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Who lives in forgotten places?

Age structure and socio-economic development in Hungary

Introduction

Socioeconomic development and the age structure of a population are often linked together in the public discourse. It is generally accepted that in industrial societies the populations of more developed regions have both younger age structures and higher levels of education. Consequently, less developed regions or places have older age structures. In this study, we examine the evidence behind this general perception, and discuss the links between age structure and socioeconomic development. There are not very many studies devoted to this particular subject, and while regional development inequalities have a substantial literature, its relation to age structure is less extensively studied (Brunow & Hirte 2006, Voss 2007). One particular example is the case of Scotland (Lisenkova et al. 2010) where the authors examined the impact of age structure on economic development. Their conclusion was that positive net migration is needed to counterbalance the negative economic impact of an older age structure.

Scholars from various disciplines, such as sociology, regional economics, political science and anthropology often argue that regional inequalities do not decline, rather increase over time (Spéder 2002, Kulcsár 2009, Bódi 2010). In many countries, including Hungary, a significant portion of the population lives in lagging, or so called "forgotten" places (Lyson & Falk 1993, Ritter 2010). The age structures of these places, however, are not uniform. Some do experience aging in place and negative net migration, while others do not. Therefore, it is not entirely true that in less developed regions and places we can only find aging populations, while in more developed places the populations are always young and increasing due to migration.

Age structure, development and migration

Regional development and population

Most of the literature discussing the links between socioeconomic development and age structure argue that more developed regions or places have younger age structures, which in turn has a positive impact on human capital and the economic competitiveness of the location. It is also true that the migration destinations of younger age groups are usually the more developed regions (Lichter 1993, Brown 1993, Campbell et al. 1993). It has also been noted in the literature that smaller settlements in unfavourable geographic locations lose population. Since migration is age selective, it is the younger generations that leave to find better opportunities elsewhere further exacerbating the development

challenges of these places (Schwarzweller & Lean 1993, Beluszky & Sikos 2007). Some scholars called this the vicious cycle of decline (Cantrell 2005, Ritter 2010).

Lichter (1993) asked why the less skilled, unemployed, disadvantaged or minority populations are not more mobile. The answer is fairly complicated and includes various reasons. One is that the advantages of the move are not substantial enough compared to the effort and resources invested in it. Another reason is that the income differences between an old and a new job, as well as between a new job and social welfare are not that large. Therefore, poor and unskilled people could fall into the trap of selectively diminishing labour markets (Brown 1993). These segmented labour markets keep poor people in place and contribute to the increasing spatial concentration of poverty (Spéder 2002).

Contrary to the literature that sees a clear relation between economic potential, growth and age structure, some point out that development disparities are not fully explained by age structure (Nemes Nagy & Németh 2003). Brunow and Hirte (2006) arrived at the same conclusion. They argue that the impact of different age groups on economic development varies, and the most important predictor is in fact the combination of age structure and migration indicators. These findings challenge the common perception about the direct and clear link between development and age structure.

Regional development and migration

Migration is one of the most important indicators of regional socioeconomic inequalities. The most basic understanding of migration uses the push and pull factors to describe why people move (Lee 1966). This, however, is strongly contingent on various contextual factors determined by space (location) and the time period. For example, the mass urban immigration during the Industrial Revolution played out differently from the migration triggered by the industrial restructuring in the 20th century (Siddle 2000). The general perception dominated by the neoclassical economic explanations of migration behaviour is that the direction of mobility points from the less developed to the more developed regions based on labour market differences. However, this perception was challenged by several authors, describing various other motives and migration streams (Teaford 2008, Brown & Glasgow 2008).

Network theory and analysis focuses on social networks as key actors in migration streams (Kritz et al. 1992). These networks are linkages between origin and destination places, and not only help to overcome the intervening obstacles by diminishing risks, but also increase the volume of migration over time, by providing positive feedback for further migrants (Massey 1990). Migrants do not necessarily make their decision based on information about wage differences, but rather rely on informants and intermediate agents in the network to minimise risks associated with migration (Massey et al. 1993). Such networks also help the migrants to gain social capital, which is considered a key factor in migration decision-making (Donato et al. 1992). Eventually Philip Martin (1992) concluded that migration networks add a fundamental component to the understanding of migration, and that complementing the pull (demand) and push (supply) factors, networks serve as magnets and shelters.

