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POPULATION DYNAMICS OF THE HUNGARIAN SMALL TOWNS IN THE LIGHT OF CENSUSES

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Abstract

The importance of cities throughout history is indisputable. Their allocation of economic, cultural and political power, their spatial organization functions are impressive, and their role in social reproduction reached a milestone in 2008, when more than half of the world's population was considered urban. Today, the urban population is still growing. Small towns are extremely diverse in terms of economic power and society, but their numbers and population base do not justify their dominance in the urban network. There have been intense waves of urbanization across Europe, with the scope of formal cities widening and the scope of functional cities closing. Grouped by population category, there are more than 7,000 small towns in Europe, almost two-thirds of the countries' urban settlements are small towns. This is particularly true in Central- and Eastern-Europe, where, due to delayed urban development, there is a combination of welfare suburbanization and urban depopulation, as well as forced-generated movements from the big cities to smaller towns.

In our study, we present the main characteristics of population change in small towns in Hungary. We examine spatial and functional differences in the population dynamics of small towns. The aim of the study is to show the spatial distribution of the settlements identified by prosperous suburbs and shrinking cities by illustrating the changes in the population dynamics of the Hungarian small towns population over the last almost twenty years.

Keywords: small town, urbanization, urban hierarchy, Hungary, census

INTRODUCTION

Small Hungarian towns have a long history and a key role in organizing the rural space l. A growing number of professional forums are recognising that small towns are the future of sustainable development and the countryside. The settlement structure of the Central- and Eastern European countries is unique, with a dense urban network; these typical cases of urban development can be considered part of the historical-cultural heritage (Enyedi, 1978; Hajdú, Horeczki & Rácz, 2017; Rechnitzer, 2013). The region was characterized by significant delays and differences in urban development. In the interpretation of urban geography, Central and Eastern Europe has a low urbanization level in a European context

(Tsenkova, 2006). The region can mostly be characterized by oversized capital cities in comparison to the size of the countries, primarily in economic terms (Zdanowska, 2017), and by few and weak regional centers (Dogaru et al., 2014). We can speak about a hybrid pattern of urbanization, where elements representing the convergence to Western Europe and the distinctive regional development trajectories based on path-dependence and going back to the period before the socialist era are present simultaneously (Taubenböck et al., 2019). In this macro-region, where rural and semi-urban spatial categories are predominant, small towns represent the most accessible and characteristic level of the urban network (Burdack & Knappe, 2007; Konecka-Szydłowska & Maćkiewicz, 2015; Trócsányi et al., 2018; Vaishar, 2004; Vaishar & Zapletalová, 2009). The combination of low spatial mobility and the deficiencies of larger cities' networks make the regional importance of these settlements more emphasized as central locations – primarily as employment centres concentrating workplaces – in comparison to Western Europe (Filipović et al., 2016; Kwiatek-Sołtys, 2005; Pirisi et al., 2016). On the other hand, their relative weakness, the limitations of their economic power appear as a key factor hampering regional convergence (Bartosiewicz et al., 2019; Cole & Svidroňová, 2021; Horeczki, 2014, 2021; Molnár, 2015a).

THEORETICAL BACKGROUND

There is a field within spatial sciences that lies somewhere between the "real" urban and the rural research, belonging somewhat to both, yet not entirely to either—a field that specifically focuses on small towns as a unique settlement type. It is not an extensive field, so much so that emphasizing the 'under-researched' nature of small towns in studies is typical (Hannemann, 2004; Horeczki, 2013; Steinführer et al., 2016). Neglect appears to have dissolved in recent years (Molnár E. et al., 2023) as several special issues concerning small towns were prepared within the leading journals (Grossmann & Mallach, 2021; Servillo et al., 2017; Steinführer et al., 2016), and two important books focusing on small towns have been published recently (Bański, 2022; Mayer & Lazzeroni, 2022). The growth might be more than apparent, not simply stemming from a massification of 'knowledge production', raising the question: what explains the increasing attention towards small towns?

