

## POPULATION AGEING IN RURAL ROMANIA - REGIONAL DISPARITIES AND SOCIAL IMPLICATIONS

## ÎMBĂTRÂNIREA DEMOGRAFICĂ ÎN ROMÂNIA RURALĂ - DISPARITĂȚI REGIONALE ȘI IMPLICAȚII SOCIALE

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**Abstract:** Population ageing is occurring on more extensive areas worldwide, is affecting rural areas with greater intensity and at a faster pace than ever. This study aims to evaluate the main demographic changes and their social consequences in post-communist Romania, highlighting the particularities of rural decline phenomenon and taking into account regional and gender-related patterns and causalities. Unfavourable demographic trends recorded in rural Romania emphasize the urgent necessity to address the complex processes associated with rural depopulation through national, regional or even local solutions and approaches.

**Key-words:** *population ageing, rural Romania, demographic changes, social implications.*

**Cuvinte cheie:** *îmbătrânire demografică, România rurală, schimbări demografice, implicații sociale.*

### 1. INTRODUCTION

The world continues to experience an unprecedented and sustained change in the age structure of the global population, driven by increasing levels of life expectancy and decreasing levels of fertility (UN, 2020). After the generational group of baby boomers significantly contributed to worldwide economic development between 1970-2005, the global dependency ratio is at a point of inflexion as the retiring population will live longer but there is usually not enough local birthing to create an offset (Goodhart & Pradhan, 2020, 41). Moreover, this natural decline in place is amplified by international migration in most countries nowadays showing more modest economic performances, lower GDP per capita and lower human development index.

Although most European countries consider themselves to be confronted with population ageing, there are several spatial differences in terms of rhythm, intensity and social-economic impact. Thus, population ageing is a well-known demographic trend in post-industrial societies, but only a recently accelerated process in the Eastern European countries as compared to the rest of the continent;

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the collapse of the communist system caused profound changes in the main demographic processes and fostered transformation of population structures in all former communist countries (Kulcsár & Brădăţan, 2014; Kučera et al., 2000; Höhn et al., 2008; Guran-Nica & Rusu, 2015).

Fistly, as compared to countries belonging to Western Europe, Romania's case distinguishes by the time lag it frames into the model of classical demographic transition (Nancu et al., 2010; Trebici, 1996; Kurkó, 2010; Kulcsár & Brădăţan, 2014), assuming a modernization of the social-economic structure of the population by shifting from a traditional demographic regime characterized by high mortality and fertility to a modern demographic regime, the latter being characterized by low mortality and fertility. Unlike other countries, a major disruption was caused in Romania by the specific demographic policy of the communist regime and the sudden interruption in the descending evolution of birth rates, imposed by Decree no. 779/October 1966 prohibiting abortions. However, the pronatalist coercive factor only had an effect for a short period of time, because in the years following the post-decree climax, the values were in a downward trajectory again.

The beginning of the 1990s marked the end of classical demographic transition and the beginning of much lower birth rates, determined by profound economic and social transformations taking place during the post-communist period (Rotariu, 2009). Thereby, Romania entered a new, atypical phase of demographic transition, in which the main demographic processes are: (a) a sharp decline in fertility below the threshold of generational replacement, (b) an increasing share of the elderly population due to growing life expectancy at birth – thus resulting the increase in mortality. Hence, the rising imbalance between extreme age groups was one of the two major phenomena that contributed to Romania's demographic decline.

Yet, what is particularly striking is the extent demographic ageing is differentiated by area of residence. That is because rural demographic changes became more complex during the beginning of the 21<sup>st</sup> century, possessing cumulative causalities and being characterized by associated vicious circles of decline: economic restructuring, localization disadvantages, peripherization, historical context, inherited delays and economic inertia. Ageing population in rural areas and rural demographic shrinkage seem to be inevitable all over Europe, but again, Romania's case is special because its rural depopulation does not take place mostly in favour of internal urbanization, but more frequently of the international migration, similar to Bulgaria, Latvia and Lithuania (ESPO, 2020; MDLPA-DPS, 2020).

