THE DEMOGRAPHIC PROFILE
OF RURAL AREAS IN ROMANIA

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*T*his paper aims to provide descriptive results about demographic trends (natality, mortality, and migration) and their effect on age structure in Romania in the past 30 years. We focus on analysing rural areas, since, while having a negative natural growth and negative net external migration values, internal migration has further affected rural areas by increasing the rate of population decline in many localities. Apart from describing rural areas at a general level, we also differentiate various rural localities according to two criteria, namely inclusion in functional urban areas of every county seat and the existence of marginalised communities within localities'administrative territory. This differentiation allowed us to portray population characteristics within the broader context of uneven economic development across Romania. Various well-developed cities, known as magnet cities, contribute not only to an increase of population volumes in the surrounding rural settlements, but also to other demographic discrepancies between the growth poles and the peripheries.

Keywords: rural areas; demographic change; functional urban areas; marginalized communities.

Romanian sociological literature includes detailed analyses of the country's demographic evolutions during the last century (Gheţău, 2018; Rotariu, *et al*. 2017). Although, they cover rural areas, none of them focuses exclusively on this type of living environment/residence. In this paper, we are trying to outline a demographic profile of the rural areas in Romania in the past 30 years, and to highlight the fact that there is a high degree of heterogeneity within rural localities. Thus, in our analysis, we are trying to overcome the rural – urban dichotomy, as far as the available data allow us, and to differentiate within rural administrative territorial units (ATUs) according to two extra criteria: the existence of marginalized communities and the affiliation to a functional urban area.

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THE SOCIO-HISTORICAL CONTEXT

The complex historical and structural dynamics of rural areas arouse considerable interest in the demography of Romanian rural communities. First, we can discuss the processes of urbanization and industrialization after 1950, a period marked by several stages of internal migrations (Sandu, 1984; 2018a: 83−88; Petrovici, 2017, Rotariu and Mezei, 1998). Before 1950, over 75% of the country's population lived in rural areas; however, starting with 1985, there was an equal proportion of population living in rural and urban areas, with a continuous downward trend in rural areas (Demographic Yearbook, 2006). Despite the accelerated urbanization in Romania after 1950, the urbanization or deruralization of the country was completed only towards the end of the socialist period. The forced industrialization and urbanization gave rise to new types of social actors: "the commuter" and "the urban villager" (Szelény, 1988: 72). The contact with the rural world remained essential for these actors, to ensure their own social reproduction (Petrovici, 2017:195). The family relations with members that continued to live in rural households, and the informal economic exchanges with the place of origin helped build a social space for "the new urbanites", where the village continued to be a "symbolic space of belonging" (Diminecu, 2009: 52).

Although rural – urban migration rates were fluctuating, the trend during the communist period was unidirectional, with population exchanges favouring urban areas, especially due to the collectivization of agriculture, investments in farming technology, as well as the creation of new factory jobs in cities, undergoing full industrial development (Petrovici, 2017). For a while, the natural growth managed to cover the population losses caused by migration, however, the intense migration to urban areas, especially among young people, had visible effects on the age structure in rural Romania.

The urban – rural migration became the most important form of internal migration in 1995, which was an essential moment in the history of rural Romania. The country was experiencing major social and economic changes, due to the transition from a planned economy to a market economy. Industry and the construction of public housing were among the most important sectors that were negatively affected by this transition. The decrease, or even the loss of jobs in factories, increased urban living costs, the lack of new housing opportunities in cities, and the restitution of agricultural land to former owners generated important flows of internal urban – rural migration, from de-industrialized cities to the rural places of origin (Rotariu and Mezei, 1998).

External migration also played an important role in the reconfiguration of Romanian villages. The increased mobility of a significant number of people, the village to city migration and vice-versa, as well as commuting to the city for work created a "mobility culture" (Diminescu, 2009: 52). After the cross-border mobility was facilitated, the migration destinations expanded outside the Romanian territory. The external migration had major effects on the demographic and social profile of the Romanian population, after 1990. Romania became one of the main

exporters of Eastern to Western migrants (Horváth and Anghel, 2009:13). In 2015, the number of Romanians officially residing in other European countries was around three million (Rotariu *et al*., 2017: 135). Worldwide, by 2013, the number of Romanians living in countries around the world was around 3.4 million (Horváth and Kiss, 2015:114). With regards to rural areas, earlier estimates show that in 2002, around 149,000 people from rural areas were temporarily abroad, namely a 14.6 rate of temporary migration (Sandu, 2004:181). In 2011, there were 169,589 people living in rural areas and working abroad (2011 Population Census, authors' own calculations).

CLASSIFICATION OF RURAL AREAS IN ROMANIA

The academic topics of rural studies cover the specialized area of social development studies, human, economic or infrastructure development, housing and deprivation, external migration, and internal mobility. Dumitru Sandu's works have contributed greatly to the knowledge about the Romanian rural world during the socialist regime, the transition to market economy, and the present days. In his more recent studies, the author brings together essential elements about rural communities, in terms of temporary migration abroad, internal migration, mobility and commuting, human, social, economic and cultural development, and occupational structures (see for example Sandu, 2018a, 2018b, 2018c).

Other recent studies that also include analyses of rural development highlight the dynamics of demographic phenomena (Rotariu *et al*., 2017), the rural in relation with industrial cities and economic production chains (Petrovici, 2013, 2017), work, social marginalization and deprivation (Vincze *et al*., 2019), housing and poverty, the integration of disadvantaged communities (Teşliuc et al., 2015). This list is evidently not exhaustive, however, we believe it was a great potential to capture the key aspects necessary for a detailed investigation of the population evolution, the age structure and implicitly demographic phenomena (birth rates and fertility, mortality and migration).

Rural areas feature a high degree of heterogeneity of localities and administrative units. The diversity of urban and rural communities is illustrated in two reports published by the World Bank, namely "The Atlas of Rural Marginalized Areas and of Local Human Development in Romania" (Teşliuc *et al*., 2016), on rural areas with marginalized communities and "Magnet-Cities: migration and commuting in Romania" (Cristea *et al*., 2017), on the functional areas of Romanian magnet-cities. These two reports include a classification of all localities (in this paper we are only interested in rural localities), with different types of marginalized communities, and also localities that are part of the functional urban areas of county municipalities, according to the intensity of work mobility from the place of residence to the country seat. The two key analytical dimensions are marginalization and spatial mobility. At aggregate level, if we compare rural localities based on these

classifications, there is a significant variation of characteristics, such as age, level of education, occupation, income, household size, etc.

People living in marginalized communities usually have a very low level of education (primary school, at most), are generally involved in an informal economic work to make ends meet, and live in precarious conditions and overcrowded housing, without access to utilities or to basic infrastructure (Teșliuc *et al*., 2016: 24−25). According to previously mentioned reports, 6.2% of the rural population lives in such marginalized communities. There are also a significant number of single mothers, very young mothers, mothers with many children (34% of the total population living in marginalized rural areas), and a relatively low share of older people (13%) (Teșliuc *et al*., 2016: 25). In addition, the geographic location seems to be another indicator of marginalized areas. For example, the authors argue that the proximity to the county boarders and the distance from the county seat is associated with the emergence of these types of communities (Teșliuc *et al*., 2016: 34).

People living in functional urban areas are at the opposite pole. These are homogeneous regions that include localities where at least 15% of the employed population commutes to the county seat, along with localities in its proximity (Cristea *et al*., 2017:18). Most of the country's population is concentrated here (58%), as well as the largest number of people with tertiary education (80%), and 61% of the employed workforce (Cristea *et al*., 2017:XI). Moreover, internal migration is driven by the existence of these areas as preferred destinations. During 2001−2011, two thirds (66%) of the total geographically mobile population within the country was active in functional urban areas (Cristea *et al*., 2017:XI). According to the report, more than half of this mobile population consists of women, people from counties in spatial proximity, over 45 years old and employed in the service sector. Half of the migrant population comes from rural areas, 23% have tertiary education, 28% are managers and professionals with university degree. Compared to the low share of elderly population in disadvantaged areas, 33% of the migrants in functional areas are retired. On the other hand, those commuting to urban functional areas are mostly men under 35. Of the total number of commuters within functional areas, 26% have tertiary education (Cristea *et al*., 2017: XII).

DATA AND METHOD

In this paper we analyse the natural and migratory movement in rural areas in the last 30 years, using data provided by the National Institute of Statistics (NIS). We also used data from the Demographic Yearbooks (2006 and 2015), and the NIS Tempo-Online databases, to have a complete picture of the rural areas.

As highlighted in the previous sections, we want to investigate the demographic situation of rural areas considering their heterogeneity. We started from an exhaustive list of all territorial units in rural areas. Based on the classification of marginalized rural localities and the classification of functional urban areas

published in the two reports mentioned previously, we kept their composition, and built a new classification that includes both criteria. Even if they both capture a gradual intensity of the measured object, we chose to simplify these classifications in our analysis as follows: the ATUs with socially marginalized communities (MC), regardless of the severity, respectively ATUs within functional urban areas (FUA), regardless of the intensity of commuting, were included in a single category.

Thus, we will distinguish between (1) rural administrative territorial units with marginalized communities, outside functional urban areas, (2) rural administrative territorial units with marginalized communities, within functional urban areas, (3) rural administrative territorial units without marginalized communities, outside functional urban areas, and (4) rural administrative territorial units without marginalized communities, within functional urban areas.