The scholarly interest in small towns can traditionally be traced back to multiple sources. In Central Europe, where approaches of the German geography have always been dominant, the small town primarily appeared as a central place (Grötzbach, 1963). This approach is functional and centred around services and development. Embedded in the settlement

network, small towns emerge as places catering to rural areas, gaining significance beyond themselves in these relations (Courtney et al., 2007; Elsasser, 1998; Vaishar et al., 2015; Vaishar–Zapletalová, 2009). At the same time, one of the approaches interpreting small towns as a specific problem can be traced back to this perspective. If small towns are seen as the key to rural development, some of the possible causes of the crisis in rural areas must be sought here as well. This interpretation emerged particularly sharply in post-system change Central- and Eastern-Europe (CEE) because the connection seemed rather obvious: the collapsing economies of small towns on one side and persistently crisis-ridden rural areas on the other. From this approach, it is worth examining the transformation of the economic performance of small towns (Cudny, 2012; Molnár, 2015b; Novotný et al., 2019; Zuzańska-Żyśko, 2005). Experiences from this perspective are two-fold and diverge notably between developed countries (besides Western Europe, particularly well-known case studies come from the United States and Australia) and the transformation countries of Central- and Eastern-Europe. In the former, there are also numerous signs pointing to problems related partly to the global economic transformation and partly to cyclical crises that occur from time to time (Broadway, 2000; Lovell et al., 2018), but there is more emphasis on the resilience of the small-town economy and community (Lazzeroni, 2020).

In CEE-countries, deindustrialization, the decline of industries inherited from socialism, and the ensuing economic crisis (Bole et al., 2020; Zuzańska-Żyśko, 2005), the objective limitations of tertiarization, and the question marks concerning re-industrialization (Czapiewski et al., 2016; Konecka-Szydłowska et al., 2010) have destabilized the economic role of small towns. Only a couple of small towns can act as significant commuting centres and provide employment for the population in the surrounding rural areas (Pénzes, 2013; Pénzes et al., 2015; Pirisi et al., 2016; Zuzańska-Żyśko & Sitek, 2014). The differentiation of small towns based on their economic performance and development level shows both hierarchical and spatial tendencies, while industrial potential partly inherited from the socialist era plays a key role in generating larger and “more developed” economies (Molnár et al., 2023). There are small towns with per capita economic power similar to the larger cities, but their innovation potential is clearly more limited. According to earlier investigations, only 50-60 cities and towns in the Hungarian urban network were found to have some innovation potential, while the outstanding places were larger or medium-sized cities or those belonging to their agglomeration zones (Rechnitzer et al., 2004; Rechnitzer et al., 2014). Small towns with remarkable innovation potential were mostly locations of higher education but taking the concentration process of the Hungarian higher education system and the decline of rural

locations (Lengyel, 2023) into consideration, their future seems to be not too bright. Overall, perhaps even those somewhat concise conclusions cannot be regarded as exaggerations, which directly saw small towns as the biggest losers of globalization (Enyedi, 2012).

One of the most crucial attributes of a crisis-ridden small town is demographic shrinkage: the decline of economic roles and population loss go hand in hand, reinforcing each other with positive feedback loops. Of course, this is not solely an issue in CEE-countries. The challenges faced by small towns in the globalized economy are significant even in central areas, leading to emigration (Alston, 2004; Shetty, 2009; Troeger-Weiß & Domhardt, 2009). The essence of the problem lies in the fact that the traditional population reserves in rural spaces have been depleted in both Western and Eastern Europe. Small towns are not an attractive destination for global migration that feeds the growth of big cities (Carr et al., 2012). In CEE-countries, natural decrease, negative international migration balances since at least the mid-2000s, and fundamentally, migration towards big cities have simultaneously and significantly affected shrinkage, becoming a defining factor in the life of small towns (Bartosiewicz et al., 2019; Ljubenovic et al., 2022; Pirisi & Trócsányi, 2014). The most significant and painful factor of shrinkage is a type of emigration that primarily affects the younger population (Leibert, 2016; Makkai et al., 2017; Wolff et al., 2021), endangering the economic and social reproductive potential of small towns. It is crucial to emphasize that shrinkage is not merely a quantitative issue; it leads to the breakdown of connections, erosion of social capital, fundamentally questioning the elements that constitute small-town identity.