Also, the age structure represents a major component of the population also because of its social implications: it determines many features and characteristics of a society's way of life, beginning with the economic consumption and ending with cultural behaviour and mentalities (Kučera et al., 2000, 269). Beyond unquestionable negative economic consequences of demographic changes, the social repercussions will represent a particular challenge for policymakers

concerned with the sustainable demographic development of Romania during the following decades.

According to the demographic projections of the National Institute of Statistics, the phenomenon of demographic ageing of the population will be accentuated over time, but with different intensities at the territorial level; although both areas of residence will be affected by demographic decline, however, in rural areas, the decreases will be between 1.8 million people and 4.5 million people by 2060 (NIS, 2019).

## **2. DATA AND METHODS**

The statistical data provided by the National Institute of Statistics (the Tempo-online data series) were used to create a full database regarding territorial differences in rural Romania: the NUTS III units in Romania (counties) and NUTS II level (regions) were used, allowing the analysis of complete dynamics of the demographic indicators. The analyzed period was comprised between 1990 and 2020, with a special territorial view of 2020 rural Romania, concerning main demographical processes and several relevant indicators used to analyze the extent of demographic ageing in rural areas. In this respect, specific geographic information systems have been used to analyze the dynamics and territorial disparities at national level.

## **3. RESULTS AND DISCUSSIONS**

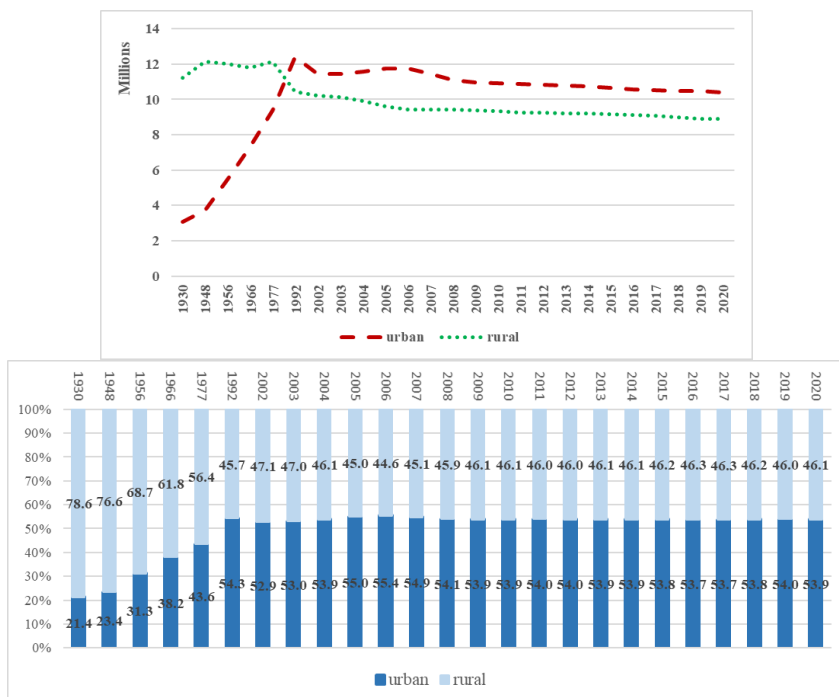
The numerical evolution of Romania's population registered significant dynamics, rhythm and spatial variability due to quantitative and qualitative changes that have taken place over time in the main components of the social-demographic-economic system: natural dynamics (through the evolution of birth and mortality rates dynamics) and migratory dynamics (whose contribution to the general dynamics of the population was determined mainly by the contribution of external migratory flows), depending on the action of complex demographic, economic, historical, social, legislative factors, etc. (*Geografia României*, 50).

When analyzing the general dynamics of the Romanian population by area of residence (Fig. 1), there can be individualized two major periods: (1) during 1930-1985, in which rural areas dominated and (2) after 1985, in which the urban population first equalized and then exceeded the rural population. Also, starting with 1990, a pronounced and continuous trend of declining population became predominant, but also an increasing rural heterogeneity (Mihalache, 2010). Romania's rural population decreased from 11.2 billion inhabitants in 1930 to 8.8 billion inhabitants in 2020, while the share of the rural residence in the national population decreased in the same period from 78.6 in 1930 to 46.1 in 2020.

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 ("commuters" and "urban villager") whose contact with the rural world remained essential, their connections with family members that continued to live in

rural households remained close 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” (Hărăguș & Földes, 2020, 290).