In countries undergoing rapid economic transformation, rural to urban migration is the dominant stream during which regional inequalities increase as skilled migrants move to places that provide better opportunities for them. This has been demonstrated by examples from China (Pingzhong 2008) and Hungary (Spéder 2002). However, in many cases not only skilled and educated people participate in this migration stream. This mobility can also mean economic survival for some with fewer skills but still with some resources (Fassmann et al. 2009, Hatziprokopiou 2006). After the eastern enlargement of the European Union, some scholars have noted that both major motives are present in the migration streams from Eastern to Western Europe (Black et al. 2010).

The way in which scholars think about socioeconomic development is partly determined by their value orientation, which results in significant variations in empirical approaches. Moreover, the conceptualisation and operationalisation of development is also influenced by disciplinary vocabularies and practices. In some cases, economic indicators are used exclusively, while in others these are elaborated by infrastructural or human resource indicators. Additional challenges are created when these indicators are sometimes used as independent while at other times as dependent variables. Such examples include many of the demographic indicators that are both causes and consequences of socioeconomic changes (Faluvégi & Tipold 2007, Nagy 2011). Finally, the chosen indicators are open to political games, as the measurement of regional inequalities can be used to access development resources or making places ineligible for central development support.[1]

One particular method to measure development is to use composite indices that combine various aspects of social, economic and political conditions (Antony & Visweswara 2007, Elgar et al. 2011, Higgins & Campanera 2011, Mack & Grubesic 2012). However, the application of such indices, such as the Human Development Index (HDI) and Human Poverty Index (HPI) create some methodological problems. For example, Booysen (2002) argues that these can only be used as supplemental measures as they do not provide additional explanation beyond the original indicators, while at the same time are more exposed to political or ideological manipulations and the legitimisation of development agendas. This latter warning should be particularly important in the transforming societies of Eastern Europe.

Based on the literature, we can say that the age structure of a population relates to development or economic potential, but this association varies across historical periods or geographic locations that have different cultural characteristics. It is quite difficult to create a realistic assessment in the midst of simplifying stereotypes and significant methodological challenges. In this study, we examine this relationship using the example of Hungary. We will use indicators that are clear and accepted methods for analysing age structure and economic performance. Our goal was to create a typology that shows the dynamic linkages between age structure and economic development.

1 We would like to thank the comment of József Nemes Nagy who pointed this out.

Data and methods

In the analysis, we used the T-star database of the Hungarian Central Statistical Office (HCSO). The unit of analysis was the micro-region, which corresponds with the NUTS4/LAU1 level in the EU classification system. We used 173 micro-regions in the analysis, and excluded Budapest to minimize the bias related to the very different demographic and development indicators of the capital. To avoid the potential false conclusions from the bias of a snapshot, we used data from three years of observation points (2004, 2007, 2009).

The regional measurement of socioeconomic development is a complex task. The methodology of regional classification in Hungary has changed several times over the past years (Nagy 2011). The number of indicators fluctuated between 15 (1996) and 31 (2007), which shows considerable uncertainty. Among these indicators we can also find demographic, infrastructural and economic (level of services, density of entrepreneurship, unemployment etc.) ones. The increasing number of indicators however has not improved the reliability or validity of measurement, rather made it possible to introduce subjective factors in the classification system. The results of Nagy (2011) also demonstrated that it was the income per capita that had the strongest positive correlation with the complex development index. This opened up the possibility to use income per capita in our analysis as a single indicator of development. However, we felt that this would simplify the examined relationships. In addition, we decided not to employ any of the indicators of the constantly changing official methodology. Instead, we developed our own indicators that correspond with the literature while at the same time match our study goals better (the relation between age structure and economic development). The first step was to choose the basic variables we wanted to use (Table 1). All the selected variables have direct and clear connection to analysed indicators and there are no variables with unclear and indirect connection.

