

County-Level Demographic Disparities in Romania

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In Romania the interregional demographic disparities are historically determined, and are closely connected with the evolution of certain demographic, economic and historical elements.

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IN TIME, the evolution of demographic and economic processes significantly influenced the territorial distribution of the population and, implicitly, its density. This change was caused by the differences in economic potential between counties and between locality types, which entailed a rural-urban type migration, especially oriented toward the more industrialized and more developed cities. In this paper the demographic disparities are analyzed in the light of population density, urbanization rate, net migration rate, but also by determining the vitality of the localities (considering the ratio between young and elderly populations). By the aggregation of these indices, and taking into account the standardized values, the demographic trajectory of each county, as well as the disparities existing between them, can be determined. Having in view the rather high stability of the selected indices, the reference year was 2008, alongside the internal migration, for which the values related to the period 1990 to 2008 are taken into consideration.

Spatial Distribution of the Population

ACCORDING TO the latest statistical data, the population density in Romania is 90.2 inhabitants/km², with significant differences between the counties of the country, due to the different growth of the population of each territory along the decades, as well as to the existence of some natural limits, which do not allow the settling of a larger population in certain areas. This last group includes upland counties: Caraș-Severin, Harghita, Gorj, Covasna (40–60 inhabitants/km²), as well as Tulcea (29.5 inhabitants/km²), which comprises large areas of the Danube Delta. Because of the economic, political, social and cultural factors manifest over the past six decades, the population of some counties increased more than 1.5 times (Bacău, Brașov, Constanța, Galați, Hunedoara, Iași, Maramureș, Prahova and Suceava), a fact that also entailed an increase in population density in these zones. While in Moldavia we find the higher population pressure, nationwide the highest density can be found, beside the country's capital, in Prahova county (173.4 inhabitants/km²), while the area with the lowest population density is Tulcea (29.3 inhabitants/km²), due to its unfavorable geographic position, remoteness, and underdeveloped infrastructure. The population density of Prahova county is almost twice the country average, while the Tulcea county one is more than one third below the average value.

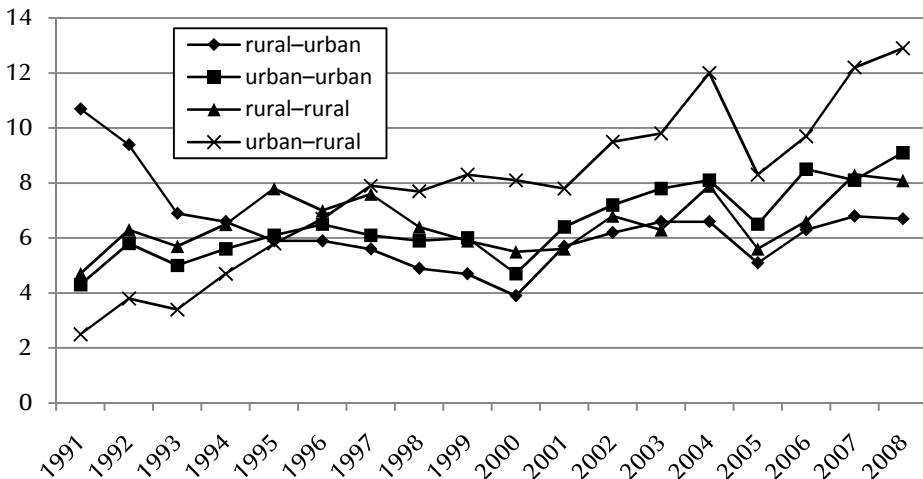
However, in many cases the physical density index does not accurately reflect the anthropic pressure, which can be defined, in this context, as the result of the interaction between the dynamics of the social-economic structures, and the natural assets of a given geographic space. Thus, the human pressure index is calculated as a ratio between the total population and the total area, minus the lands occupied by forests and water (Ianoș 1997, 67). The value of this index varies between 61.6 inhabitants/100 hectares in Tulcea county, and 261.5 inhabitants/100 hectares in Prahova county, beside the city of Bucharest, where this index even reaches 1,498.2 inhabitants/100 hectares. High values (over 150 inhabitants/100 hectares) can also be found in Maramureș, Argeș, Brașov, Dâmbovița, and Ilfov counties, as well as in the majority of the Moldavian counties (with two exceptions: Botoșani and Vaslui), which is due both to the higher natural growth rate (especially in Moldavia and Maramureș), and to the concentration of the population in the urban areas. The lowest values of the human pressure index (less than 75 inhabitants/100 hectares) can be found in Tulcea, Călărași, Ialomița, Caraș-Severin, Teleorman and Harghita counties, the majority of these counties being covered by waters or forests. The analysis of the human pressure is also important in the context of the optimal use of the land potential, of the assessment of the population characteristics and of the differences between them, these being the most important elements of the regional development projections.