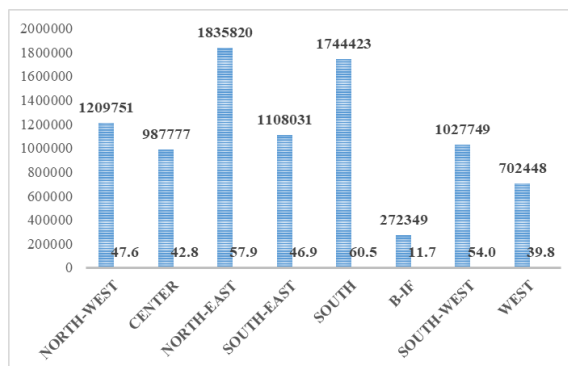
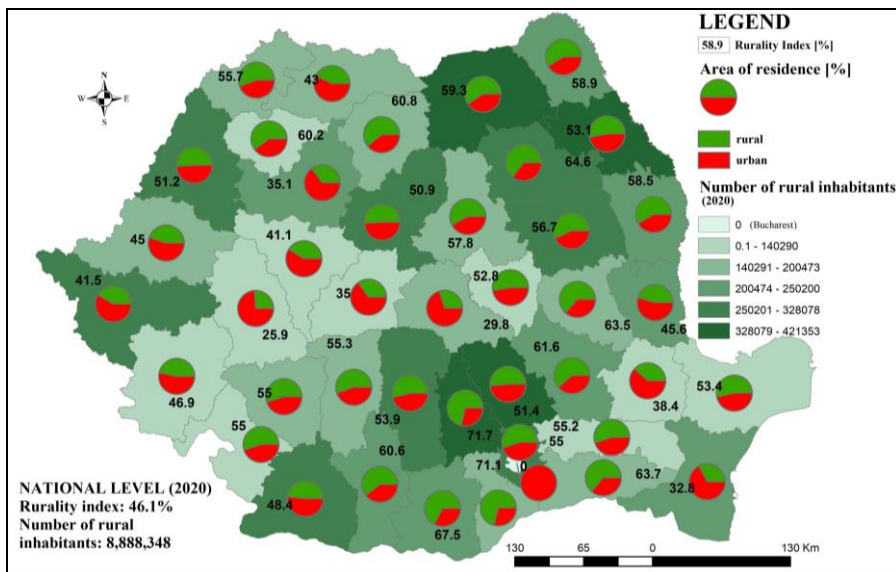
At the end of the communist period, Romania entered not only a new stage of socio-economic evolution, but also a disruptive demographic phase, emphasizing territorial inequalities. First of all, immediately after 1990, due to cancelling restrictions of settling in urban areas, the internal rural-urban migratory flows intensified. However, during the second half of the 1990s, reverse phenomena of ruralization began to appear as a result of massive deindustrialization. This first phase of urban-rural migration implied several dramatic social problems: due to economic restructuring and rising costs of urban life, a significant number of citizens were forced to return to the rural area from which they had left in the 1970s and 1980s. In addition, most of these urbanites who had lost their jobs in industry were persons over the age of 40, whose re-professionalization would have been difficult and their only chance was to return to their rural households. Subsequently, starting with the 2000s, a new type of urban-rural migratory flow began to intensify especially in the rural areas surrounding large cities (suburbanization) and counterbalanced to some extent the degradation of rural areas by age groups, mainly involving young adults and their families.



**Fig. 1 General dynamics of the Romanian population by area of residence during 1930-2020 period (a-gross figures, b-percentages)**

(Data source: INS, Tempo online, author's processing)

In 2020 (Fig. 2), the largest rural population belongs to the North-East (1.8 million inhabitants) and South (1.7 million inhabitants) development regions and the largest share of the rural population is held by the same regions, in reverse order (60.5% South and respectively, 57.9% North-East). However, the rural population of Romania's most regions has decreased significantly in recent decades, except for Bucharest-Ilfov region, in which there was an increase in the rural population by over 19.8% during the period 2012-2020. The NUTS III level analysis reveals that most counties with over 250,000 rural inhabitants are situated in the North-Eastern (Suceava, Bacău, Iași) and Southern regions (Dâmbovița, Prahova). A rurality index of over 50% is also specific to several counties comprised in the same development regions: Dâmbovița (71.7%), Teleorman (67.5%), Giurgiu (71.1%), Călărași (63.7%) and Neamț (64.6%).