Intensive growth was never characteristic of small towns. In the urbanization cycle theory (Van den Berg et al., 1982), the place of small-town urbanization should partly be sought in the phases of relative and absolute deconcentration (Enyedi, 2011), as “in-depth urbanization”, a counterbalance to the development of large urban metropolitan regions. However, doubts regarding the limited applicability of cycle theories to mid-sized and small towns are not new (Nyström, 1992). In the CEE-region, especially in Hungary, a significant transformation of demographic processes reversing small-town shrinkage is hardly expected in the near future. It would also be illusory to expect small towns to strengthen to such an extent in their traditional roles as to become genuine, small-scale growth poles. What is needed is either new growth impulses or the acceptance and management of shrinkage.

Examples of both cases exist. At the level of small-town planning, it is challenging to exceed the growth-paradigm, but there are precedents for 'smart shrinkage' at the small-town level too (Peters et al., 2018). On the other hand, the growth or more precisely, the success factors of small towns can be diverse, even in the age of the global economy that favors urban

spaces. In the changing patterns of territorial inequalities, not every small town can be seen as a loser. Some have integrated into functional metropolitan regions (Kwiatek-Sołtys, 2005), while others have provided attractive locational factors allowing their businesses, based on external direct investment rather than locally rooted, to successfully integrate into global value chains (Cole & Svidroňová, 2021; Novotný et al., 2019; Pipan, 2018; Wirth et al., 2016).

It is important to emphasize that while traditional small-town functions might have been questioned, there seems to be a revaluation of traditional small-town values in recent times. Two pillars are worth highlighting: firstly, small towns appear much more capable of transforming into sustainable habitats harmonising with elements of the natural environment than urban spaces (Mayer & Knox, 2010; Vaishar et al., 2016; Vaishar & Greer-Wootten, 2006). Secondly, as also witnessed during the COVID-19 pandemic (Pirisi et al., 2022; Sztando, 2020; Uzzoli, 2022), small towns are being revalued as secure places. This narrative is likely to strengthen now, especially when societal, political, military, and economic risks are on the rise. The almost suffocating stability and conservatism manifested in multiple dimensions in small towns may push young people to emigrate, but for others, these factors might be attractive (Fertner et al., 2015; Kwiatek-Sołtys, 2006; Windley & Scheidt, 1988). The decline and crisis of traditional economic functions on one side, and adaptation to globalization, primarily ensuring an appealing local living environment on the other. Theoretically, in the demographic processes of small towns, the analysis of actual data should show us this kind of duality, differentiated trajectories. This study attempts to provide an overview of the population changes in Hungarian small towns using data released three months before the manuscript preparation of the 2022 Hungarian census. The particular focus of the study is on the territorial and size differences in population dynamics.

DATA AND METHODS

The interpretation of small towns can be summarized by the saying “as many houses as many small towns”, or more precisely, “as many researchers as many different kinds of small town demarcation”. The authors of this paper have also used different approaches in their previous works but have been able to reach a consensus in the interest of common research. Without going into too much detail in this paper, it should be noted that we considered as small towns all settlements in Hungary whose population did not exceed 30,000 at the time of the 2022 census and which already had urban status at the time of the census. In previous works, all

authors of this article have used the latter, formal criterion for the delimitation of small towns, with all its contradictions (see e.g. Horeczki & Egyed, 2021; Horeczki, Molnár & Pirisi, 2023; Molnár 2007; Pirisi & Trócsányi, 2006). Considering the characteristics of the settlement network in Hungary, several authors have used a similar definition of a small town: Kőszegfalvi (2004) with the urban status and a population threshold of 30,000, Dövényi (1986) in his analysis of the Great Plain, Tóth (1988) in his early works, and the Hungarian Central Statistical Office also uses this population limit. The upper limit of 30,000 inhabitants is also the result of a compromise and partly reflects the weakness of the urban area with a central urban character (Pirisi &Trócsányi, 2009). On the other hand, cities with over 30.000 inhabitants – with the exception of some large agglomeration towns – have mostly special legal status, more autonomy and they function as mesoregional or regional centers – as opposed to "typical or traditional" small towns regarded as microregional centers (Kovács et al., 2021). The method used finally selected 317 towns for the analysis, with the smallest actor being Pálháza with a population of just 972 and the largest Szekszárd, which just slips under the 30,000 inhabitants limit. The determined group of small towns represents a colorful picture in terms of urban functions and hierarchical positions as well, there is even one county seat (Szekszárd) and two cities with county rights (Szekszárd and Esztergom) among them.