Internal Migration

THE INTERNAL migration is also related to the territorial distribution of the population, which may bring about significant changes in the spatial distribution of the population, as well as in relation to population structure. The changes of domicile are caused by multiple factors, the economic one standing out. Migration influences in a decisive way the economic development processes, since the first reactions of the workforce in the case of regional disparities are emigration and immigration (Heller and Ianoş 2004, 5).

The analysis of migration rates during the transition period reveals significant fluctuations. In this context, the year 1990, when the internal migration balance reached 33.9%, is an exception. The cause of this massive increase in the internal migration, and first of all of the rural-urban migration flow, is the fact that the restrictive regulations regarding the settling of individuals in certain cities were repealed. The analysis of the internal migration by locality types indicates significant differences: if until 1994 the rural-urban migration was dominant, for a short period (1995–1996), the rural-rural migration became more important, and as of 1997 until today the urban-rural migration became the main direction of internal migration (Fig. 1).

FIG. 1. EVOLUTION OF INTERNAL MIGRATION BETWEEN 1991 AND 2008



SOURCE: The Annual Statistical Bulletin of Romania, 2010 (time series 1990–2008).

If in 1990 more than 600,000 individuals settled in the urban environment¹ (691,803 individuals), in about 5 years this figure decreased sharply, and as of

reserve trend emerged: over 150,000 individuals (158,545) settled in rural localities, a figure which exceeds by far the number of individuals who settled in towns and cities (144,034). This change, which became a trend—is also well illustrated by the ongoing increase in the number of individuals who returned to their places of birth, reaching in 2008 nearly 200,000 individuals. Thus, if at the beginning of the transition period the urban-rural migration transition represented only 3.5%, while the rural-urban migration went up to 70%, at the end of the '90s the migration toward the rural environment also reached values of 33.8%, which exceeds by far the percentage of individuals who settled in the urban environment, of only 19.5%. The statistical data also indicate that, while in the early '90s the migration of a significant number of individuals contributed a great deal to the weakening of the position of rural settlements, at the end of the decade the increase in the number of adults (over 35 years of age) and children who settled in the rural environment became ever more significant. Thus, we may talk about individual migration prior to the fall of the communist regime, while family migration emerged during the transition years (Rotariu 1999, 14). The migration toward the rural space is closely related to the decreasing number of jobs in the industry of the small and medium-sized cities. The large cities remained attractive for migration after 1989 as well, due to their tertiary functions; thus, the internal migration balance shows positive values further on. In this context, we may talk about two projections of the internal migration: the coerced migration, caused by the restructuring of the industry and the higher costs of living in the city, and the welfare migration, which is especially characteristic for the localities situated in the vicinity of large urban centers, where the territorial and social infrastructure are much more developed.

A survey of the county migration rates points to the fact that the largest percentage of individuals coming from other counties was recorded in the most urbanized and developed counties of the country. Bucharest ranks first (75.5‰), followed by Timiș (56.2‰), Brașov (37.5‰), Constanța (36.9‰), Arad (26.1‰), Sibiu (16.2‰), Galați (7.9‰), Cluj (3.2‰) and Argeș (1.2‰) counties. The negative migratory balance, and at the same time the largest population losses were recorded by Vaslui, Giurgiu, Călărași, Ialomița, Botoșani, and Teleorman counties (the population decrease varying between 40‰ and 50‰).