Table 1

Micro-regional indicators used in the analysis

Indicators	Variables
Age structure	Proportion of the population under 14 – 2004, 2007, 2009 Birth rates – 2004, 2007, 2009 Young dependency ratio – 2004, 2007, 2009
Regional economic development[a)]	Income per capita (In thousands HUF) – 2009 Number of enterprises per 1000 population – 2009 Unemployment ratio (number of unemployed/population aged 18–65) – 2009

a) Due to the changes in the data collection system, direct comparison across the time points is not possible. Therefore we only used the 2009 data.

In the next step, we used dimension reduction by principal component analysis to create the two fundamental indicators. The two components separated the variables while keeping the individual characteristics. The two factors explained 91.2 percent of the variance. The rotated component matrix is shown in Table 2.

Table 2

Rotated Component Matrix

Variables	Components	
	youth indicator	negative economic development
Population under 14, 2009	**0.971**	0.196
Population under 14, 2007	**0.950**	0.269
Birth rates, 2004	**0.933**	0.006
Young dependency ratio, 2009	**0.921**	0.350
Birth rates, 2007	**0.916**	–0.090
Population under 14, 2004	**0.916**	0.348
Birth rates, 2009	**0.897**	–0.104
Young dependency ratio, 2007	**0.890**	0.429
Young dependency ratio, 2004	**0.837**	0.515
Income per capita (1000 HUF), 2009	–0.109	**–0.938**
Number of enterprises per 1000 population, 2009	0.042	**–0.926**
Unemployment ratio (number of unemployed/population aged 18–65), 2009	0.332	**0.851**
Explained variance, %	*70.8*	*20.3*

The two components are clearly separated allowing a straightforward interpretation[2]. We took the quintiles of the principal components of each factor scores, and then we employed two additional analytical steps. First, we were looking for associations between the factor types and the various socioeconomic indicators. Second, using cluster analysis for the factor scores, we developed a micro-regional typology that indicates the association between age structure and economic development.

Results

Micro-regions with young populations

The results indicate that the micro-regions with the youngest populations are in four distinct regions in Hungary (Figure 1). The two largest contiguous areas are in the northeast part of the country, mostly in Borsod-Abaúj-Zemplén and Szabolcs-Szatmár-Bereg counties, as well as in the Budapest agglomeration area. Two other regions have typically young populations: one is in Baranya County by the River Dráva, and the other is in the central part of the northern Great Plains.

Underdeveloped micro-regions

The economic underdevelopment is the most profound in the north-eastern and south-Transdanubian parts of Hungary (Figure 2). This is not a surprise, as this fact is well known in the literature, but this validates our instrument and methodology. The interesting finding here is the overlap, or its lack thereof, between the two maps.

2 The KMO value was 0.888, while the Bartlett-test was significant at the 0.000 level.

Apparently, age structure and economic development are related positively in some cases and negatively in others.