After delimiting the small towns, we analyzed their population dynamics based on the data of the last censuses (2001, 2011, 2022). We examined their population change investigating the tendencies of two decades (2001-2011 and 2011-2022), comparing their dynamics to the group average in the given decade. As a main outcome of this analysis, we identified six dynamic categories (their detailed description can be found in the next part). In a subsequent step of the analysis, we examined the distribution of small towns among the dynamic categories based on different criteria (population, urban hierarchy, complex city types, regional location). While the population size typology was based on the 2022 census data, for the urban hierarchy and the complex city types we relied on the classification published in the National Atlas of Hungary (Kovács et al., 2021).

RESULTS

The appearance of continuity over time in small towns is reinforced when we consider the weight of the category within the urban or settlement network. In 2022, the 317 small towns were inhabited by 2.9 million people, 30.2% of the country's population. Three out of ten Hungarians can therefore be considered small town citizens (irrespective of whether they

identify themselves as such), and this proportion is remarkably stable. The same 317 municipalities represented a population of almost three million and a weight of 30.3% in 2011, compared with 30.2% in 2001. This means that the aggregate population change (shrinkage) of small towns is identical for the country as a whole. Between 2001 to 2022, the current population of small towns are expected to have lost 5.77% of its initial population (5.82% for the country as a whole). This stability is somewhat altered if we do not look at the change in the rate of the current population, but rather apply the upper and lower limit criteria mentioned above at the time of the censuses. In this case, 199 municipalities fit into the small town definition in 2001 with a population of 2.22 million (21.7% of the national total) and 291 municipalities in 2011 with 2.70 million inhabitants, representing a weight of 27.2%. The growing importance of small towns in this sense can of course be partly attributed to formal urbanization (Karsai & Trócsányi, 2019). As Faragó (2010, p. 434) puts it, "the trend of economic development is a continuation of urbanization".

Table 1 Causes behind the expansion of the small town network

	Period	Formal urbanization	Shrinking cities (under 30,000)	TOTAL increase
Number of small towns	2001-2011	91	4	95
	2011-2021	20	6	26
	2001-2022	111	10	121
Population of small towns	2001-2011	514,095	115,706	629,801
	2011-2021	108,704	172,997	281,701
	2001-2022	622,799	288,703	911,502

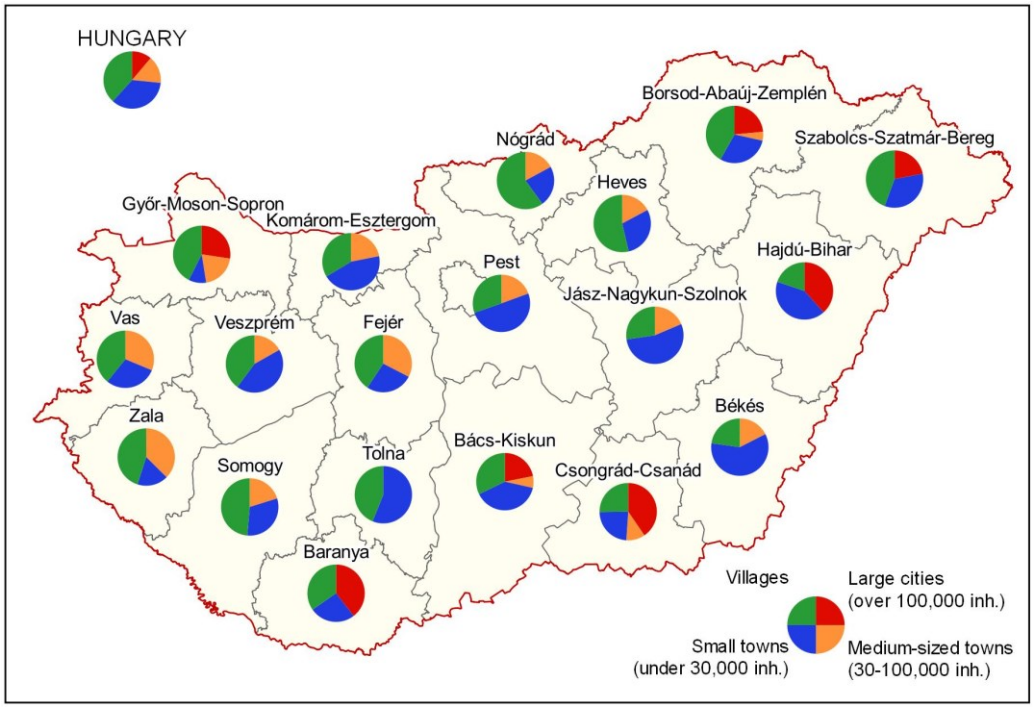
Source: own editing.