As of 1997, the internal migration underwent a fundamental change and, for the first time in the last four decades, the urban-rural migration became dominant. This type of migration in Romania occurred in close connection with the economic crisis. As of 1994, an increased internal migration balance becomes visible in relation to those counties which, in the early '90s, recorded the highest population mobility values. Thus, if we review the period preceding the internal migration flow change, several counties emerge where the population began to increase

based on this index. In question is Ialomița county, where the migration rate went up from -45.4% in 1990 to 1.6% by 1997, which means that during this time span about 35,000 individuals arrived on this territory. Certainly, we should also take into account the departure from this area of a significant number of individuals, especially from among the young; however, an excess of 711 individuals results from this difference only in 1997. At the same time, in Giurgiu county the migration balance reached 1.2% . In the Moldavian counties, the migration balance during this time span underwent a constant decline, and has not reached any positive values for the time being. Ilfov county has a special situation, where the -77.6% loss from the beginning of the '90s and the balance increase up to 4.6% may be explained by the speeding up of suburbanization.

The internal migration reached the climax in 2008, concurrently with the increase in the rural population. Due to the marked demographic aging and the negative natural growth rate, characteristic for the rural zones, their population should have decreased. However, the rural population recorded a slight increase in number over the past years, between 1997 and 2000, by 14,000 individuals (Popescu 2003, 39), due to internal migration.

If we have in view the period 1990 to 2008, the highest population decline is characteristic for those counties where deindustrialization entailed the phenomenon of remigration from urban toward rural areas. This class includes counties with a significant mining industry, such as Alba, Hunedoara, Maramureș (the population loss by internal migration represents more than -3%), as well as the underdeveloped counties, where the increasingly unfavorable economic and social situation led to population migration (Botoșani, Olt, Teleorman, Vaslui counties, with values of over -4%). The most significant positive values were recorded—beside the country's capital—in Timiș, Constanța, Ilfov, Arad counties, followed by Brașov, Cluj and Dolj counties. There are counties which have easily adapted to the new conditions of the market economy. In their turn, these developments accentuated even more the existing territorial disparities, in the sense that the more developed counties further on benefitted not only from a significant workforce inflow, but also from a significant volume of direct foreign investment.

Disparities in Urbanization, Demographic Vitality and Demographic Potential

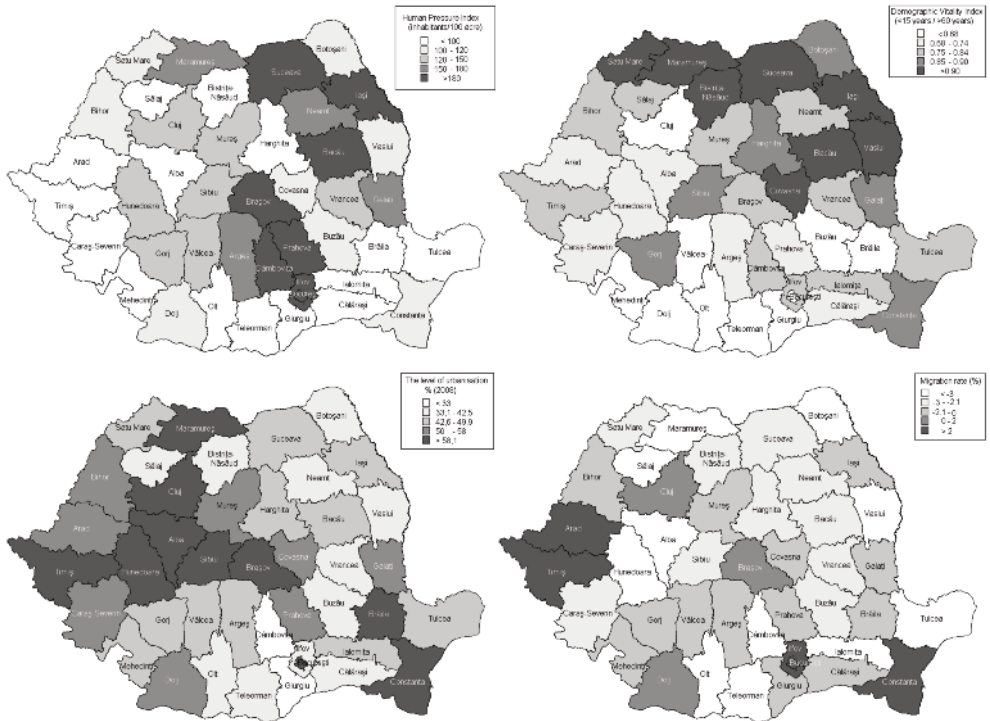
THE ECONOMIC and social changes also had direct effects on the residential environment of the population (Pénzes 2013, 373). Generally, an important role in the evolution of the urbanization index was played—beside the economic and political factors—by the demographic behavior of the