Figure 1

Geographic distribution of micro-regions with young populations

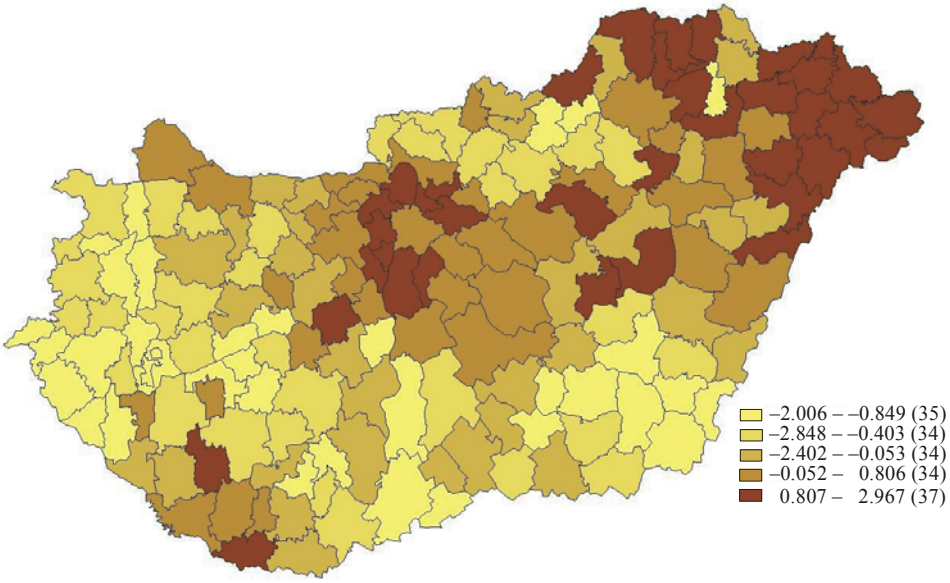
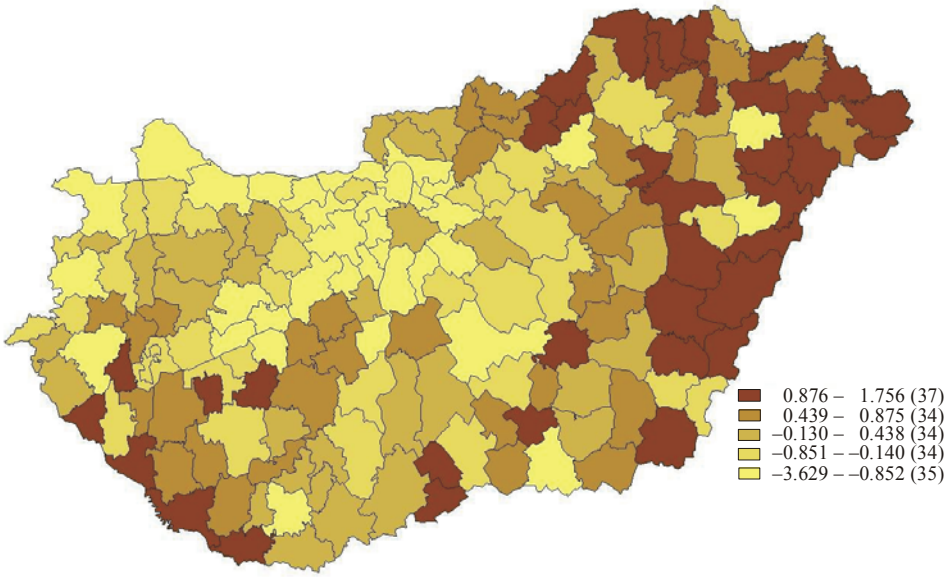


Figure 2

Geographic distribution of underdeveloped micro-regions

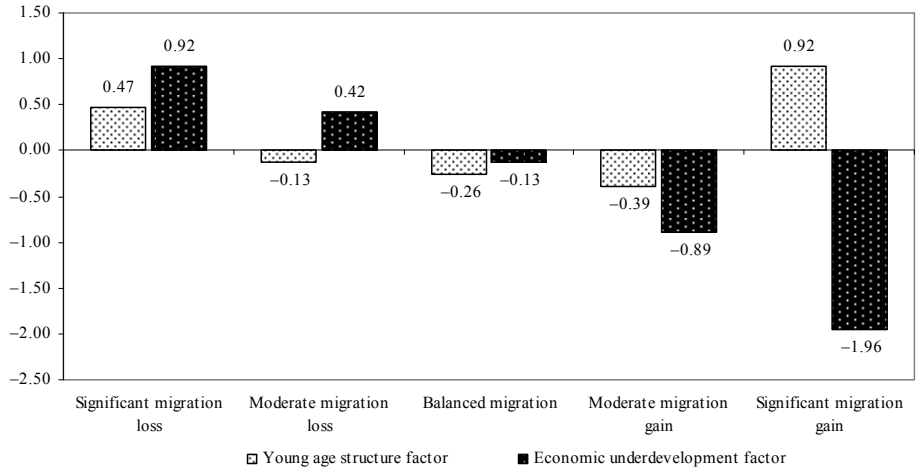


Age structure and migration

The question is whether there is any association between the age structure of the population and the migration dynamics, in other words whether areas with positive net migration indicators have younger populations. Generally, it can be said that less developed regions tend to lose populations, and these populations are disproportionately young given the age sensitivity of migration. Developed regions on the other hand experience positive net migration, however the local dynamics vary considerably. Figure 3 shows the association between migration and our two main factors.