Considering the limited statistical information provided by the National Institute of Statistics on the TEMPO online platform at locality level, we chose territorial administrative units as a starting point. By working with aggregated data at this level, generalizations might be inconsistent with realities at locality level. However, we managed to control this source of error, by combining the two classifications mentioned previously.

After we classified the rural areas into four categories, we downloaded all available data provided by the National Institute of Statistics through the TEMPO online platform at the level of communes and cities on the population volumes by age and sex, births, deaths, emigrants and internal or external immigrants, temporary or permanent. The analysed period is equivalent to the years for which the TEMPO platform provides data. Statistical series we used cover mostly the period 1991−2018, and referring to the population domiciled in Romania[1]. The demographic data on the population residing in Romania[2] are available for shorter periods, which vary for different indicators.

We then normalized the tables downloaded from the platform of the National Institute of Statistics. Based on the SIRUTA code (Level 2), we created the necessary joints with the source table containing the classification of rural areas in the four categories mentioned previously. Table 1 provides information on the number of administrative units in each rural category we created. We chose to work with four categories, to capture all combinations by joining the two distinct classifications.

Thus, some of our analyses have a second aggregation level which goes beyond the rural – urban dichotomy, more sensitive to the existing variation between rural communities in Romania. However, the demographic indicators that can be analysed as such are limited to the type of demographic data available at ATU level.

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[1] The domiciled population is the number of people with Romanian citizenship domiciled on Romanian territory.

The resident population is the total number of people with Romanian citizenship, foreigners and without citizenship, with a usual residence on Romanian territory, according to NIS, Tempo platform.

Table no. 1

Distribution of rural administrative units, according to a classification into four categories

Category	Name	Number	Percent
1	Rural administrative territorial units with marginalized communities, outside functional urban areas	759	27
2	Rural administrative territorial units with marginalized communities, within functional urban areas	226	8
3	Rural administrative territorial units without marginalized communities, outside functional urban areas	1,157	40
4	Rural administrative territorial units without marginalized communities, within functional urban areas	719	25

Source: Cristea *et al*., 2017; Teşliuc *et al*., 2016.

We also used the micro data from the Annual statistical surveys on births also provided by the National Institute of Statistics. For these data, we again used the classification of ATUs in four categories, and together with a series of socio-economic characteristics of the women who gave birth, we managed to have a detailed understating of rural fertility.

POPULATION VOLUME

Romania's population has declined continuously after 1989, with a decrease of 3.8 million people, by 2018. The population decline at national level is generated by the natural change (negative natural change, respectively the numerical difference between births and deaths), and by the migratory flow (external migration). Over the period 1990−2016, the country recorded a 2.6 million decline in the population due to external migration, and another decline of approximately 1 million people, due to natural change (Gheţău, 2018a: 123). Most of the migrants who contributed to the population decline are evidently unregistered and temporary migrants (Gheţău, 2007: 2−4; Rotariu, 2015). If we narrow it down to rural areas, we notice an additional source of decline: internal migration.

The natural decline is generated by the evolution of the natality and of mortality: the birth rate dropped after 1989, and after that, it maintained a low level, while the number of deaths increased, and they maintained higher values as compared to births. In recent years, the contribution of the natural decrease in the total decline of the Romanian population has increased, estimated to account for 66% of the entire population decline during 2011−2018 (Gheţău, 2018a: 124).

Regarding the population domiciled in Romania, the rural area lost 935,096 people from 1992 to 2018 (through natural decline, internal and external migration). Regarding the resident population, the rural areas has lost 1,147,479 people from 2002 to 2017 (NIS published data about this category only since 2002).

With regards to the evolution of the population volume in the four rural categories, there is a downward trend in the case of administrative territorial units

outside urban functional areas, and even more so in those without marginalized communities. The evolution of the population volume in ATUs that are part of a FUA (functional urban area) is continuing an upward trend, much more visible in the case of those without marginalized communities (*Figure 1*). Given the classification we used, it will become obvious that internal migration played a key role in shaping the population volume in the four rural categories.

Figure 1

**Evolution of the population volume
in the four categories of rural administrative units, 1992−2018**
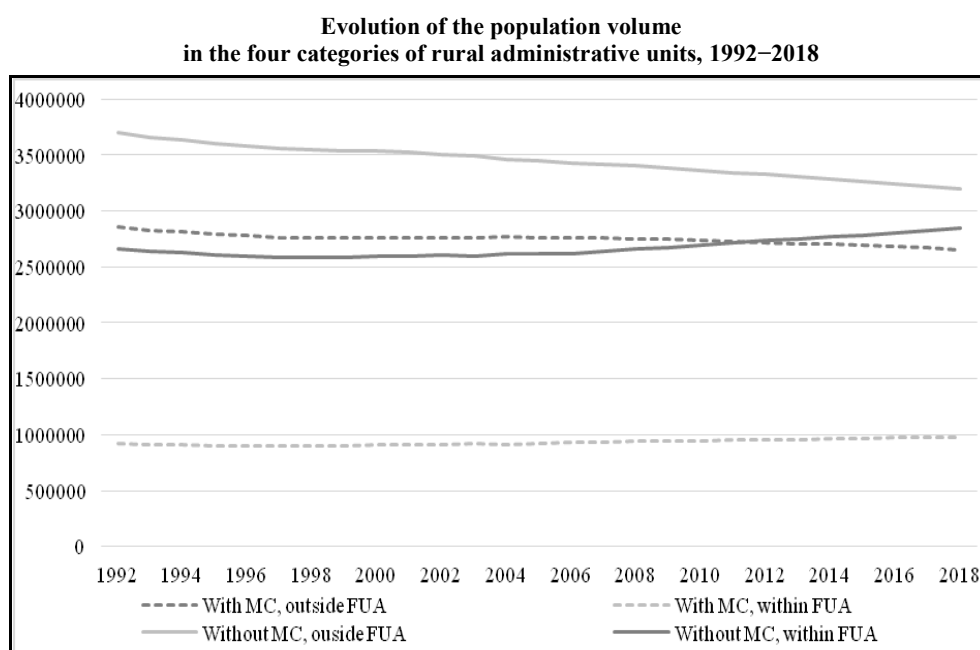
Source: National Institute of Statistics, Tempo online, table POP108D.

SOURCES OF DECLINE – NATURAL DECLINE

The evolution of the rate of natural change in urban and rural areas had a different dynamic (*Figure 2*). The negative natural change is deeper in rural areas, while in urban areas there is an alternation between periods with positive and negative change, but with a much smaller volume than in rural areas. In other words, the natural decrease of the population in Romania is more severe in rural areas.

The positive natural population change in urban areas is due to the upward trend of urban births after 2003. This recovery is mainly due to social benefits and rights for employed women (statutory childcare pay and leave), which stimulated births in this population segment, located mainly in urban areas (Ghețău, 2018a: 137). 2004 was an exceptional year, as the number of urban births exceeded that of rural births, while the country's degree of urbanization remained stable. In rural areas

both the number of births and the total fertility rate (the average number of children born to a woman over her lifetime) are registering a continuous decline (*Figure 3*). On the other hand, the number of deaths is systematically higher in rural areas, although the trend in the two areas is similar.
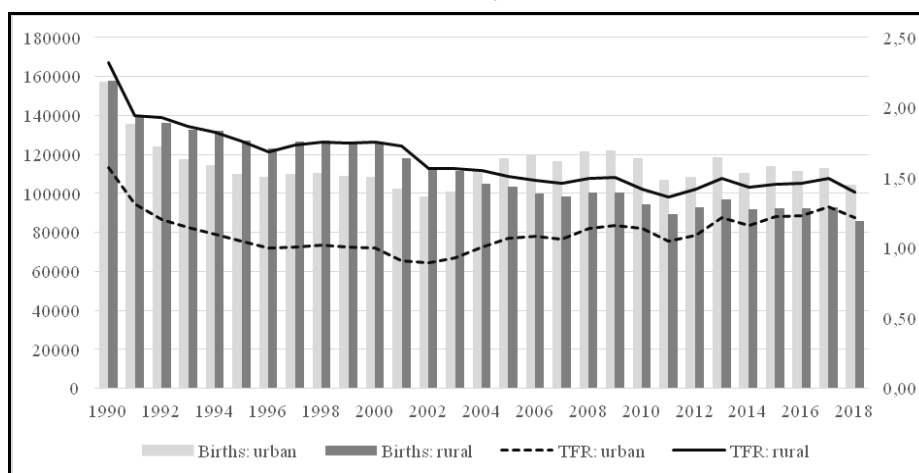
Figure 2

Evolution of the number of births and deaths in rural and urban areas, 1990−2018
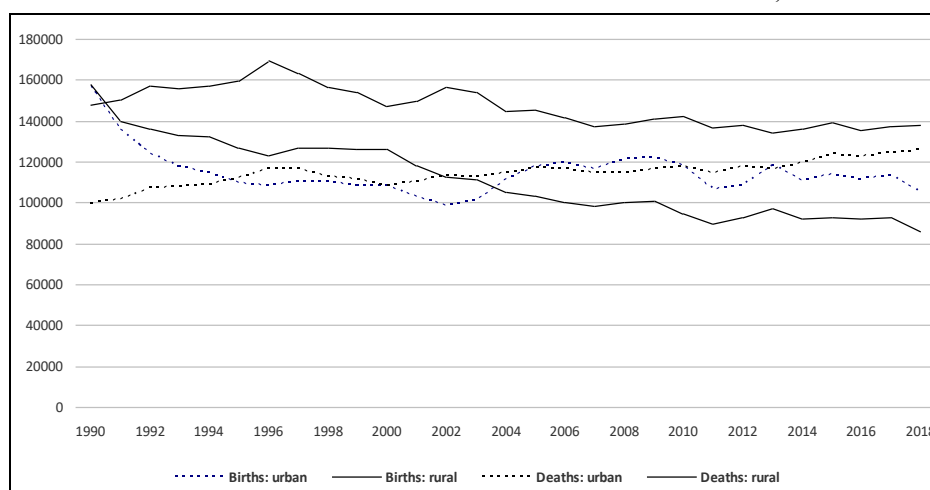
Source: National Institute of Statistics, Tempo online, tables POP201A and POP204B.