population. Taking into account the latest statistical data, the urban population exceeds 65% only in seven counties of the country (Fig. 2): Constanța, Brașov, Hunedoara, Timiș, Brăila, Cluj and Sibiu, which have stood out during the past decades on account of their high development level, at the same time constituting the main destination of the internal migration. At the opposite pole are Dâmbovița, Giurgiu, and Teleorman counties, characterized by a high degree of ruralization (the urban population barely reaching 35%), and also by a high concentration of aged population and a low development level, as distinctive features. Even though the urban population decreased in the majority of counties over the past years, especially in the western and central parts of the country, that is the result of a high emigration, more significant in the case of the national minorities. Besides that, a decrease in the natural growth rate became conspicuous, more significantly in the urban environment, contributing to the diminution of the population in this environment. Thus, the highest diminution of the urban population was recorded in Iași, Bacău, Constanța, Arad, Brașov, Mureș, Covasna and Harghita counties, caused by the restructuring of the industry. A significant increase in the number of small towns occurred over the past few years, within a rather short timeframe (2002 to 2004), when 46 rural localities became towns. The population of the new towns increased the urbanization of the entire country by about 2%, this value representing a position similar to that of 1992, the effects of the urban-rural migration being thus eliminated (Benedek 2006, 63). The more spectacular change can be noticed in relation to the urbanization of certain Moldavian counties (Suceava, Botoșani, Neamț, Vaslui). However, nationwide urbanization had remained at a low level.

Beside the territorial distribution of the population, we must also take into account the demographic vitality of the localities (the ratio between the youths under 15 years of age and those over 60 years of age), which has a direct effect both on the potential workforce offer and on the attractiveness of the respective territory. The lower the value of this index, the more obvious the demographic aging, and the existence of a diminishing population. While the national value of the abovementioned index is around 0.78, its extreme values are 0.48 and 1.09. The situation is alarming in the case of Teleorman (0.48), Giurgiu (0.62), Dolj (0.64), Brăila, Olt, and Vâlcea (0.65) counties (Fig. 2). As a matter of fact, these counties used to produce migrants some decades ago, which gradually entailed the aging of rural population (the elderly represent more than 25% of the total population). Beside this phenomenon there is the rather low development level of these regions, the little diversified economic structure, conditions in which their chances of development are rather small. In the case of Bucharest (0.63) and Cluj (0.64), the high value of the aging index is determined first of all by the rather low proportion of youths, which is about 3% below the national average. This phenomenon is typical of the more developed

areas, where the economic and social influences contribute to the gradual decrease in fertility. The reproductive behavior of the young couples changes in the more urbanized areas (Loriaux 1995, 1615).