**Fig. 2 Number of rural inhabitants and rurality index in Romania's counties-a and development regions-b (2020)**  
 (Source: NSI, Tempo online)

With a significant impact in terms of population dynamics, the vital demographic processes (fertility, mortality, migration) in rural Romania have undergone major changes since 1990, following the collapse of the communist regime and the complex changes that followed: repeal of Decree 779 and liberalization of abortion, promotion of contraceptives and their assimilation among the population, opening of the first family planning offices, changing the status of women in society, women's emancipation and their increasing participation in the socio-economic life, raising the age until which most young people are involved in some form of education, raising the average age of mothers at first birth, increasing social mobility, labor market insecurities, changing mentalities, lifestyles and demographic behavior of young people.

Other important recent demographic effects have also appeared as a result of the change in the direction of internal migration. This way, in 2020 (Table 1), there are still regions where, traditionally, the birth rate of the rural population is higher than that recorded in the urban area (North-West, Center, South-East), but also regions which, due the migration of the young population to large cities, are characterized by higher values of natality in the urban areas (Bucharest-Ilfov, South-West). In contrast, the mortality rate is definitely higher than the birth rate in rural areas, which is explained by the significant share of the elderly living in rural areas. All development regions in Romania have a natural demographic deficit, much more pronounced in their rural areas (the exception is the Bucharest-Ilfov region). In terms of international migration, only two development regions differentiate from the generalized negative migratory balance: Bucharest-Ilfov, thanks to the level of socio-economic development, extent of the suburbanization process and attractiveness for investors and the North-East region, which is facing a significant influx of young adults from Republic of Moldova in recent years. Both contrasting situations (negative and positive migratory balance) are a territorial reflection of a changing European construct on Romania: opening borders after a coercive communist regime in 1989, industrial restructuring and rising unemployment in the first decade, changing migration policies and eliminating visas in the Schengen area in 2002 and EU integration in 2007 (Șoșea et al., 2018, 174).

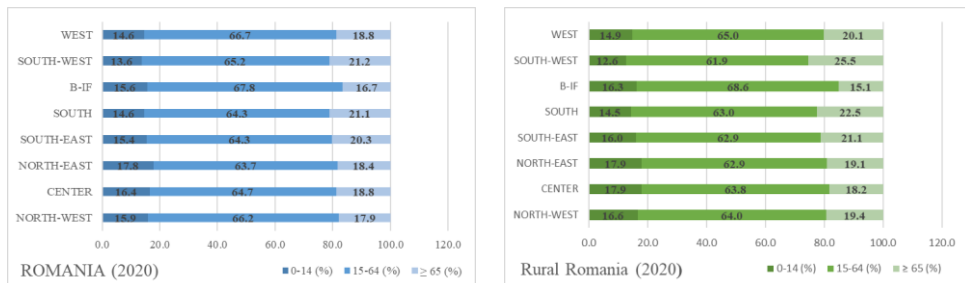
**Table 1 Natural and migrational deficit by area of residence and development regions (2020)**

| NUTS 2 level | Natural balance [%] |       | International migration [%] |       | General demographic balance [%] |       |
|--------------|---------------------|-------|-----------------------------|-------|---------------------------------|-------|
|              | Total               | Rural | Total                       | Rural | Total                           | Rural |
| RO           | -6.2                | -7.8  | 0.6                         | 0.2   | -5.6                            | -7.6  |
| NW           | -4.8                | -6.1  | -0.4                        | -0.2  | -5.2                            | -6.3  |
| C            | -4.7                | -3.9  | -0.5                        | -0.2  | -5.2                            | -4.1  |
| NE           | -5.5                | -6.7  | 3.3                         | 2.2   | -2.2                            | -4.5  |
| SE           | -7.9                | -9.2  | 0.6                         | -0.3  | -7.3                            | -9.5  |
| S            | -9.2                | -10.6 | -0.4                        | -0.3  | -9.6                            | -10.9 |
| B-IF         | -2.8                | -2.2  | 1.6                         | 0.1   | -1.2                            | -2.1  |
| SW           | -8.2                | -11   | -0.4                        | -0.2  | -8.6                            | -11.2 |
| W            | -6.8                | -6.6  | -1.1                        | -0.5  | -7.9                            | -7.1  |