In the period under review, a total of 111 large villages and municipalities were granted the title of town (table 1), all of which can be classified as small towns (the largest - Fót, Gyömrő and Vecsés - have a population of over 20,000). However, the population is not only open at the bottom. Ten settlements defined as small towns in our research (Ajka, Gyöngyös, Gyula, Hajdúböszörmény, Kazincbarcika, Kiskunfélegyháza, Orosháza, Pápa, Szekszárd and Szentes) were found to be above the 30,000 threshold in 2001, yet their shrinkage was generally significant. There are far fewer dynamic settlements emerging from the small town category: only three towns (Dunakeszi, Szigetszentmiklós and Mosonmagyaróvár) were still below the 30,000 inhabitants threshold in 2001. While the former two are dynamic suburbs of Budapest with a population exceeding 40,000 until recently, the latter town is located in the northwestern edge of the country influenced by the spatial proximity of the Austrian and

Slovakian capital cities. A similar result was found in Rácz (2008), which confirmed the growing importance of small towns and the increasing share of towns with a population of less than 20,000. Shrinking therefore represents a net increase in the population of small towns under the current conditions and delimitation, but this effect is only secondary to the growth of formal urbanization, which came to a halt in all but two cases in 2013. The weight of small towns, even if relatively stable over time and essentially only due to formal urbanization, has moved from around 20% after the regime change to around 30%, but shows very significant spatial variations.

Small towns have a high population share in counties where there are no large cities (Figure 1). Pest county is of course in a misleading position in this context, as the influence of the capital determines the development of the settlement geography. However, in addition to the absence of large towns, the importance of small towns may be high both in areas where the weight of villages is high, i.e. where the overall population distribution shows more rural characteristics (Tolna, Veszprém), and in areas where the weight of the village population is low, where the historical path of urbanization has led through the development of rural towns to the present day (Békés, Jász-Nagykun-Szolnok).

Figure 1 Population distribution by settlement category in the counties



Source: own editing.

The counties of Győr-Moson-Sopron, Nógrád and Zala, with their completely different backgrounds, represent the other pole. In the case of the former-mentioned, the relatively small weight of small towns is due to the fact that it is home to two major medium-sized towns in addition to its metropolitan seat (the situation would have been different if the analysis had been based on the 2001 census data, when Mosonmagyaróvár was still classified as a small town). However, in the case of Nógrád and Zala, the high proportion of municipalities also indicates that urbanization is slow, few villages have been able to develop (at least formally) into towns, and they are among the smallest (e.g. Letenye, Pacsa, Zalakaros, Zalalövő in Zala). In Nógrád, moreover, the latest promotion to town rank (Bátonyterenye, Rétság) occurred in 1989, after which the process completely froze in the absence of large municipalities and settlements with dynamic population growth. The issue of Pest county deserves special mention, as its urban network is dominated by small towns and several of its larger towns are considered to be relatively functionally poor. However, even though the growth of the number of towns in this county has been intense, in formal terms Pest is still under-urbanized: the vast majority of the country's settlements with a population of more than 5,000 but without urban status (19 out of 25) are located in this county. If formal urbanization gains a new dynamic, it is not difficult to predict that the number and relative importance of small towns in Pest county will continue to grow.

The weight of small towns does not show a classic east-west or centre-periphery dichotomy. To summarize our observations, this is again a manifestation of the in-between situation so characteristic of small towns: the role of small towns is prominent when urbanization is intense enough to allow a relatively large number of villages to develop into towns, but not enough to produce a series of medium-sized and/or large towns.