Figure 3

Factor score means in micro regions with different migration balance



The results show that economic underdevelopment has a stronger association with migration than with the age structure. The economic underdevelopment factor's relation to migration is linear and changes to a negative direction (indicating economic development) as the migration loss turns into migration gain. The particularly interesting result, however, is that in the two extreme categories of migration (significant in- and significant outmigration) we can see the same young age structure. We need to note though that there is a large relative variance in the young population factor for those micro-regions that show significant migration loss (271.5%). while this variance is much smaller for those micro-regions that have significant migration gain (48.2%). This shows that micro-regions with substantial migration loss can have young and old age structures. Thus the analysis confirmed the lack of overlap in Figure 1 and 2.

Economic development and age structure: An experimental typology

Table 3 shows the association between age structure and economic development for the Hungarian micro-regions. About one-third of the micro regions (38.7%) do not show any characteristic feature in either dimension. in other words their age structure and economic development can be considered close to the average.

Table 3

The distribution of micro-regions based on the indicators in the two factors
N=173

(%)

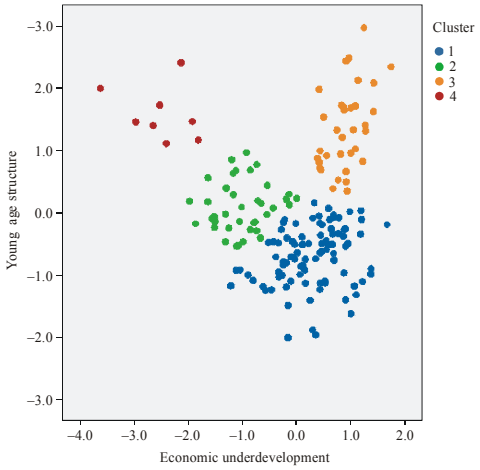
Economic underdevelopment	Young age structure			Total
	lowest, least young quintile	middle group	highest, youngest quintile	
Lowest, least underdeveloped quintile	2.3	12.7	5.8	20.8
Middle group	13.9	38.7	6.4	58.9
Highest, most underdeveloped quintile	4.0	7.5	8.7	20.2
Total	*20.2*	*59.0*	*20.8*	*100.0*

The 36 micro-regions that have the youngest age structures are quite different in terms of their economic development. Similar to this is the situation for those micro-regions (35) that are the least developed. Of these, only seven have old age structures. At the same time, 43 percent of the least developed micro-regions have relatively young age structures.

Table 3 shows that there are characteristic groups of micro-regions based on their age structure and economic development. However, such contingency tables are not suitable for creating typologies. To develop the typology of micro-regions based on these two factors, we used cluster analysis.[3] Based on this analysis, we can differentiate between four groups. Table 4 shows the scores of the cluster centres for the two factors, while Figure 4 shows the distribution of micro-regions along the two dimensions. As we can see on Figure 4, most of the micro-regions can be found by an axis indicating negative association between young age structure and economic underdevelopment. However, for a group of micro-regions (shown in yellow) this is not true.

Figure 4

The distribution of micro-regions in the space defined by the two factors



3 We chose the K-means cluster analysis which we ran for 3, 4 and 5 clusters. After interpreting the results, we decided to keep the 4 cluster variant.

Table 4

Final Cluster Centres

Factors	Cluster centres			
	1. ageing. average development	2. average age structure and developed	3. young and underdeveloped regions	4. young and developed regions
Young age structure	–0.695	0.096	1.359	1.593
Economic underdevelopment	0.281	–0.996	0.915	–2.508
Number of micro-regions in the cluster	92	38	35	8

