inflow of the poor, former manorial workers, on the one hand, and Roma population on the other. It should be emphasised that the social and spatial selectivity of these migration flows matter the most. The outward migration flows of the young and abled population towards regional centres started in the 1950s speeded up by the second round of collectivisation in the early 1960s, whilst the inwards migration was urged by the demolition of Roma settlements initiated by politics a few years later that was prolonged for approximately one-and a half decades. Resettling the Roma population in small villages was supported by incentives those days, which facilitated the process of finding residents for the Roma but the consequences of forceful actions could not be unmade. Moreover, the rural equivalent of the so called neighbourhood effect, ghettoisation ending up in marginalised local societies speeded up and made the Roma population a majority group in a number of settlements (Kovács, 2013). The spatial spread of marginalised localities is what caused the Tamási district's lagging status, which does not occur in the Szentes district (and is rare in the larger region of the Southern Great Plain as well). This process of marginalisation triggered frequently but not exclusively by an increasing rate of the Roma population that is still ongoing especially in small, isolated rural settlements across Southern Transdanubia, the northern, north-eastern and eastern border areas of Hungary.

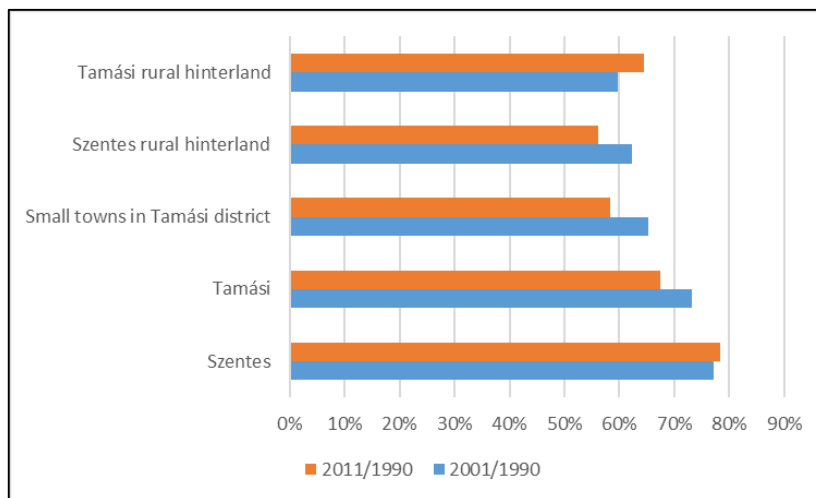
Another vital aspect of the economic position of the two case study areas is that of the availability of jobs in the local labour markets, which shows slight differences between the two districts. The fact is that since the fall of state socialism in 1989 and the resultant collapse of the economy, neither of the investigated districts had managed to restore or even approximate the number of jobs in 1990 by 2011 as is shown by the figure below (Figure 6). Transition-related job losses indicated much in common in the two case study areas.

It seems obvious that in agriculture, consequences of re-privatisation and dissolution of co-operative farms into the labour market in the 1990s were as damaging as was collectivisation three decades earlier. As far as manufacturing is concerned, the collapse of state socialism swept away industrial subsidiaries, which were the most important achievements of "industrialisation of the countryside" in the former decades, and induced an exodus of industrial labour in rural areas that was interpreted by a leading academic as an "export of crisis from centres to peripheries" (Nemes and Nagy, 1997, p. 148), that is: commuters were sacked first and subsidiaries were closed first. (ESPON, 2017, 2020).

⁶ The public services studied were general practitioners, outpatient care, pharmacies, nurseries, primary schools, libraries and day care for the elderly.