In our analysis, we have examined the population dynamics of small towns based on data from the most recent censuses (2001, 2011 and 2022), compared to the average of their own group (the group average was -2,30% in the first decade and –3,56% in the second decade, the population shrinkage of small towns accelerated). We have assessed separately the population changes between 2001 and 2011 and between 2011 and 2022 and have identified six categories in total by comparing the two decades. Municipalities that have experienced population growth in both decades (red) were classified as “Towns with continuous growth” (category 1), while small towns that have experienced a decline in addition to (or instead of) growth but at a rate below the group average for small towns as a whole (yellow) were classified as “Towns with continuously above-average dynamics” (category 2). In this group

the shrinkage of the towns was less intensive than the -2,30% and the -3,56% average characteristic for the two decades, some towns showed a growth in one of the two decades. At the other extreme, there were "Towns with continuous and extreme shrinkage" (category 6), which in both decades experienced extreme population decline (dark brown), with a rate of decline three times the group average (it means at least -6,89% or -10,67% decrease). Where, in addition to (or instead of) extreme shrinkage, there was 'only' above-average shrinkage, the settlement was labelled "Town with continuously under-average dynamics" (category 5) (light brown). These towns had a population dynamics between -2,30% and -6,89% in the first decade and a change between -3,56% and -10,67% in the second decade, or there were several towns undergoing extreme shrinkage in one of the two decades. Finally, there are two intermediate categories: "Towns newly gaining above-average dynamics" (category 3) and "Towns losing their above-average dynamics" (category 4). Category 3 went from above-average or extreme shrinkage to under-average shrinkage or even growth (orange), while small towns 'losing dynamism' (category 4) followed a similar path in reverse (light red) (Table 2).

Table 2 Distribution of small towns among the dynamic clusters based on population changes over the last two decades (percentage)

		2011-2022				
		Growing	**Shrinking less than average**	**Shrinking more than average**	**Extremely shrinking**	**Total**
2001-2011	**Growing**	18.0	3.5	1.9	0.6	24.0
	Shrinking less than average	1.9	2.2	2.5	0.0	6.6
	Shrinking more than average	3.2	6.9	18.6	4.4	33.1
	Extremely shrinking	0.3	1.6	18.3	16.1	36.3
	Total	23.3	14.2	41.3	21.1	**100.0**

Source: own editing based on Census 2001, 2011, 2022.

But what kind of differences in the population dynamics of small towns exist if we examine town groups based on the criteria of population size, urban hierarchy, complex urban types and regional position? At a first glance, it should be emphasized that internal differentiation of the small towns' group appears quite stable: a relatively small number of towns (18%) were found to be shifting their position between the positive and the negative poles of the table by gaining a new or losing their earlier population dynamics (categories 3-

4). However, the majority (almost 60%) of the towns can be placed on the negative pole (categories 5-6), the "most typical" small town has under-average population dynamics (category 5).

When examined from the point of view of population size (Table 3), higher categories (20-29 and 10-19 thousand inhabitants) appear to incorporate many continuously growing towns (category 1) beyond the predominating ones with under-average population dynamics (category 5). Category 1 has a clear overrepresentation in these groups, which can be explained by the relatively big and dynamic agglomeration towns.

Table 3 Distribution of small towns with different population size (%) by categories based on population dynamics

Population (thousands)	**1**	**2**	**3**	**4**	**5**	**6**	**Total**
20-29	31	7	7	7	34	14	100
10-19	31	6	9	3	38	13	100
5-9	16	8	13	8	43	12	100
-5	7	9	14	4	43	23	100
Total	**18**	**8**	**12**	**5**	**41**	**16**	**100**

1. Towns with continuous growth. 2. Towns with continuously above-average dynamics. 3. Towns newly gaining above- average dynamics. 4. Towns losing their above-average dynamics. 5. Towns with continuously under-average dynamics. 6. Towns with continuous and extreme shrinkage.
Source: own editing based on Census 2001, 2011, 2022.

On the other hand, lower population categories (5-9 and 1-4 thousand inhabitants) more characteristic for the rural space include a higher (and overrepresented) share of towns with under-average population dynamics. 23% of the towns with less than 5 thousand inhabitants is extremely shrinking (category 6), a further 43% have under-average population dynamics (category 5). However, it must be noted that our categorization was based on population data at the end of the examined period (census 2022) which strengthens the correlation between population dynamics and size.