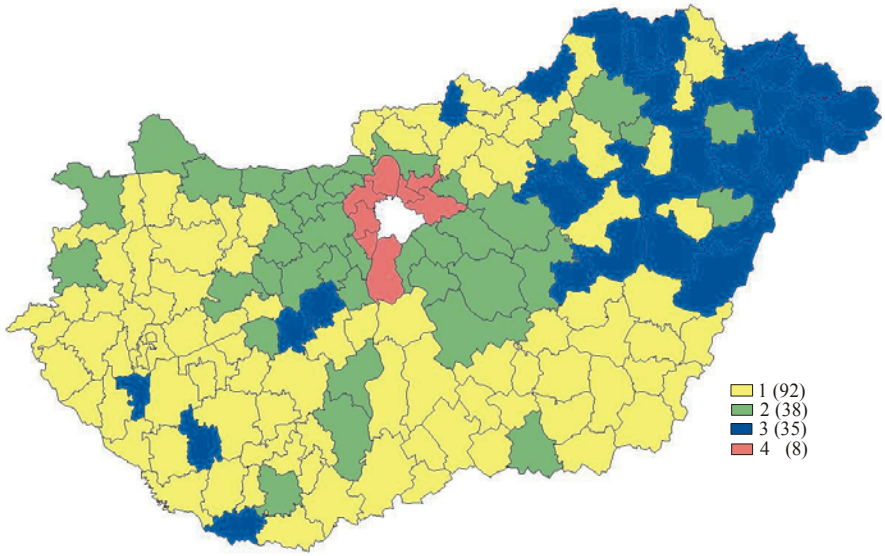
For our research purposes, the interesting cases are clusters 3 and 4. Those in the first and second clusters are typical in only one aspect. The first cluster has the ageing micro-regions that otherwise have average development indicators, while the second cluster includes micro-regions that have average age structures but are more developed than others.

According to our analysis, there are only eight micro-regions that have young age structures and at the same time are more developed than the rest. There are many more that have young age structures but could be considered underdeveloped. The latter do not fit to the general perceptions that we can find in the literature or the public discourse.

Figure 5 shows the geographic location of the four types of micro-regions. Those in cluster 4 are all located around Budapest. The young but underdeveloped micro-regions (cluster 3) are mostly in the northeast region of the country, where young age structure is not related to good economic conditions. The micro-regions with average age structure but higher than average economic development (cluster 2) are in the northern and western parts of Transdanubia, as well as in the outer rim of Budapest. The rest of the micro-regions (cluster 1) are the most common and are found in various regions of Hungary, especially in the south.

Figure 5

The geographic distribution of micro-regions in the four clusters



Age structure and ethnic composition

One important question to discuss is the extent of the impact of ethnic composition on the regional typology we developed. The ethnic component in such research has been suggested by Askins (2009), arguing that ethnic minority status can explain observed regional inequalities in social deprivation, poverty of economic disadvantages. Bajmóczy & Balogh (2002), and Ritter (2010) have also noted the association between demographic composition and ethnic status. The impact of ethnicity on economic underdevelopment was demonstrated by Bottlik (2008) who used the case of Bulgaria.

When discussing the ethnic composition in Hungary. most studies focus on the situation of the Roma. Unfortunately, there is relatively little reliable information about the social characteristics of the Roma, and some of the data are exposed to political subtexts as well. This lack of reliable information is particularly unfortunate given the significance of social problems, including poverty, discrimination and unemployment. The data we used for the Roma population comes from the 2001 census.[4] Table 5 shows the Roma population in the micro-region groups in the context of the two major study dimensions.

Table 5

Proportion of Roma population, 2001

(per thousand)

Factor score quintiles	Not typical 1. quintile	2. quintile	3. quintile	4. quintile	Very typical 5. quintile
Young age structure	12.4	18.0	17.3	20.0	45.4
Economic underdevelopment	8.9	19.0	20.8	43.0	52.5

Based on the results we can say that the proportion of Roma population is positively associated with both economic underdevelopment (from 9 to 52 per thousand) and young age structure (from 12 to 45 per thousand). There are considerable differences between the four clusters we identified earlier in the study. In the micro-regions around Budapest that have young age structure and developed local economies, the proportion of Roma population was 9.4‰ in 2001. In those two clusters that have micro-regions with average indicators, this proportion was around 20‰. However, in the micro-regions with young age structure but significant economic underdevelopment, the proportion of Roma in 2001 was 60.8‰. This ethnic composition is not a coincidence and provides considerable challenge for policy makers.

Conclusions

Age structure and economic development are clearly related. However, this association is often portrayed as a simple link between young age structure and good economic performance determined by positive net migration and the accumulation of human capital. As our research showed, the picture is more complex. Young age structure is not always equal with economic development.

4 The 2001 census underestimated the Roma population because of the census questionnaire methodology. According to the 2001 census data the Roma population is less than 200 thousand in Hungary. Almost all scholars estimated the Roma population more than 500 thousand. See Kemény (2005).