Figure 3

Evolution of the number of births and the total fertility rate in rural and urban areas, 1990−2018
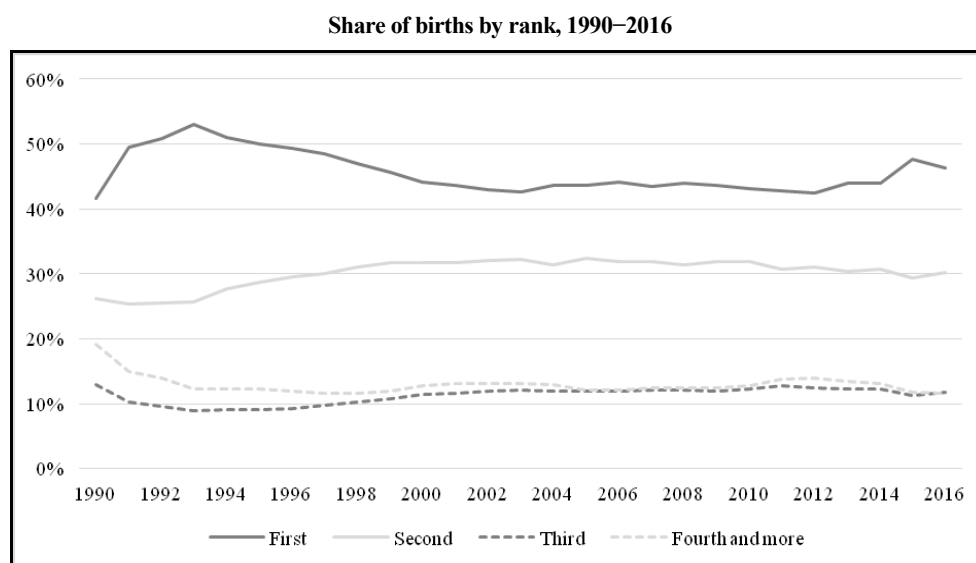

Source: National Institute of Statistics, Tempo online, table POP201A and own calculations based on table POP203A.

BIRTH RATE/FERTILITY

If we look at the population by domicile, the share of women of childbearing age (15−49 years) has increased over time, in rural areas (and in each rural subcategory) (*Table no. 4*). This is due to the aging of the generations born between 1967−1989. If we look at the resident population, there is a slight decrease in the share of women of childbearing age in rural areas. The maturity of the generations born before 1990 has partially counter-balanced the effect of external migration.

In the first half of the 1990s, the number of 3rd or higher births dropped all over the country, however, in rural areas the share of 3rd, 4th and higher births remained relatively stable, around 12−13%, higher than the 5−6% share in urban areas (*Figure 4*). The declining fertility rate immediately after 1989 was due to a very low number of higher births, and the increasing share of first births; however, in subsequent years the share of first births decreased, and there was a more visible increase in the share of second, third or higher births. The share of second births remained relativelyconstant, around 30−31%, and first births fluctuated around 43%. In recent years, however, there has been an increase in the share of first births and a decrease in the share of third or higher births.

Figure 4

Share of births by rank, 1990−2016

Source: National Institute of Statistics, Demographic Yearbook 2015, and Annual statistical surveys on births, 2006 and 2016.

As shown in *Figure 5*, the rural fertility rate registered a significant decrease, especially in the 20−24 age group. The intensity of the fertility rate in the 25−29 age

group has remained constant since 1995. The fertility rate for older age groups registered a sharp decline in the first half of the 1990s due to an extremely low number of higher births. However, in recent years there has been a slight increase in the birth rate of the 30+ age group. The maximum fertility has shifted from the 20−24 age group to the 25−29 age group, starting with 2013. This was mostly because the fertility rate of the younger age groups has decreased. The average age of first-time mothers increased from 21.3 years in 1990 to 24.8 years in 2018, and the average age at all births, from 24.5 years in 1990 to 27.2 years in 2018.

Figure 5

Fertility rate by age groups, rural areas 1990, 1995, 2000, 2005, 2010, 2015, 2018
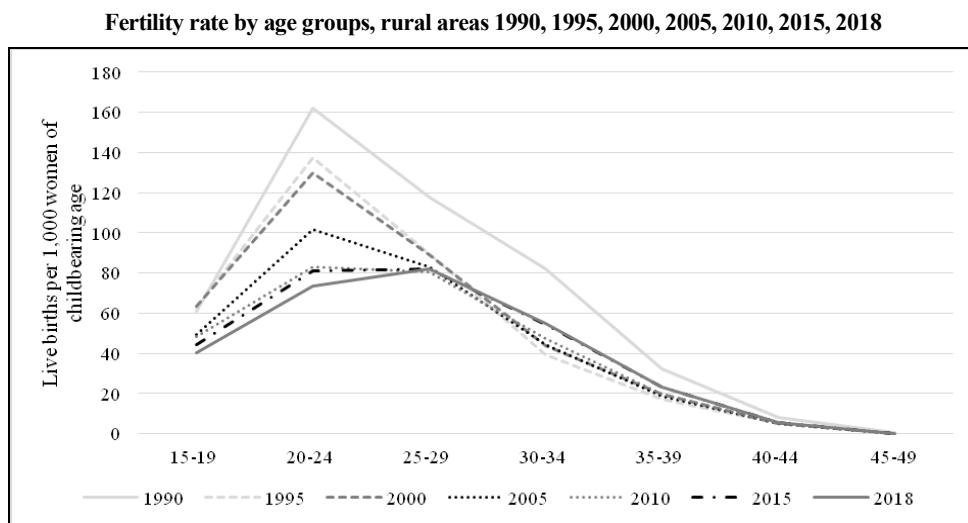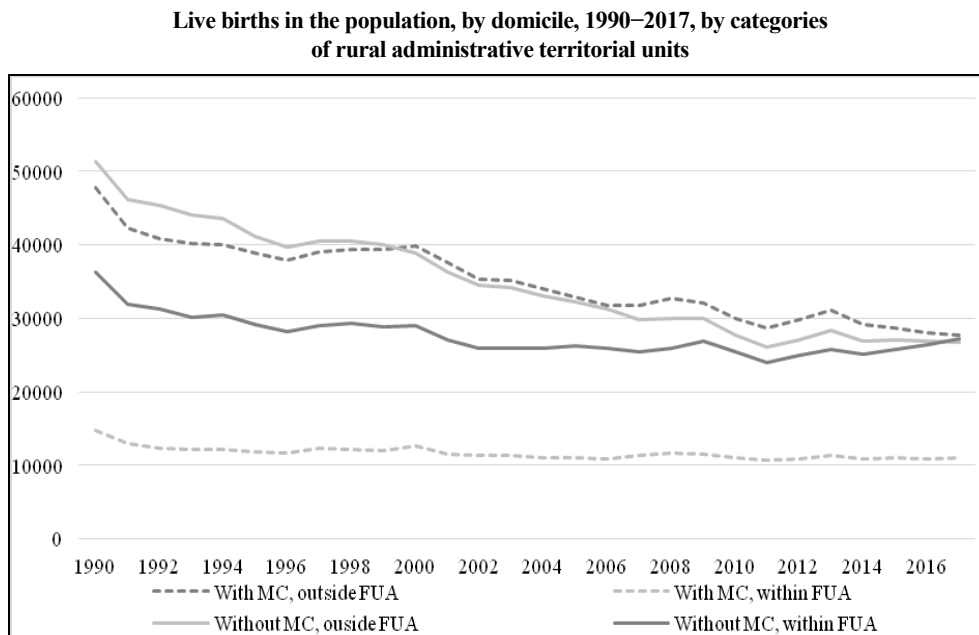

Source: National Institute of Statistics, Tempo online, table POP203A.

The census data allow us to assess the fertility rate of the female generations that were over 50 years old at the date the census was completed, *i.e.* the completed cohort fertility. Starting with the 1942 generation (whose fertile period had ended in the early 1990s), and ending with the 1960 generation (whose fertile period had ended before the 2011 census), the final number of children per woman was 2.4. Most of the women in the 1961−1965 generation, whose fertility period practically ended in 2011, gave birth to two children (36.7%), followed by 19% who gave birth to one child, and by 17.2% who gave birth to three children; 8.2% gave birth to four children and 9.3% to five or more.

Our analysis of the dynamics of the fertility and birth rate for the four categories of rural communes is again limited by the type of data available at ATU level. As such, we can only make an analysis in terms of the absolute number of events or crude rates. The number of rural births is declining (*Figure 6*). However, the evolution of births differs between the different types of rural ATUs. The most

visible decrease was registered in rural areas outside FUA (functional urban areas), as the population in these localities is declining. In the early 2000s, this decline was reduced in rural areas without marginalized communities located outside the FUA, and in recent years there was an increase in the number of births. The rural areas within the FUA that include marginalized communities registered the smallest changes, both in terms of births and in the total population.