(Data source: NSI, Tempo online, author's processing)

However, from a micro-scale point of view, the villages of contemporary Romania present very heterogeneous situations in terms of international migration behavior and experience. In a first stage, international departures seem to have been more prominent in the case of villages in Western Moldova and Northeastern Transylvania (Sandu, 2004), with a special cultural profile (ethno-confessional diversity, large share of the population aged 30-59, located in proximity of cities or communication arteries of European importance). Subsequently, the migration experience affected even the most isolated rural localities, located more than 30 km away from urban centers, with poor infrastructure, public services and living conditions that decisively influenced the migratory movement and their demographic decline. The least affected by international migration were the rural localities located in periurban or tourist areas, which benefited from the advantages of location and higher economic development level (Stănescu, 2021; MDLPA, 2020; Guran-Nica & Rusu, 2015).

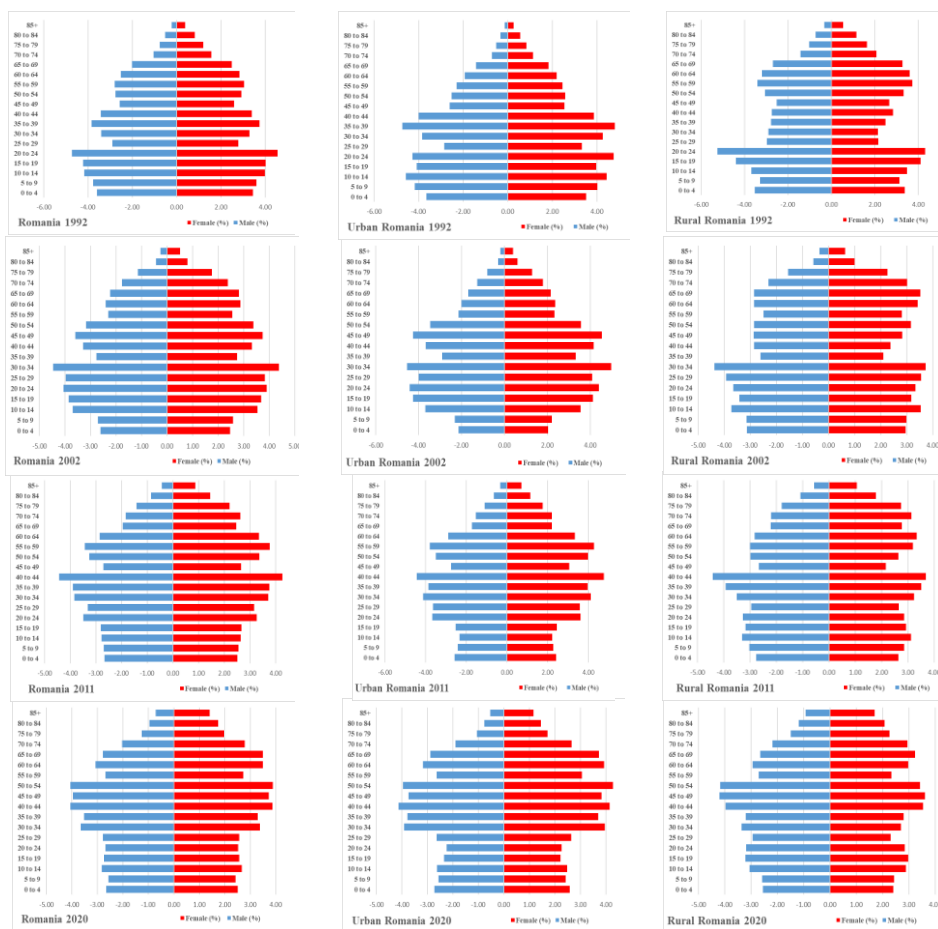
Therefore, declines in fertility and international migration seem to be reshaping the demographic profile of rural Romania. Although the population over the age of 65 living in rural areas was lower than the urban population in 2020 (1.83 million people as compared to 1.85 million people), the share of the elderly in the total population was different in the two areas of residence: while 19% of Romania's urban population was over 65 in 2020, in rural areas almost 21% of the population fell into this age group. In terms of development regions disparities, it can be noticed that the share of elderly population is, with no exception, higher in rural areas and the share of adult population is generally lower when comparing rural areas to overall development region (Fig. 3).