Population dynamics problems of small towns functioning as the centres of rural space are clearly underlined by the analysis of the several hierarchical categories (Table 4). 80% of the "medium towns" and 70% of the "small towns" representing the higher hierarchical levels can be found in the two worst population dynamics categories (categories 5-6). On the other hand, "village towns" and "titular/ceremonial towns" with a modest position in the urban hierarchy have a slightly better position: 25% of the former and 33% of the latter group show continuous growth or above-average population dynamics (categories 1-2). Moving beyond the urban hierarchy and using the categories of a more complex typology (Table 5), we can state that small towns under the influence of larger cities ("agglomeration and residential

towns") as well as "resort and spa towns" dynamized by tourism mostly have a higher population dynamics than "meso- and microregional centres" or "village and titular towns" less affected and shaped by the effects of suburbanization and the development of tourism. While more than half of the towns showed a continuous growth (category 1) and there were no towns with continuous and extreme shrinkage (category 6) in the first two settlement groups, about half of the towns had under-average dynamics (category 5) and further 20-25% underwent continuous and extreme shrinkage (category 6) in the two latter settlement groups.

Table 4 Distribution of small towns with different positions in the urban hierarchy (%) by categories based on population dynamics

Urban hierarchy	**1**	**2**	**3**	**4**	**5**	**6**	**Total**
Medium town	7	7	3	3	57	23	100
Small town	8	6	8	7	52	18	100
Village town	20	5	20	2	39	14	100
Titular town	24	9	13	6	34	14	100
Total	**18**	**8**	**12**	**5**	**41**	**16**	**100**

1. Towns with continuous growth. 2. Towns with continuously above-average dynamics. 3. Towns newly gaining above- average dynamics. 4. Towns losing their above-average dynamics. 5. Towns with continuously under-average dynamics. 6. Towns with continuous and extreme shrinkage.
Source: own editing based on Census 2001, 2011, 2022.

Table 5 Distribution of complex types of small towns (%) by categories based on population dynamics

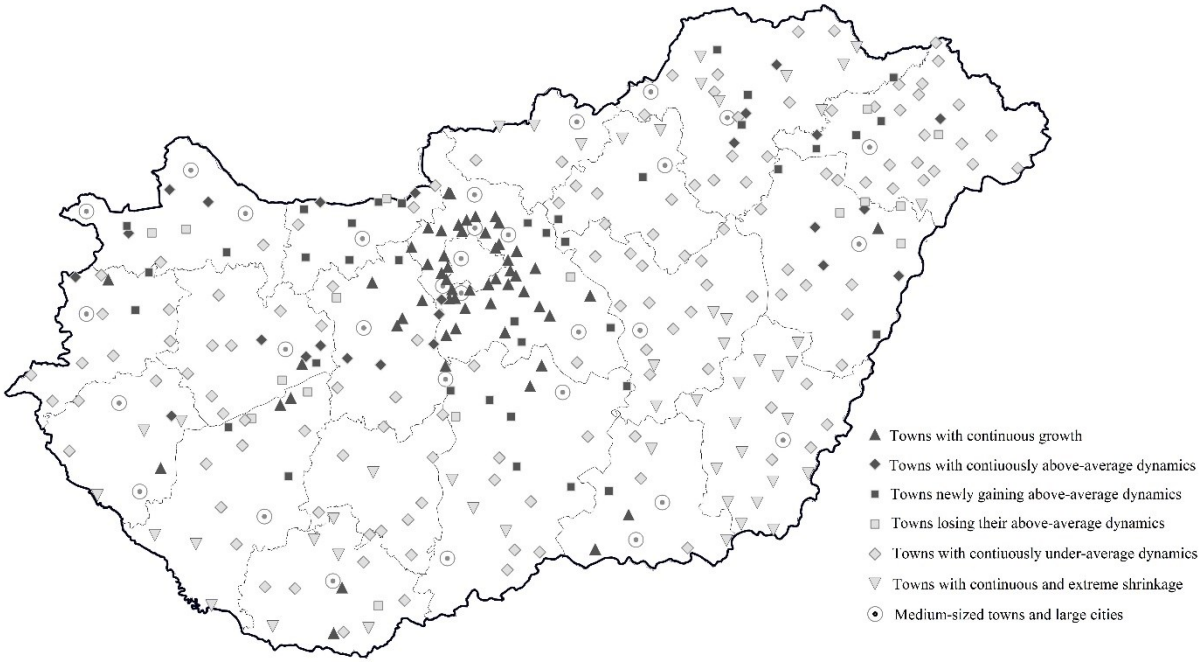
Complex urban type	**1**	**2**	**3**	**4**	**5**	**6**	**Total**
Agglomeration and residential towns	56	11	13	3	18	0	100
Resort and spa towns	56	6	13	13	13	0	100
Meso- and microregional centres	2	8	6	6	56	22	100
Village and titular towns	4	6	15	5	47	23	100
Total	**18**	**8**	**12**	**5**	**41**	**16**	**100**