Young age structure can be a result of positive net migration. since migration is age-selective, or high fertility. In post-industrial societies fertility is generally low and does not vary much across sub-national regions, therefore migration is thought to be behind the age structure differences. The only exception is if a minority group with markedly different fertility dynamics is dominant in a given location. Since minority status is often associated with various indicators of disadvantages, young age structure in a dominant minority location can correlate with economic underdevelopment.

The Hungarian case was an example for this more complex relation, mediated by minority presence. The cluster analysis defined a set of micro-regions in the north-eastern part of the country that have young age structures while still considered economically disadvantaged. In these micro-regions, the percentage of the Roma population, the traditionally disadvantaged minority in Hungary, is higher than average. While association may or may not refer to causation, it seems that the two are causally related, which calls for additional research on the subject.

So what is the importance of all this for policy makers? All governments want to address regional economic inequalities. However, the ways in which these are defined vary and are exposed to political manipulation. It is important to revise and publicly discuss the indicators, and sometimes the most basic perceptions also have to be challenged. Understanding the local context of a seemingly universal association is the first step towards policies that can successfully address regional inequalities.

REFERENCES

Antony, G. M. & K. Visweswara Rao 2007, 'A composite index to explain variations in poverty, health, nutritional status and standard of living: Use of multivariate statistical methods', *Public Health*, 121. pp. 578–587.

Askins, K. 2009, 'Crossing divides: Ethnicity and rurality', *Journal of Rural Studies*, 25. pp. 365–375.

Bajmóczy, P. & Balogh, A. 2002, 'Aprófalvas településállományunk differenciálódási folyamatai', *Földrajzi Értesítő*, 3–4.

Beluszky, P. & Sikos, T. T. 2007, *Változó falvaink*, MTA Társadalomkutató Központ, Budapest.

Black, R. & Engbersen, G. & Okólsk, M. & Panţîru, C. (eds.) 2010, *A Continent Moving West? EU Enlargement and Labour Migration from Central and Eastern Europe*, IMISCOE Research, University Press, Amsterdam.

Bódi, F 2010, 'Népességfogyás, a szegénység ördögi köre', *A Falu*, 3.

Booysen, F. 2002, 'An Overview and Evaluation of Composite Indices of Development', *Social Indicator Research*, 59.

Bottlik, Zs. 2008, 'A regionális és etnikai különbségek összefüggései Bulgáriában az ezredfordulón', *Területi Statisztika*, 3.

Brown, D. L. & Glasgow. N. 2008, *Rural Retirement Migration*, Springer.

Brown, D. L. 1993, 'Comments on Daniel Lichter's "Migration, Population and the New Spatial Inequality"' in *The Demography of Rural Life*, Brown. D. L. & Field. D. & Zuiches. J. J. (eds), University Park PA, Northeast Regional Center for Rural Development.

Brunow, S. & Hirte, G. 2006, 'Age Structure and Regional Economic Growth', *Jahrbuch für Regional-wissenschaft,* 26. pp. 3–23.

Campbell, R. R. & Spencer, J. C. & Ravindra, G. A. 1993, 'The Reported and Unreported Missouri Ozarks: Adaptive Strategies of the People Left Behind' in *Forgotten Places*, *Uneven Development in Rural America*, Lyson & Falk (eds.), University Press of Kansas.

Cantrell, R. 2005, *Rural Depopulation: A Closer Look at Nebraska's Counties and Communities*, University of Nebraska, Rural Initiative.

Donato, K. M. & Durand, J. & Massey, D. 1992, 'Changing conditions in the US labor market: Effects of the Immigration Reform and Control Act of 1986', *Population Research and Policy Review,* 11.. pp. 93–115.

Elgar, F. J. & Davis, C. G. & Wohl, M. J. & Trites, S. J. & Zelenski, J. M. & Martin, M. S. 2011, *Social Capital, Health and Life Satisfaction in 50 Countries,* Health & Place

Fassmann, H. & Reeger, U. & Sievers, W. 2009, *Statistics and Reality, Concepts and Measurements of Migration in Europe*, IMISCOE Reports, University Press, Amsterdam.