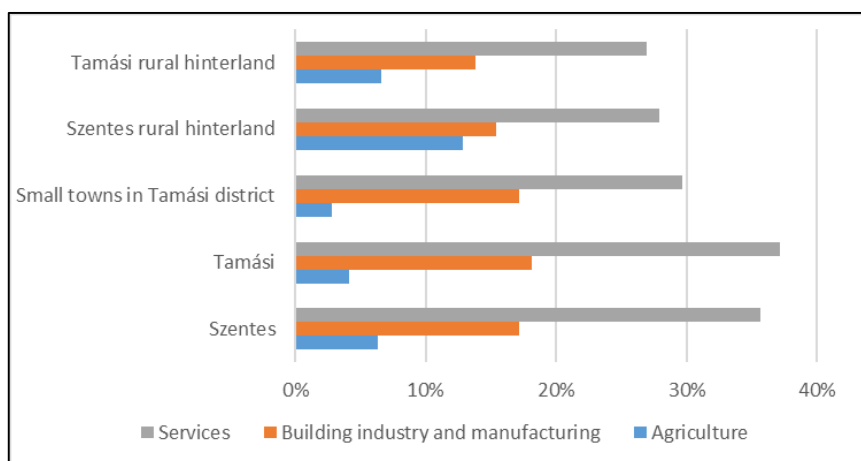
Compared with Tamási, Szentes is a large town as the number of its residents is three times that of Tamási. However, owing to its being a ‘shadow area’ in terms of transport, and the brain drain effect exerted on it by the neighbouring county seats, its power to attract investments became almost as weak as Tamási’s. Szentes seems to have been stuck with its agricultural and food processing profile. However, it is intensive agriculture (small as well as large-scale) and the food industry that prevent high unemployment here where gardens and food companies absorb unskilled labour, which accounts for the majority of the unemployed elsewhere, including in the district of Tamási. The figure below shows the employment structure of the districts of Szentes and Tamási in a distribution by urban and rural, and by settlement structure (Figure 7). Table 1 indicates labour market characteristics. The figure reveals that the ratio of agricultural employment is significantly higher in Szentes and its environs than in the district of Tamási, which is all the more striking as most garden farms have not been included in statistics. Therefore, the actual ratio of agricultural employment is presumably higher than what statistics reflect.

Figure 6. The scale of the loss of jobs in Szentes and Tamási districts 1990–2011



Source: Hungarian Central Statistical Office (HCSO), Population census.

Figure 7. Employment of active-age population by branches in the Szentes and Tamási Districts, 2011



Source of data: Hungarian Central Statistical Office (HCSO), Population census.

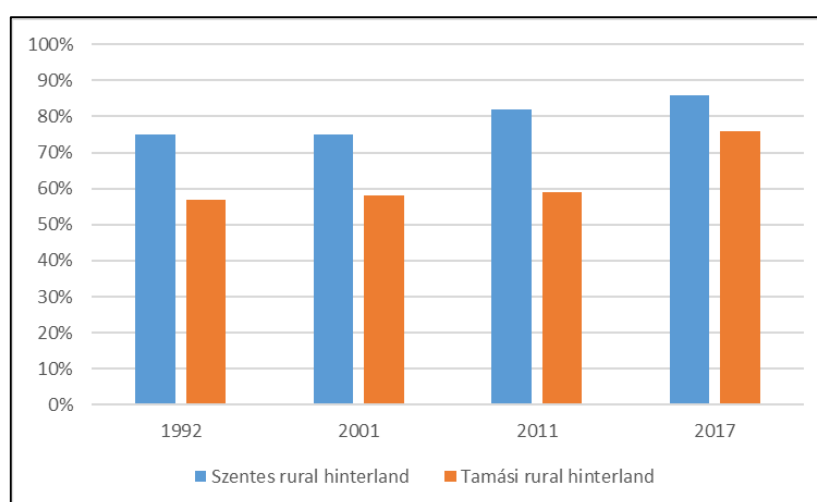
As regards the table, while the 2011 data reflect the impact of the global financial crisis taking the form of a higher-than-previous rate of unemployment and an increased ratio of long-term unemployment, 2017 data show the end of the crisis and the recovery of the labour market, which, however, took place in Hungary with a delay, between 2015 and 2017. In 2012, a high rate of permanent unemployment prompted the government to restrict active labour market measures, and resort in an unprecedented high degree to public work, an intervention which, though used before, had been of much lesser importance. Financed from public funds and organised by local governments, the public work schemes provided mainly unskilled men and women usually but not exclusively in rural areas with a livelihood for remuneration much lower than the minimum wage.

Table 1. Comparative labour-market figures in the two districts 2001-2017

Territorial units	Unemployment rate in % of active-age population			of which % of the long-term unemployed			Rate of public workers in % of active-age population
	2001	2011	2017	2001	2011	2017	2017
Szentes	4%	7%	2%	39%	53%	29%	2,2%
Tamási	7%	8%	3%	39%	47%	35%	4,4%
Small towns in Tamási district	10%	11%	4%	59%	53%	43%	3,4%
Szentes rural hinterland	5%	9%	2%	41%	54%	32%	3,6%
Tamási rural hinterland	10%	15%	5%	40%	44%	39%	7,2%

Source: Hungarian Central Statistical Office (HCSO), Municipality Statistics Database (T-STAR).