Figure 6

Live births in the population, by domicile, 1990−2017, by categories of rural administrative territorial units
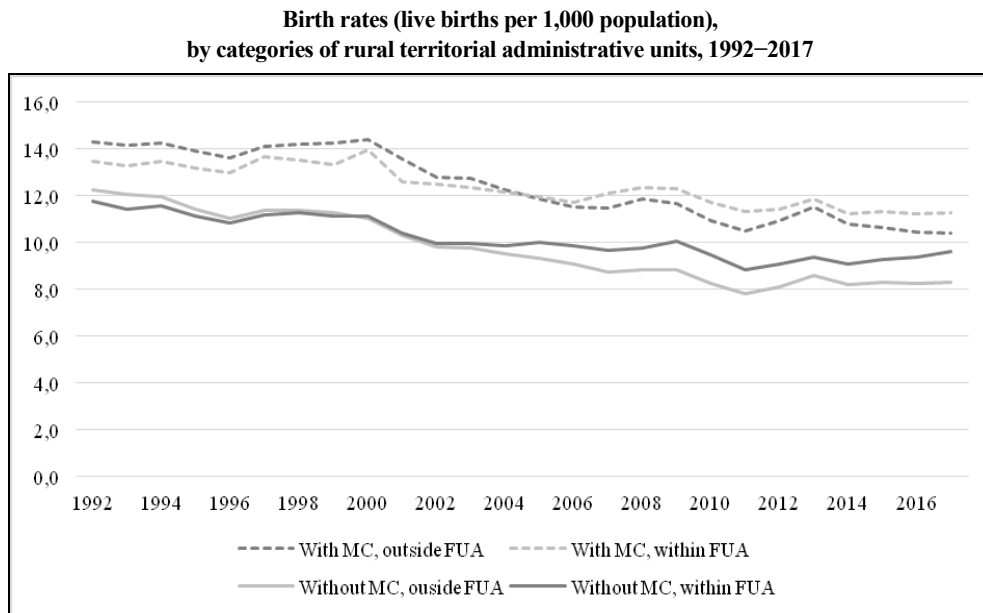

Source: National Institute of Statistics, Tempo online, table POP201D.

If we look at the crude birth rates (*Figure 7*), which are influenced by the age structure of the population, we notice similar evolutions, given by the presence or absence of marginalized communities. In the case of localities without marginalized communities, the difference in the evolution of localities inside and outside the FUA can be noticed around 2003−2004, when the decline in rural areas inside urban functional areas was fading. We can link these developments with the introduction of the statutory childcare pay and leave, a measure addressed to employed women (in the case of employed women living in rural areas, the largest shares live in localities without marginalized communities, within FUA).

The databases containing all live births within a calendar year provide a detailed insight of the four types of rural ATUs. Unfortunately, such data are not

available for the entire 1990−2018 period, and as such we will make an analysis based on the data for 2006 and 2016.

Figure 7

**Birth rates (live births per 1,000 population),
by categories of rural territorial administrative units, 1992−2017**

Source: National Institute of Statistics, Tempo online, table POP201D and POP108B, own calculations.

First of all, we notice a significant change in the level of education of rural mothers: from 5% with secondary education and 6% with tertiary education in 2006, to 26% mothers with secondary education and 13% with tertiary education in 2016 (*Table no. 2*). The share of employed mothers registered a less spectacular increase, from 27% to 33%, while the share of employed fathers increased from 50% to 54%. However, if we look at the four types of rural areas, these shares vary according to the socio-economic context in which children are born: from high shares of low-educated mothers, housewives, high shares of unemployed fathers, high shares of births outside marriage that are typical for localities with marginalized communities located outside functional urban areas, to more educated mothers, a higher share of employed mothers, and an even higher share of employed fathers and births during marriage in localities without marginalized communities located within functional urban areas.

Table no. 2

**Characteristics of women who gave birth in 2006 and 2016,
by types of rural administrative territorial units**

	MC, outside FUA	MC, within FUA	Without MC, outside FUA	Without MC, within FUA	Rural
2006					
% of rural births	31.8%	10.9%	31.3%	26.0%	
2016					
% of rural births	30.4%	11.8%	29.1%	28.6%	
2006					
Primary and other situations	64%	58%	55%	49%	57%
Primary and vocational education	24%	28%	34%	38%	31%
Secondary and post-secondary	4%	4%	6%	7%	5%
Tertiary	8%	9%	5%	6%	6%
2016					
Primary and other situations	25%	27%	15%	15%	20%
Primary and vocational education	48%	40%	42%	33%	41%
Secondary and post-secondary	20%	22%	30%	30%	26%
Tertiary	7%	10%	13%	21%	13%
2006					
Employed	18%	26%	28%	38%	27%
Stay-at-home parent	72%	64%	65%	56%	65%
2016					
Employed	19%	30%	33%	50%	33%
Stay-at-home parent	69%	56%	56%	42%	56%
2006					
Undeclared father	10%	12%	7%	8%	9%
Employed	35%	50%	52%	65%	50%
Other situations	26%	28%	23%	20%	24%
2016					
Undeclared father	9%	10%	6%	6%	7%
Employed	38%	51%	56%	70%	54%
Other situations	35%	29%	27%	19%	27%
2006					
Unmarried	36%	42%	28%	31%	33%
Married	63%	58%	71%	68%	66%
2016					
Unmarried	44%	46%	32%	31%	37%
Married	55%	53%	67%	68%	62%

2006					
rank 1	41%	44%	46%	47%	45%
rank 2	30%	31%	33%	33%	32%
rank 3+	29%	26%	21%	20%	24%
2016					
rank 1	42%	44%	47%	51%	46%
rank 2	28%	30%	31%	32%	30%
rank 3+	29%	26%	21%	18%	23%

Source: National Institute of Statistics, Annual statistical surveys on births, 2006 and 2016.

The age distribution of births varies in the four rural categories (*Figure 8* and *Figure 9*). The variation mentioned previously is also visible here, and it is more accentuated in the next decade. Although lower than in 2006, the share of births at a very young age remained high in rural areas with marginalized communities: about a third of first time mothers are under the age of 20, while in rural areas close to urban environments only 16% of births occur before the age of 20, and 22.6% occur after the age of 30.
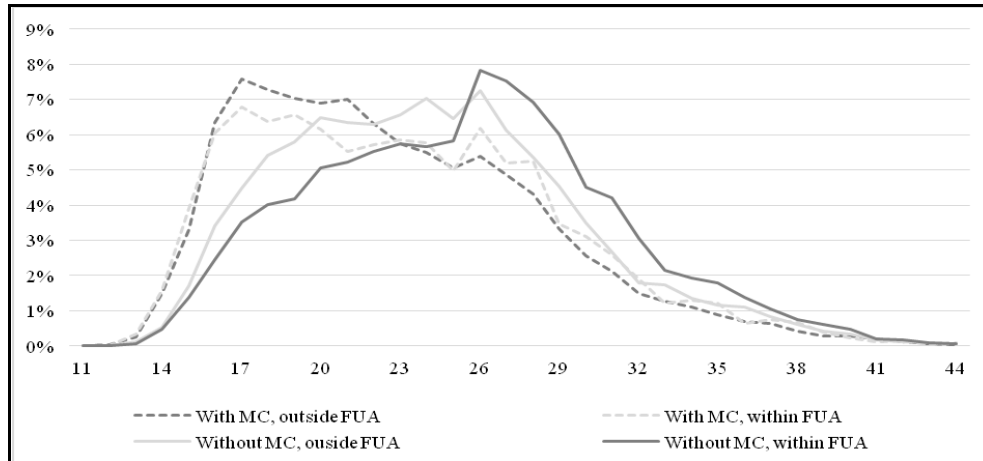
Figure 8

**Distribution of births in 2006 by the age of the mother at birth,
by category of rural administrative units**
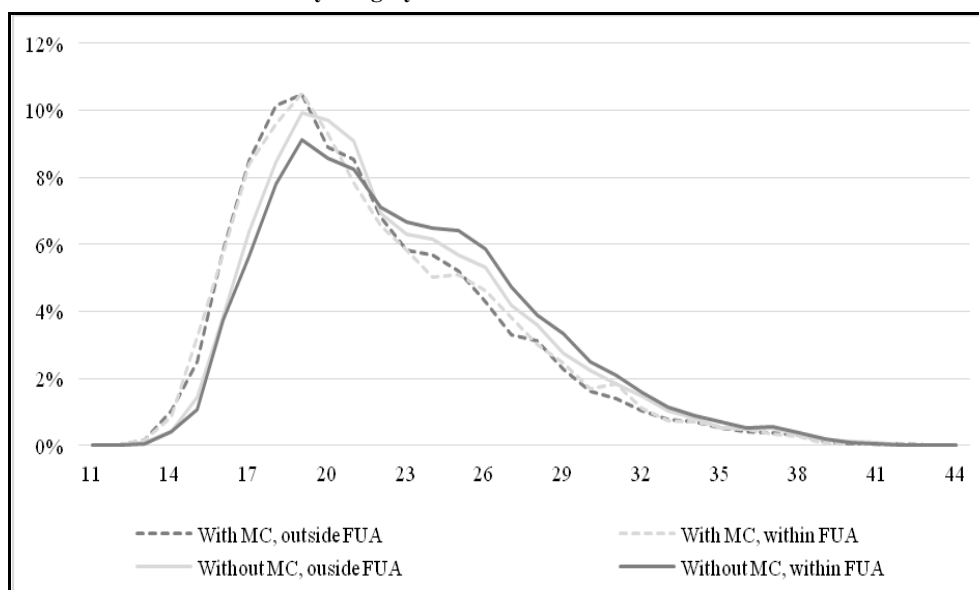
Source: National Institute of Statistics, Annual statistical surveys on births, 2006.