Hatziprokopiou, P. A. 2006, *Globalisation, Migration and Socio-Economic Change in Contemporary Greece, Processes of Social Incorporation of Balkan Immigrants in Thessaloniki,* IMISCOE Dissertations, University Press, Amsterdam.

Higgins, P. & Campanera, J. M. 2011, 'Sustainable quality of life in English city locations', *Cities*, 28. pp. 290–299.

Kemény, I. (ed.) 2005, *Roma of Hungary*, Social Science Monographs, Boulder, Colorado – Atlantic Research and Publications, Highland Lakes, New Jersey, New York, 385 p. East European Monographs, No. DCCII.

Kritz, M. & Lim, L. & Zlotnik, H. (eds.) 1992, *International Migration Systems*, A Global Approach, Clarendon Press, Oxford.

Kulcsár, L. 2009, 'Társadalmi zárványok, vagy zárványtársadalmak?' *Területi Statisztika*, 1.

Lee, E. 1966, 'A Theory of Migration', *Demography*, 3. pp. 47–57.

Lichter, D. T. 1993, 'Migration, Population Redistribution, and the New Spatial Inequality' in *The Demography of Rural Life*, Brown. D. L. & Field. D. & Zuiches. J. J. (eds.), University Park PA, Northeast Regional Center for Rural Development.

Lisenkova, K. & McGregor, P. G. & Pappas, N. & Swales, J. K. & Turner, K. & Wright, R. E. 2010, 'Scotland the Grey: A Linked Demographic-Computable General Equilibrium (CGE) Analysis of the Impact of Population Ageing and Decline', *Regional Studies*, 10.

Lyson, T. A. & Falk, W. W. 1993, 'Forgotten Places: Poor Rural Regions in the United States' in *Forgotten Places, Uneven Development in Rural America*, Lyson & Falk (eds.) University Press of Kansas.

Mack, E. A. & Grubesic, T. H. 2012, 'All jobs are not created equal: Divergent indicators in the knowledge economy' *Applied Geography*, 32. pp. 88–101.

Martin, P. 1992, 'Migration and Development', *International Migration Review,* 26., pp. 1000–1012.

Massey, D. 1990, 'Social Structure, Household Strategies and the Cumulative Causation of Migration', *Population Index,* 56., pp. 3–26.

Massey, D. & Arango, J. & Hugo, G. & Kouaci, A. & Pellegrino, A. & Taylor, E. 1993, 'Theories of International Migration: A Review and Appraisal', *Population and Development Review,* 19., pp. 431–466.

Nagy, A. 2011, 'A kedvezményezett térségek besorolásának alakulása, a lehatárolások módszertanának sajátosságai', *Területi Statisztika*, 2.

Nemes Nagy, J. & Németh, N. 2003, 'A „hely" és a „fej", A regionális tagoltság tényezői az ezredforduló Magyarországán' *Budapesti Munkagazdaságtani Füzetek,* BWP 7, MTA Közgazdaság-tudományi Kutatóközpont.

Pingzhong, D. 2008, 'Influence of China's Population Mobility on the Change of Regional Disparity since 1978 China Population', *Resources And Environment*, Vol. 18., Issue 5.

Ritter, K. 2010, 'Socio-Economic Development and Employment Crisis in Agriculture in Hungary' in *Regional Aspects of Social and Economic Restructuring in Eastern Europe: The Hungarian Case*, Kulcsár. L. & Kulcsár. J. L. (eds.), Hungarian Central Statistical Office, Budapest.

Schwarzweller, H. K. & Lean, S-W. 1993, 'Ontoganon: A Remote Corner of Michigan's Upper Peninsula' in *Forgotten Places, Uneven Development in Rural America*, Lyson & Falk (eds.) University Press of Kansas.

Siddle, D. J. 2000, *Migration, Mobility and Modernizátion,* Liverpool University Press, Liverpool.

Spéder, Zs. 2002, *A szegénység változó arcai. Tények és értelmezések,* Századvég.

Teaford, J. C. (2008), *The American Suburb*, The Basics, Routledge, New York.

Voss, P. R. 2007, 'Demography as a Spatial Social Science', *Population Research Policy Review*, 26., pp. 457–476.

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