**Fig. 3 Share of main age groups by area of residence and development regions in 2020**

(Data source: NSI, Tempo online, author's processing)

Thus, there have been fundamental quantitative changes in the evolution of Romania's rural population, by the gradual demographic decline, but also qualitative ones, through obvious reduction of the young population and the increase of the elderly one. The process of demographic ageing of the rural population is illustrated using the age pyramids at the time of the three post-communist censuses and adding the year 2020 for a more actual assessment of the phenomenon (Fig. 4).



**Fig. 4 Age pyramids reflecting rural-urban differences in post-communist Romania (1992, 2002, 2011 and 2020)**  
 (Data source: NSI, Tempo online, author's processing)

In addition to a narrowing base of the 4 pyramids over time (1992, 2002, 2011, 2020), the following observations can also be made:

- the decrease in the birth rate between 1956-1966 due to free access to contraception and the termination of pregnancy, which is felt especially in the 55-59 age group (2020);
- the impact of the decree of 1966 on the age group 50-54 years (2020);
- the permanently different form - more uniform of the age pyramids in rural areas as compared to those in urban areas; although at the beginning, in 2002 and 2011, the young population in urban Romania seems underrepresented as compared to rural Romania, in 2020 this situation is no longer valid, most probably due to the influx of young people in larger urban settlements; also, the trunk is more prominent in the case of the urban age pyramid (2020) and the peak is widening for rural Romania (2020) because of the generalization and enhancement of the demographic ageing process.



Male supramortality and a more pronounced demographic ageing of Romania's rural areas can also be seen by analyzing the differences related to the median age and the life expectancy at birth by gender and residential areas in Romania's development regions (Table 2). There is a significant difference between the male and female population, the latter having an average life expectancy at birth longer with 4 up to 8 years than men. In the same time, both men and women living in rural areas live less than their urbanite age counterparts. Also, the median age shows the demographic ageing of the South and South West development regions, but also the obvious differences imposed by gender.

**Table 2 Median age and life expectancy at birth by gender and residential areas in Romania's development regions (2020)**

| NUTS 2 level | Median age (years) |      |      |               |      |      | Life expectancy at birth (years) |      |      |               |      |       |
|--------------|--------------------|------|------|---------------|------|------|----------------------------------|------|------|---------------|------|-------|
|              | Romania            |      |      | Rural Romania |      |      | Romania                          |      |      | Rural Romania |      |       |
|              | Total              | M    | F    | Total         | M    | F    | Total                            | M    | F    | Total         | M    | F     |
| RO           | 42.3               | 40.6 | 43.9 | 42.5          | 40.8 | 44.1 | 76.1                             | 72.5 | 79.7 | 74.4          | 70.7 | 78.7  |
| NW           | 41.5               | 39.9 | 43   | 41.6          | 40   | 43.2 | 75.9                             | 72.6 | 79.4 | 74.7          | 71.2 | 78.5  |
| C            | 41.8               | 40.3 | 43.4 | 40.6          | 39.3 | 42   | 76.6                             | 73.3 | 79.9 | 74.9          | 71.4 | 78.9  |
| NE           | 40.8               | 39.2 | 42.4 | 40.7          | 39.2 | 42.4 | 75.7                             | 71.9 | 79.7 | 74.06         | 70.2 | 78.6  |
| SE           | 43.1               | 41.3 | 44.8 | 42.7          | 40.9 | 44.4 | 75.3                             | 71.3 | 79.6 | 73.3          | 69.2 | 78.3  |
| S            | 43.7               | 41.9 | 45.5 | 44            | 42.1 | 46   | 75.4                             | 71.8 | 79.3 | 74.2          | 70.4 | 78.5  |
| B-IF         | 41.5               | 39.6 | 43.2 | 40.2          | 38.8 | 41.6 | 78.1                             | 74.8 | 81.1 | 75.8          | 72   | 79.9  |
| SW           | 44.2               | 42.5 | 45.8 | 46            | 44.1 | 47.9 | 76.3                             | 72.9 | 79.9 | 74.9          | 71.5 | 79.04 |
| W            | 42.6               | 40.9 | 44.2 | 42.8          | 41.2 | 44.4 | 76.01                            | 72.8 | 79.2 | 75.3          | 72.1 | 78.8  |

(Data source: NSI, Tempo online)

In regional profile, the demographic ageing index and the age dependency ratio register much higher values in the rural areas compared to the national level and much higher of the female population as compared to males.