Figure 9

**Distribution of births in 2016 by the age of the mother at birth,
by category of rural administrative units**

Source: National Institute of Statistics, Annual statistical surveys on births, 2016.

In this section we saw that the share of the rural female population of childbearing age remained relatively constant after 1989. However, there is a notable change in its composition by education and to a much lesser extent by occupational status. These changes, against the background of the socio-economic evolutions in Romanian society after 1989, favoured a decreasing fertility rate and a more advanced maternal age.

MORTALITY

In the post 1989 period, mortality started to decline (increasing life expectancy at birth) only around 1997, after an initial period of stagnation for women or increase for men (*Figure 10*). The gap in the life expectancy between men and women in rural areas has increased from 6.1 years in 1990 to 8.4 years in present days, with a lower value for men.

As for the age groups that contributed to the fluctuation of life expectancy at birth, Rotariu et al. (2017) and Gheţău (2018b) showed that, in the case of men in both rural and urban areas, the decrease of life expectancy at birth over the period 1990−1997 came about from the increase of adult mortality, and that the 50−60 years age group registered the highest number of relative losses. This was a common phenomenon in Central and Eastern European countries, a consequence of the "shock therapy" policies during the transition, especially the massive privatization that generated a high level of unemployment (Stuckler *et al*., 2009), which led to a lower quality of life and poor health.

Life expectancy at birth by sex and area of residence,
1988-1990 − 2012−2014
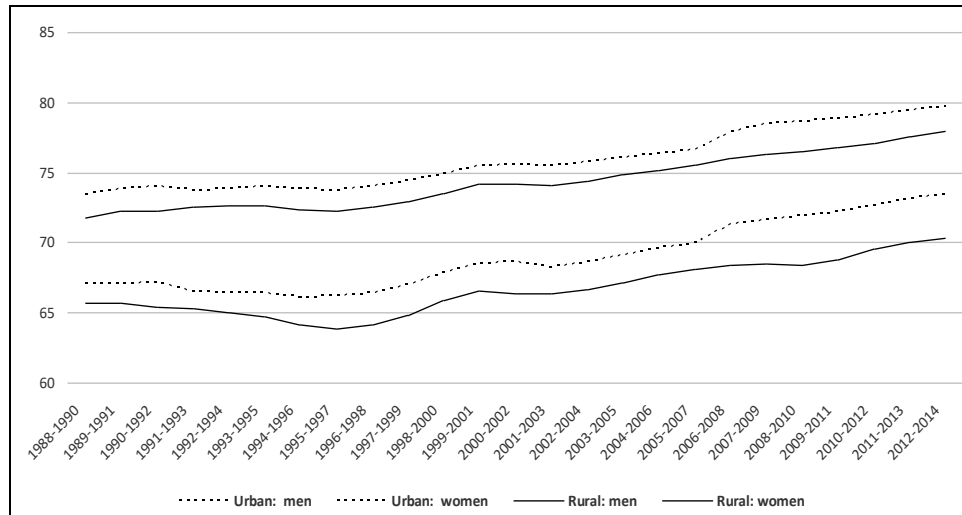
Source: Demographic Yearbook 2015.

Compared to the value of life expectancy at birth over the period 1988−1990, men living in rural areas lost 1.84 years, by 1995−1997, however, between 1995−1997 and 2012−2014, they gained 6.51 years. During the same period, women gained 5.70 years. Life expectancy increased because of a decreasing infant mortality rate (as the restrictive legislation on abortion and contraception was abolished) and the economic, social, cultural, and medical progress made by the Romanian society (Ghețău, 2018b: 168).

Ghețău (2018b: 168−169) estimates that, in the case of men in both rural and urban areas, the age groups 40−59 years, 0−9 years and 70 years and older, and, in the case of women in both rural and urban areas, the 70 years and older, 40−59 years, and 60−69 years age groups contributed the most to this progress. The data available allow us to analyse the evolution of mortality by age groups in rural areas (Table 3). The increase in male mortality in the first part of the post 1989 period was indeed registered in adulthood, with the highest increases in specific rates in the 55−64 years and 45−49 years age groups. The progress made during the entire 1992−2018 period was mainly registered in the case of those over 70, but also in adult ages, such as 35−54 years, as well as in the case of infant mortality. For women living in rural areas, the most visible progress was registered for the elderly (over 65 years), and in the case of infant and adult mortality.

Table no. 3

**Mortality rates by age groups (deaths per 1,000 people),
rural area**

|	MEN							WOMEN				
	1992	1997	2000	2010	2018	1997 − 1992	2018 − 1992	1992	2000	2010	2018	2018 − 1992
0−4 years	6,9	6,8	5,7	2,9	2,0	-0,1	**-4,9**	5,5	4,5	2,4	1,6	**-3,9**
5−9 years	0,8	1,2	0,6	0,4	0,2	0,4	**-0,6**	0,5	0,4	0,2	0,2	-0,3
10−14 years	0,6	0,6	0,8	0,3	0,3	0,0	**-0,3**	0,4	0,5	0,2	0,2	-0,2
15−19 years	1,0	1,1	1,0	0,7	0,6	0,1	**-0,5**	0,5	0,5	0,3	0,2	-0,3
20−24 years	1,6	1,5	1,2	1,0	0,7	-0,1	**-0,8**	0,6	0,5	0,3	0,2	-0,4
25−29 years	2,1	1,9	1,7	1,2	0,9	-0,2	**-1,2**	0,9	0,6	0,5	0,4	-0,5
30−34 years	3,2	3,4	2,4	1,8	1,1	0,2	**-2,1**	1,4	1,0	0,6	0,5	-0,9
35−39 years	5,1	6,0	4,0	2,7	2,1	1,0	**-3,0**	1,9	1,8	1,1	0,8	**-1,1**
40−44 years	7,4	9,7	7,1	4,9	3,6	**2,3**	**-3,8**	2,9	2,8	2,0	1,4	**-1,4**
45−49 years	9,5	13,0	10,5	8,7	6,5	**3,5**	**-3,0**	3,9	4,2	3,6	2,6	**-1,3**
50−54 years	14,1	16,3	13,9	14,9	10,7	**2,2**	**-3,4**	5,7	5,4	5,3	4,2	**-1,5**
55−59 years	19,0	22,9	19,2	20,0	18,7	**3,9**	**-0,3**	8,1	8,3	7,6	6,5	**-1,6**
60−64 years	25,9	30,5	26,4	26,4	27,5	**4,6**	**1,6**	12,6	12,5	10,9	10,6	**-2,0**
65−69 years	38,7	40,8	36,9	36,0	37,0	**2,1**	**-1,6**	21,4	19,8	17,3	15,5	**-5,9**
70−74 years	57,1	61,4	54,5	52,4	49,6	**4,3**	**-7,6**	38,4	35,3	28,7	25,1	-13,4
75−79 years	94,4	89,5	83,7	77,5	74,5	-4,9	**-19,9**	74,9	63,1	52,3	45,1	-29,8
80−84 years	148,3	147,0	130,0	119,1	112,9	-1,3	**-35,4**	128,4	109,3	95,1	83,4	-45,0
85 years and over	261,8	246,5	225,3	200,8	190,2	-15,3	**-71,6**	239,3	210,9	185,2	174,0	-65,4
Total	15,7	17,2	15,2	15,4	14,9	1,5	**-0,8**	13,9	13,5	13,8	13,6	-0,3

Source: National Institute of Statistics, Tempo online, tables POP206A and POP108B, own
calculations.

For a detailed evolution of mortality in the four rural communities that we identified, the only available data is the absolute number of deaths and the crude mortality rates (deaths per 1,000 people). However, these indicators are sensitive to changes in population volume and age structure.

Over the period 1990−1997, the mortality increased in all four categories of rural ATUs, visible in the increasing number of deaths (*Figure 11*). The number of deaths registered a slight decrease after this period, but remained close to the values from the 1990s, while the rural population outside FUA decreased over time. Although the mortality rates by age have decreased and the life expectancy has increased in rural areas, the total number of deaths is still maintained at a high level due to the increasing share of the elderly population, as three quarters of deaths in an year occur among people 65 years and over (Ghețău, 2018a: 125).