Figure 8. Proportion of annual income of taxpayers in the rural hinterland of the case study areas as a percentage of the income of taxpayers in the district centres, Tamási and Szentes 1992–2017



Source: Hungarian Central Statistical Office (HCSO), Municipality Statistics Database (T-STAR).

The data in the table reveal that the public work schemes operated mostly in disadvantaged rural areas where availability of primary economy jobs was scarce. Despite the fact that by 2017–2018 this form of employment had lost much in popularity, the proportion of public work participants as a percentage of the working age population in

the district of Tamási was still 4.4%, i.e. twice the corresponding figure for Szentes, as late as 2017. The corresponding figure for the rural hinterland of the town was roughly the same (twice the figure in the Szentes district, 7.6%) (Figure 8). It follows that income earned in the villages in the district of Tamási, where public work was more widespread was significantly lower in the period surveyed than in Tamási, the centre of the district. Furthermore, there was a wider gap between the opportunities to earn income in Tamási and in the surrounding villages than in Szentes and the villages in the Szentes district, which is attested to by the following figure.

Despite differences in terms of degree of wealth, shrinkage has not been significantly higher in the disadvantaged Tamási district than in the Szentes district; decline of the population between 1990 and 2017 was -16% in the former and one per cent less in the latter. Although, in principle, a highly educated labour force should have found employment in Szentes and its environment with a population three times that of Tamási, data and anecdotal evidence from interviews fail to support such an assumption: the proportion of those holding a degree as a percentage of the (25+) years of age was the same in Szentes as in Tamási (16%) and in the villages in the vicinity of the towns (7%). Stakeholders in both districts agreed that of the dominant population trends, the migration of the young skilled workforce to cities was the most regrettable.

Shown in the table below is a comparison of the number of the young and the old (the ageing index) that illustrates the extent of ageing (Table 2).

Table 2. Ageing index: the pop. ratio of those 60+ years of age to every 100 under 14 years of age

Territorial units	1990	2001	2011	2017
Szentes	97	128	190	214
Tamási	84	116	186	209
Small towns in Tamási district	90	146	251	296
Szentes rural hinterland	120	155	222	253
Tamási rural hinterland	127	138	162	176

Source: Hungarian Central Statistical Office (HCSO), Municipality Statistics Database (T-STAR).

The table suggests the town centres, even the very small towns in the Tamási district started with a predominantly young population in 1990, when ageing of rural hinterlands was already significant. The growth rate of (60+) population was also more or less similar in the district centres, 221% in Szentes and 241% in Tamási. Two gaps are suggested by data, one occurring in the small group made up of the two little towns of Gyöng and Simontornya in the Tamási district, where the speed of ageing has been extremely high (329%): by 2017, the number of (60+) people falling to one hundred (14-) increased from 90 to 296. The other gap appears between rural hinterlands of the two rural centres: in villages of the Tamási district, ageing is less significant and the growth rate of the (60+) population is smaller (139%) than in the Szentes district (211%). The reason is that the proportion of vulnerable social layers, Roma ethnic groups amongst them characterised by higher-than-average birth rates is significantly higher in the Tamási district than in its Szentes counterpart. The rate of those individuals

who had identified themselves as Roma in the 2011 census⁷ stood at 4% and 8% on average in the district centre and in the rest of the settlements of the Tamási district, at 2% in Szentes and only 1% in the neighbouring villages. These figures have been in line with natural decrease rates: negative natural change for the villages in the Tamási district was ‘only’ -13% between 1990 and 2011. The corresponding figure for the rural hinterland of Szentes was much higher at -21%.

The mechanisms through which spatial and social peripheries evolve can be also exemplified by the Tamási case: the isolated and depleting settlements, some of the small villages and the former manorial dwelling places attract social strata with a low social status because it is here that they find affordable housing (Kovács et al., 2020; Mihály, 2018a; Tagai et al., 2018). Such islands of social segregation evolve in both cities and isolated rural areas of similar kind in Hungary (Kovács et al., 2020).

5. CONCLUSION

In our study dedicated to Joan Noguera, we have pointed out that demographic decline in Hungary is a common experience in both rural and urban contexts but more widespread and more dramatic in the countryside.