1. Towns with continuous growth. 2. Towns with continuously above-average dynamics. 3. Towns newly gaining above- average dynamics. 4. Towns losing their above-average dynamics. 5. Towns with continuously under-average dynamics. 6. Towns with continuous and extreme shrinkage.
Source: own editing based on Census 2001, 2011, 2022.

Finally, by plotting the dynamic types defined by population changes on a map, some spatial correlations can be clearly seen (Figure 2). In the agglomerating areas around the large cities, mainly Budapest, around Lake Balaton and Lake Venice, and along the western border and in the more dynamic areas of the North Transdanubian region, we find small towns in a better position, mostly growing or moderately shrinking, or more recently dynamic. More than 80% of the small towns in Central Hungary (Pest county) have a stable growing population and the rest are mostly stable above group average or dynamic. On the other hand, cities with a high or extreme population decline are more prevalent in the Great Plain,

Northern Hungary and Southern Transdanubia. Three quarters of the small towns in Békés county are in the stable or strongly shrinking (6th) category, while the rest are in the stable below group average (5th) category.

Figure 2 Spatial distribution of dynamic types of small towns defined by population changes



Source: own editing.

However, small towns with stable population growth can be found around Debrecen, Szeged and Pécs, and small towns that are better off than the group average or more recently dynamic can also be found in North-Eastern Hungary and the Danube-Tisza area. It is important to note that, in contrast to the tourism-recreation function, which can highlight small towns in terms of population dynamics even in less developed regions, the driving force of industry-based economic dynamism appears to be less pronounced. In particular, among the small towns with a stable above-average dynamics (e.g. Esztergom, Komárom, Oroszlány, Hatvan, Jászfényszaru), there are various settlements where industry plays an important role. However, a glance at the map also suggests that these small towns may be suspected of being geographically located in a relatively dynamic situation: they are increasingly linked to the outskirts of agglomeration areas (Figure 2).

DISCUSSION AND CONCLUSION

The study presented the weight of small towns in the settlement network and the differences in their population dynamics in Hungary in the light of the latest census data. Our study showed that urbanization in Hungary appeared to be continuous and almost relentless until 2011. During the period under examination, there were two main sources of growth in the number of small towns: formal urbanization, with 111 new towns being promoted to town rank; and a permanent decline in the population of towns with a population of around 30,000. In the first period (2001-2011) 4 cities fell into the category of small towns, and between 2011 and 2021 a further 6 towns declined. Our analysis revealed the internal differentiation of the Hungarian small towns' network in terms of population change, the duality of dynamic agglomeration towns mostly having larger population but moderate positions in the urban hierarchy and the settlement system on the one hand, and the declining centres of rural spaces having diverse sizes and positions in the urban hierarchy on the other. Only resort and spa towns were able to break this duality, showing population stability or growth in less dynamic regions as well. This "big picture" reflects the challenged positions of rural centers facing shrinkage and the tendencies of relative deconcentration boosting the development of the small towns in agglomerations. This dual pattern of population dynamics generates challenges for both groups. The agglomeration towns have to manage growth (infrastructural and institutional shortcomings), while the centres of rural space have to cope with shrinkage while facing the problems of economies of scale (local economy, institutions). Beyond the local strategies, a general question of regional development arises from the point of view of small towns: what future(s) do national strategies imagine for agglomeration towns and rural centres? Despite the apparent stability, there are dynamic processes which, due to their regional differences, are also leading to considerable spatial reorganization. At the same time, there are still potential candidate cities, both in functional terms and in terms of population, which suggests that the role of small towns in the settlement network may continue to grow in the near future, albeit at a more moderate rate. Once we have information on the components, the role of natural population movements and migration in the population of small towns beyond simple population data, we will be closer to understanding the different dynamics of these settlements. In the follow-up part of the research, we shall attempt to answer the question: "What challenges does shrinkage create for the small town economy and institutional system, which is already facing economies of scale challenges?"

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