Figure 11

**Evolution of the number of deaths by domicile, 1990−2017,
by categories of rural territorial administrative units**
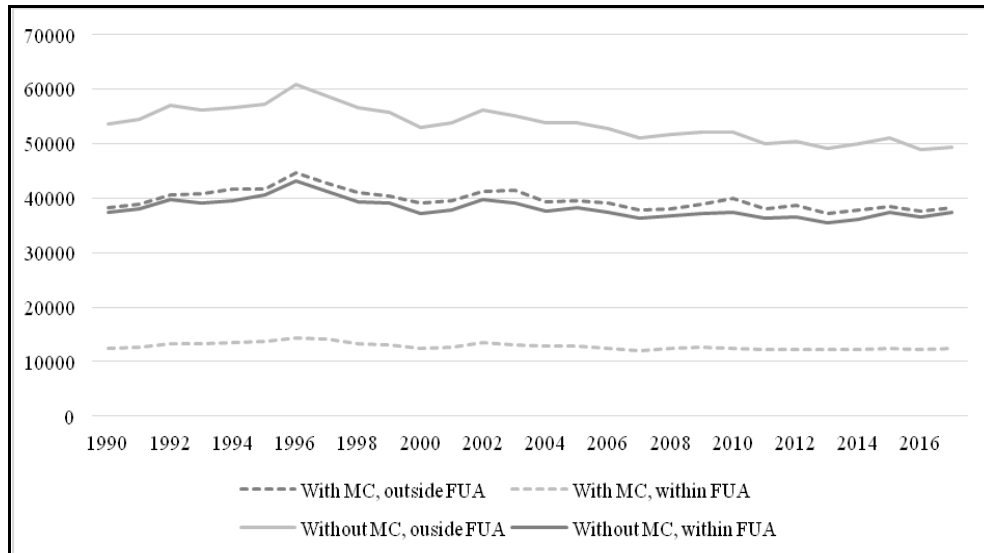
Source: National Institute of Statistics, Tempo online, table POP206D.


MIGRATORY MOVEMENT. INTERNAL MIGRATION

Changes of domicile

While analysing migratory movements, a distinction is made between internal and external migration, namely between establishing or giving up a domicile or residence.

If we look at the domicile changes trend throughout the country, we notice a series of stages after 1990. In the first stage, between 1990 and 1991, there was a sharp decline in the number of people leaving rural areas and moving to urban areas (mostly in cities). The increase, followed by the sharp decline in internal urban migration was the result of the abolition of restrictions after 1982, when "closed cities" welcomed new inhabitants. The negative trend continued until 2000, however, with a visibly lower intensity. The second stage began in 1997, when the number of people leaving rural areas was exceeded by that of newcomers. This was an essential moment in the history of the Romanian rural, as it was the first time in the last decades when rural areas became the favourite destination for internal migration. This period is associated with the strong negative effects of the transition from a planned economy to a market economy. Cities undergoing deindustrialization were losing significant shares of population as people were returning to their rural origins. The upward trend of rural migration since the beginning of the new millennium is a

result of the expansion of large cities on the administrative territory of neighbouring communes (Dumitrache *et al*., 2016, Grigorescu *et al*., 2012). The emergence of sub-urban and peri-urban areas around several magnet cities continues to underlie the territorial discrepancies generated by the post-transition economic dynamics.

Figure 12

Internal migration flows determined by changes of domicile
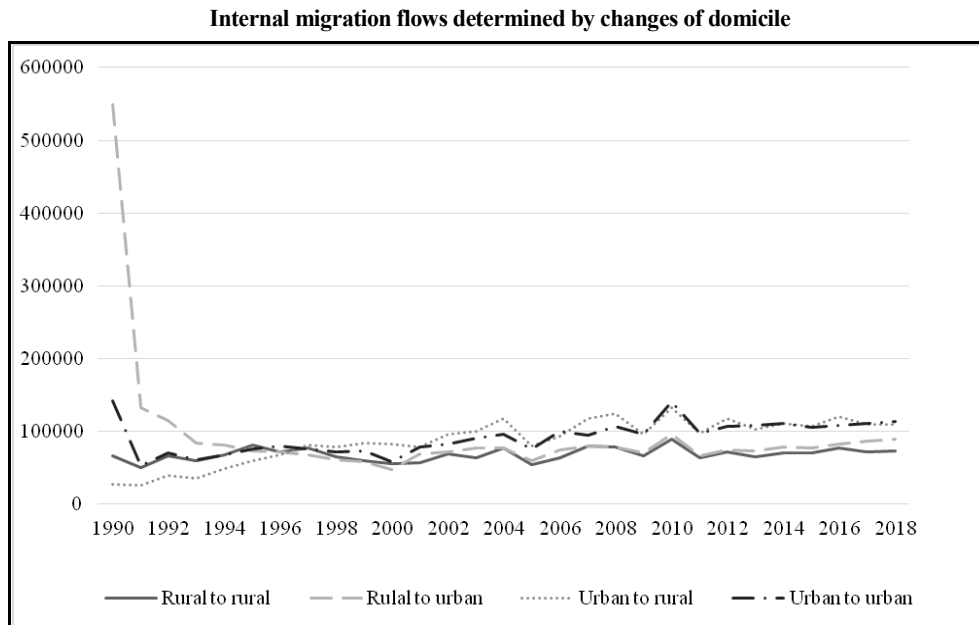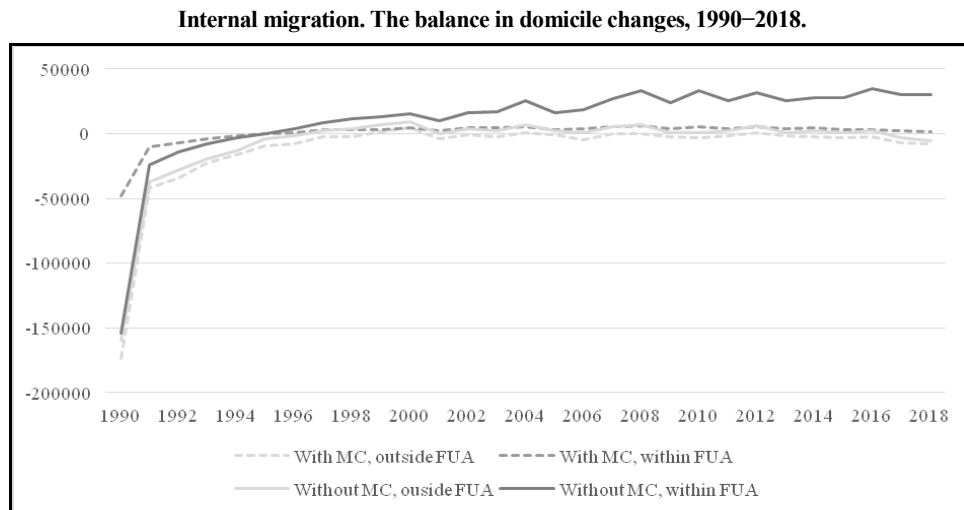

Source: National Institute of Statistics, Tempo online, table POP311A.

The third stage began in 2001, when the correlation between the number of people leaving rural areas and moving to urban areas, respectively those leaving urban areas and moving to rural areas was positive. We analysed the flows of domicile change by area of residence and we noticed that in 2001, the city to city migration increased in intensity. If we compare the destinations of those changing their domicile from rural areas, 2001 is again a reference year. Due to the country's revitalization and economic growth in the new millennium, certain cities became attractive again as migration destinations. The fact that only certain cities manage to attract population coming from urban areas, and that the rural – urban migration keeps on registering similar rates to urban-urban migration, is an indicator of inequalities in terms of economic and social development, also on a territorial level. The forces that attract or repel the population to big cities restructure our imaginary about the city and the village.

The evolution of the migratory balance determined by changes of domicile between 1990 and 2018 in the four rural categories mentioned at the beginning of the paper is illustrated in *Figure 13*, which helps us have a more detailed picture of

internal migration in rural areas. A negative value indicates a higher number of departures and a positive value indicates a higher frequency of arrivals. At the end of the time series, the difference between the number of people establishing domicile and those who leave is the highest, and of course positive, in the case of rural areas within functional urban areas without marginalized communities. Localities with marginalized communities outside functional urban areas are at the opposite pole. For this category, the balance was negative for almost the entire period after 1996. The high number of people establishing domicile in rural suburban areas is the most eloquent example of how cities expanded and transformed nearby villages into suburbs. The new population living in these new types of rural settlements is fully dependent on the city not only in terms of commuting, but also for certain facilities related to health, recreational, cultural and educational needs that are available only in the city.

Figure 13

Internal migration. The balance in domicile changes, 1990−2018.
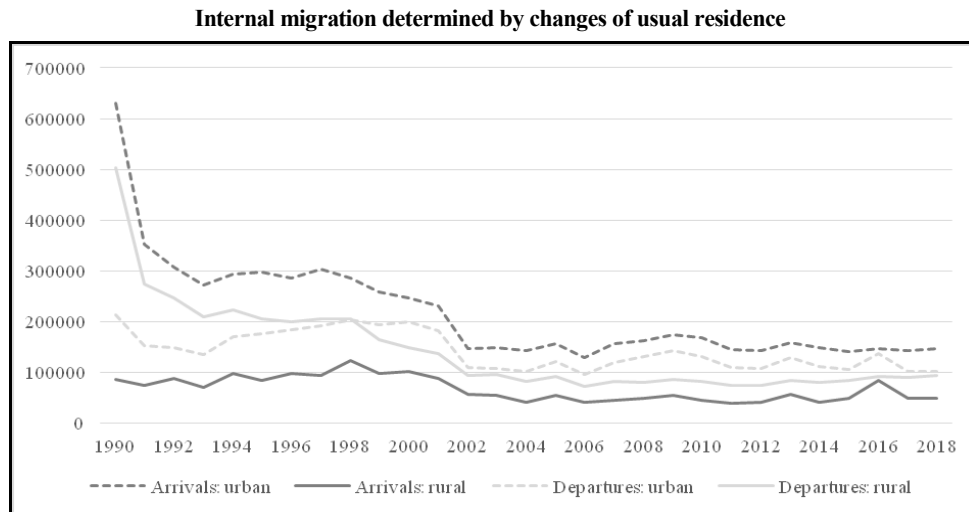

Source: National Institute of Statistics, Tempo online, tables POP307A, POP308A, POP310E and POP309E.