Population decline was the dominant outcome of demographic processes all over the country except the agglomeration zones, the developed districts in north-west Transdanubia bordering Austria and south-eastern Slovakia and some patches outside these two geographical regions. The fact that the capital city itself was among the settlements affected the most by shrinkage shows that the relationship between demographic decline and the socio-economic status of a settlement or a district is not straightforward. Although the quantitative analysis of this article pointed out that most districts have been shrinking in the last three decades, especially rural districts and particularly those located along county boundaries (inner peripheries) there are exceptions from the rule, namely districts bordering eastern Slovakia, Ukraine, and Romania. Many of these districts are lagging, but their populations in the last three decades have been stagnant or, in the case of a few of them, growing rather than shrinking.

The apparent contradiction of the ‘irregular’ phenomenon can be explained by four factors: (i) the still ongoing immigration of Hungarian speaking population from the neighbouring countries, especially from Eastern Slovakia, Ukraine and Romania, (ii) a low level of mobility, (iii) a high level of birth rates and young age structure resulting from factors (i)-(iii). The group of districts producing ‘irregularities’ represents a significant part, an estimated one quarter of rural districts. However, the rest of rural districts are characterised by the mainstream patterns of outmigration, ageing, and low birth rate resulting in significant (23%) or dramatic (23%) population decline as Figure 2 indicates. To complicate the picture further, peripheral and non-peripheral locations appear in mainstream and ‘irregular’ districts as well.

The secondary interpretation and comparison of the two case studies conducted in the PROFECY and ESCAPE projects illustrated the complexity of the social and spatial trends that underlie the population shrinkage. Both investigated districts belonged to the

⁷ It is worth mentioning that according to estimates, the number of the native Roma population is two-three times higher than of those who declare Roma identity at censuses (Somogyi and Teller, 2011).

group of dramatically shrinking rural districts, still, especially one of them, the case study of Tamási district, provided adequate examples for irregularities caused by the prevalence of very small villages and former manorial settlements at the outskirts of town. The significance of these settlements from the point of view of peripherality is, that they represent spaces where social and geographical disadvantages of extreme degree overlap and induce irreversible marginalisation and demographic ‘irregularities’. The cumulative outcomes of peripherization show themselves clearly in complex dependencies of these peripheral localities on the centre(s) after the disruption of economic connections and the disconnection of social networks between people of different social classes due to increasing selectivity of population flows.

Case studies also illustrate that the impact of the historical cataclysms that had caused damage to the economy (and society) takes a long time to remedy or cannot be remedied at all. One such cataclysm was the communist takeover, disruptions of economic and social structures that affected rural communities, especially peasant societies to a dramatic degree. The next historical event occurred forty years later with the collapse of state socialism in 1989. Although the latter is considered positive overall, the economic breakdown, the liquidation of large-scale farming and the dissolution of industrial and service branches of these large-scale farms or headquarters seated in cities in the wake of the political shift had led to the loss of approximately half of the jobs in the two districts under survey, which have failed to reach or even approximate the 1990 employment rate over the past three decades.

It is worth stressing that path dependency, which despite breaks and discontinuities affects the attitude of the population strongly and can influence living conditions in both a positive and negative sense. A good example illustrating this is the presence of labour-intensive horticulture capable of integrating a broad layer of the population in Szentes and its environs, as a result of which the unemployment rate is much lower in this region, and income differences between town and country are also smaller. This activity is based on deeply rooted traditions and skills of the population that have survived historical cataclysms.

Finally, the last factor we wish to highlight is that though rural Hungary has always been a prime area of agriculture, the very type of the agriculture cultivated in a certain rural area makes a difference as attested to by the examples of Szentes and Tamási districts. The former case illustrates that mixed, labour-intensive farming based on knowledge and skills that have encouraged personal ambitions is likely to improve the economic and social resilience and, therefore, contribute to the medium- and long-term wellbeing of a given region despite population decline. In contrast, large-scale capital-intensive farming that creates only a few jobs increases rather than reduces spatial and social inequalities.

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AUTHOR'S CONTRIBUTION

	ITEM	Katalin Kóvacs	Gergely Tagai
1	Conceptualization	50 %	50 %
2	Data curation	45 %	55 %
3	Formal analysis	0 %	100 %
4	Funding acquisition	75 %	25 %
5	Investigation	50 %	50 %
6	Methodology	50 %	50 %
7	Project administration	90 %	10 %
8	Resouces	50 %	50 %
9	Software	0 %	0 %
10	Supervision	0 %	0 %
11	Validation	0 %	0 %
12	Visualization	0 %	100 %
13	Writing (original draft)	50 %	50 %
14	Writing (review & editing)	90 %	10 %

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