**Table 3 Demographic ageing index and age dependency ratio by gender and residential areas in Romania's development regions (2020)**

| NUTS 2 level | Demographic ageing index |       |       |               |       |       | Age dependency ratio |      |      |               |      |      |
|--------------|--------------------------|-------|-------|---------------|-------|-------|----------------------|------|------|---------------|------|------|
|              | Romania                  |       |       | Rural Romania |       |       | Romania              |      |      | Rural Romania |      |      |
|              | Total                    | M     | F     | Total         | M     | F     | Total                | M    | F    | Total         | M    | F    |
| RO           | 122.4                    | 96.2  | 150.0 | 129.8         | 103.3 | 157.9 | 53.3                 | 47.5 | 59.3 | 57.7          | 49.1 | 67.6 |
| NW           | 112.7                    | 89.0  | 137.7 | 116.7         | 92.5  | 142.0 | 51.1                 | 45.9 | 56.3 | 56.1          | 48.5 | 64.6 |
| C            | 114.5                    | 91.9  | 138.4 | 101.7         | 83.3  | 121.1 | 54.5                 | 49.4 | 59.7 | 56.6          | 50.1 | 64.0 |
| NE           | 103.4                    | 82.0  | 125.9 | 106.8         | 84.9  | 129.8 | 56.9                 | 50.3 | 64.1 | 58.9          | 49.6 | 69.9 |
| SE           | 132.0                    | 104.3 | 161.1 | 132.4         | 104.6 | 161.7 | 55.6                 | 49.0 | 62.5 | 59.0          | 49.7 | 69.8 |
| S            | 144.6                    | 112.8 | 178.4 | 155.7         | 121.2 | 192.5 | 55.6                 | 48.1 | 63.6 | 58.6          | 48.7 | 70.1 |
| B-IF         | 107.1                    | 79.7  | 136.2 | 92.2          | 73.0  | 112.9 | 47.6                 | 44.2 | 50.7 | 45.8          | 41.8 | 50.0 |
| SW           | 155.7                    | 125.1 | 188.0 | 202.1         | 163.3 | 243.2 | 53.4                 | 47.0 | 60.2 | 61.7          | 51.1 | 74.1 |
| W            | 128.8                    | 100.7 | 158.5 | 135.2         | 108.0 | 164.1 | 50.0                 | 44.5 | 55.6 | 53.8          | 46.8 | 61.7 |

(Data source: NSI, Tempo online, author's processing)

In a national context, Bucharest-Ilfov region stands out with the most favourable values of the two indicators and the South, South-East and South-West regions through the highest, most unfavourable values of the two indicators. These are the result of the high share of the elderly and the rural population within the mentioned regions, the low level of development and the poor economic diversification.

#### 4. CONCLUSIONS

Rural Romanian is characterized by obvious intra-regional and interregional social-economic heterogeneity, which is also reflected in the extent of demographic ageing phenomena. Together with its negative migratory flows during the post-communist period, Romania experienced a rapid replacement of the traditional reproduction pattern with a modern one, both processes having negative consequences on the evolution of the population, on the labor force, on the health system, the social insurance budget, social protection, the pension system. The main consequence of the increase in the average age of life is the change in the weights of the older age groups, but also the slowdown in the decrease in the number of inhabitants. Thus, along with the decrease in the birth rate, the increase in the average life expectancy had a significant contribution to the accentuation of the demographic ageing phenomenon in rural Romania.

The effects of the demographic ageing process on the development of economic and social life, as well as future demographic developments, will be increasingly felt more strongly in the following years when in the working age population (15-64 years) the numbered generations born after 2007 and the generations born in the '70s and '80s will retire. Therefore, given the pace of the ageing process, policymakers are required to develop medium- and long-term visionary strategies to ensure demographic for rural Romania during the following decades.

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