FIG. 2. HUMAN PRESSURE, MIGRATION, URBANIZATION AND DEMOGRAPHIC VITALITY INDICES IN 2007

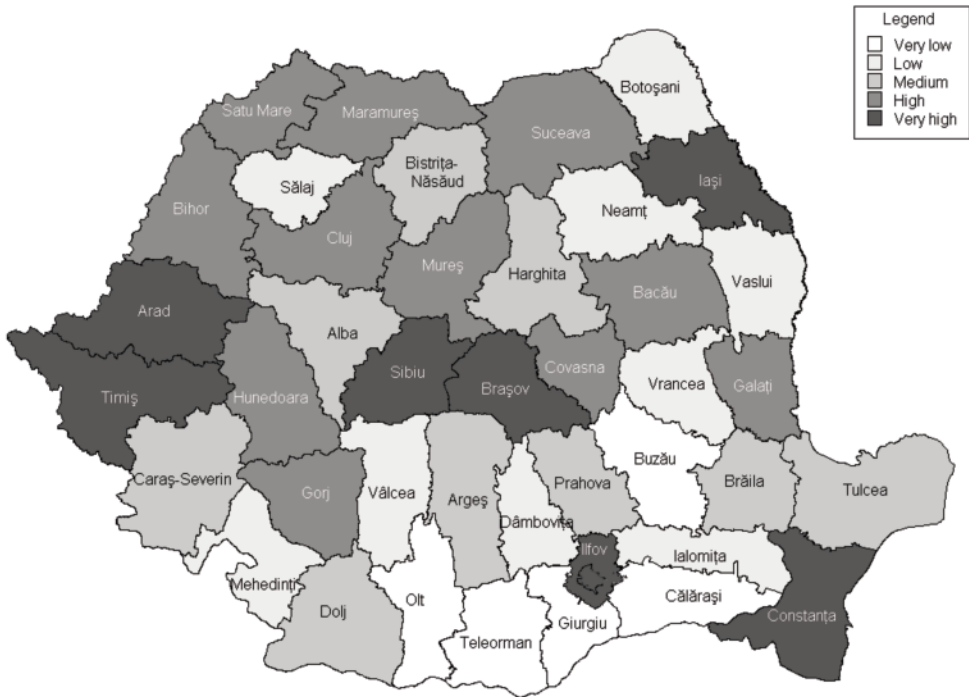


SOURCE: the authors, based on the Tempo Online data.

A higher demographic vitality is characteristic for the majority of Moldavian counties (Botoșani 0.90; Bacău 0.94; Vaslui 0.98; Suceava 1.02 and Iași 1.09), followed by the counties in northern Transylvania (Maramureș 0.94; Satu Mare 0.97 and Bistrița-Năsăud 0.99). These counties stand out on account of their relative balance of the age groups, recording higher fertility rates, due to the maintenance of the same demographic model over the past decades.

Taking into account the net migration rate, the urbanization level, human pressure and demographic vitality indices, and their standardized values, we have operated a classification of the counties by their demographic potential. The five major classes resulted indicate the different demographic behavior of the counties (Fig. 3).

FIG. 3. DEMOGRAPHIC POTENTIAL OF COUNTIES



SOURCE: the authors.

Thus, one category includes Teleorman, Olt, Giurgiu, Călărași and Buzău counties, where all the four reviewed indices have low values. These counties are confronted with advanced demographic aging and high ruralization, which in its turn entails massive emigration. Even though more individuals settled in the rural area over the past few years, pursuant to a change in the internal migratory flow, this rather small percentage could not counterbalance the ongoing population decrease in these areas.

The second class includes several counties in Moldavia (Botoșani, Neamț, Vaslui, Vrancea) and Muntenia (Ialomița, Dâmbovița), where the main cause of the low demographic potential is the low level of urbanization and the negative migratory growth. In the case of certain counties even the demographic vitality index shows a certain imbalance (Mehedinți, Vâlcea and Sălaj). These counties are also characterized by negative migratory growth, which is more marked in the case of Botoșani, Vaslui and Neamț counties.

The class of counties with an average demographic potential includes, as a rule, the counties with a low human pressure index (Tulcea, Harghita, Caraș-

Severin), the urbanization being around the national average due to the existence of a system of localities dominated by small and medium-sized towns (Alba, Argeş, Prahova). The demographic aging is rather high in some counties, such as Dolj and Brăila.