Changes of residence

The study of the resident population, and especially of the migratory movement related to the change of usual residence is often complicated, due to the difficulty of gathering sufficient and reliable data. Based on official data, we managed to analyse internal migration at the level of rural categories. However, this was not possible for external migration, as it is an even more complicated issue. *Figure 14* shows statistical data on the usual residence change in the country, from 1990 to 2018. The number of people moving to urban areas and the number of people leaving rural areas registered the sharpest decline from 1990 to 2002. It is

interesting that, during this period, the frequency of people moving to rural areas and of those that leave urban areas fails to cover the values of the two other changes of residence mentioned previously. Only in 2002, the number of changes of residence begins to record a certain balance for all types of movements (urban/ rural arrivals and urban/ rural departures). After 1999, we also notice a reversed trend of departures from the two areas of residence. Initially, there were more people leaving rural areas. However, according to the data, things are changing in favour of urban areas. In addition, in 2003−2004 and 2018, the departures with usual residence from rural and urban areas registered similar values, compared to the other years.

Figure 14

Internal migration determined by changes of usual residence

Source: National Institute of Statistics, Tempo online, tables POP304B POP305B.

Figure 15 shows the difference between settling of the residence and departures from the residence. When we applied this simple calculation technique for internal changes of domicile, we obtained both positive and negative values; however, in this case, we can see that almost throughout the entire analysed period, for each rural category, the number of departures is higher than the number of arrivals. On the one hand, the migratory balance in the two types of rural areas within functional urban areas registered values close to zero since 1991, and this was a continuous trend until 2017−2018. On the other hand, the rural areas with or without marginalized communities outside functional urban areas registered significantly higher values in the early 1990s, compared to those within functional urban areas, and starting with 2002−2003 to the end of the time series included in the analysis, they registered balanced values. The biggest differences between the four rural categories were registered in the 1990s, when villages closer to city seats

experienced a less massive loss of their resident population, compared to those outside the current functional urban areas. Even after the 2000s, rural areas within functional urban areas managed to regain the population lost by changes of residence, but not completely. The destinations of departures with residence are county seats, where, at aggregate level, there is a positive balance during the entire period analysed. Moreover, from 2007 to 2014, cities other than county seats registered the highest negative balance in changes of residence, compared to all four rural types. This is another indicator of the attractiveness of large cities for the mobile population, and of the demographic disparities that are being created between the different types of administrative territorial units.

Figure 15

Balance in changes of usual residence. Internal migration
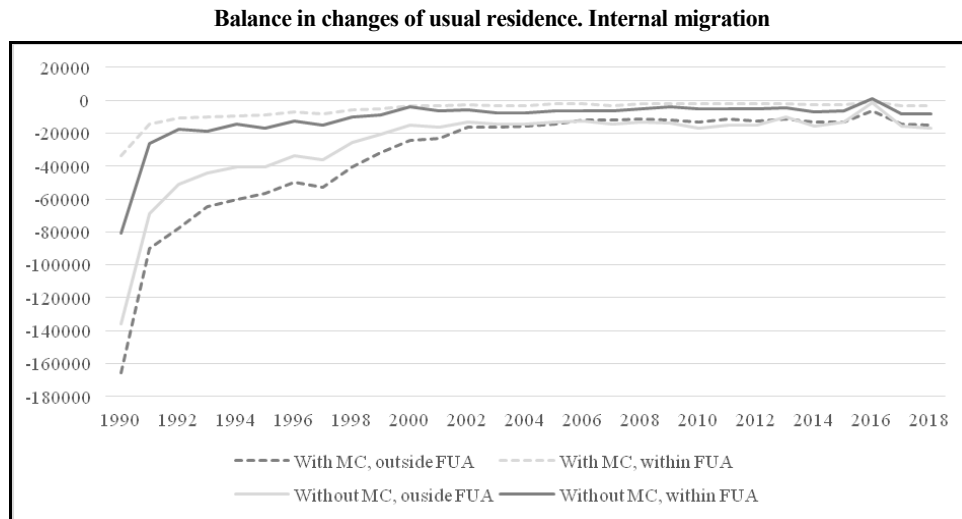
Source: National Institute of Statistics, Tempo online, tables POP304B and POP305B.

Migratory movement. External migration

International migration is the main cause of the demographic decline in Romania after 1989 (Ghețău, 2018c: 216; Rotariu, 2015, 2018). In addition, previous studies highlight regional variations when explaining external migration flows (Ghețău, 2018c: 220; Sandu 2018c). Unfortunately, the lack of data at locality level does not allow us to use the classification of rural areas with which we operated in the other sections of the paper. Considering this limitation, in the present analysis we will look at the rural – urban differences based on estimates of the intensity of the phenomenon in the two areas of residence. The existing public data differentiate between changes of domicile (permanent migration) and the changes of residence (temporary migration, for a period of at least one calendar year). However, we will insist on the second form of migration, namely temporary

migration abroad. The information on permanent migration provided by the National Institute of Statistics through the Tempo Online platform shows an increasing number of arrivals (permanent immigrants), and higher values, compared to departures (permanent migrants). Most of the changes of domicile occur in county seats. Moreover, the most common country of origin in the case of migrants who establish their domicile in Romania is the Republic of Moldova. The Romanian citizenship is a good opportunity for Moldovans to benefit from the European Union facilities and rights offered to our country. Free movement and access to the Western European labour market are just a few reasons why we cannot start from the premise that these categories of immigrants are also part of Romania's resident population.

With regards to temporary migration abroad, the analysis of available official data is quite problematic. Taking into account the free movement of people within the European Community, it is impossible to register all cross-border movements, and especially to classify those involved in the act of mobility as migrants (Rotariu 2015: 163). Previous estimates show that in 2013 there were 3.4 million Romanians officially residing in other countries worldwide (Horváth and Kiss, 2015: 114). In 2018, there was a difference of 2.7 million people (between the population with domicile and with residence in the country), 1.6 million more compared to 2002. If we consider the two sets of values as being close to reality, the resulting difference should indicate the number of individuals who have an official domicile in Romania, but a usual residence in another country (Gheţău, 2018c: 220). However, as previously mentioned, at this time it is impossible to make an accurate assessment of the resident population based on the available tools. Beyond these aspects, it is nonetheless important to analyse the temporal dynamics of the difference between the two types of population at the level of rural and urban areas of residences. The temporarily absent urban population in Romania is more numerous throughout the analysed time sequence. Based on the data from 2002 to 2004, the difference between the permanent resident population and the usually resident population is significantly smaller in rural areas, compared to the following years.

However, the data needs to be interpreted with caution. The term usually resident population was only introduced in the 2011 census, and for the previous years the data series were reconstructed.However, the compatibility of the data was affected. Of course, the biggest difficulties are related to estimating external migration through a change of the usual residence. The limitations of the official statistical data regarding the size of the country's population have been repeatedly stressed (Rotariu, 2015, 2018; Gheţău, 2018c; Sandu, 2018c).

Figure 16

Number of people domiciled in Romania and with usual residence abroad
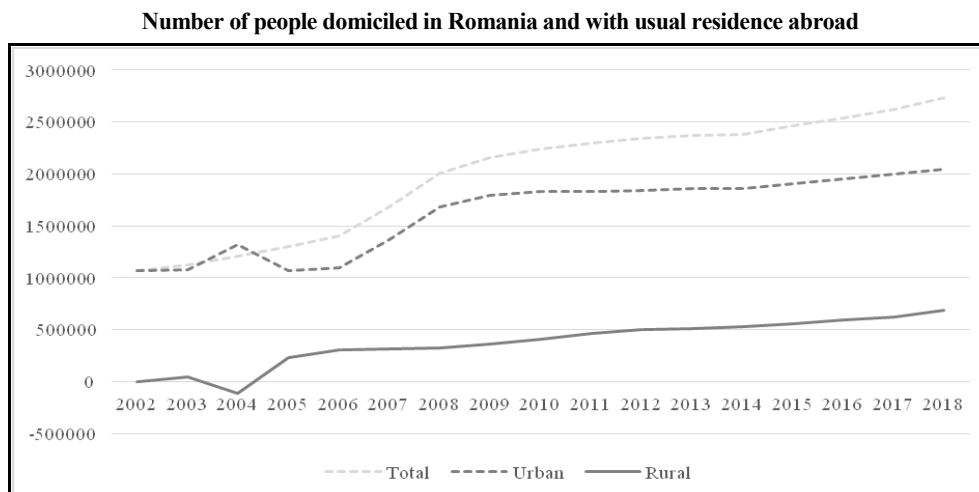
Source: National Institute of Statistics, Tempo online, tables POP106A and POP108B.
Note: The data series represents the difference between the population with domicile (permanent
        residence) and the population with usual residence in the country (Ghețău, 2018c: 220).

THE EVOLUTION OF THE AGE STRUCTURE

As a result of the periods with declining fertility and the net negative external and internal migration, the volume of the rural population decreased, but there were also changes in the age structure. However, the negative effects are not so obvious yet, as the many generations born between 1967 and 1989 are still part of the active population.