The demographic potential is higher in Bihor, Cluj, Mureş and Galaţi counties, both due to the attractiveness of these counties for investment localization and, implicitly, for the workforce, and to a higher development level, measured by the urbanization index (Hunedoara, Cluj, Galaţi). The counties in northern Transylvania (Satu Mare, Maramureş) and Moldavia (Suceava, Bacău) stand out because of their higher demographic vitality, while both the internal migratory growth and the proportion represented by the urban population are far below the national average (except for Maramureş county).

The last class, with the highest demographic potential, comprises eight counties, defined by higher population density, doubled by a more favorable age structure—such as in the case of Iaşi county, or by positive internal migration, such as in the case of Timiş, Ilfov, and Constanţa counties, and Bucharest. As a rule, in these counties all the selected indices exceed the national average, reaching the highest values in the case of the capital city and of Braşov, Timiş and Constanţa counties. As a matter of fact, these counties are characterized not only by a high development level (the urbanization reaches 60% or even more), but also by a favorable migratory growth, especially in the case of Timiş and Constanţa counties.

Conclusions

SUMMING UP, the demographic space of Romania is characterized by the existence of a north-south disparity: the counties in the northern part of Romania have a high demographic potential, represented by a more stable composition of the age groups, but also by a weak level of development. The demographic absorption effect exerted by Bucharest over the neighboring counties has lowered the demographic potential in the southern part of the country.

It can be stated that in Romania the interregional demographic disparities are historically determined, and are closely connected with the evolution of certain demographic, economic and historical factors. The existing differences pertaining to the territorial distribution of the population result from the consequences of the economic evolution, and from the geographic features of the counties, while migration has created multiple disadvantages, as evidenced by the demographic decline of some rural areas.



Note

1. It must be stated that the massive migration of 1990 is purely statistical, since in actual fact many of the 600,000 individuals who took up domicile in cities had already lived there for years.

References

- Benedek, J. 2006. Urban Policy and Urbanisation in the Transition Romania. *Romanian Review of Regional Studies* (Cluj-Napoca) 2 (1): 51–64.
- Heller, W. and Ianoş, I. 2004. Spatial Patterns of Economy and Migration in Post-socialist Romania. *Europa Regional* (Leipzig) 12 (1): 4–13.
- Ianoş, I. 1997. Demographic Disparities in Romania. *Romanian Journal of Sociology* (Bucharest) 8 (1): 65–74.
- Loriaux, M. 1995. Du vieillissement démographique à l'intégration des âges: la révolution de la gèritude. *Population* (Paris) 50 (6): 1611–1625.
- National Statistics Institute. 2010. *Anuarul Statistic al României*. Time series 1990–2008. <<http://www.insse.ro>>
- Pénzes, J. 2013. The dimensions of peripheral areas and their restructuring in Central Europe. *Hungarian Geographical Bulletin* (Budapest) 62 (4): 373–386.
- Popescu, Claudia. 2003. *Disparitățile regionale în dezvoltarea economico-socială a României*. Bucharest: Meteor Press.
- Rotariu, T. 1999. Asupra unor aspecte ale migrației interne recente din România. *Sociologia românească* (Bucharest) 1 (3): 5–37.

Abstract

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The information related to the profile of the population of a country constitutes a good starting point for the understanding of several social and economic aspects. At the same time, the demographic changes, both regionally and by residential environments, have implications on public policies (health, education systems, social services, transport infrastructure), and on the development potential of the entire country. The study is concerned with the demographic disparities in Romania, focusing on the basic question of regional studies, demography or economics: which are the spatial patterns of population distribution and what are the factors determining such distribution? We use in the study a combination of different demographic indicators for the description of regional inequalities in the spatial distribution of some demographical elements, at the level of the counties (*judete*).

Keywords

demographic disparities, population density, urbanization, migration, Romania