In 1992, the share of children up to 15 years was 20.5%, and by 2018 it decreased to 15.7% in the total number of people domiciled in Romania, while the 15−64 years age group is better represented now than at the beginning of the 1990s. Given the continuous decrease of fertility in rural areas, the share of elderly has increased from 14.9% in 1992 to 17.6% in 2018. The values are slightly different if we look at the resident population in rural areas. Given the fact that the difference between the domiciled and the resident population in Romania is mainly given by temporary Romanian emigrants, and, since this type of migration is mostly driven by work opportunities, it is obvious that the active 15−64 years age group has a lower share in the resident population than in the domiciled population. As the share of children is similar in the two populations, the share of elderly in the resident population increased to 20.2%, in 2017. The demographic dependency ratios (the number of children or elderly per 100 people of working age) indicate the same trends: the young-age dependency ratio decreases over time, while old-age dependency ratio increased, and it is more pronounced in the resident than in the domiciled population.

A detailed look at the four rural categories shows that they vary in terms of age structure (Table 4, the share of the three major age groups, Figure 17, the structure by five-year age groups, in absolute values). We would like to point out that we worked with the population domiciled in Romania, as the data on the resident population necessary for our classification is not available at ATU level.

In 1992, the 25−54 years age group was poorly represented in rural areas, while children and the elderly were much more numerous. The localities with marginalized communities had the highest share of children, and those without marginalized communities outside FUA had the highest share of elderly.

The decline of the fertility rate after 1989 and the aging of the generations born after 1966 shaped the current age pyramid. Thus, rural areas with marginalized communities outside functional urban areas have a higher number of children and elderly, and as such, a high dependency ratio, both in the case of children and elderly (*Table no. 4*). Rural areas with marginalized communities within functional urban areas also have many children, but fewer elderly, and a high young-age dependency ratio. Rural areas without marginalized communities outside functional urban areas have the highest shares of elderly and the most accentuated reduction in birth rates after 1989. Rural areas without marginalized communities within functional urban areas have the most consistent working age population.

Table no. 4

Indicators of the age structure for the four categories
of rural administrative territorial units, 1992 and 2018

	With MC, outside FUA	With MC, within FUA	Without MC, outside FUA	Without MC, within FUA	Rural (domiciled)	Rural (resident)
1992						
0−14	21.5%	21.8%	19.2%	19.8%	20.3%	
15−64	63.5%	63.7%	65.0%	65.3%	64.6%	
65+ %	15.0%	14.5%	15.8%	14.9%	15.2%	
women 15−49	40.3%	41.3%	41.0%	42.1%	41.1%	
2018						**2017**
0−14	17.5%	17.9%	14.0%	15.2%	15.7%	16.4%
15−64	65.4%	67.2%	66.4%	68.0%	66.7%	63.4%
65+ %	17.0%	14.9%	19.6%	16.8%	17.6%	20.2%
		2018			2017	2017
women 15−49	47.4%	48.7%	45.8%	48.2%	50.8%	43.4%
1992						
Young-age dependency ratio	0.34	0.34	0.30	0.30	0.32	
Old-age dependency ratio	0.24	0.23	0.24	0.23	0.23	

	2018					**2017**
Young-age dependency ratio	0.27	0.27	0.21	0.22	0.24	0.26
Old-age dependency ratio	0.26	0.22	0.30	0.25	0.26	0.32

Source: National Institute of Statistics, Tempo online, table POP108D, own calculations.

Figure 17

Age pyramid in the four categories of rural administrative territorial units, 1992 and 2018 (thousands)
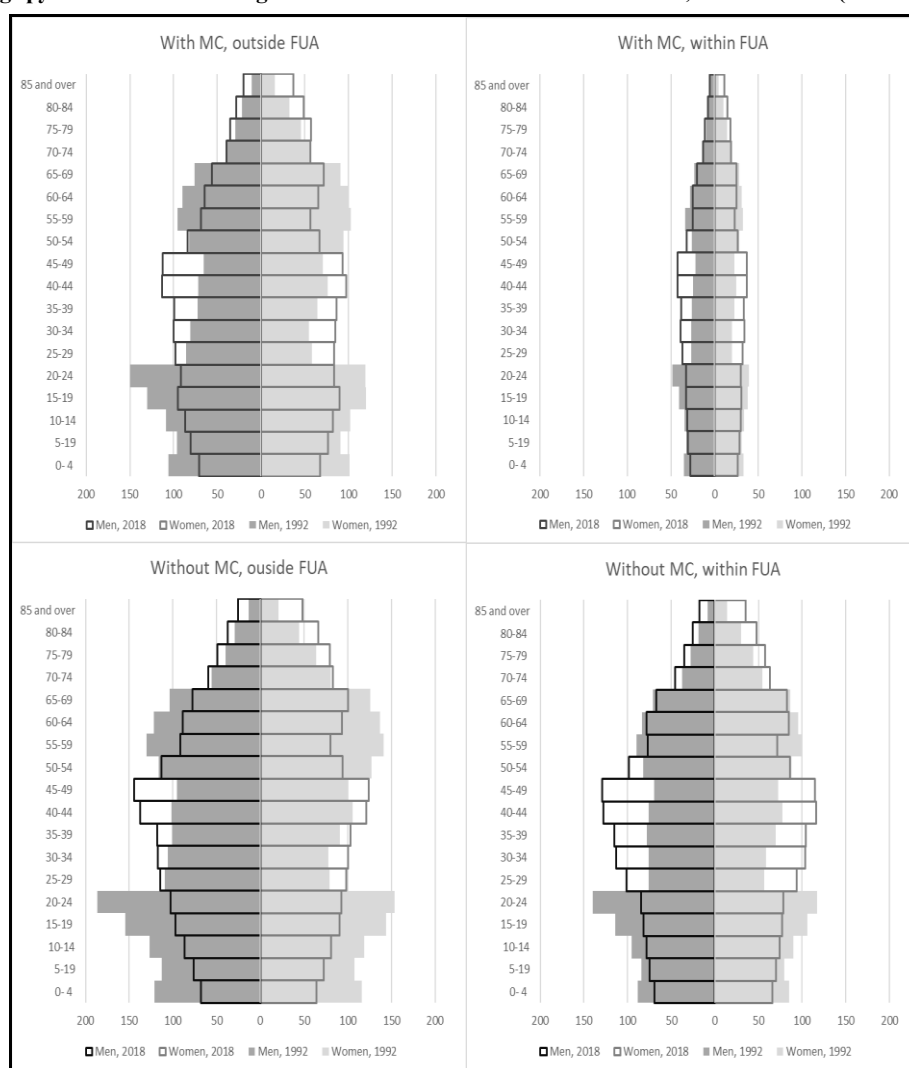
Source: National Institute of Statistics, Tempo online, table POP108D, own calculations.

CONCLUSIONS. PERSPECTIVES

The natural decline is intensifying in rural areas, while the evolution of fertility does not seem to be on the path of recovery. At the same time, migration accentuates the demographic decline. However, rural areas are not homogeneous. The population decline is increased or reduced according to several factors, such as the existence of marginalized communities or belonging to a functional urban area.

Rural areas within functional urban areas accounted for 39% of the entire rural environment in 2018, and they managed to attract young people of active age, due to better employment opportunities. Thus, the population decline in the localities of departure is deepened by internal migration. Rural communities within FUA are economically and socially advantaged, and as such they have a younger age structure and a higher share of employed women. This aspect is especially important in the context of the debate about a possible recovery of fertility in Romania, which cannot ignore the continuous decline in the case of unemployed women and the recovery periods in the case of employed women.

ATUs with marginalized communities (MC) also have a younger age structure, given by the considerable number of children. However, their living conditions are precarious, and their prospects for growth and development are extremely low. Most parents have a very low level of education, and are rather involved in informal and/or precarious work to make ends meet.

Localities without marginalized communities outside functional urban areas have the oldest population. They are not attractive as internal migration destinations, and as such they have the lowest prospects of demographic recovery.

The increasing difference between villages without marginalized communities within functional urban areas and the other three rural categories has a major potential to influence rural – rural and urban – rural migration. If we start from the idea that large cities in continuous development are poles of attraction for internal migration, we can consider two essential aspects. On the one hand, urban development often involves higher living costs, and not only, which can contribute to a form of emigration to suburban areas. On the other hand, as poles of attraction, these cities are work destination in terms of internal migration, and the functional areas become, in fact, living destinations, places where people establish their domicile/ residence.

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*A*nalizăm, în această lucrare, evoluțiile fenomenelor demografice *(natalitate, mortalitate, migrație) și efectul acestora asupra structurii pe vârste în mediul rural din România, pentru ultimii 30 ani. Ne oprim asupra mediului rural întrucât, pe lângă un spor natural negativ și o migrație externă netă negativă, ruralul a resimțit și efectul migrației interne, care a accentuat declinul populației în multe localități. Pe lângă descrierea situației ruralului în ansamblu, facem o diferențiere a localităților rurale ținând seama de două criterii. Acestea sunt apartenența la zonele urbane funcționale ale fiecărei reședințe de județ și existența în cadrul localităților a unor comunități marginalizate. Această diferențiere ne-a permis caracterizarea populației în contextul mai larg al dezvoltării economice inegale de pe teritoriul României. Diferite orașe dezvoltate, cunoscute ca orașe-magnet, contribuie nu doar la creșterea volumului populației în localitățile rurale din jur, dar și la alte discrepanțe demografice între polii de creștere și periferie.*

Cuvinte-cheie*: mediul rural; evoluții demografice; zone urbane funcționale; comunități marginalizate.*